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**M&A Activities and Goodwill: an Empirical Study on the effect of PPA
Discretion on Firms Performance**

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Introduction

The introduction of IFRS/IAS in 2005 substantially changed the accounting exercise in the adopter's countries. The main drivers of the accounting change were the intention of the standard setters to increase decision usefulness of the financial statements toward their users, shifting from a cost-based accounting paradigm to an informational-based accounting paradigm. Accordingly, IFRS 3 and IAS 36 are the results of these change, translating the new paradigm into action by providing high quality and relevant standards to account for goodwill and business combinations. Prior researches reported the large effects of the adoption of the *acquisition method* and of the *impairment-only regime*, which go beyond the effects on financial reporting by impacting on stock market performance and value relevance.

The aim of this thesis is to address the concerns about discretion granted under the current accounting standards when accounting for business combinations and goodwill. Accounting discretion can be defined as the latitude, the power or the right of a corporation to act according to his judgment in certain circumstances, deciding or to do or not do something. The accounting standards allow the reporting entities to employ fair value accounting, providing some principle and guidance to constrain and limit its opportunistic implementation. Although constrained, substantial discretion is involved when an acquirer buys a target company and then account for the acquisitions and its effect in the subsequent period. In particular, the decisions related to the purchase price allocation, the recognition of goodwill, and its subsequent impairment tests may be heavily affected by the discretion granted. Even if specific disclosures related to these matters are required, it is likely that some information, usually material information, will be hidden by the reporting entity, reducing the claimed information advantage of the current standards.

While many academic articles addressed the effect of goodwill accounting by studying the transition from IAS 22 (and SFAS 121) to current accounting standard, this thesis specifically focuses on the effect of goodwill and business combination accounting. The examination of a sample of deals provide some relevant pieces of evidence of the effect that accounting decisions may have on the acquirer's reported performance and impairment recorded. Data reported, demonstrate that the acquirers, on average, allocate much of the price paid to goodwill and that impairment losses are usually quite rare. The empirical results then suggest that the decision to allocate a large share of the purchase price to goodwill is associated with better performance

reported in the year in which the acquisition is completed. Moreover, goodwill balance is also associated with impairment decisions. Indeed, findings suggest that firms reporting a large amount of goodwill are less likely to write-down goodwill and, at the same time, they are more associated with large impairment losses when the impairment is recorded.

The remainder of this thesis is structured as follows: Chapter 1 provides a substantial introduction and to the matter studied and set the tone of the thesis. Chapter 2 summarizes the development of the regulatory background and the most important provisions in relation to business combinations and goodwill accounting. Chapter 3 reviews prior literature and provide the basis for the development of the research hypothesizes. Chapter 4 presents the sample selection, the data gathered, and the research method implemented in this study. Chapter 5 provides the results of the empirical analysis, discusses the findings obtained and provides the Final thoughts on the matter studied.

Chapter 1: Goodwill, Accounting for it and Accounting Discretion

In November 2015, General Electric Co. took control of the power and grid division of the French company Alstom SA for a total consideration of USD 11.89 billion. The deal represented a strategic investment for GE, which was expecting the transaction to strengthen both financially and strategically its power business. Indeed, GE reported some bold expectations related to the contribution of the acquisition, forecasting a target impact on company's EPS of about USD 0.15-0.20, expecting the creation of cost synergies up to USD 3 billion and growth synergies up to USD 0.6 billion in the period 2015-20. As required by US GAAP, the company assessed and measured all the identifiable assets acquired and liabilities assumed as a result of the transaction, as part of the purchase price allocation process. From this assessment, that lasts almost one year long¹, the value of net assets arising from the acquisition was below zero, leading GE to add goodwill to its books for USD 17.3bn in 2016. Goodwill attributed to Alstom have been allocated to the power business units, which did not report any impairment loss in 2016. With a total amount of USD 26.4bn, GE's power division was the reporting unit with the larger amount of goodwill. However, due to the decline in the Power market, GE reported a first write-off of the power division's goodwill at the end of 2017, for an amount of about one billion. In 2018, the whole Power business was sinking fast, forcing the newly appointed CEO Larry Culp to write-down goodwill of about additional USD 2bn in June. Because of the weak performance of its business supplying equipment to the power industry, in October, GE disclosed in its third-quarter report that they will write-off around USD 22-23bn of goodwill in 2018, which is, substantially, all the goodwill in the power division. Moreover, GE said that both free cash flow and earnings per share are expected to fall, resulting in a significant negative market reaction, with the stock price decreasing from USD 12.09 per-share the first October to USD 7.57 per-share at the end of December.

This recent case is an interesting example of the risks associated with business combinations and goodwill accounting. While the substantial impairment loss cannot be attributable to the acquisition of Alstom, because the whole power business was performing badly, is impossible not to questioning how is it possible to recognize such amount of goodwill and then write it down two

¹ As a result of the acquisition, completed at the end of 2015, GE reported a provisional purchase price allocation in its financial report for the year. As allowed by the standards, the company spent about one additional year working out what it had bought, finally reporting and disclosing the acquisition in its annual 10-K report for 2016. The ultimate purchase price allocation leads GE to recognize additional goodwill for USD 4bn.

years later? The initial overpayment of the target, the misvaluation of the earning power initially envisioned for it and the failure in realizing the expected synergies are probably among the causes that lead GE to take this significant write-off. While the huge impairment can be compared to an admission of a “bad” investment decision, it also represents a substantial opportunity, since it will benefit both future earnings and the new CEO by removing the need to take small charges for years to come. Last year, during an interview, the ousted CEO, John Flannery, admitted that GE overpaid for the target company, stating as much “if we can go back in a time machine today, we would pay a substantially lower price than we paid”. IFRS did not include special provisions to account for a business combination in which a buyer overpays for its interest in the acquire, because unlikely to be detectable or known at the acquisition date. The Board acknowledged that overpayments are possible and, in concept, an overpayment should lead to the acquirer’s recognition of an expense, but in practice, it is not possible to identify and reliably measure an overpayment at the acquisition date. To solve the issue related to accounting for overpayment is addressed by subsequent impairment testing when evidence of potential overpayment arises, for example, the weak performance of the Power Division in the GE example.

1.1 The Economic effects of Accounting Discretion

The GE case confirms how business combinations and goodwill are becoming more and more relevant, not only in terms of amounts reported in entities’ consolidated balance sheet (Hamberg, Paananen, & Novak, 2011) but also for the potential impact on the stock market and firm performance in general (Shalev, 2009; Bens, Heltzer, & Segal, 2011; Li, Shroff, Venkataraman, & Zhang, 2011; Li & Sloan, 2017; Amel-Zadeh, Faasse, Li, & Meeks, 2018). Acknowledging the relevance that future profitability and stock performance have in the economic context, the intent of this work is rather to shed the lights on M&A activities and their accounting practice. According to the current standards, issued by IASB and US GAAP, goodwill is reported into an entity consolidated financial statement whether acquired through a business combination, measured as the excess of the purchase price over the fair value of net assets acquired. Under an optimistic point of view, it is possible to define goodwill as a premium paid by the acquirer in order to obtain control over the target company. Thus, the excess of purchase price paid is explained by the acquisition of future economic benefits, synergies, opportunities and so on.

The transformation suffered by business combination's accounting is imputed to the transition from the IAS 22, *Business Combinations* to the IFRS 3 *Business Combinations* and IAS 36 *Impairment of Assets*. The adoption of the standards governing business combinations substantially changed the accounting approach to M&A in more than a sense. The transition provides preparers of the financial statements and accountants with a new approach to be applied, as well as new disclosure requirements for the purpose of better accounting quality. It is important to notice that, despite the standards clearly set the approaches and methods to be applied to act in compliance with the regulation, concern is generated from the high discretion afforded to entities in taking decisions related to how the standards are applied. For this reason, business combinations worth to be studied, in order to understand how this element of judgment allowed by the standard can impact the entities and their performance. Indeed, business combinations involve substantial discretion, for example in the allocation of the purchase price, in the recognition of goodwill acquired, in the development of expectation on the future performance and benefits from the acquisition, and finally when testing goodwill reported for impairment.

The GE suggests that the discretion involved in business combination has relevant and highly negative economic effects. What emerged, at first sight, is the substantial goodwill capitalized as a result of the acquisition, which basically doubled goodwill balance of the company's Power division. This is the first situation in which discretion play a significant role. The price paid by GE, the amount of goodwill recognized and the recent decision to write that goodwill down are strongly suggest that the target has been overpaid. This is the result of a bad evaluation of the target, its assets, and the potential for value creation resulting from the combination of the two entities. The standard does not provide any specific rules or principle in relation to the definition of the purchase price, thus they are not able to prevent the acquirer from overpaying for the target company. The standards, on the other hand, requires the acquirer to allocate the price paid to the assets acquired and liabilities assumed, and subsequently to consolidate them at their fair value. However, recognizing previously unreported intangibles separately from goodwill is particularly costly and involves substantial uncertainty on the relevance and reliability of the outcomes of the PPA. Moreover, opportunistic behaviors may be involved in the allocation of the price paid, as a result of the substantial discretion granted. Discretion involved in the PPA and the potential incentives that drives this decision might result in the recognition of large goodwill balance, in particular, if the price paid was particularly high. Goodwill, which calculated as a plug number, is strongly affected by the decisions made in relation to previous steps of the business combinations. If this is not

enough, goodwill is complex to evaluate by itself. The standards do not provide any specific requirement or provisions to address the potential overpayment of the target company, and as a result goodwill may encompass elements that cannot be considered an asset. To address the risk that goodwill reported could be overstated, which means that elements other than the *core goodwill* are reported in the financial statement, the standards require to test goodwill for impairment at least annually, to assess the recoverability of its carrying amount. The GE example again provides a clear view of the economic effects of discretion. Indeed, the acquirer did not record an impairment in its Power division until the first year after the acquisition, then impairing substantially the whole amount allocated to that CGU. This can be interpreted as a signal that maybe the firm used its discretion to avoid impairment recognition up to the point that goodwill became unsustainable? Or did the recognition of the large impairment is to be related to the appointment of a new CEO that, by recognizing immediately the large impairment, will avoid bad surprises in the future years?

Identifying the appropriate method to account for business combinations and goodwill, thus a method that provides with a faithful representation of the acquisition, its underlying economics, and consequences, lead the regulators to continuously revise the standard implemented. In recent years, the introduction of IFRS 3 and IAS 36 gained the attention of researchers, enlarging the accounting literature on the subject. In particular, the contributions provided by previous works addressed substantial changes adopted by the accounting model. The main concerns were related to the potential trade-off between relevance and reliability of the information disclosed and accounting numbers reported as a result of the mandatory adoption of both the acquisition method and goodwill impairment test. Often, empirical works focus on the IASB's claim of a superior value relevance of the information provided by IFRS/IAS framework, resulting from the higher reliance on the discretion granted to the managers and fair-value estimates. Some authors hypothesized that this informational advantage may be indeed dampened by the large uses of estimates and managerial judgment, arguing that too much room for discretion may lead managers to take accounting decisions on the basis of opportunistic incentives (Beatty & Weber, 2006; Holthausen & Watts, 2001; Watts, 2003; Lhaopadchan, 2010; Shalev, Zhang, & Zhang, 2013; Detzen & Zülch, 2012; Zhang & Zhang, 2015; Hamberg, Paananen, & Novak, 2011). Empirical researches thus focused on the main drivers of managers accounting decisions and tested the relevance of accounting numbers and disclosures reported in the entities' financial statements.

Current evidences strive to provide a clear view of the matter under exam. Even if considered a valuable asset, goodwill and the related accounting approach provided by the standards are often

too much “open-ended” and exposed to the risk that its information content may be misleading for the users. The issue related to the reliability of fair value estimates, their consequent high potential for manipulation, and their highly discretionary nature may generate substantial uncertainty in relation to the future performance of the acquiring firms. As suggested by many authors, impairment decisions are often subjective, and even if usually relevant in term of market impact, they are also recognition and calculation are difficult to verify and audit. Researchers focused their attention on market reaction to goodwill acquired and to impairment announcement, but there are no significant findings on the direct effects of the current accounting standards on the performance reported in the entity’s financial statement. Shedding the light on the relationship existing between business combinations, goodwill accounting and numbers conveyed in the financial reports turn out to be useful also considering the relevance that those numbers have to the users of the financial statements.

1.2 Business Combinations and Goodwill Accounting

The International Accounting Standards Board (IASB or the Board from here on) issued standards which shall provide investors with all the relevant information useful in order to evaluate the company, and subsequently take economic decisions. In the modern economy, the ability to generate value and to sustain growth lies substantially on intangible factors and resources. The transformation of the underlying economic setting required the improvement of accounting standards and the development of appropriate frameworks to effectively represent these changes. For this reason, accounting changes in recent years increasingly recognize the importance of intangibles and goodwill.

M&A activities are a way to achieve goals, usually part of a long-term strategy pursued by the management. Moreover, they are one of the few mechanisms which enable an entity to acquire intangibles. Generating intangible assets internally, pursuing the creation of competitive advantage, is subject to higher uncertainty. On the other hand, acquiring well-established brands, know-how, customer relationships etc. allows the entity to reduce uncertainty and quickly “develop” competitive advantages. While their economic value to the firm and their increasing importance cannot be discussed, the debate concerns who to adequately capture and report useful information about intangibles through appropriate accounting model. According to the standards, an asset must

meet two criteria. First, the economic benefits that will arise from the asset must flow to the enterprise and, second, the cost of the asset must be reliably measured (IAS 38, Intangible Assets). Once the asset has been recognized, the major issue is to manage the subsequent measurement of the value of the asset itself. To recognize the decrease in value, it is appropriate to use systematic amortization over the useful life of the asset? There is a maximum period over which the asset can be amortized? Alternatively, the value decrease should be tested annually through impairment? While this issue has been managed in different ways by different standards during past decades, a universal agreement among accounting standard setters has been reached and subsequently translated into significant accounting changes.

Despite the relevance of M&A activities as value-creating strategies, one important factor to bring to the attention is the uncertainty surrounding those activities. Information asymmetries between the acquirer and the external environment (from lenders to shareholders), lead the bidder to disclose some information about their long-term strategy and their plan, subsequently disclosing the required information in the financial statement. Combining both voluntary and mandatory disclosures of information enhance the efficiency of the capital market, enabling capital providers and other possible users of the financial statement to understand and evaluate the acquisition and its effects. With particular attention to M&A activities, the Standards requires the acquirers to perform and subsequently disclose the Purchase Price Allocation (PPA) resulted from the business combination. This should provide the users with relevant information related to assets acquired and liabilities assumed. The information conveyed by the PPA and the other mandatory disclosures in the acquirer's financial statements are relevant to the users and even the company could benefit from disclosing information².

Once again, concerns lie on the reliability of the information and disclosure. While the purchase price is relatively easy to determine, the purchase price allocation is far more ambiguous, especially the recognition and measurement of previously unrecognized intangibles. In accordance with the standard, internally generated intangibles are generally not capitalized and reported in the balance sheet³. On the other hand, they can be recorded as a result of an acquisition. More specifically, in

² Even if voluntary disclosure is uncommon, and the only sources of information disclosed to the public are the result of mandatory requirements from the standard setters, the theory of *Positive Accounting* (Watts & Zimmerman, *Positive Accounting Theory*, 1986) believe that even the firm will benefit directly from conveying information.

³ Given the difficulty to identify whether an internally generated asset can generate future economic benefit and determining reliably its costs, those assets are generally not capitalized in the entity balance sheet. However, the

a business combination, intangible acquired include both separately identifiable intangibles (allowed to be separately recognized in the balance sheet) and goodwill. IFRS 3, as well as SFAS 141, require the disclosure of specific information related to business combinations. In the accounting for business combinations, the acquirer can recognize both intangible assets and goodwill. Indeed, the allocation of the purchase price, the entity identifies and measures at fair value all assets acquired, liabilities assumed, as well as previously unrecognized intangibles when the separability criterion and the contractual-legal criterion hold. Moreover, intangibles separately identify must be measured following a value hierarchy⁴, prescribed by the accounting standard, that favor observable over unobservable data. The simple comparison between the consideration transferred and the value of net assets acquired is reported in the acquirer balance sheet as goodwill. While only a little discretion is associated with the allocation of the purchase price to tangible assets, monetary amount and reported liabilities, this procedure leaves room for potential manipulation of the amount allocated to intangibles and goodwill. Intangible assets cannot be reliably measured; hence they are subject to estimation based on managerial assumptions and discretion. Therefore, if the amount of previously unreported intangibles is uncertain, or if those assets are not separately recognized, also the goodwill generated in the business combination will be unreliable because computed as a residual.

Why standard setters allow the initial recognition of intangibles and goodwill? Because of their belief that benefit associated with disclosure of relevant and useful information, such as recognition of goodwill and intangibles as a signal of future economic benefits and improved performance, outweigh the potential costs from the cost of reporting numbers not fully reliable. Current standards represent the attempt of the Board to provide users with the best information possible, requiring the prepares to apply specific provisions and provide the appropriate disclosures on the relevant matters. However, it must be considered that business combinations are way different from buying another asset for a number of reasons, and these differences and difficulties are reflected in the way in which the standard setters shaped the provisions to account for business combinations and goodwill. Even if disclosures and fair value provide the acquisition method and the impairment-only approach with value relevance, the allocation of the purchase price must take into

standard allows the recognition of the internally generated asset if arising from development and complying with the requirements as reported by IAS 38, paragraph 57.

⁴ IFRS 13, Fair Value Measurement, paragraph 72, introduce the concept of value hierarchy that categorizes the inputs used in the valuation techniques to measure fair values. The highest level (Level 1) of priority is given to quoted prices, lowest priority (Level 3) is assigned to unobservable inputs.

consideration the high subjectivity and managerial discretion of the process. Indeed, intangibles separately identified cannot be measured in a reliable way, as well as their value cannot be verified with accuracy.

The outcome of the method prescribed by the standard is the result of accounting choices and management decisions to communicate their private information. Anyway, those kinds of decisions can be driven by both managerial opportunism or economic efficiency, increasing the uncertainty of the representation provided in the consolidated financial report. In the latter case, managers use their discretion and judgment to provide recognition of goodwill that better reflect the underlying economics of the business combination, enhancing accounting quality. Although the standard requires to recognize intangible assets separately during business combinations, goodwill still represents a large portion of the purchase price (Shalev 2009), confirming the lack of effort implemented by managers to identify and measure intangibles separately from goodwill.

The initial recognition of goodwill is also likely to affect the probability of having goodwill impairment and the amount of that impairment charge (Beatty & Weber, 2006). Fears behind impairment testing are also due to the lack of verifiability in assigning goodwill to specific CGUs and to the lack of a clear definition of these CGUs. Impairment testing also involves managerial judgment and discretion in defining the level at which to carry out the test, how to allocate goodwill, identifying the inputs and formulating the assumptions for the estimation of the recoverable amount. Therefore, impairment is also subject to uncertainty and risks related to the opportunistic behavior of management (Shalev, Zhang, & Zhang, 2013; Hamberg, Paananen, & Novak, 2011).

1.3 The Potential Effects of Discretion

One of the main points highlighted so far is the “position” taken by many those who disagree with the standards in relation to the relevance-reliability trade-off. Even if both IASB and FASB agree on avoiding internally generated goodwill to enter in the entity balance sheet, in some ways reflecting the importance put on the concept of reliability, accounting for business combination using the acquisition method and measuring goodwill through impairment test clearly signals the importance of relevance over reliability. According to the critics moved against IFRS/IAS, the

absence of market valuation for internally generated goodwill is likely to increase the uncertainty and subjectivity in the value, reducing the usefulness of information provided.

When we talk about M&A activities, we are basically talking about growth strategies implemented by entities to reach and achieve specific goals and objectives. While the acquisition decision cannot be driven by accounting considerations, accounting can have a material impact on the deal, its structure and the subsequent representation of the combining entities. To address this potential issue, the IASB, jointly with the FASB, revised and updated the standards governing business combination, with a particular focus on the value relevance of accounting numbers and information provided in the financial report. The acquisition method enables to clearly represent what the acquirer is paying for, and the impairment-only approach provides the entities with a suitable framework to represent goodwill and its consumption after the acquisition.

Despite the quality of the standards issued, the trade-off between relevance and reliability and its subsequent implication of this concept concerns the minds of several authors, and that should be analyzed in a deeper manner. Take for example a simple acquisition. One entity, desiring to expand in a new segment or achieving other types of synergies, acquires a second entity. The acquirer carefully evaluates the target and came up with the price he is willing to pay to obtain control of the other business. This first step, endowed with strategic importance, is in more than a sense connected with the allocation of the purchase price required by IFRS 3. The bidder assesses, evaluate and recognize all the assets and liabilities of the company, then allocate the price paid to gain their control. To perform this activity in accordance with the standard, the acquiring entity must allocate the purchase price to identifiable assets and liabilities measured at fair value. Any difference between the price paid and the fair value of the net assets acquired is then recorded as goodwill. What shall be noted is the level of discretion that this process involves. The allocation of the purchase price in excess over the book value of the net assets acquired relies on their fair value, which is often not available for all of them. While for some assets a quoted price exists, other require to be estimated. Identifying and measuring identifiable assets previously not reported in the acquire balance sheet, and allocate the excess consideration transferred to them, is for this reason costly, and some managers might use their discretion to avoid this process. Furthermore, when estimation is involved, managers are required to make decisions related to forecasted performances, growth rate and discount rate, which will reflect on the result of the estimation. The discretion involved in the allocation of the purchase price at the acquisition is not limited to the uncertainty involved in the estimation of intangible assets, but it affects also their recognition in the

consolidated balance sheet. Indeed, if managers can effectively identify and measure intangible separately from goodwill, they may avoid doing so in order to take advantage of lower amortization charges in the post-acquisition period.

This concern about high discretion and flexibility permitted by the standards holds also for the impairment testing. IAS 36 forbid the amortization of the goodwill, because unable to provide in a relevant manner the effective consumption of the goodwill item. On the other hand, the amortization regime was considered more reliable, because it provides at least a certain level of assurance that goodwill reported entered in the Income Statement of the company. Moreover, the amortization approach was advocated because able to avoid the risk that internally generated goodwill could enter in the balance sheet, gradually replacing goodwill acquired through business combinations. It is well known that amortizing goodwill, and impairing it only when there are indicators that impairment losses may have occurred, enable to reduce constantly the value of goodwill acquired by expensing amortization charges in the P&L. The impairment only regime does not rely on systematic charges in the Income Statement. In contrast, it relies on the discretion and the judgment of management decision-making ability.

The impact of the discretion and judgment granted to the management may affect the price paid at the time of the acquisition and the subsequent decisions taken for the allocation of the purchase price, which assets are identified, the value of such assets recognized and of goodwill generated as result of the allocation's decisions. As result of the wide range of consequences, often adverse, that allocation decision might have, discretion may increase the level of risk of the already risky estimation and allocation process, eventually affecting future earnings and stock performances. Performing the impairment test in the years subsequent to the acquisition involve substantial discretion as well, in determining the level at which the test is carried out, in the allocation of goodwill to the appropriate CGU and in identifying whether goodwill should be written-off. This thesis will focus on the element of uncertainty inherent in business combinations and goodwill accounting, providing an empirical examination of the effect of goodwill arising from a business combination on the income reported after an acquisition has been completed. The main objective is to provide evidence of a significant increase in reported net income as a result of the accounting treatment of goodwill. Moreover, the investigation might be useful to obtain an understanding of whether, as result of large goodwill recognized in the acquirer balance sheet, net income reported do or do not behave in a more unpredictable way, as result of the uncertainty generated by the approach implemented to measure goodwill.

The remainder of this thesis is structured as follows: Chapter 2 summarizes the development of the regulatory background and the most important provisions in relation to business combinations and goodwill accounting. Chapter 3 reviews prior literature and provide the basis for the development of the research hypothesizes. Chapter 4 presents the sample selection, the data gathered, and the research method implemented in this study. Chapter 5 provides the results of the empirical analysis, discusses the findings obtained and provides the Final thoughts on the matter studied.

Chapter 2: The Institutional Environment and Related Issues

In recent decades, accounting practice and financial reporting are facing one of the most significant changes in their history. Accounting model has become a mixed-attribute system, combining both historical cost and fair-value, adopting more principle-based guidance and granting more discretion to professionals to do what is right given the circumstances. Mard, Hitchner, & Hyden (2010) described these changes as a paradigm shift, from an industrial economy emphasizing historical cost and rule-based guidance, to an information economy focused on fair-value measurement, on the substance of economic events and on the *usefulness of information*⁵. The information paradigm emerged as a result of the development in both financial reporting practice and accounting thought. With the objective of improving the quality of accounting standards, the International Accounting Standard Board revised the previously adopted IAS, a part of a process of international convergence, emphasizing the concept of decision-usefulness of information. Among the others, this transition involved the revision of IAS 22 *Business Combinations*, issuing simultaneously IFRS 3, addressing business combinations, and the revised versions of IAS 36 *Impairment of Assets* and IAS 38 *Intangible Assets*.

2.1 IFRS and the new accounting paradigm

Since their adoption (2005 in the European Union), the International Financial Reporting Standards had its share of supporters and critics. While the costs and benefits of IFRS were initially uncertain, the development of literature seems to agree on the beneficial effects of IFRS on adopting firms. Benefits range from improved transparency to lower cost of capital, and from enhanced cross-country investment to higher comparability of financial statements (IASB, *The Conceptual Framework for Financial Reporting*, 2010). These benefits are, in a way of in another, linked to the initial purpose of the Board to narrowing difference among countries through the harmonization of regulations, accounting standards and procedures related to the preparation and presentation of

⁵ Decision useful information is information that is relevant, faithfully represented, comparable and understandable. These characteristics are applied sequentially when determining when information is reported, following a logical path.

financial statements. The effort of the Board is therefore focused on the preparation of financial statements, whose purpose is defined as follows:

“The objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity (IASB, 2010)”.

In line with the two main objectives of IFRS adoption, namely (i) enhancing reporting quality and (ii) improve the comparability of financial statements across countries, one of the major changes refers to M&A activities and how to account for them. Before the beginning of this new era to aimed at the creation of financial reporting rules for a worldwide capital market, M&A activities were accounted for in different ways different national standards. Current standards only emerged after a difficult and long process, ended with the IASB bringing its rules on business combination in line with those of the FASB. However, the debate about the accounting for business combination and about the determination of whether it is informative to represent multiple entities together, as a single company, is far from a resolution.

During the first phase of the process for preparing the new standards related to business combinations, FASB and IASB deliberated separately, issuing in 2001 and 2004 respectively, FAS 141, Business Combinations, and IFRS 3, Business Combinations. Those standards can be considered a cornerstone of the accounting for M&A activities, ending the use of pooling-of-interests accounting, in favor of the adoption of the Purchase Method. As result, goodwill generated from a business combination is treated as an intangible asset with indefinite life, hence capitalized in the acquirer’s balance sheet and periodically tested for impairment rather than being subject to annual amortization. Moreover, where there are non-controlling interests involved, assets and liabilities of the subsidiary must be valued at full fair value, including the portion belonging to NCIs. Issuing IFRS 3 (R) in January 2008, the Board replace IFRS 3, seeking to enhance the relevance, reliability, and comparability of information provided about business combinations.

The process toward the harmonization of regulations and rules for the preparation of the financial statement required the IASB and the FASB to revise the standards previously issued. In January 2008, the IASB issued the new version of the two key standards related to M&A activities, IFRS 3, *Business Combinations*, and IAS 27, *Consolidated and Separate Financial Statements*, as result of the joint effort exerted by the standard setters to reach the same conclusion. The newly issued standards affect significantly the accounting for business combinations, supporting the alignment-

objective of the boards. Even if the conclusion reached in this second phase of the project is, in most of the cases, the same for both IASB and FASB, with issuance of revised IRFS that more closely resemble the US GAAP equivalent, some differences remain⁶.

Focusing on IFRS 3 and IAS 27, numbers of changes have been introduced relating to the accounting for business combinations and preparation of consolidated financial statements. Key changes include:

- Option to measure non-controlling interest at fair value;
- Recognition of any previously held interests in the acquire at its acquisition-date fair value;
- Measurement of contingent consideration;
- Reassessing the classification or designation of assets acquired and liabilities assumed;
- Accounting for changes in parent`s controlling ownership interest that do not result in a loss of control as equity transaction (consequently, no changes in the subsidiary`s carrying values, including goodwill);
- Losses in the subsidiaries are allocated between controlling and non-controlling interests;
- Loss of control of a subsidiary triggers the derecognition by the parent company of the individual assets, liabilities, and equity. Any retained interest should be valued at fair value at the date the control is lost, recognizing in P&L any resulting gain or loss.

2.2 Business Combinations and the Acquisition Method

In accordance with IFRS 3 and IAS 27, which came into effect for the first annual reporting period beginning on or after July 1, 2009, all business combinations are accounted for using the acquisition method, which should be distinguished from the previously prescribed purchase method⁷. Before taking further steps, it is important to provide a clear definition of what a business combination is.

The definition of a business combination was an item of divergence between IFRS 3 and SFAS 141. IFRS 3 defined business combination as “the bringing together of separate entities or businesses into one reporting entity”. This definition was in a certain way considered too broad for

⁶ Among the others, the most significant difference is the measurement of non-controlling interest in the acquire.

⁷ The purchase method was adopted as result of the issuance of IFRS 3, Business Combination, in 2004. The new acquisition method is substantially equal to the former one, even if it enabled the successful convergence between the US GAAP and the International standards. However, some differences remain.

the FASB because it would allow for the inclusion in a business combination of one or more businesses that the acquirer does not control. As a result of the joint project on Business Combination, IASB and FASB adopted the same definition:

“A transaction or other event in which an acquirer obtains control⁸ of one or more businesses. Transactions sometimes referred to as “true mergers” or “mergers of equals” also are business combinations as that term is used in this Statement (FASB, 2007) (IASB, 2008)”.

As result, the scope of the of revised IFRS 3 (and equivalent revised SFAS 141), has been narrowed. It applies only to a transaction or other event that meet this definition of business combination, consequently excluding the formation of joint ventures, the acquisition of an asset or a group of assets that does not constitute a business⁹ and the combination of entities or business under common control. This definition also identifies the need for a transaction or other event that result in the acquirer to gain control of one or more businesses in order to have a business combination. This occurs in many different ways, including the transfer of cash, cash equivalents or other assets, incurring liabilities, or the issuance of equity instruments.

As already mentioned, one of the main changes implemented with the adoption of IFRS in 2005 is the mandatory application of the purchase method, removing in this way the possibility of the preparers to choose between this method and the pooling-of-interest method afforded by IAS 22. Under IFRS 3 (R), the term used to describe the method of accounting for business combinations has been replaced with the term *Acquisition Method*. The revised standard replaces, in this way, the cost principle with the fair value principle of accounting for business combinations, measuring the exchange transaction at fair values. This means that all assets, liabilities, and equity of the entity are measured at their acquisition-date fair value, enabling to improve relevance, reliability and comparability of the information that a reporting entity provides in its FS about a business combination and its effects. The implementation of the new standard encompasses:

⁸ Control of an entity can be obtained either by gaining the ownership of the majority of the voting power or by obtaining contractual rights to receive the majority of the financial benefits or assuming the obligation to bear the majority of the financial consequences. IFRS 3 define control as the power to govern the financing and operating policies of an entity so as to obtain benefits from its activities and increase, maintain, or protect the amount of those benefits (IASB, IFRS 3, Business Combination, 2008)

⁹ In accordance with IFRS 3 (2008) and SFAS 141 (2007), a business is an integrated set of activities and assets capable of being conducted and managed for the purpose of providing a return in form of dividends, lower costs, or other economic benefits directly to investors or other owners, members, or participants. Requires the combination of three elements, namely input, processes applied to those inputs, and outputs (IASB, IFRS 3).

- Identify the acquirer;
- Determining the acquisition date;
- Determining the amount transferred for the acquisition of the target;
- Recognizing and measuring the identifiable assets acquired, the liabilities assumed and any non-controlling interests in the acquiree; and
- recognizing and measuring goodwill or a gain from the bargain purchase.

Among the five steps that must be fulfilled by the reporting entity, the last two are the most interesting considering the purpose of this research.

As prescribed by IFRS 3 (R), the conditions for recognition of an item acquired or assumed require that the aforesaid items must be an assets or liability at the acquisition date and, at the same time, part of the business acquired¹⁰. For what concerns the non-controlling interests arising from a business combination, the new standards provide the acquirer with the choice of two ways to measuring them. In particular, the acquirer can measure NCIs at fair value, or measure them as the share of the net assets not belonging to the parent itself. Once all the identifiable assets, liabilities, previously held interests and the portion of NCIs in the acquire have been identified and measured, the last step in applying the acquisition method is the measurement of *goodwill*.

IFRS requires recognizing goodwill arising from a business combination at the acquisition date as the excess of the (1) aggregate of (i) consolidation transferred, (ii) NCI and (iii) previously held equity interests in the acquiree over (2) the amount of net identifiable assets acquired:

$$\text{Goodwill} = (1) - (2).$$

In a business combination, goodwill is treated as an intangible asset that, differently from other assets acquired, is not specifically identifiable. A simple examination of the formula above presented makes it easy to understand that goodwill results only from situations when the amount the acquirer is willing to pay for the controlling stake is higher than the value of net assets acquired. Occasionally, an acquirer will make a bargain purchase, which is a business combination in which

¹⁰ The reference is to IFRS 3, Business Combinations, paragraphs 10 to 12. In accordance with the standards, assets and liabilities, in order to qualify for the recognition as part of the acquisition method, must meet the definition of assets and liabilities in the Conceptual Framework for Financial Reporting (2010). In addition, to qualify for recognition as part of the acquisition method, assets and liabilities must be part of what the acquirer and the acquire exchanged in the business combination transaction.

the amount of net assets acquired exceeds the aggregate. The resulting gain shall be recognized in Profit or Loss statement on the acquisition date.

Accounting for business combination shall look very mechanical and, in a certain way, easy. The standard provides with a process that only requires to be applied, following the principle, the guidelines and the regulations issued by the board. The reality is different. The reviews and the constant updating of the standards must provide a clue on the three inherent difficulties faced by legislators to provide standards which are appropriate, reliable and suitable for the need expressed by the users of the reporting documents. Behind an M&A transaction, there is more than a simple “acquisition” of good in exchange of a price. Debate on M&A accounting is still open, covering a wide range of aspects which can be easily considered as given if not critically analyzed. Among the bundle of potential that can be discussed and studied, this work sheds the lights on one specific aspect of Business combination and its accounting rules. One aspect so clear and straightforward in appearance, as potentially open to different views and subject to manipulation in reality: goodwill.

2.3 Goodwill in the Accounting Practice

The definition of goodwill provided by the accounting standards, both IFRS 3 and SFAS 141, seems clear, enabling the simple computation of the item and supporting the adopter also by providing a formula and specific guidance for the implementation of the standards. However, for more than a century, goodwill has been an accounting issue, with academic researchers and standard setters unable to reach an agreement on the nature of goodwill. Many have argued that the nature of goodwill is such that it is neither “fowl nor fish¹¹”, often pointing out that goodwill is neither servable nor reliably measurable, given its intangible nature. Some authors, considering these statements, concluded that goodwill should not be included in the financial statements. Others argued that the lack of tangibility, the difficulties in measuring it and the inability to separate goodwill from the rest of the firm does not negate the fact that it may have significant value to the firm, and therefore should be represented in the financial statement. Given that goodwill

¹¹ Expression used by Hajm Falk and L.A. Gordon, in their paper *Imperfect markets and the nature of goodwill* (1977).

theoretically represents the amount paid to earn abnormal returns on an investment made, Dicksee and Tillyard (1906) described goodwill as “whatever adds value to the business” (quoted in Wen & Moehrle, 2016, p.12). Although goodwill can either be generated internally or arise in the course of a business combination, for the sake of this work goodwill will refer to the former one, also because a general agreement over the treatment of internally generated goodwill¹² has been reached by standard setters and academic researchers.

Ma & Hopkins (1988) take a position in the debate on goodwill measurement and reporting, examining in their work the nature of this asset, concluding eventually that there is an inability to identify the stream of specific benefits associated to goodwill arising from an acquisition. In their research, they examine goodwill as the product of synergetic benefits generated by the interaction of assets within the firm and its environment. They observe problems in order to get to an effective valuation and reporting of the expected earnings flows associated with such activities, in particular, associated with the lack of identification of the flows with specific assets or entities. Thus, they failed in finding an economic interpretation for purchased goodwill, arguing that purchased goodwill does not meet the criteria to be defined an asset¹³. This claim has been debated a few years later (Grinyer & Russell, 1992). While M&H’s work sustains the lack of meaningfulness of goodwill, advocating the usefulness of financial statements to show economic values, the commenters provide a different point of view, focused on matching costs to revenues, providing a rationale for goodwill to be accounted in the balance sheet and expensed in the P&L.

By expressing his disagreement toward the definition of asset provided by the standard, former SEC Chief Accountant Walter Schuetze indirectly support the idea that goodwill should not be eligible as assets. In his opinion, the definition of assets adopted at the time by the FASB resemble an “empty box” and as a result of that, anything could be fit into it (Schuetze, 1993). According to him, an asset should be defined as cash, contractual claim to cash or service and items that can be sold separately for cash. Even if the argument of the author was generally related to the definition of asset itself, goodwill as defined by the standards clearly did not meet any of the criteria proposed by Schuetze.

¹² Treatment of internally generated goodwill is within the scope of IAS 38. In accordance with the standards, it is not recognized as an asset, because it does not meet the criteria for recognition.

¹³ In their work, Ma and Hopkins state that “*in accounting an example of a puzzle unsolved... is provided by the calculation and reporting of goodwill*” (p. 75), highlighting the issue represented by goodwill accounting and reporting.

In the late nineties, discussion on goodwill accounting was heating up as a result of the increasing significance of M&A activities and the subsequent changes proposed by standard setters to update business combination accounting. An important step has been taken as of November 19, 1997, when the FASB decided that goodwill meets the assets definition criteria. In relation to this decision, an important contribution has been provided by Johnson & Petrone (1998). The authors, through their work, tried to provide an explanation of the reasons that lead the FASB to this decision. In the first part of their work, Johnson and Petrone solve the practical problems of separating the components that do not constitute goodwill and those that do. Hence, goodwill can be viewed from two opposite perspectives:

- a *top-down perspective*, under which goodwill is a component of something larger (the investment in the target), or;
- a *bottom-up perspective*, which views goodwill as the sum of components that make it up.

Under the (i) *top-down perspective*, goodwill is viewed as a component of the acquired company, results of the expectations about future earnings from the business combinations. The acquired company is seen as an asset, made up of different components, and after various identifiable assets have been recorded, the reminder is reported as goodwill. Under this perspective, goodwill is treated as a residual, as what is left over, similarly to how accounting standards were used to describe it¹⁴. However, this description focuses only on how goodwill should be calculated rather than explaining its substance. The (ii) *bottom-up perspective* is opposite to the former one. Under this perspective, if the price paid by the acquirer exceed the FV of identifiable net assets of the target, probably other resources valuable to the acquirer have been acquired. Goodwill, in this way, is made up of other valuable components, not required to be recognized by the standard for example. In that context, the authors have identified the two components¹⁵ that made up goodwill asset and termed it *core goodwill*. In their opinion, only the fair value of the going concern element

¹⁴ The authors in their works are referring to the following definition of goodwill: “*the excess of the cost of the acquired company over the sum of the amounts assigned to identifiable assets acquired less liabilities assumed*” APB, Opinion 16, *Business Combinations*, paragraph 87 (1970a).

¹⁵ The authors refers to six possible components of goodwill: (i) the excess of FV over BV of net assets; (ii) the FV of other assets not recognized by the acquiree; (iii) the FV of the going concern component in the target; (iv) the FV of synergies that are expected to arise from the combination of the two companies; (v) the overvaluation of the consideration paid by the acquirer; (vi) or simply the overpayment by the acquirer.

of the acquiree's business and the fair value of the synergies from combining the net assets of the two entities are conceptually part of goodwill asset, explaining the "premium paid" by the acquirer.

The main contribution of the authors, however, is providing with the basis to understand whether core goodwill meets the definition of asset. In *The Conceptual Framework for Financial Reporting* (2010), IASB provide the following definition:

"An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity. (paragraph 4.4a)"

From this definition, it is possible to identify three fundamental characteristics required in order to meet the asset definition. First, an asset embodies future economic benefits which, directly or indirectly, singly or in combination with other assets, contribute to the cash flow of the entity. Second, the asset must be controlled by the entity, such that the entity controls the benefits that are expected to flow from it. Third, the control over the asset must be the result of a past event or transaction. The standards also provide other specifications, overcoming deficiencies of past regulations, stating for example that neither physical form nor the right of ownership is essential to the existence of an asset. The authors pointed out that, even if unable to be exchanged for something else or used to settle liabilities, goodwill can be used by the entity, in combination with other assets, to produce cash inflows. Moreover, although its non-separability, does not preclude goodwill from having future economic benefits. In addition to having future economic benefits, there must be control over the asset, in turn resulting from past events or transactions. Core goodwill fit into these requirements because resulting from an acquisition which provided the acquirer with the ownership of a controlling interest in the acquired entity. Johnson and Petrone thus showed that, on the basis of its capacity to contribute to future cash inflows, core goodwill is an asset.

The concept of goodwill and its implications in the accounting practice generated heated debates among scholars, legislators, and preparers. The concept of goodwill is easy to describe as it is difficult to define. For decades, even the definition provided by the standard has been criticized to be complex, open-ended, all-inclusive and vague. As results of this longstanding debate is a wide literature, which enables to better understand what goodwill is, breaking the veil of simple "accounting" definition and eventually shedding lights on pros and cons arising from the current M&A accounting method.

In the mere accounting context, goodwill is calculated the amount paid in excess of the fair value of the identifiable net assets for a business acquisition. Why the acquirer is willing to pay more than what he will actually get? Usually, this happened as a consequence of expectations of synergies and economies of scale expected from the combination of the businesses involved in the combination. Basically, goodwill represents the premium paid by the acquirer to obtain control of the acquire and consequently became entitled to all the benefits arising from the integration of the entities. This concept is cliched in the definition of goodwill provided by the current IFRS 3:

“(goodwill) an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized (IASB, 2008)”.

Because of its complexity, goodwill accounting and reporting are often subject to continuous attempt for improvements. From a historical point of view, the biggest step taken from the Board has been the issuance of the new IFRS/IAS regulation in 2004. This change deeply affects goodwill accounting for two reasons. First, abolishing the pooling-of-interests method and requiring the mandatory adoption of the purchase method for the initial recognition of goodwill generated from business combinations (if any). Second, the standards addressed the problem of the subsequent measurement of goodwill. The Board concluded that identified goodwill should have been treated as an indefinite-lived asset, thus subject to annual impairment test rather than periodical amortization over his determined useful-life.

In *figure 1* are summarized the key aspects highlighted so far.

Differences between the pooling method and the acquisition method are easy to identify in the acquirer's balance sheet at the time of the acquisition. Indeed, the pooling method, as spotted in *figure 1*, did not entail step-up of target book value and no goodwill is recognized as result of the transaction, allowing the acquirers to reduce post-acquisition costs related to higher D&A charges. Some proponents of the pooling method argued that the information provided would be a more faithful representation of the business combination with respect to the information provided by the acquisition method. The trade-offs between faithfulness/reliability and relevance/usefulness of information represent the heart of the debate and business combinations and goodwill accounting. The board concludes that using the pooling-of-interests method would have hindered the relevance of the information provided, decreasing their predictive value. The mandatory adoption of the

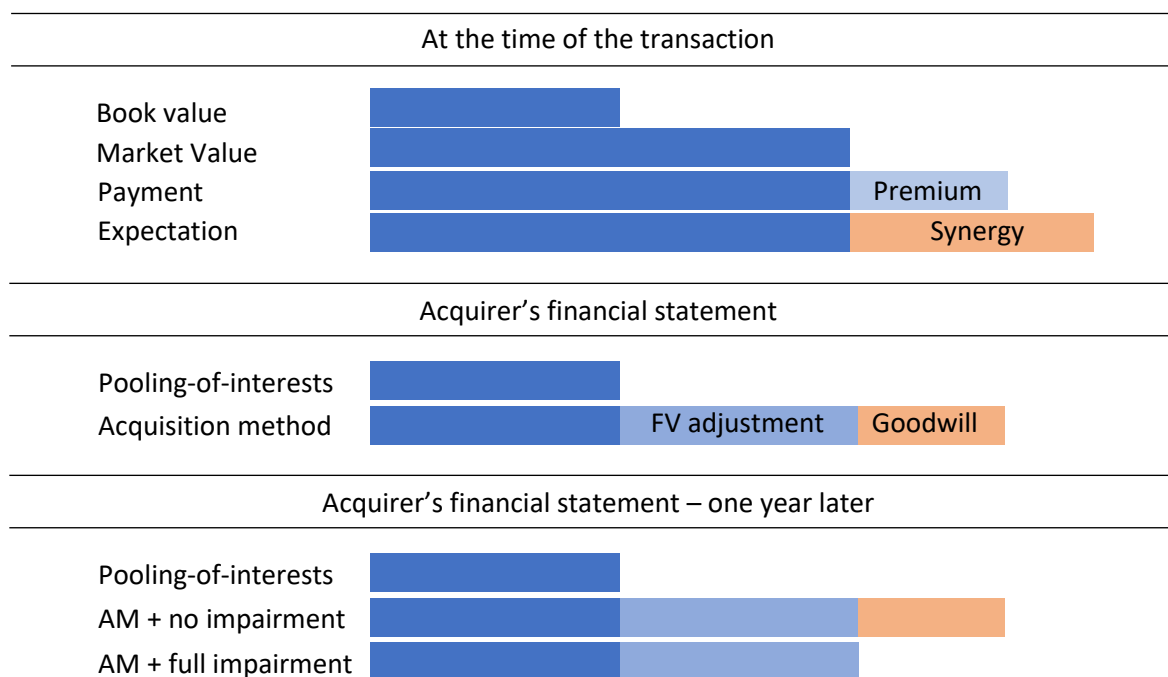


Figure 1 Key aspects of Business Combinations accounting and subsequent Goodwill measurement.

acquisition method clarified the position taken by the Boards, valuing the relevance of information disclosed.

Moreover, the mandatory adoption of the new method addresses the issue related to the comparability of financial statements. Under the previously adopted IAS 22, the preparers could decide on how to account for business combinations. Erasing this element of discretion, the Board enhanced comparability and usefulness of the information provided to external users.

On the other hand, the IASB concluded that IFRS benefits both preparers and users of financial statements, by converging to common high quality, understandable and enforceable accounting standards for business combinations. In the longstanding debate related to business combination accounting, the supporters of the acquisition method, often point detractors' attention on the higher level of information and the usefulness of those information. It requires to identify, measure and report in its balance sheet all assets acquired, and liability assumed, including those intangible assets previously not recognized in the target's balance sheet. This allows users of the financial statement to better assess the initial investment made by the company and its subsequent performance, as well as providing them with the possibility to compare results with those of other

entities. Moreover, beside of the improved disclosure requirements, the informativeness of the acquisition method shall be addressed to the mandatory recognition of net assets identified at their *fair value*. In performing the purchase price allocation, the entity made fair value adjustment to the value of reported items and the opportunity to recognize previously unrecorded assets. The acquirer then records in its balance sheet the assets acquired, and liabilities assumed at their fair value, thus providing information about the market's expectation of future cash flows associated with acquired the acquired items. As result, the financial statement will provide a better representation of what the acquirer bought with the acquisition.

Once again, the main critics moved against the use of fair value is related to the risk that items recognized during business combinations might be value relevant but not reliably measured. Measuring assets not previously reported is a highly subjective task and requires the use of discretion and insights. For this reason, one of the major concerns drafting IFRS 3 was related to the ability granted to the preparers to allocate any excess between the consideration transferred and the fair value of net assets recorded in the target financial statement to identifiable intangibles and, as a residual, to goodwill. This kind of flexibility may lead to opportunistic recognition of assets, driven by personal incentives (liked to remuneration for example) and cost advantages, in terms of lower D&A charges in the acquirer's income statement. Decisions related to the price paid, the method of payment and the initial allocation of the purchase price between net assets and goodwill are relevant also in light of their consequences on debt contracting ability. The recognition of a high portion of tangible assets, or other assets that can be used as collateral, indeed, may result from the incentives of the acquirer to increase their debt capacity.

It is important to mention that, because of the potential initial misallocation of the purchase price as of the acquisition date, also the subsequent measurement of assets reported is affected. This offers the possibility to make a digression on the new accounting treatment of goodwill, which have been already introduced, but not deeply analyzed: the impairment test.

2.4 Subsequent Measurement of Goodwill: The Impairment Test

As already mentioned, the adoption of the IFRS standards, namely IFRS/IAS, affect business combinations, goodwill, and their accounting treatment. Not only business combinations are

required to be accounted for using the acquisition method, with a material impact on the acquirer's financial statement, but even goodwill accounting treatment has been modified. In particular, the adoption of an impairment test system arises many concerns among professionals and preparers, enlarging the longstanding debate related to the effectiveness of the different treatments to account for goodwill.

In general, assets with definite useful life are subject to annual amortization and depreciation, which is charged in the P&L of the entity controlling those assets. Under IAS 22 *Business Combinations*, goodwill used to be amortized on a systematic basis over the best estimate of its useful life, as any other intangible asset recognized in the entity balance sheet. Then, the adoption of the new standard ISA 36, *Impairment of Assets*, forbid amortization of goodwill, in favor of the more value relevant periodic test for impairment. In other words, the objective of this standard is to prescribe the procedure an entity applies to ensure that assets are carried in the financial statement at no more than their recoverable amount, whether through use or sale. If this is not the case, impairment losses must be expensed in the Profit and Losses statement of the entity, and the related disclosure must be provided.

IAS 36 applies, among other assets, to land, buildings, equipment, investment properties carried at cost, investments in subsidiaries, associates and joint ventures, intangible assets, and goodwill. At the end of each reporting period, the entity shall assess whether there is any indication that an asset may be impaired. This requirement is stricter for intangible assets with indefinite useful life and goodwill acquired in a business combination. Indeed, they are tested for impairment annually, and whenever there is an indication that the CGU may be impaired. The complex nature of the goodwill item requires that, for the purpose of impairment testing, goodwill acquired shall be allocated to each of the acquirer's *cash-generating units*¹⁶. Goodwill requires to allocate it to the entity's CGUs because it cannot generate cash-inflows autonomously, hence it requires to be tested in combination with other assets.

To successfully testing goodwill, the recoverable amount of the CGUs to which it is allocated must be identified as the higher of an asset's fair value less costs of disposal and its *value in use*¹⁷. If the carrying amount of the CGU teste for impairment is lower than its recoverable amount, an

¹⁶ Defined by IAS 36, paragraph 6 as "the smallest identifiable group of assets that generate cash inflows that are largely independent of the cash inflows from other assets or groups of assets".

¹⁷ Defined by IAS 36, paragraph 6 as "the present value of the future cash flows expected to be derived from an asset or cash-generating unit".

impairment loss shall be recognized for that unit, for an amount equal to the difference between the two terms. The recognition of the loss reduces the carrying amount of the cash-generating unit first by reducing the carrying amount of any goodwill allocated to that CGU, then to the other assets of the unit pro rata based on the carrying amount of each asset.

Requiring mandatory impairment testing for goodwill and other indefinite useful life intangibles rise some criticism. Even the Board examined different approaches considering the most appropriate accounting for goodwill, evaluating three possible approaches:

- the straight-line amortization approach;
- the impairment-only approach; and
- the possibility to provide the entities with the possibility to choose between the two options.

However, permitting entities a choice between the two different approaches for subsequent measurements of goodwill would have adversely affected the information usefulness and comparability of the financial statements, leading the board to exclude this option. Respondents to the Exposure Draft 3 *Business Combinations* generally supported the adoption of a straight amortization for goodwill, thus ensuring its representation in the P&L statement, avoiding the representation of internally generated goodwill in the balance sheet, allowing an alignment with the measurement approach taken for tangible and intangible assets, and providing an appropriate and practical solution to the problem (*A Guide through IFRS Standards, Part B*, 2016). The board, however, remain doubtful of the usefulness of amortization charges in recognizing the actual consumption of goodwill. Moreover, the value relevance of impairment, with respect to amortization, has been documented and supported also in various researches (Hirschey & Richardson, 2002; Chalmers, Godfrey, & Webster, 2011; Amel-Zadeh, Meeks, & Meeks, 2016). The board eventually reaffirmed its view on the higher usefulness on information provided by the impairment testing and outlined the form impairment test for goodwill should take and the related objective, purpose, and disclosures.

At this point, the accounting system surrounding Business combination and the subsequent goodwill measurement has been unveiled. Entities obtaining control over other entities must comply with IFRS/IAS in order to correctly account for the business combination, prepare the consolidated financial statements and measure in appropriate manner goodwill generated from the acquisition. The standards are deemed, by the issuer, to enhance value relevance of the numbers reported in the financial statements, increasing usefulness for their users, both existing and

potential investors, or whoever have interests in the reporting entity. In taking the decision of issuing this standard, the Board preferred the relevance of the data disclosed to their reliability. These standards heavily rely on fair value valuation, which provides relevant information at the expenses of an uncertain measurement. Beside of the debate on the appropriateness of fair value measurement, what must be highlighted is that both IFRS 3 and IAS 36 seem to provide considerable flexibility to managers of the reporting entity (in general, the preparers of the financial statements), which at the higher extent have to ability to change the outlook of a company by applying their discretion to the application of the standards.

The objective of financial statements is to provide information about the financial position, performance, and changes in financial position of an entity, useful to users in making economic decisions. According to the IASB “*the revised IFRS 3 benefits both preparers and users of financial statements by converging to common high quality, understandable and enforceable accounting standards for business combinations* (p B373, IASB, *The Conceptual Framework for Financial Reporting*, 2010)”. However, even the standards highlighted that the benefits derived from information should exceed the cost of providing it, suggesting that some costs from the adoption of new standards exist, in particular, related resulting from the application of fair value measurement. In business combinations, the PPA enable the acquirer to provide useful information on what has been acquired and the expectations related to the acquisition performance, by adjusting at fair value assets acquired, liabilities assumed and allocating the remaining to goodwill. However, the lack of active market quotation for each asset acquired requires the acquirer to estimate the value of several assets at the acquisition date. In this context, literature provides several examples of incentives that may result in the opportunistic recognition of assets. Other risks are related to the determination of the purchase price. Indeed, some firms may have incentives to overpay the target, both for reputation and capital market concerns. Considering that overpayments are likely to flows into goodwill items, but that there are no specific indicators at the acquisition date that indicate overpayment, the issue is primarily addressed by subsequent impairment testing of goodwill. In this situation, the level of discretion is likely to be much more significant than in any other step of business combinations and goodwill accounting. even if managers must provide disclosure of the impairment procedure, the standards provide them with substantial freedom in identifying CGUs, in allocating goodwill to the appropriate CGU and in determining whether an impairment loss should be recognized.

As result of the significant level of discretion, the entire procedure of goodwill accounting, from its generation at the acquisition-date, the determination of its amount and the subsequent measurement by means of impairment testing, is likely to affect the performance reported by the acquirer in its consolidated financial statement. In particular, the discretion related to goodwill accounting and the potential incentives driving accounting decisions, can generate uncertainty about numbers and result disclosed by the entity. This thesis focuses on these potential adverse effects, resulting from IFRS/IAS's provisions on business combinations and goodwill accounting.

Chapter 3: Literature Review and Hypothesis Development

Goodwill in the accounting context represents the amount paid in excess of the fair value of the identifiable net assets for a business combination. Goodwill has become an increasingly significant asset in the company's balance sheet, often the largest dollar value intangible reported. Because of its prominence and complexity, the standards have revised goodwill accounting and reporting several times, in the continuing attempt for improvement. Alongside with the continuous effort of standard setters to provide high-quality reporting standards on business combination, the debate on goodwill accounting remains today. The longstanding discussion on how to best measure goodwill, how to report it in the company's financial report and the implication of the choices implemented, favored the growth of important accounting literature and empirical evidence.

3.1 Disclosure Requirements and The Contents of Goodwill

Despite the common view that goodwill can be a valuable asset, the concept of goodwill continues to challenge the accounting practitioner. To counterbalance the risks related to a large amount of discretion enjoyed by managers in allocating the purchase price and testing goodwill for impairment, both IFRS and US GAAP mandate extensive disclosure on the acquisition and on the goodwill impairment tests. This countervailing measure is aimed to shall assist the users of the financial statements in evaluating the estimates and assumptions used by managers to support accounting numbers reported. In reality, empirical studies and reports by authorities that companies' disclosures often fail to fulfill these objectives. Hayn & Hughes (2006) criticized the quality of disclosure requirements implemented by SFAS 142, suggesting that investors should get better and more detailed information, thus enabling the effective assessment of goodwill value and the complete traceability of goodwill acquired.

In this context, it is relevant to mention the contribution provided by Shalev (2009). The author, once recognized the increasing relevance of business combinations and their impact on the acquirers, shedded light on disclosure in such transactions. His analysis suggests that disclosure level decrease with the abnormal allocation of purchase price to goodwill, which in turn is associated with overpayment and/or overstatement of goodwill when initially measured. These

findings are consistent with the idea that managers tend to communicate good news but withhold or delay bad information. These results are corroborated by empirical evidences showing that firms lower future performances are associated with the abnormal portion of purchase price allocated to goodwill at the acquisition date. Specifically to business combinations, data gathered by the author show that only 13% of the acquirers disclose the factors contributing to the recognition of goodwill. Furthermore, only 43% disclose the breakdown of intangible assets into different classes, while almost 57% do not provide separate disclosure of assets and liabilities assumed. It is also relevant to highlights that only 33.7% of the business combinations considered disclosed the related purchase price allocation. Substantial non-compliance on disclosures required by IFRS 3 and IAS 36 has been identified by Glaum, Schmidt, Street, & Vogel (2013), affecting the ability of market participants to compare and interpret financial statements' information.

In order to provide a definition of goodwill from a more practical perspective, Giuliani & Brännström (2011) analyzed how companies describe goodwill in relation to disclosed acquisition under IFRS 3 regime. Their findings show that in spite of the attempt of the new standards to make goodwill a clearer accounting object, it continues to keep its "black box" nature. Companies in their sample, in the majority of the cases, defined goodwill acquired as a *residuum*, a plug-number, hence as the simple difference between the price paid and net assets acquired. Results and the pieces of evidence provided by this work show that even if goodwill, in practice, is considered an asset, its content remains hidden, as companies disclosures fail to provide a clear definition of this accounting item. Consistently with these findings, considering the importance that financial information has for investment decisions and the large impact of business acquisitions on financial statements, ESMA (2014) identified that disclosure improvement is necessary. In particular, the authority concluded that disclosures related to goodwill and impairment testing were, in many cases, of a *boilerplate* nature (ESMA, 2014, p. 3), thus not firm-specific. Likewise, KPMG (2014) recognized the importance of improving the quality of disclosure required by the standards in relation to the impairment-only approach. Moreover, the survey pointed out the different perspective of entities and analysts. While the formers believe that disclosures required are sufficient, the latter would like to see enhanced disclosures about goodwill impairment. The review also highlighted that most companies and the majority of regulators suggest the reintroduction of straight-line amortization of goodwill, because of its simplicity, prudence and reduced reliance on subjective assumptions and estimates.

While the concept of goodwill and its contents are not so immediate, an accounting definition of purchased goodwill can be identified. However, given its complex nature, goodwill accounting has been subject to continuous reviews, in order to improve the framework employed to account for it, and often has been treated differently among different accounting standards and across times. Recent literature and researches shed the lights on more “practical” aspects of business combinations and goodwill accounting.

3.2 Discretion and Value Relevance in Accounting for Goodwill

The introduction of IFRS 3 substantially increased the amount of goodwill reported in the financial statement of the adopting entities. Indeed, in their analysis of the accounting consequences of the adoption of the new standards, Hamberg, Paananen, & Novak (2011) found a substantial increase in the amount of goodwill capitalized. Under the Swedish GAAP, goodwill reported was, on average, half of the amount reported from 2005 thereon and, thanks to the systematic amortization of goodwill at the year-end, the amount reported was decreasing steadily. With the adoption of IFRS 3, the option for its retroactive implementation and the disappearing amortization of goodwill, the year subsequent the mandatory adoption of the IFRS 3 the amount of goodwill reported by Swedish listed firms examined was almost doubled, and it took only three additional years to completely double the amount reported in 2004. Even if quite shocking, the sharp increase of capitalized goodwill was not surprising. Indeed, while these results are partially attributable to larger acquisition occurred the years following the mandatory adoption of IFRS 3, the main explanation is the newly adopted standard itself. The data provided by Chalmers, Godfrey, & Webster (2011) and the aforementioned Hamberg et al. (2011) highlight the substantial changes in the entities’ financial report, as result of the mandatory adoption of the acquisition method in combination with the impairment-only approach. This latter aspect has been criticized and debated for a long time, and so it is today. As shown by the authors, under thanks to goodwill amortization, combined with impairment testing when necessary, goodwill capitalized in the balance sheet of the companies under examination decreased gradually. This was not the case under the impairment-only regime. Observing these numbers, it is easy to understand why the method for subsequent measurement of goodwill is central in many researches. Before the introduction of IFRS 3, firms had the possibility to choose between the pooling-of-interest method and the purchase method. The

latter was requiring to the acquirer to amortize goodwill arising from the acquisition over its useful life, while under the former one the assets of the two entities were combined at their book value, avoiding the recognition of any goodwill. The well-known concern related to reporting lower earnings in the periods after the acquisition often lead the acquirers to adopt the pooling-of-interest method when possible¹⁸. Replacing the old accounting practice with the mandatory application of the acquisition method, this time without the requirement to amortize goodwill, has been criticized because of the incentives that this approach creates, in particular, related to the discretion on determining goodwill.

The evolution of accounting standards on business combinations and goodwill accounting was driven by the desire of both FASB and IASB to increase the usefulness of information reported. In considering the appropriate accounting for acquired goodwill, supporters of the straight-line amortization approach put forward some arguments against the impairment test approach. First, they argued that acquired goodwill is an asset that is consumed and replaced by internally generated goodwill, which is forbidden by the accounting standards (IAS 38, paragraph 48). In their opinion, while testing goodwill acquired for impairment did not ensure that internally generated goodwill was recognized as an asset, amortization charges effectively expense goodwill in the entities' income statements, avoiding acquired goodwill to be replaced little by little with internally generated goodwill. Second, testing goodwill for impairment would have been inconsistent with the approach adopted in accounting for other assets with definite useful life. Conceptually, supporters of the straight line amortization found no reason for treating goodwill differently. Third, goodwill amortization over an arbitrary period provides an acceptable solution to account for an asset whose useful life and value consumption cannot be either known or predicted with satisfactory reliability. The Board acknowledged these critics, remained doubtful about the usefulness of amortization charges to reflect goodwill consumption, especially in a setting in which internally generated goodwill is not recognized. Finally, the Board concluded by affirming that rigorous impairment test would provide more useful information to users of an entity's financial statements. Indeed, testing goodwill for impairment differently from systematic amortization, should better represent the consumption of goodwill by the entity and adequately measure it in the

¹⁸ Pooling-of-interest was designed for so-called "mergers of equals". Business combinations did not qualify for the application of the pooling method, thus they had to be accounted for using the purchase method. In light of the advantages granted by the pooling method, evidence from prior researches suggests that managers, in order to avoid expensive amortization charges, were willing to pay a premium to use pooling (Ayers, Lefanowicz, & Robinson (2002) quoted in Shalev, Zhang, & Zhang, 2013).

financial statement by testing the recoverability of its carrying amount. The decision of the regulators has been surrounded by several academic works. Despite the reasonable concerns related to opportunistic behavior, which can incentivize earnings management practice, eventually corrupting accounting numbers integrity, reliability and relevance, some authors sustain the superior *value relevance*¹⁹ of goodwill impairment versus goodwill amortization charges.

Under the impairment regime, goodwill is first allocated to each of the acquirer's cash generating units that are expected to benefit from the synergies of the combination, then the recoverable amount of the CGU is compared to its carrying amount. Finally, the impairment loss is detected when the recoverable amount is below the carrying amount of the CGU tested. The criticisms moved against the impairment test arise from the measurement and nature of the recoverable amount. Indeed, reporting entity often identify the recoverable amount as the *fair value in use* of the CGU being tested, which heavily relies on future cash flow estimates and managerial assumptions. As argued by some supporters of more conservative accounting (Watts, 2003), estimate and managerial discretion make the recoverable amount prone to manipulation, decreasing the likelihood that subsequent measurements of goodwill would be associated with expected cash flows. Jarva (2009) address this concern. His study examined whether goodwill write-offs are associated with expected cash flows, as suggested by Board's claims. The author failed to find pieces of evidence that impairment decisions are driven by the opportunistic behavior of managers. As result, consistently with the claim of the standard setters, he found that goodwill write-offs have significant predictive power for the expected cash flows, confirming that impairments are more closely associated to economic factors than opportunistic behavior.

Like both IASB and FASB, Chalmers, Clinch, & Godfrey (2008) support the idea that goodwill impairment regime better reflects the underlying economic value of goodwill than an amortization. Their work provides empirical evidence suggesting that the adoption of new accounting treatment for intangibles provides incremental information for investors about goodwill. Their investigation of the association between Australian firms' share prices and intangibles and goodwill assets,

¹⁹ Value relevance, or simply relevance, of financial information refers to the ability of information reported to "making a difference in the decisions made by the users", which is when "if it [financial information] has predictive value, confirmatory value or both" (IASB, The Conceptual Framework for Financial Reporting, 2010). Kargın (2013) defined value relevance as "the ability of information disclosed by financial statements to capture and summarize firm value" Since value relevance is a matter of predicting outcomes and/or providing feedbacks on previous evaluations, it can be measured through the statistical relations between information reported in the financial statements and the stock market values or returns.

comparing pre- and post-IFRS period, provided interesting results. Specifically, they suggest that the approach introduced by IFRS to accounting for goodwill (i.e. impairment test) has more relevance on to firm valuation than the previously adopted amortization approach. Interestingly, the documented increasing explanatory power of goodwill under impairment regime cannot be extended to intangible assets. Indeed, under IFRS, intangibles reported are unable to provide information beyond that already contained in the pre-IFRS measure. Gjerde, Knivsflå, & Sættem (2008) suggest that, as a result of IFRS adoption, it is possible to observe increased value relevance of the balance sheet and net operating profit reported by Norwegian firms. In particular, as Chalmers et al. (2008), the increase value-relevance can be explained by the differential reporting treatment of intangible assets, requiring goodwill to be tested for impairment at year-end rather than be expensed through amortization. In their opinion, extending the scope of fair-value measurements resulted in higher value-relevance for balance sheet reported according to IFRS. Similarly, Lee (2011) affirmed that eliminating amortization and favoring fair-value estimates, improved representation faithfulness of goodwill reporting, significantly increasing its value relevance and predicting power.

The adoption of the IFRS in 2005 inspired many studies on the effects of the new reporting standards on both capital markets and financial reporting itself. IFRS 3, IAS 36 and IAS 38, in particular, significantly affects the adopting firms, and thus requires to be examined more closely. Differently from Chalmers et al. (2008) and Gjerde et al. (2008), whose studies examine the value relevance of earnings and/or balance sheets, the study by Aharony, Barniv, & Falk (2010) additionally examined the value relevance of particular accounting items, including goodwill. The authors focused their analysis on goodwill because of the significant changes implemented by IFRS in accounting for it in accordance with the new requirements. Their findings support the adoption of the new accounting standards, providing empirical evidence of increased value-relevance of goodwill as a result of the elimination of the amortization regime, consequently favoring goodwill impairment test. The value relevance of intangible assets and goodwill reported by adopting firms has been addressed also by Oliveira, Rodrigues, & Craig (2010). Their study suggests that, in the pre-IFRS period, value relevance of accounting information has decreased principally because of the amount attributable to unreported intangibles. The authors explore the impact on value-relevance resulting from the adoption of IFRS in 2005 by Portuguese's firms. Consistently with prior studies, the results confirm the higher value relevance of goodwill, as well as of other intangibles when considered in subclasses. These findings are also fundamental to corroborate the

evidences suggesting that goodwill subject to impairment is valued more realistically, and therefore be associated more closely with market prices (Al Jifri & Citron, 2009).

Evidences provided by Li, Shroff, Venkataraman, & Zhang (2011) show how both investors and financial analysts' expectations would be affected by the announcement of impairment losses. The study examines the reaction of market participants to the announcement of impairment, the nature of the information conveyed by the loss and whether the loss can be traced back to the initial overpayment. As suggested by other researches, impairment losses may convey private managerial information and future cash flows' estimates to investors. Notwithstanding, impairment losses may also be useless, because the information conveyed by the reported loss may reflect impairment occurred in prior periods, or because the information content of the loss has been reduced as result of the subjectivity inherent to its estimation procedure. To address this doubt, the authors tested whether goodwill impairment has informative content. The results show that announcement-period market returns are negatively correlated with unexpected goodwill impairment losses, thus consistent with the hypothesis that goodwill write-offs communicate valuable negative information, and that investors revise downward their expectation as a result of these bad news. These findings are corroborated by additional findings by the authors. Additional results suggest that impairment losses are significantly and negatively associated with future earnings and performances. Indeed, impairment loss appears to be a leading indicator of a decline in future profitability, due to slowing down of sales and/or increase in operating expenses, maybe due to unachieved expected synergies from the acquisition. Overall, Li et al. (2011) suggest that investors are able to correctly evaluate the negative pieces of information contained in goodwill impairment losses, revising their expectation in order to reflect the expected deterioration of firm performance both in terms of sales growth and operating profitability.

Consistently, Amel-Zadeh, Faasse, Li, & Meeks (2018) obtained results suggesting a strong market reaction to impairment communications. Their analysis on UK firms predicted that each pound of impairment charge translates into more than one pound of decline in market value, consistent with the idea that impairment, thus goodwill reduction, carries bad news in term of future earning. Moreover, under IFRS 3, the reported amount of goodwill is more relevant. Indeed, the coefficient attached to newly acquired goodwill is positive and significant, thus it has a positive effect on stock prices, which at the same time confirms that the initial recognition of goodwill in the acquirer's balance sheet provides the market with relevant information.

It is possible to conclude that, based on the empirical pieces of evidence of past studies, the discretion granted by current accounting standards seems to contribute to value-relevance of accounting numbers resulting from business combinations is consistent with the claim made by standard setters, suggesting that fair-value estimates are used by managers to convey private information on future cash flows. On the other hand, the disclosure provided are often not timely, difficult to verify and subject to managerial opportunistic behavior, suggesting that the substantial discretion granted may have adverse effect on goodwill accounting.

3.3 Impairment Tests, Discretion, and Managerial Opportunistic Behavior

Several authors criticized current standards on business combinations and goodwill accounting. This thesis already mentioned the high discretion granted to managers during the purchase price allocation process, highlighting the effect of the different accounting treatment of goodwill, which is now tested for impairment to assess the recoverability of the carrying amount at year-end. In this scenario, where goodwill is not systematically expensed in the entities' P&L statement, managers are incentivized to overallocate the price paid on goodwill. Moreover, incentives behind managers' decisions are even stronger considering that impairment procedure relies heavily on managerial estimates and assumption, which are hard to verify and audit. Considering all these findings, it is likely to theorize that the results of goodwill impairment test are significantly affected by managerial choices since managers will use their discretion when goodwill is initially recognized, when allocating goodwill to the entity's CGUs and when building the estimation model to carry out the impairment tests.

Testing goodwill for impairment enables firms to assess the recoverability of the amount reported. In other words, test results confirm whether future benefits from the acquisitions are achievable, while the recognition of an impairment loss should signal uncertainty about future cash flows of the firm. For this reason, the ability to make independent evaluations of goodwill's value is important for investors. Forbidding amortization of goodwill, favoring impairment-only approach, may incentivize managers to report the maximum amount of goodwill even if its economic benefits had expired. This concept is central in Hayn & Hughes (2006), which tried to address the predictability of goodwill impairment, eventually providing pieces of evidence consistent with the exercise of managerial discretion in timing goodwill write-offs. Indeed, order to meet certain

objectives, managers tend to delay goodwill write-offs, which lags behind the deterioration of goodwill for significant years. This is not surprising, given the high flexibility granted by the impairment test procedure.

Beatty & Weber (2006) specifically studied the adoption of the new accounting standards, addressing the potential opportunistic behavior driving managerial choices in recording goodwill write-off during the transaction year. As suggested by Watts (2003), the authors were worried about the potential for manipulation offered by goodwill accounting and its first adoption by reporting entities. As result of managers' flexibility in allocating goodwill to the appropriate CGUs and determining their recoverable amounts, the author suggests that the probability of recording any goodwill write-offs and its amount were highly affected by reporting discretion. In accordance with these statements, managers will take accounting decisions on the basis of their preferences and incentives. In particular, the probability to record impairment losses was greater for firms with wealth covenants affected by accounting changes. The likelihood of recognizing impairment is also increasing with the market concern of the firm, while it decreases when the compensation plans do not explicitly exclude special items. Moreover, results suggest that firms with more growth options are unlikely to take a write-off. Even if the results of this research are limited to the effects of managerial incentives on recognition of impairment losses during the transaction-year from SFAS 121 to SFAS 142, the evidences confirmed that, under the impairment-only regime, goodwill accounting decisions are prone to manipulation.

As already mentioned, Ramanna (2008) suggests that the adoption of the impairment-only regimes can be explained by the advantages in term of increased discretion granted. Moreover, according to the authors, managers saw such increased discretion as a device to exploit to act opportunistically, as suggested by the agency theory. These findings are consistent with subsequent work by the author (Ramanna & Watts 2008). The view shared by the authors is in contrast with to the perspective suggesting that managers will use their discretion to convey their private information to the market, enabling a better evaluation of future cash flows which are expected from the reporting entity. Under the new regime, goodwill reported relies solely on management estimates of its current value, calculated as a function of future managerial decisions, strategies, and actions. While the reliance on managers' assumptions should provide goodwill reported with significant value-relevance, as suggested by the Boards and by several academic researches, it is undoubtedly difficult to verify and audit. Since goodwill represents rents expected from the acquisitions, capitalizing this item in the balance sheet of the acquire requires to estimate the

expected cash inflows. Estimation exercise is likely to involve subjective assumptions, which is particularly true in case of goodwill. First, because of the uncertainty of future cash flows related to goodwill, since the realization of rents depends on several unpredictable factors. Second, moral hazard might be involved. While managers' effort is likely to affect the realization of expected rents, but it is impossible to objectively assess whether the failure in realizing the expected synergies after the acquisition was due to management actions. Thus, providing managers with discretion over the goodwill estimation is likely to result in opportunistic behavior by managers. The debate on discretion has been subsequently addressed by Ramanna & Watts (2012), whose work empirically tests the two hypotheses behind how managers will use their discretion in goodwill estimation. Results do not support the hypothesis of private information, while they found significant evidences in line with the agency-based prediction. Managers avoid timely goodwill write-offs when they have the incentive to do so, not surprisingly the results identified association between goodwill non-impairment and CEO compensation, CEO reputation, CEO tenure and debt covenant violation concerns, consistent with several findings by prior studies (Beatty & Weber, 2006; Detzen & Zülch, 2012; Lhaopadchan, 2010; Shalev, Zhang, & Zhang, 2013; Zhang & Zhang, 2015). Write-off decisions, on the other hand, are not significantly associated with proxies of private information, specifically showing that there was no significant association between future returns of non-impairers and share repurchase and net insider buying. Overall, the results highlighted the potential costs of the new accounting treatment of goodwill, while did not provide any evidence of the beneficial effect of the use of unverifiable fair-value estimates.

The adverse impact of the impairment-only approach on both the accounting for goodwill and its evaluation has been recently examined by Li & Sloan (2017). The authors disagree with the statement of the statements of the Boards, claiming the improvement of financial reporting as a result of the new accounting standards. In their opinion, new rules may actually worsen financial reporting, because of the elimination of goodwill amortization and because of the well-known discretion granted to managers. Consistently with Hayn & Hughes (2006), the recognized significant delay in recognizing goodwill impairment, which became less timely under the impairment approach as a result of the incentives provided by the new standards. The authors suggest that managers are likely to exploit the subjective and unverifiable nature of estimates when running the impairment test. The fear of the adverse market reaction that usually follows impairment losses and the incentive provided by the possibility to boost reported earnings, prevent the timely recognition of goodwill write-offs under the impairment-only regime with respect to

goodwill amortization. Results are inconsistent with the claim that goodwill impairment should better reflect the underlying economics of goodwill itself, suggesting that goodwill is more overvalued at the time of the impairment-only regime. On the other hand, the pieces of evidence provided are consistent with prior studies on opportunistic behavior, suggesting that the decision to avoid goodwill write-offs are driven by managerial incentives.

In general, the bidding company is expected to acquire substantial goodwill as a result of an acquisition. While there is not a systematic method to provide the acquirer with the right price to be paid, it is possible to argue that the price paid should be lower than the fair value of net assets acquired plus the value of expected synergies. In other words, the acquirer must carefully evaluate assets, liabilities and expected benefit to come out with the correct evaluation of the target, in order to avoid any overpayment. When this is not the case, and the price paid exceeds the benefits arising from the benefits that are expected to flow from the merger, it is likely to expect that the acquirer would suffer future goodwill write-offs. Academics often argue that, when firm's shares are overpriced, it is beneficial for its shareholders to buy, and even overpay, to acquire businesses, as long as the acquirer's shares are more overvalued than the target ones²⁰. In this context, practitioners argue that goodwill write-offs represent a non-event, just simple accounting routine. In contrast with this thought, Gu & Lev (2011) argue that, while a certain amount of goodwill can be expected, impairment losses cannot be automatically predicted. Indeed, when the target firm is priced correctly so that the value of perceived synergies is higher than the purchase price, there will be no goodwill write-offs. The authors focused on the main causes that lead overvalued firms to acquire businesses and the implications of such write-offs, and finally provided with evidence that goodwill represents a significant event, signaling a bad investment strategy. The data suggest that when the consideration given is composed of stocks, goodwill and acquisition intensity increase with share overpricing. The regression confirms that goodwill from an acquisition is positively and significantly associated with overpricing indicators. Even the coefficient attached to managerial ownership is positive, suggesting that managers might have some incentives to engage in acquisitions and even to overpay for the target. Not surprisingly, goodwill is also positively associated with indicators of lax corporate structures. Moreover, overpricing indicators are negatively associated with future returns, suggesting that overpayment negatively affects post-

²⁰ This is the result of the model of corporate acquisition based on investors' misvaluations of the merger partners, proposed by Shleifer & Vishny (2003). Assuming inefficient financial markets, firms are valued incorrectly. On the other hand, rational managers understand market inefficiencies and consequently act taking advantage of them.

acquisition returns. This negative relationship exists even when post-acquisition performances are measured by accounting variables rather than market ones. The authors also found that lower future returns are associated with goodwill write-offs. Moreover, both the amount of goodwill acquired and acquirer's overpriced shares are deemed to have an important contribution in predicting future goodwill impairment. Overall, these findings confirm that goodwill impairment is significant a event, and the identified negative effect of the acquisition on firm performances corroborate the initial idea that many acquisitions are ill-advised, results of bad investment decisions, either related to overpayment or strategic misfits.

Among the findings reported by Gu & Lev (2011), it is interesting to highlight how the amount of goodwill acquired is deemed to be a major indicator of future impairment. Olante (2013) subsequently addressed business combinations, looking for a powerful determinant of post-acquisition impairment losses. This study hypothesized that the cause of many goodwill write-offs is that the target firms were often overpaid at the time of the acquisition, rather than the deterioration of the performance at CGU levels. When engaging an M&A activity, it is possible to expect that the acquirer will pay a premium over the value of net assets acquired. However, when the purchase price exceeds the value of the target plus the expected value flowing from the merger's synergies, the acquirer is overpaying for the target business. The author suggests that overpayment triggers the recognition of components other than core goodwill in the balance sheet. Since goodwill represents the value of future benefits arising from the business combination, like synergies, economies of scales, lower cost of capital and the going-concern value of the target entity, if other elements are included, it is unlikely that goodwill would be able to represent faithfully the underlying economics of the acquisition. Results obtained corroborate the initial hypothesis. Indeed, overpayment indicators have significant explanatory value in predicting future impairment losses. Moreover, consistent with Gu & Lev, the indicators via which the author represents goodwill acquired in the business combination are significant. These pieces of evidence are also suggesting that managers are more prone to overpay for the target, consistent with Shleifer & Vishny (2003) and with the implicit assumptions of the already mentioned work by Gu & Lev.

Recently, Yehuda, Vincent, & Lys (2017) examined whether goodwill resulting from an acquisition represent an economic asset, in other words, whether goodwill represents faithfully represent the underlying economics of the transaction. To reach their objective, the authors estimated the expected economic profit of each deal studied, suggesting that in a transaction with an expected economic benefit for the acquirer, economic profit and goodwill are positively

correlated. On the other hand, when the market reacts negatively to the acquisition, hence expecting economic losses, the association between the loss and goodwill is negative, probably as a result of the overpayment. Further evidences suggest that goodwill could be able to predict future performance. Indeed, when economic profits are expected, the association between future operating profitability and goodwill is positive. Conversely, when the acquisition is expected to result in an economic loss, accounting goodwill is not associated with future performance. However, by adjusting accounting goodwill for the expected loss predicted by the market, the new indicator of goodwill has better predictive capabilities for future operating performances. Moreover, accounting goodwill and expected economic losses are associated with future impairment charges, while expected economic profits are significantly negatively related to the probability of impairment. These results interestingly suggest that, even if the market may not always be correct in its assessment of a business combination, the aggregate expectation of market participants tend to outperform the management evaluation of the acquisition and of the related synergies.

Overall, prior studies provided evidences consistent with the criticisms moved against the new goodwill accounting approach, based on the acquisition method and the impairment-only regime. managers are likely to exploit their discretion in both initially recording goodwill (Lhaopadchan, 2010; Shalev, Zhang, & Zhang, 2013; Zhang & Zhang, 2015) and testing goodwill for impairment (Beatty & Weber, 2006; Hayn & Hughes, 2006; Ramanna & Watts, 2012; Li & Sloan, 2017). Empirical evidences suggest that capital market concerns, investors' fixation on reported net income, CEO compensation, CEO reputation, CEO tenure, and debt covenant violation concerns are usually the main drivers behind managerial opportunistic behavior. Even if the adoption of IFRS/IAS framework have provided more complete disclosures on business combinations and goodwill accounting, evidence suggests that some improvements are still needed. The empirical results obtained from previous works claim that, as a result of the absence of amortization charges on goodwill and the higher discretion inherent to the impairment test procedure, managers are likely to overstate goodwill in order to reduce amortization charges on the consolidated net income. On the other hand, accounting for a high portion of goodwill is likely to significantly affects the likelihood suffering impairment losses in the subsequent period, thus creating uncertainty on the expected results that will be reported by the entity. Indeed, if growth expectations will not materialize and the performances indicate that goodwill must be written-off, the risk of reporting large losses due to goodwill impairment increases. This thesis decided to investigate the impact of goodwill reported on the decision to impair goodwill capitalized in the balance sheet. Large

goodwill acquired and reported could lead the entity to large write-offs. The matter studied is important because differently from amortization, impairment charges are not predictable and their size could significantly affect the performance of the reporting entity, as in the GE example in chapter 1. Indeed, reporting high goodwill could be a signal of bad decisions and bad investment strategies, and when those strategies fail to provide the value expected, goodwill is written-off after being tested for impairment. As a result, managers may be reluctant to write-off goodwill, and they may employ their discretion in order to avoid giving the impression that the acquisition made was a bad investment decision. Consistently, several studies suggested that large amount of goodwill can be used as an indicator for the overpayment at the acquisition date (Hayn & Hughes, 2006; Shalev, 2009; Li, Shroff, Venkataraman, & Zhang, 2011; Gu & Lev, 2011; Olante, 2013; Amel-Zadeh, Faasse, Li, & Meeks, 2018). Moreover, the discretionality involved in testing goodwill for impairment and the non-systematic basis on which impairment losses are recorded adversely affect the predictability of Net Income reported, increasing the uncertainty of future results. To address this issue, hypothesis one is:

HP 1a: firms reporting a larger amount of goodwill (pre-impairment) in their balance sheet are more likely to avoid impairment losses.

Similarly, considering the material effect that large goodwill write-offs will have on the company performance, in particular the stock market performance, it is likely that firms reporting larger amount of goodwill will use the discretion granted in running the impairment test on goodwill to smooth the potential negative effect of the loss identified. This thesis provides a second hypothesis addressing the effect of accounting discretion on impairment testing results:

HP 1b: firms reporting a larger amount of goodwill (pre-impairment) in their balance sheet are more likely to record lower impairment losses (in relative terms).

3.4 IFRS/IAS, Fair-Value Accounting and Discretion

In the current standards, substantial agreement on the treatment of goodwill has been reached by the issuance of new accounting standards and the continuous effort toward improvement made by standard setters. In particular, the joint project undertaken by FASB and IFRS, ended with the issuance of the new standards, represent a significant step in accounting for business combinations

and goodwill. Indeed, the introduction of IFRS 3 and IAS 36 by the IASB, and of SFAS 141 and SFAS 142 by the FASB, provide the preparers with a more “homogeneous” set of regulations, definitions and approaches to be applied, enhancing the comparability and reliability of the information reported in the financial statements issued by the adopting firms. These changes are part of the Board project toward implementation decision-useful accounting standards. For this purpose, the standards enlarge the scope of fair-value measurement. As a result, substantial discretion has been introduced in both purchase price allocation and goodwill accounting.

As already mentioned, the introduction of the new standards has profoundly changed the accounting for business combinations and for goodwill under both US GAAP and IFRS. Specifically, they mandated the application of the acquisition method to account for a business combination, addressing the issue related to the initial recognition of goodwill. In addition, in order to address the problem related to the subsequent measurement of goodwill, IFRS and SFAS abolished the amortization of goodwill, in favor of an impairment-only approach, which should provide financial information that faithfully reflects the economic impact of acquired goodwill, when adequately implemented. Despite the benefits advocated by the Boards, the changes resulted from the adoption of the new accounting standards have been criticized by professionals and adopting firms. The risks of mixing goodwill generated arising from business combinations with internally generated goodwill, the burdensome impairment test that entities are required to carry out annually and especially the high discretion granted to the management are some of the main critics moved against the acquisition method and the impairment-only approach. The, at least initially, weak consensus generated by the new standards, favored the development of a rich literature, devoted to the study and analysis of business combinations and goodwill accounting.

With the issuance of IFRS 3 (subsequent to the issuance of SFAS 141), the IASB substituted historical-based measures with fair value-based measures, with the intent of increase decision usefulness of information, providing a better understanding of the underlying economics of the business and of the acquisition. The abolition of goodwill amortization and the subsequent implementation of the impairment-only approach lies on the same concept. The argument moved against the standard is that mixing fair-values and high managerial discretion may raise some issues in terms of reliability of reported information, as well as encouraging opportunistic behavior. The concept of the optimality of providing managers with discretion over the financial reporting choices have been introduced by Demski, Patell, & Wolfson (1984), based on their belief that managers’ access to superior and private information will improve the organization’ contracting and decision-

making opportunities. However, several authors subsequently provide evidence that, in practice, managerial contracts and flexibility of valuation may not be fully optimal, and may erode the quality of the information disclosed. Beatty & Weber (2006), for example, support this incentive-driven decision-making. Specifically, their work shed light on the treatment of goodwill and the impact of the adoption of SFAS 142, in particular regarding the timing and placement of goodwill charges²¹. They exploited the implementation of the new standard as a “historical experiment”, finding evidence suggesting that management preference over the accounting treatment of goodwill were driven by incentives related to market concerns, debt contracting and compensation. Consistent with these findings, Ramanna (2008), while focusing on the uses of fair-value estimates to account for goodwill, suggests that the unverifiable discretion under the new accounting standards can be used opportunistically on the basis of the *Agency Theory*²².

The changes brought by the movement of the standards entailed higher reliance on fair-value measurement. Holthausen & Watts (2001) argue that fair-value can increase the likelihood of opportunistic disclosure, if not based on actively traded market prices, hence not verifiable. Consistently, according to Watts (2003), these changes discarded the benefits of *conservatism*²³ accounting, in favor of an accounting system based on managers’ estimates. While it is true that managers do have private information, the author sustains that it is unlikely that they will provide any advantage over a market of informed participants. The paper furtherly address goodwill accounting. The calculation of goodwill is linked with managerial evaluation of the identifiable net assets acquired. In assessing the fair value of the net assets acquired, managers are required to identify and measure, among the others, intangible assets previously unrecorded in the target’s balance sheet. This process entails substantial discretion and the development of unverifiable fair-value estimates, that are more subject to manipulation and, accordingly, poorer measures of the real underlying economics of the target. In its study on fair-value accounting and treatment of

²¹ All charges taken against goodwill within the first year the company adopts the new approach, namely SFAS 142, may be written off as result of an accounting change, obtaining below-the-line treatment, avoiding charges on reported earnings. After the adoption year, goodwill impairment charges must be considered as an operating expense, therefore reflected as a reduction to earnings.

²² The author assumes that managers are responsible for firm decisions: if managers’ incentives are not perfectly aligned with those of shareholders, firm decisions will reflect managers’ interests. Jensen & Meckling (1976) which firsts studied agency theory integrated with the ownership structure of the firm, suggests that the interests of the owners are likely to be different from those of the management. In particular, while the owners want to increase the value of their stake, managers want to be paid more.

²³ Conservatism is defined as “*the differential verifiability required for recognition of profit versus losses* (Watts, 2003, p. 207)”, in its extreme form “*anticipate no profit, but anticipate all losses*”. The author recognizes the importance of conservatism, in addressing the verification-problem inherent to value estimates.

intangible assets, Lhaopadchan (2010) concludes that, despite the alleged benefits associated the new accounting standards, accounting decisions related to goodwill are affected by managerial interests and earnings management concerns.

The brief literature review made so far shed the light on the substantial discretion that the new standards on business combination provide to managers, focusing on the purchase price allocation and on the use of fair-value estimates involved in such procedure. Identifying and then measuring assets acquired and liabilities assumed requires managers to develop unverifiable estimates, which are prone to manipulation. The agency theory suggests that managers will exercise their discretion and, subsequently, taking accounting decisions, based on their own interests and personal incentives. Considering these concerns, Shalev, Zhang, & Zhang (2013) specifically addressed the relationship existing between management compensation packages and purchase price allocation. Their study provides empirical evidence of the effect on accounting decisions of managerial concern over their salary. The different implications on future earnings resulting from the allocation of the price paid on different classes of asset are likely to impact CEO compensation. Accordingly, earnings-based bonus plans, compared with other forms of compensation, provide a stronger motivation for CEOs to overstate goodwill. These results are consistent with those provided by Detzen & Zülch (2012). Examining the relationship between CEOs' short-term cash bonuses and the amount of goodwill recognized in acquisitions, with increasing cash bonus intensity managers were likely to recognize more goodwill. Once again, agency theory and the higher flexibility granted under IFRS are considered relevant determinant of these results. Indeed, rather than using their discretion to convey relevant and useful information in the financial statements, managers are more likely to act opportunistically. Given the differential treatment of goodwill versus other intangibles, managers exploit the discretion granted for the initial recognition to overstate goodwill balance, subsequently increasing, in the short-term, the reported net income. Interestingly, the authors found that the association between management's earnings-based compensation and goodwill allocation is non-linear. Indeed, they argue that below a certain threshold, cash bonuses are not expected to affects goodwill recognition, as managers did not expect additional gain from overstating goodwill.

Findings on managerial incentives and purchase price allocation have been reinforced in subsequent studies. Zhang & Zhang (2015), in a scenario of high relevance of fair-value measurements and the higher flexibility granted on accounting decision, as result of the introduction of the new accounting standard, provided pieces of evidence of the effect of the

different treatments of goodwill and other intangible assets. According to the authors, amortization of intangibles imposes tighter constraints on managers' accounting discretion if compared with the test of goodwill impairment. Thus, in order to avoid an excessive charge on reported earnings and the subsequent reduction of their remuneration, managers might decide to use their discretion to overstate goodwill at the acquisition date, avoiding mandatory amortization and increasing reported earnings in the short-term. On the other hand, overstating goodwill substantially increases the likelihood of facing unexpected impairment, affecting long term reported earnings, expected earnings' volatility, and compensation (Shalev, 2007). Managers are likely to face a trade-off between the benefits and costs of overstating goodwill for short-term and overstating other intangible assets for long-term reporting. Consistent with the theory supporting managerial opportunism, the results show that managers will prefer to overstate goodwill when the likelihood of future impairment is low. In other words, managers and/or preparers of the financial statement are more likely to overstate goodwill during the allocation of the purchase price when they believe that, by means of discretion granted in testing goodwill for impairment, they will be able to hide future write-offs. Zhang & Zhang (2015) contribute to goodwill accounting literature specifically addressing the concerns over goodwill allocation. While several studies take the amount reported as given, focusing on the subsequent measurement of goodwill, Z&Z considered whether the initial measurement of goodwill was correct, whether goodwill could be over or understated. Their results show that, apart from high discretion that management seems to have in the purchase price allocation process, acquirer characteristics²⁴ and CEO age are significant determinants of goodwill allocation. For example, firms with higher market-to-book ratio are more likely to overstate goodwill, considering high ratio as a characteristic associated with high managerial discretion. The same hold for the verifiability of acquirer's assets. The study provided also with marginal empirical findings on external appraisers, whose activity seems to have only a limited effect on managerial discretion. Finally, the authors compared the results obtained from the analysis of the periods before and after the mandatory adoption of the new accounting standards. The comparison suggests that the association between purchase price allocation and management incentives, as a result of the differential treatment of goodwill with respect to other intangible, is unique under to the new accounting standard.

²⁴ The authors refer to characteristics of the acquirer identify by Ramanna (2008) as the indicator of higher discretion in accounting for goodwill.

Substantial evidences have been provided by empirical researches on business combinations and goodwill accounting, often suggesting contrasting point of view on how manager use their discretion. Some authors argue that the flexibility granted by new accounting standards will be used by preparers to pursue their own interests, disregarding shareholders' ones. In contrast, others argued that the adoption of the acquisition method, the impairment test, and fair-value accounting provided managers with enough discretion to convey private information, thus significant information, to enhance the usefulness disclosures and accounting numbers reported. Investors use public information already available to continuously revise their expectations about future earnings and cash flows. In order to consider the effect of goodwill impairment on investors expectation, it is necessary to compare goodwill impairment that is expected by investors and goodwill impairment disclosed by managers. To ensure an accurate revision, however, more detailed information about managers' decision to impair, or not, goodwill are required, thus information beyond public information and additional disclosures are fundamental for investors. Some academic researchers suggest that the introduction of the new accounting standards, managers would exploit their higher discretion to communicate useful private information to the users of the entity's financial report. However, it is well-known that managers will avoid the disclosure of some information, namely private information, because costly to disclose and because hiding some private information reduce proprietary costs (Schatt, Doukakis, Bessieux-Ollier, & Walliser, 2016). In addition, other studies highlighted the low quality of company disclosures under IFRS 3 and impairment-only regime (Hayn & Hughes, 2006, Shalev, 2009; Glaum, Schmidt, Street, & Vogel, 2013; ESMA, 2014). In this setting, does goodwill accounting and goodwill impairment help investors in forming and revise their expectations?

Both supporters and detractors of the new accounting standards believe that, in a way or in another, goodwill and goodwill write-offs have a significant impact on the market. In other words, users will react to the disclosures made by the entity in relation to the goodwill and its subsequent measurement under an impairment test regime. Even with evidences confirming reactions to the impairment decisions, some doubt remains on whether information and additional disclosures are or not evaluated correctly by investors.

In this context, Shalev (2009) contributed significantly to M&As and goodwill accounting literature, in particular, focusing on the effects of the disclosure provided. Its work suggests that, on average, that both performance and market returns are positively associated with the disclosure made in relation to business combinations. Interesting but somehow not surprising, one of the

determinants of the disclosure level is, accordingly to the author and the results obtained, the level of the purchase price allocated to goodwill. Indeed, the pieces of evidence suggest that the level of disclosure would be lower when the acquirers abnormally allocate the purchase price to goodwill. Specifically, abnormal goodwill could be generated by overpayment of the target and/or opportunistic overstatement of goodwill. These findings were interpreted as a result of the opportunistic behavior in disclosing information, which predicts that managers disclose positive information, or “good news”, while they withhold negative information, or “bad news”. In accordance with this theory, managers are likely to avoid substantial disclosures of less favorable acquisition, fearing the reaction of the market to the disclosure of such bad news. In other words, when the acquirer opportunistically overallocates the price paid to goodwill and when he pays too much for the target company, the level of the disclosures decreases. Investors, however, did not fully internalize the information into its expectation once released. Conversely, Hamberg, Paananen, & Novak (2011) provide evidences suggesting that investors react to the increased reported earnings resulting from IFRS 3 adoption. Findings suggest that managers are likely to overstate goodwill to minimize amortization expenses and that investors, correctly or incorrectly, respond to the reported earnings’ increase. The authors initially hypothesized that new accounting standards are able to affect the market (i.e. the stock prices) if one of the following statements is true. First, the stock market should react when investors incorrectly interpret an increase in earnings, indeed created by lower the absence of goodwill amortization chargers, as an indicator of higher future cash flow. The second possibility suggests that the stock market should react when investors perceive that the impairment-only regime provides more relevant information. The authors highlighted how goodwill-intensive firms yield higher abnormal returns compared to those of no-goodwill firms, and that this difference is significant. Then, after adjusting returns in order to remove the effects of disappearing goodwill amortization, goodwill intensive firms still yields higher returns, even if their abnormal earnings are lower if compared to those of firms which reporting no goodwill. Overall, this study provides useful evidences of market reactions as result of IFRS 3 adoption, even if it did not provide a clear answer on whether such market reactions were truly driven by investors perceiving the higher value relevance of the impairment approach.

The tension created by the trade-off between relevance and reliability of accounting information, in particular, related to the potential alteration of the informative content of goodwill and goodwill impairments, is the driving motivation behind several researches and studies. Bens, Heltzer, & Segal (2011) examined the relationship between goodwill impairments and stock returns, in order

to provide evidences of whether new accounting standards indeed altered the information content of goodwill write-offs. The results of the study suggest that the information conveyed by goodwill write-offs²⁵ is significant over the sample period analyzed. Not surprisingly, the association between stock returns and the unexpected impairment is negative and significant, in particular when the firm reporting goodwill impairment is deemed to implement efficiently impairment tests and when information asymmetries between the market and the firm exist. However, even if significant, the reaction of the market to the impairment is weakened under the new accounting standards. The authors argue that this lower information content is the result of the complexity of applying the new requirements and high managerial judgment.

Other pieces of evidence have been provided by Hamberg & Beisland (2014), whose study examined the effects on the value relevance of the new accounting treatment of goodwill in Sweden, investigating the association between security prices and goodwill reported after the adoption of IFRS 3. The authors, in line with other researchers, expect that both information and opportunistic motivations would affect the amount of goodwill initially recognized and the impairment test. As a consequence, they also expect that those motivations will affect the relationship between goodwill and stock prices. Results provided by this study suggest that straight-line amortization alone is not associated with stock returns in the pre-IFRS period. However, considering separately the effects of amortization and impairment charger in the amortization plus impairment regime (Swedish GAAP), goodwill impairment resulted negatively and significantly associated with stock returns. The result obtained from the examination in the period after the adoption of the impairment-only approach surprisingly found that goodwill impairment is less associated with stock returns. While the relevance of goodwill impairment disappeared with the introduction of IFRS 3, the amount of goodwill capitalized is significantly associated with stock prices in both the accounting regimes. The authors addressed the decreased value relevance of impairments as a result of managers opportunistic decision making. Indeed, if managers would have used their discretion to convey more relevant information, the reaction of the market would have been negative and significant after the adoption of IFRS 3. Overall, this study which is not consistent with the claimed superior information relevance on the new accounting standards,

²⁵ To more accurately capture the effects of goodwill impairment, the authors designed a model to determine the expected impairment, suggesting that the difference between the expected and the actual impairment represents write-off surprises or unexpected goodwill write-offs. Since it is likely that some of the effects of impairment are impounded into the stock price before the recognition of the impairment itself, the authors isolated the unexpected impairment charge and used it as the main explanatory variable.

concluding that write-off decisions are likely to be explained by personal incentives rather than by performance deterioration at CGU level.

Evidences suggesting that discretion granted by new accounting regime might have affected market perception of goodwill and impairment charges is provided by Li & Sloan (2017). The authors suggest that managers are likely to exploit their discretion to delay the recognition of impairment losses. As result, when goodwill is not written-down as needed, the amount reported in the balance sheet is likely to overstate its real underlying economics. Moreover, even if the analysis shows that stock prices are at least partially able to anticipate impairment, it also highlighted that investors are incapable to effectively and fully anticipate delayed impairments. This misrepresentation of goodwill balance in the financial report, combined with the inability of investors to fully anticipate unrecognized impairment eventually results in temporarily inflated share prices. These results are inconsistent with IASB's claim that goodwill accounting under IFRS better reflects the underlying economics of goodwill.

Some studies addressed the association between new accounting standards and M&A performances. Concerns are related to the excessive reliance of estimates on managers' judgment in valuation models, cash flow forecasts and discount rates, thus increasing the opportunities for managers to manipulate the data to obtain results favoring their own interests. The availability of such opportunities may influence how managers represent performance after an acquisition, eventually preventing shareholders of the acquirer from obtaining any benefit from the acquisition. Acquisitions are common phenomena, typically implemented by firms to pursue internationalization strategies, to expand their scope or achieve new resources. These activities have been extensively debated at both the academic and the regulatory's level because of their impact on the acquirer, which often goes beyond the mere operating sphere of the firm. The increasing significance of those activities required standard setters to implement and review how these activities should be accounted for. The collaboration between the IASB and the US GAAP provided accountants with high-quality standards, which shall enable them to effectively and efficiently account for business combinations. Moreover, the Boards claims the usefulness and relevance of such accounting standards, which serving the interests of the users of the financial statements and responding to their need for more informative financial information. However, this accounting revolution heated the longstanding debate on business combinations as never before. This thesis is not aimed to provide empirical evidences on whether M&A activities do or do not generate value, it rather focuses on the method by which adopter of the new accounting standard,

namely those issued by International Financial Reporting Standards, account for those extraordinary activities.

As suggested by previous studies, the adoption of the IFRS 3 and IAS 36 drastically changed how acquirers must account for business combinations, how they must deal with, and account for goodwill purchased. While goodwill is considered an asset, and as such it enters in the acquirer's balance sheet, its nature and concept are still unclear. Goodwill can definitely be considered an asset when its core components are considered, namely the fair-value of the going concern component in the target and the fair-value of synergies that are expected to arise from the combination of the two companies. However, the newly adopted IFRS 3 does not prevent the risk that other elements, different than the core components, might flow into the goodwill account. This risk would significantly affect the relevance of goodwill account, dampening its to provide relevant information about the acquisition and its underlying economics. Other arguments moved against the new standards are related to IAS 36, in particular to the method that the standard setter mandate for subsequent goodwill measurements. The abolition of amortization, favoring the annual impairment test of goodwill, exacerbated the trade-off between relevance and reliability of accounting numbers. Literature provides contrasting evidences of the effects resulting from the adoption of the impairment-only approach. Some authors sustain the claim made by the IASB, others argue that the new standards, which seriously rely on fair-value estimates and managerial discretion, actually reduced both relevance and reliability of goodwill accounting.

The high flexibility granted to managers in taking accounting decision, the extensive uses of fair-value estimates and, last but not least, the implication of testing goodwill for impairment are the reasons behind the belief that goodwill accounting could be used by managers to pursue opportunistic objectives. Indeed, managers are granted with substantial discretion and judgment in performing both purchase price allocation and goodwill impairment tests. During the purchase price allocation, managers may face the incentive to overstate goodwill to avoid excessive amortization charges, thus reporting higher net income. Performing the impairment test requires managers to allocate goodwill to each CGU that obtain benefits from it and forecast cash flows to estimates the recoverable amount of each CGU. The whole process relies on management assumptions and expectations, moreover, the results are difficult to audit and verify, increasing managerial incentives to act opportunistically and pursuing personal interests or reporting objectives.

Pieces of evidence obtained so far identified significant economic effects of the discretion involved in goodwill accounting. In particular, previous works highlighted the adverse effects of managerial incentives and other indicators of market concerns on the accounting decisions related to goodwill. This work is focused on the potential effect of the high discretion that standards grant to managers in allocating goodwill generated from an acquisition, and it is aimed to provide a direct association between the decision made on the early stage of the business combination accounting and the post-acquisition performance. The thesis will try to trace the effect of goodwill acquired as result of a specific acquisition and subsequently associate it with the earnings reported in the subsequent periods. From the knowledge obtained by literature surrounding goodwill accounting, it is easy to conclude that managers are likely to face a trade-off between short-term benefits and potential long-term costs when making decisions on the allocation of the purchase price. Especially, as result of the absence of amortization charges on goodwill and the higher discretion inherent to the impairment test procedure, managers are likely to overstate goodwill in order to reduce amortization charges on the consolidated net income. It is important to provide empirical evidence that some short-term reporting benefits exist as a result of the large allocation of the purchase price to goodwill. Prior studies provided found that private incentives, in general, may affect the initial measurement goodwill. The empirical results obtained from previous works, for example, claim that as a result of the absence of amortization charges on goodwill and the higher discretion inherent to the impairment test procedure, managers are likely to overstate goodwill in order to reduce amortization charges on the consolidated net income. Besides the incentives supported by remuneration concerns and managers or CEOs' reputation, capital market concern and reporting objectives might play an important role in the allocation decision. The common opinion is that goodwill reported is relevant, and as such, it is valued by the investors. On the other hand, estimation exercises involved in the purchase price allocation is difficult to verify and to audit, providing room for manipulation and decreasing the usefulness of information on contained in goodwill generated from the acquisition and then reported. In relation to the issue related to opportunistic behavior that managers may implement in accounting for goodwill to obtain personal benefits, it is relevant to observe whether, as result of an acquisition, the amount of goodwill recognized does or does not affect the net income reported by the entity. The second hypothesis developed then is:

HP2: discretionary allocation of a large portion of the purchase price to goodwill positively affects net income reported in subsequent periods.

Chapter 4 will provide the method implemented to test the two hypothesis and a description of the sampling methodology, moreover providing a brief overview of the sample selected. The results will be reported and commented in Chapter 5.

Chapter 4: Sample Selection and Research Method

4.1 Goodwill Capitalized and Impairment Losses Under IFRS 3 and IAS 36

The first hypothesis (HP1) to be tested links the decision of the entity to recognize impairment losses and the amount of goodwill capitalized. The logic behind this hypothesis is simple: firms that acquired a large amount of goodwill are more likely to have substantially overpaid for the target acquired. As the synergies expected fail to be realized, goodwill is written-off to as an adjustment for the misevaluated acquisition and the consequently overstatement of goodwill. Fearing the potential adverse effect that large impairment losses will have on both reported and capitl market performance, firms with substantial goodwill acquired and reported are likely to use they dicretion to avoid or delay the recognition of the loss.

In order to tests HP 1a, the study implements a simple OLS regression to study the decision to reduce goodwill amount by recording an impairment loss at the year-end. For each firm in the sample, the decision to impair or not to impair goodwill is associated with the amount of goodwill recorded, controlling for the performance of the firm and the financial structure. *Table 1* provide the list and a brief description of the variables used. The regression model is reported below:

$$(1a) \quad IMP(0,1)_i = \alpha + \beta_1 * GW_TA_i + \beta_2 * ROA_i + \beta_3 * LEV_i$$

Where the subscripts i represents the individuals observed, hence the acquirers. The thesis analyzes the relationship that exists between the decision to recognize impairment losses and the amout of goodwill reported for the period following the acquisition. Thus, the regression is runned 3 times, from t to $t+2$, where t represents the year in which the acquisition occurred. The hypothesis will be confirmed if the regression will return a positive and significant coefficient β_1 . Conversely, coefficient β_2 is expected to be negative and significant because attached to the variable ROA, which controls for the performance of firms analyzed (similarly to the model presented in Hamberg, Paananen, & Novak, 2011).

Variable	Description
IMP (0,1)	The dependent variable represents the firm's decision to write-downs goodwill, equals 1 if the firm recorded an impairment loss in a given period, and equals 0 otherwise.
GW_TA	The explicative variable of interest is the ratio between the total amount of Goodwill capitalized before impairment charges and the total amount of Assets reported at year-end.
ROA	Explicative variable controlling for the operating performance of the firm computed as Net Income over Total Assets reported in a given year.
LEV	Explicative variable controlling for the financial structure of the firm computed as the ratio between the total amount of Liabilities and Total Equity.
IMP_TA	The second dependent variable, representing the impairment recorded by the firm, it is computed as Total Impairment over the Total Assets as reported.

Table 1. Variables used to test HP1 through the panel regression.

To test hypothesis HP 1b and to obtain further evidence on this matter studied, the thesis introduced another variable representing the amount of the impairment loss recognized, namely the variable IMP_TA (see table 1). Running the regression where the variable IMP(0,1) is substituted by the new dependent variable, the thesis aims to obtain more evidences confirming the existence of a negative relationship between the impairment decision and goodwill capitalized. The second regression is reported below:

$$(1b) \quad IMP_TA_i = \alpha + \beta_1 * GW_TA_i + \beta_2 * ROA_i + \beta_3 * LEV_i$$

The same assumptions and expected results of regression (1a) hold for regression (1b).

4.2 Purchase Price Allocation, Goodwill and Net Income Under IFRS 3 and IAS 36

The second hypothesis (HP2) tested focuses on the deals performed at year t . In particular, this study is aimed at providing evidence of an association between the allocation of the purchase price to goodwill and the future performances of the firm, represented by the net income reported at year-end.

In order to tests HP2, the study implements an OLS regression, using the appropriate indicator to measure the acquirer performance as the dependent variable, and an indicator of goodwill acquired from the busienss combination as main explicative variables. For information, in order to test hypothesis HP2 several indicators of goodwill acquired at the acquisition date have been identified and used as main explicative variable, for example considering the ratio between goodwill acquired and the acquirer's total assets, as well as the ratio between the goodwill acquired and the most recent value of the target total assets. Unfortunately none of them was providing significant results except for the ratio between goodwill acquired and the price paid as reported in the acquirer financial statement (variable GWA_TA). The list of variables is provided in *table 2*. As a reference, all data used have been collected from the acquirers' financial statements, thus as reported at the end of the year. For the purpose of this study, the effect of goodwill on net income is tested for the periods t , $t+1$, and $t+2$, thus enabling to observe the effect of the specific business combiantion in the periods following the acquisition. The dependent variable is then tested unsing the OLS regressions reported below:

$$(2a) \quad NI_i = \alpha + \beta_1 * GWA_PP_i + \beta_2 * GW_TA_i + \beta_3 * IMP_TA_i + \beta_4 * DA_i + \beta_5 * OPEX_i + \beta_6 * SAME_IND_i$$

Where the subscript i represent the acquirer. HP2 will be confirmed if the main explicative variables related to goodwill acquired at the acquisition date affects significantly the reported net income in the three periods observed.

Variable	Description
NI	The dependent variable computed as the ratio between the Net Income recorded at the end of year t and the amount of Total Assets.
GWA_PP	The third explicative variable of interest computed as the ratio between the amount of Goodwill Acquired and the Purchase Price paid at the acquisition date.
GW_TA	Explicative variable controlling for goodwill already capitalized in the acquirer's balance sheet computed as Total Goodwill over Total Assets reported at year-end.
IMP_TA	Explicative variable controlling for the impairment charges recorded by the entity, computed as the total amount of Impairment Losses over Total Assets reported at year-end.
DA	Explicative variable controlling for the D&A charges recorded at year-end by the acquirer computed as Total D&A over Total Assets.
OPEX	Explicative variable controlling for the operating expenses recorded at year-end by the acquirer computed as Total Operating Expenses over Total Assets.
SAME_IND	Dummy variable, controlling for the impact of an acquisition carried out between entities belonging to the same industry, it takes value 1 in this case, 0 otherwise.

Table 2. Variables entering the OLS regression used to test HP2.

4.3 Sampling Methodology and Data Description

The objective of the thesis is to identify the relationship that exists between the acquisition and its effect on the future performance of the acquirer, studying the association between goodwill arising after the purchase price allocation and net income reported. To achieve this objective, the analysis required to identify a sample of firms which recently engaged M&A activities from an appropriate time frame which shall enable to gather sufficient data on the post-acquisition phase. To keep things

as simple as possible, this study focuses only on business combinations that are accounted for using the acquisition method and in accordance with IFRS 3, excluding in fact adopter of SFAS 141 and SFAS 142. This decision has been taken in order to avoid the potential differences and inconsistencies that could arise by studying business combinations among different, even if similar, accounting systems. Related to this choice, the sample selection focused on firms belonging to the four major countries in the European Union, namely France, Germany, Italy, and Spain.

The sample selection procedure has been conducted in two different steps. The aim of the first step is to obtain a large list of deals whose general characteristics are accordant to those listed above. The sample has been selected starting from the results obtained the Zephir database, an information solution offered by Bureau van Dijk, containing M&A, IPO and venture capital deals. The deals selected are those completed in on and after 01/01/2012 and up to and including 01/01/2018. Given the objective and the nature of the studies, only business combinations among currently listed or previously delisted acquirers and targets have been selected. Finally, this initial part of the sampling process has been concluded including deals completed only if the acquirer or target or vendor were located in France, Germany, Italy, and Spain. The results of the first step are reported in *table 3*.

Research Criteria	Search Result
Time period: completed on and after 01/01/2012 and up to and including 01/01/2018	638,047
Country: Acquiror or Target or Vendor from France, Germany, Italy and Spain	71,725
Companies characteristics: Acquiror and Target both listed and delisted	2,309
TOTAL	2,309

Table 3. Results from the first step of the sampling procedure.

The second step of the sample selection consists of an accurate skimming procedure to come up with the final sample of firms. To do so, it is important to shape the selection procedure in order to obtain a sufficient number of deals with the appropriate characteristics and sufficient data to implement the analysis. To ensure the relevance of the deals examined, any deal below a relevant threshold has been eliminated from the sample. For this study, consistent with other empirical

researches, the threshold selected is EUR 10mln, thus only deals which entailed the payment of a purchase price higher or equal to the threshold are considered. In order to obtain a homogeneous sample, all the financial companies have been excluded, as well as any investment made by investment funds. Given that the scope of this research is limited to acquisitions accounted in accordance to the principles issued by IASB, the sample has been revised in order to eliminate all the transactions in which the acquirer was not an adopter of IFRS. This basically excluded from the sample all the acquires incorporated in the US, China, Japan, and Russia. In accordance to the objective of the research, any transaction other than acquisition has been eliminated, like capital increase, share buyback, and transaction identified as business combinations of entities under common control because not within the scope of IFRS 3. Considering that only the acquisitions of the controlling stake are eligible for the application of the acquisition method as required by the standards, the final sample does not consider acquisition which did not entail an exchange of control. Finally, the deals completed from after and including 01/01/2016 have been excluded, since the method applied requires the collection of at least two years data disclosed in the acquirer's financial report. *Table 4* reports the final results of the sampling procedure.

Research Criteria	Search Result
Result from the first step	2,309
Value Constraint: elimination of all the deals where consideration transferred is below EUR 10mln	1,400
Accounting standards: only IFRS adopter are included in the sample	578
Elimination of financial companies	321
Elimination of deals outside the scope of IFRS 3 (BCUCC, minority acquisition, share buyback and capital increase)	93
SUBTOTAL	93
Incomplete disclosures of the acquisition in the acquirer Annual Report	59
FINAL SAMPLE	59

Table 4. Second step of the sampling procedure and result.

Unfortunately, the elimination of deals for which the standards do not require the adoption of the acquisition method, thus those for which goodwill do not arise, significantly reduced the size of the sample. Moreover, several acquisitions were not adequately disclosed in the acquirer financial report, usually because disclosed in aggregate with other non-material transactions. This further problem reduced the final sample to 59 deals, reported and disclosed in accordance with IFRS and completed within the period 01/01/2012-31/12/2015. According to the final sample of deals, French companies are the most active in the M&A market, with 20 deals completed in the four year period. The target company usually did not belong to the four countries specifically highlighted (see *figure 2* for reference).

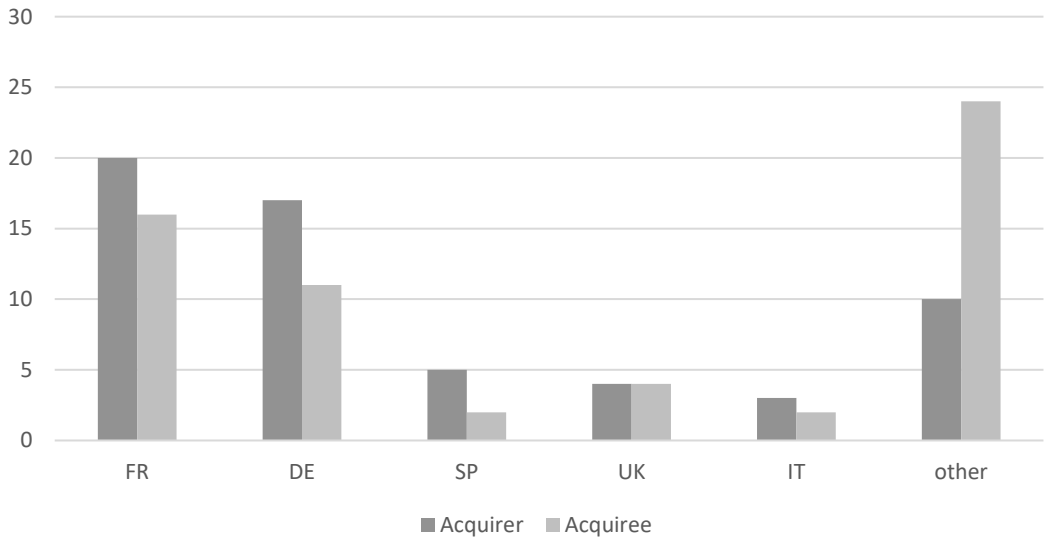


Figure 2. Number of acquirers and acquirees reported by Country.

The higher number of transactions is registered in 2015, with 24 completed acquisition. Considering the *Standard Industrial Classification* (SIC) for classifying the entities engaging business combinations, the acquirers operate in the manufacturing industry and in the services business in the 55.9% of the cases. The division of the sample by industry is reported below in *figure 3*.

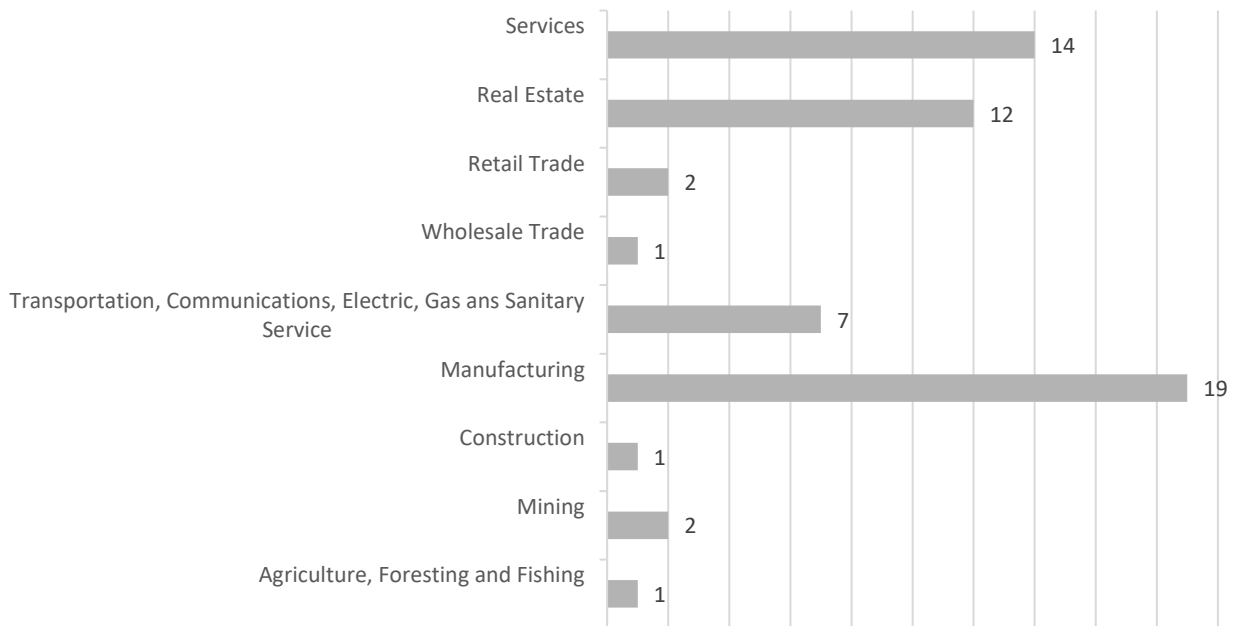


Figure 3. Numbers of deals reported by the main industry, defined on the basis of the acquirers' SIC code.

From a more thorough analysis, 62.7% of the deals are transactions between entities operating in the same major industrial segment, while 59.3% of the deals are cross-border transactions, thus completed among entities primarily addressed in different countries. By analyzing the number reported for the deals, it is possible to notice that, on average, the acquirer is 23.6x²⁶ times the target company, where the multiple is obtained as the value of total assets of the acquirer over the total assets reported by the acquiree.

Now it is possible to analyze the decision taken by the acquirer concerning the initial allocation of the purchase price. Unfortunately, the scope of this analysis is limited to the decisions taken in relation to goodwill. Indeed, the large majority of the firms belonging to the sample avoid the disclosure of separate intangibles identified at the acquisition date, thus limiting the possible inference that can be done on the observed PPA. Moreover, the revised IFRS 3 eliminated the previously required disclosure of the target's carrying amount, because the benefits of disclosing those pieces of information to users were lower than the costs of providing them. Since the acquirers are not obliged to provide information on the carrying amount before the acquisition,

²⁶ 23.6x is the multiple obtained by excluding from the calculation the acquisition performed by AstraZeneca (AZN) and Amadeus IT Holding (AMS). For these two companies, the multiple calculated was so high that including them in the provided average would have provided misleading information on the average structure of the sample.

they usually avoid to voluntarily disclose it, again limiting the initial analysis on the allocation of the price paid.

Despite the limitations resulting from the types of information disclosed, it is still possible to provide an interesting description of the M&As' market. Considering the information available in the entities' annual reports, among the 59 acquirers only four of them lead to the recognition of goodwill equal or below 0. This data is not surprising, because in general, the acquirers are willing to pay a premium over the value of the target's equity in exchange of the controlling stake. The average consideration transferred is equal to EUR 1,762.77mln, while the median value amounts to EUR 623.8mln. The large difference between the average value and the median value are attributable to the different size of the acquisitions contained in the sample. The maximum value observed amounts to EUR 18,277.53mln, which is the consideration paid by Holcim Ltd in 2015 to acquire the French company Lafarge SA, while the lower value observed equals EUR 17.05mln. Moreover, there are 22 deals whose consideration transferred exceed one billion, 14 of them are above two billion and eventually, 8 of them also exceed also the four billion threshold.

Like what is observable for the purchase price, also the amount of goodwill varies significantly. The average goodwill generated stands at EUR 968.55mln, while the median value equals EUR 232.59mln, ranging from a lower bound equal to EUR 3.79mln²⁷ to a maximum amount equals to EUR 10,892.59mln, again recorded by Holcim Ltd in its annual report. The most relevant data reported in absolute terms are summarized in *table 5*.

	Average	Median	Max	Min
Consideration Transferred	1,762.77	623.8	18,277.53	17.049
Goodwill Capitalized	968.55	232.59	10,892.59	3.79 ²⁸
Intangible Assets Identified	480.52	87.00	5,872.60	0.00
Net Assets Acquired	825.32	200.00	7,384.94	-435.36
Impairment Loss ²⁹	63.31	0.00	902.48	0.00

Table 5. Most relevant data on the acquisitions examined (absolute terms).

²⁷ Excluding the deals that incurred in the recognition of zero goodwill or that realized a bargaining purchase.

²⁸ Excluding acquisition in which goodwill acquired was equal or below zero.

²⁹ Refers to the total impairment losses related to the acquisitions under examination in the year of the transaction and the following two years. It is calculated summing the impairment losses recognized in the three periods observed.

Even if useful in order to obtain an understanding of the extent and the relevance of goodwill, data reported in absolute terms provide little or no information at all on the decisions made at the acquisition date. Indeed, more pieces of information are provided by considering goodwill acquired in relative terms, as a percentage of the purchase price. The ratio representing goodwill acquired as percentage of the purchase price paid confirms that, on average, a large amount of the consideration transferred (52.6%) is allocated to goodwill during the purchase price allocation. By associating goodwill acquired and M&A activities among firms belonging to the same industry, the data suggest that the acquirer reports more goodwill (55.6%) as a percentage of the purchase price when the target purchased belong to a different industry (49.2% when they operated in the same segment). Similarly, cross-border business combinations reported a higher percentage of goodwill over purchase price (53.7%) with respect to business combinations concluded among firms incorporated in the same country (48.3%). From the scrutiny of the purchase price allocation procedures reported by the acquirers in their financial statements, it has been possible to obtain some information also on other intangibles, separable from goodwill, recorded at the acquisition date as emphasized by the standards. Even if, in the majority of the cases, the purchase price allocation did not provide relevant disclosure on intangibles acquired, some acquirers identify and disclose the subclasses of intangible assets acquired. From the data available, the acquirers usually recognize trademarks, tradenames or brands, customer base and other customer-related intangibles, developed technologies and in process R&D, software, concession rights, licenses, and patents. However, as already mentioned, most acquirers do not provide disclosure of the specific classes of intangibles acquired. Moreover, nine transactions of the sample examined did not identify any intangible as a result of the purchase price allocation. These considerations are not aimed at addressing the decisions made in relation to intangibles recognition, and these evidences cannot be considered relevant in supporting the idea that firms avoid identifying or to provide specific disclosure of intangibles acquired for opportunistic purposes³⁰. On the other hand, these evidences

³⁰ The idea that managers may opportunistically use their discretion to minimize the allocation of the purchase price to intangible assets relies on the idea that, by doing so, higher goodwill will be identified, and subsequently lower amortization charges will be reported in the subsequent years. If we assume that providing relevant disclosures on intangible assets identified is a proxy of high-quality PPA, then it is likely to expect a lower amount of goodwill arising from the business combination, as result of the higher effort exerted by the acquirer to allocate the price paid to separately identifiable assets. In contrast to this plausible expectation, data obtained from the sample of deals observed show that on average, firms that provide separate disclosure for each class of intangibles, on average, also recognize the higher amount of goodwill. Indeed, while the whole sample. The difference between

at least support the idea that the purchase price allocation and the identification of previously unrecorded assets are costly for the acquirer. From these data, it is possible to identify the amount of net tangible assets acquired, by subtracting the value of net assets acquired the value of intangible assets recognized. On average, the net tangible assets acquired represent only 19.2% of the total purchase price paid.

In their financial statements, the preparers are required to provide sufficient and appropriate information related to both business combinations and impairment test procedure. Thanks to the disclosure provided, it has been possible to observe whether goodwill acquired from the acquisition examined has been subject to write-offs after being tested for impairment. Acquirers allocated goodwill to one or more CGU and test the recoverability of their value annually. From the analysis emerged that only 18.6% of the acquirers (11 firms) recorded impairment losses related to the acquisitions examined in the year of the acquisition and in the subsequent two periods. Among the impairers, three written-off the entire amount of goodwill related to the acquisition within the second-year post-acquisition. The summary of the key data is reported in *table 6*.

For the purpose of this research also other data from the acquires have been extrapolated by the companies' financial statements. Data gathered goes from two years prior to the acquisition year up to two years following the acquisition. To facilitate the representation of those data, the time

	Average	Median	Max	Min
Goodwill Acquired	0.526	0.481	1.794	0.073 ³¹
Intangible Assets Identified	0.329	0.266	1.426	0.000
Net Tangible Assets Acquired	0.192	0.088	1.691	-1.230
Impairment Loss ³² (scaled by goodwill acquired)	0.091	0.000	1.000	0.000
<i>considering only impairers</i>	<i>0.478</i>	<i>0.409</i>	<i>1.000</i>	<i>0.136</i>

Table 6. Most relevant data on the acquisitions examined scaled by the purchase price (except for Impairment Loss)

the subsample reporting specific disclosures on intangibles and the subsample that did not do so is statistically significant at 20% level ($z=1.34$).

³¹ Excluding the deals that incurred in the recognition of zero goodwill or that realized a bargaining purchase.

³² Refers to the total impairment losses related to the acquisitions under examination in the year of the transaction and the following two years. It is calculated summing the impairment losses recognized in the three periods observed.

frame would be composed of the five periods from $t-2$ to $t+2$, which is two years before and after t , the acquisition year.

Table 7 provides the summary of the main data collected for each year. Implementing a five-years timeframe enable to observe the pre-acquisition period, the post-acquisition period and the period

	t-2	t-1	t	t+1	t+2
Total Assets	12,630.15	13,412.88	16,661.25	17,255.85	17,669.05
<i>YoY Growth</i>		6.20%	24.22%	3.57%	2.39%
Total Goodwill	2,297.13	2,350.01	3,312.05	3,360.08	3,383.60
<i>YoY Growth</i>		2.30%	40.94%	1.45%	0.70%
Total Goodwill/Total Assets	17.34%	16.88%	20.41%	20.42%	20.39%
<i>variance</i>	0.0255	0.0244	0.0225	0.0235	0.0235
Impairment	17.94	43.51	43.69	40.41	57.46
<i>YoY Growth</i>		142.53%	0.41%	-7.51%	42.19%
Impairment/Total Goodwill	0.48%	0.91%	2.47%	4.18%	4.47%
<i>variance</i>	0.0002	0.0011	0.0152	0.0513	0.0336
Net Income	580.46	573.34	592.65	684.1	683.19
<i>YoY Growth</i>		-1.23%	3.37%	15.43%	-0.13%
Net Income/Total Assets	4.07%	3.81%	3.85%	3.63%	4.04%
<i>variance</i>	0.0083	0.0158	0.0026	0.0031	0.0027

Table 7. Key average data gathered from the acquirers in the sample.

in which the transaction occurred. Data show that the average value of total assets increased for the whole period observed and, not surprisingly, the growth rate rises steeply from period $t-1$ to period t , as a result of the acquisition. Like *Total Assets*, also the *Goodwill* increased in each year, eventually reporting an amount of capitalized goodwill in period $t+2$ which is 67.9% higher than the amount reported at $t-2$, mainly as effect of the acquisition at time t . Data highlight the relevance of goodwill in term of value reported. As a result of the acquisition, goodwill capitalized grew up to 20.41% of the total assets reported by the acquirer. Data reported in table 7 seem to suggest that goodwill reported as the percentage of total assets is not subject to roller-coaster changes both within the same period and among the five years (except for the acquisition year). A huge difference is also observable when dividing each entity by their industrial segment, in fact *Real Estate*

companies report on average goodwill amounting to 2.7% of the total assets recognized in the balance sheet, while companies in the *Services* industry report goodwill up to 31.3% of their total assets. Differently from goodwill, *Impairment Charges* vary widely within each period considered, which is not surprising given its discretionary and firm-specific nature.

Similarly, the average value of impairment charges, both in absolute terms and in relative terms scaled by total goodwill, varies among the subsequent periods observed. However, data show that in years t , $t+1$, and $t+2$ the scaled amount of impairment losses increases substantially, consistent with the hypothesis that additional goodwill increases the risk of larger write-offs. Finally, *Net Income* reported in the consolidated financial statement seems to follow a positive path, with a reported CAGR equals to 3.31%. Data reported highlight the boosts in reported earnings after the acquisition. The effect is easier to observe in periods $t+1$ and $t+2$, where the acquirer is likely to have fully recognized the effect of the acquisition, thus profiting from the consolidation of the target's results. Higher reported earnings might be partially explained also by the increase of goodwill with respect to total assets, escaping from the substantial increase in D&A charges. The acquisition has a positive effect also in the acquisition year, even if the magnitude of this change is lower with respect to those occurred in the subsequent periods. However, at this point of the research, it is not possible to draw any conclusion on whether reported net income was or was not affected by the discretion involved in goodwill accounting.

Chapter 5: Presentation of the Results and Comments

5.1 The Association Between Impairment Decisions and Goodwill Reported

HP 1a aims to test the relationship that exists between the decision to impair goodwill and the amount of goodwill before the impairment. Indeed, it should be true that firms with large goodwill capitalized in their balance sheet are more likely to write it off as a result of the impairment test. *Table 8* report the results obtained from the first regression (*1a*), which specifically addresses the matter studies, associating the binomial variable IMP (0,1) with the amount of goodwill (represented by the variable GW_TA).

$$IMP(0,1)_i = \alpha + \beta_1 * GW_TA_i + \beta_2 * ROA_i + \beta_3 * LEV_i$$

IMP (0,1)	t		t+1		t+2	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
GW_TA	-0.99 (-1.98)	0.50	-0.08 (-0.16)	0.49	-0.20 (-0.36)	0.55
GW_APP	-0.13 (-0.68)	0.19	-0.04 (-0.19)	0.19	-0.21 (-0.97)	0.22
LEV	-0.01 (-0.25)	0.05	0.06 (1.65)	0.04	0.01 (0.49)	0.03
ROA	-1.85 (-1.66)	1.11	-2.73 (-2.68)	1.02	-1.99 (-1.6)	1.25

Table 8. Results obtained from regression 1a in testing hypothesis HP 1a.

Each column reports the results of one of each period taken into consideration. The coefficient attached to the variable GW_TA is always negative, suggesting that firms with a large amount of goodwill capitalized are less associated with the decision to record an impairment loss at the end of the year. However, this relationship is not significant in period *t+1* and in period *t+2*. From *regression 1a* it seems that only at the acquisition year the amount of goodwill is a relevant driver

of the entities' decision to reduce its amount as a result of the impairment test, although the negative association persists even in the subsequent periods, consistently with *HP 1a*.

HP 1b continue to keep the focus on the relationship between goodwill and impairment recognition. The association studied is the one between the amount of impairment and the amount of goodwill. In order to avoid circularity or conflict between the variable, the amount of impairment is scaled by total assets reported by the entity, while goodwill is represented as in regression 1a, thus as the amount of goodwill before the impairment loss. *Table 9* shows the results obtained in testing for *hypothesis 1b*.

$$IMP_TA_i = \alpha + \beta_1*GW_TA_i + \beta_2*ROA_i + \beta_3*LEV_i$$

IMP_TA	t		t+1		t+2	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
GW_TA	-0.014 (-1.43)	0.01	0.010 (1.30)	0.01	0.018 (2.12)	0.01
GWA_PP	0.001 (0.35)	0.00	0.002 (-0.64)	0.00	0.005 (-1.32)	0.00
LEV	0.001 (-0.82)	0.00	0.001 (0.85)	0.00	0.000 (0.59)	0.00
ROA	-0.031 (-1.39)	0.02	-0.023 (-1.35)	0.02	-0.038 (-1.90)	0.02

Table 9. Results obtained from regression 1b in testing hypothesis HP 1b.

The coefficient attached to GW_TA in the first column is negative and, even if not strongly significant, it is consistent with the results obtained from regression 1a, supporting the idea that firms reporting a higher amount of goodwill are reluctant to write-off goodwill. On the other hand, differently from the results previously obtained, this second study shows that the coefficient beta 1 change its sign in the periods following the acquisition. In period *t+1* and period *t+2*, GW_TA has a positive effect on the dependent variable, suggesting that a larger amount of goodwill before impairment could a relevant indicator of the amount of impairment charge recognized. These results are therefore not fully-consistent with *hypothesis 1b*.

Since the results obtained from *regression 1b* are provides contrasting evidence among the different periods studied, the thesis furtherly examined the association in the first period (t) between the amount of the impairment charge and the amount of goodwill reported. In this study, the variable GW_TA has been substituted by the interaction variable GW_if_IMP, obtained as GW_TA*IMP (0,1), thus assuming a value equal to 0 if no impairment has been reported, assuming a value equal to GW_TA in the opposite case. The results, not reported in the thesis, show that the coefficient attached to the new explicative variable GW_if_IMP is positive and significant at the 5% level³³. This further examination of the impairment-goodwill relationship in period t is inconsistent with *HP 1b* and the results reported in *table 8* for the two periods following the acquisition.

Overall, the results obtained from *regression 1a* are somehow consistent with the first hypothesis tested, while *regression 1b* provides results that are in contrast with *hypothesis 1b*. On the other hand, considering the results obtained from both the tests implemented, it is possible to conclude that the impairment recorded, and the amount of goodwill capitalized are associated.

Regression 1a returns some pieces of evidence that suggest the negative impact of the amount of goodwill on the impairment decisions, consistent with the hypothesis that firms reporting large amount of goodwill in their balance sheet, are more likely to use their discretion to avoid the recognition of an impairment loss. Indeed, entities with large goodwill reported are more reluctant to write it down as result of the impairment procedure. On the other hand, inconsistently with the hypothesis *HP 1b*, it is possible to observe that the amount of goodwill affects the amount of impairment recognized, suggesting that firms with large goodwill balance will report larger impairment. These evidences, taken all together, can be explained by findings obtained from past accounting literature. *Regression 1a* provide results consistent with the findings by Hamberg, Paananen, & Novak, 2011, which were suggesting the negative effect of large goodwill balance in deciding whether to impair or not to impair goodwill. However, even if firms are reluctant to write-off goodwill when it is accounted for a substantial part of the total assets, *regression 1b* suggests that a large amount of goodwill can be a valuable indicator of the likelihood of impairment losses. Large goodwill balance is likely to be the result of past acquisitions which resulted in the overpayment for the target. If this is the case, as in the GE example presented in *chapter 1*, the acquisition will have poorer performance than those that were expected, subsequently requiring to impair goodwill balance to reflect the sinking performance.

³³ The coefficient obtained is 0.038, the statistic t equals 2.51, and the p-value is 0.015.

Taking a larger perspective on the matter studies, the results presented enable to understand the consequences related to the discretion that can be exercised when accounting for goodwill. Discretion is a substantial component of the whole process required to account for business combinations and the subsequent measurement of goodwill that will arise from it. Indeed, working out the purchase price, the decisions related to the composition of the consideration transferred, the allocation of the price paid among identifiable assets and goodwill, its subsequent allocation to the entity's CGUs and their subsequent testing involve substantial judgment and discretion. The total amount of goodwill reported in the company financial statements is the summation of the goodwill acquired as result of the past M&A activities engaged by the reporting entity. The differential accounting treatment of goodwill then provide incentives to overstate goodwill acquired, obtaining short term benefits but opening to potential future and unpredictable losses. While results from *regression 1b* suggest that acquiring and reporting large goodwill lead the acquirers to recognize larger impairments, *regression 1a* confirms that some discretionary may be involved in the decision to impair goodwill, by suggesting that firms with a larger amount of goodwill may use their discretion to avoid to write it down.

5.2 Discretionary Allocation to Goodwill and Firm Performance

In order to test the second hypothesis, this thesis proposed to study the effect on net income by employing three different explicative variables representing goodwill acquired. The results obtained are presented in *table 10*, which specifically addressed the effect of goodwill acquired on the performance of the acquirers, confirming the relevance of goodwill accounting. The main explicative variable, which represents the effect of the decision taken by the acquirer in during the purchase price allocation (GWA_PP) on the performance of the company, described by its consolidated net income (NI), has a positive coefficient, particularly significant in period *t*. On the other hand, the coefficient attached to GW_TA, representing the amount of goodwill reported the year-end, has a negative and significant effect, which is not consistent with the expectation presented. Indeed, a large amount of goodwill should benefit the performance reported at the end of the years, since it is likely to results in lower amortization charges. The results of the analysis suggest that this benefits, arising from holding larger goodwill balances, are not reflected in the

$$NI_i = \alpha + \beta_1 * GWA_PP_i + \beta_2 * GW_TA_i + \beta_3 * IMP_TA_i + \beta_4 * DA_i + \beta_5 * OPEX_i + \beta_6 * SAME_IND_i$$

NI	t		t+1		t+2	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
GWA_PP	0.085 (4.77)	0.02	0.020 (0.98)	0.02	0.018 (0.77)	0.02
GW_TA	-0.187 (-3.72)	0.05	-0.052 (-0.97)	0.05	-0.013 (-0.21)	0.06
IMP_TA	0.002 (0.07)	0.03	-0.518 (-0.71)	0.73	-1.505 (-1.74)	0.86
DA	0.486 (1.82)	0.27	-0.027 (-0.13)	0.20	0.224 (0.84)	0.27
OPEX	0.015 (1.21)	0.01	0.048 (4.26)	0.01	0.016 (1.12)	0.01
SAME_IND	0.043 (3.66)	0.01	0.011 (0.88)	0.01	0.010 (0.69)	0.01

Table 10. Results obtained from regression 2a, implemented to test hypothesis HP2.

financial performance reported in the entity's income statement. The test also considered the dummy variable SAME_IND, in order to controls for the potential positive effect which could be generated after a business combination between firms belonging to the same industrial segment. This means that when the acquisition is aimed at increasing the industrial focus of the acquirer, then the performance reported tend to react more positively than in the opposite case. The coefficient attached to the dummy is positive and significant in period t . Unfortunately, the study did not provide evidence of a particular effect in the two periods following the acquisition. However, the positive sign and the significance of the coefficient attached to SAME_IND suggested that this association might be worthy of a further investigation. In order to understand whether the discretion granted in allocating the purchase price to goodwill and its association with cross-industry mergers is able to affect the reported performance, the thesis introduced two interaction variables,

GWA_IND and GW_IND³⁴. The test implemented in this study is reported below (*regression 2b*) and the results are reported in *table 11*.

$$(2b) \quad NI_i = \alpha + \beta_1 * GWA_IND_i + \beta_2 * GW_IND_i + \beta_3 * IMP_TA_i + \beta_4 * DA_i + \beta_5 * OPEX_i$$

NI	t		t+1		t+2	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
GWA_IND	0.091 (4.27)	0.02	0.019 (0.88)	0.02	0.021 (0.86)	0.02
GW_IND	-0.164 (-2.74)	0.06	-0.021 (-0.35)	0.06	-0.022 (-0.32)	0.07
IMPTA	-0.017 (-0.62)	0.03	-0.589 (-0.8)	0.73	-1.522 (-1.84)	0.83
DA	0.331 (1.2)	0.28	-0.039 (-0.19)	0.20	0.241 (0.91)	0.27
OPEX	0.009 (0.7)	0.01	0.048 (4.25)	0.01	0.016 (1.17)	0.01

Table 11. Results obtained from regression 2b, implemented to provide further evidence and to test hypothesis HP2.

This further examination corroborates the findings obtained from *regression 2a*. Indeed, the two main explicative variables maintain their sign and their significance even when associated with the dummy variable. It is possible to observe that the coefficient associated to GWA_IND is now more significant and positive than the previous indicator of discretion GWA_PP, suggesting that the effect of allocating a large portion of the purchase price to goodwill is intensified when the acquisition is not part of a diversification strategy.

³⁴ GWA_IND is the interaction variable associating goodwill acquired as percentage of the purchase price and the dummy variable SAME_IND, and it is equal to GWA_PP*SAME_IND. Similarly, GW_IND is the interaction variable associating goodwill reported by the acquirer, before impairment charges, and the dummy variable SAME_IND, and it is equal to GW_PP*SAME_IND.

Overall, the results obtained from both *regression 2a* and *regression 2b* are consistent with *HP2*, although not strongly significant for year $t+1$ and $t+2$. The effect of the allocation of the purchase price to goodwill in period t is statistically significant and highlight the positive effect of allocating a large share of the purchase price to goodwill, which is associated with higher net income reported. In allocating the purchase price, acquirer using their discretion to recognize a large amount of goodwill are more likely to obtain larger returns at the end of the reporting period. On the other hand, the results did not confirm the theory proposed in several research papers that suggests a positive association between goodwill reported and higher reported net income. Indeed, the findings obtained by testing *HP 2* suggest that firms reporting larger amount of goodwill in their balance sheets are associated with lower performance, i.e. net income. This interpretation of the results reported in the table provide pieces of evidence that the discretion involved in the purchase price allocation might be associated with positive and significant impact on the economic performance reported. However, even if the result obtained from *regression 2* might suggest that acquirer may have the incentive to allocate a large portion of the purchase price to goodwill, this relationship did not provide evidence of opportunistic use of the discretion granted when accounting for goodwill.

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5.3 Conclusive Thoughts

The approach adopted to account for business combinations and goodwill have substituted historical cost-based measures in favor of fair value-based measures, with the intention to increase decision usefulness of the financial statements. Consequently, extending the scope of fair value measures allows managers to use their own expectation and assumptions to value to non-financial assets. While managerial assumptions and expectations are useful if they convey private information of future cash flows and risks, their often-unverifiable nature increases the likelihood of manipulation and opportunistic behavior (Watts, 2003; Ramanna & Watts, 2012; Li & Sloan, 2017).

The aim of this thesis is to shed light on the consequences associated with the large discretion granted to the acquirer during the whole process to account for business combinations. Indeed, substantial discretion is involved from the initial definition of the price to be paid to the allocation of that price among the assets acquired, and finally in running the impairment test of goodwill

acquired. In particular, by focusing on a sample of acquisitions completed in recent years, this thesis investigates the impact that discretion in goodwill accounting has on firm performance and impairment decisions. The results obtained show that the allocation of the purchase price performed at the acquisition date is positively and significantly associated with the net income reported by the acquirer in the consolidated balance sheet. Even if this finding does not provide evidence of opportunistic behavior by the reporting entity, it suggests that the discretion implemented in the initial phase of the business combination might affect the performance reported by the acquirer in the year of the acquisition. In relation to the discretion involved in the subsequent measurement of goodwill, this thesis provides shreds of evidence suggesting that firms with larger amounts of goodwill reported are, on average, more likely to avoid the recognition of impairment losses. Further examination of this subject provides results which are somehow in contrast with the acquirer propensity to avoid the recognition of goodwill write-offs. Indeed, focusing on the amount of goodwill reduction, the results obtained show that even if acquirers with large goodwill balances are more likely to avoid impairment recognition, they are also more likely to recognize large impairment losses when they occur.

Overall, these findings provide that the discretion involved in accounting for both business combinations and goodwill has a significant impact on the performance reported in the consolidated financial statement. On the other hand, the thesis provides contrasting results in relation to goodwill impairment, suggesting that firms whose goodwill made up a substantial part of their balance sheet are more likely to use discretionally avoid impairing goodwill reported, but that when impairment must be recognized, the loss is more relevant in terms of value.

To conclude, discretion is part of the current accounting standards, and this thesis tried to provide some evidence of its effect by an examination of the M&A market and the subsequent accounting decisions that an acquisition involves. This examination is a first attempt to address the impact that discretion have on the performance of a company, and future studies may provide a deeper understanding of the phenomenon analyzed in this thesis. Valuable subject that should be considered and addressed in future researches are, for example, the recognition of the drivers behind accounting decisions, the examination of the link between discretion to stock performance and the analysis of the effects of goodwill accounting on EPS volatility could provide material evidences to support the relevant effect that discretion has on goodwill accounting and business combinations decisions.

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