GOODWILL REPORTING IN CORPORATE ACQUISITIONS: THE EFFECTS OF MANAGERIAL DISCRETION UNDER THE NEW ACCOUNTING RULES

Carlotta D'Este^{*}, Ilaria Galavotti^{**}, Marina Carabelli^{*}

* Faculty of Economics and Law, Università Cattolica del Sacro Cuore, Piacenza, Italy
 ** Corresponding author, Faculty of Economics and Law, Università Cattolica del Sacro Cuore, Piacenza, Italy
 Contact details: Faculty of Economics and Law, Università Cattolica del Sacro Cuore, Via Emilia Parmense 84, 29122 Piacenza, Italy



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Abstract

Goodwill is a critical issue in the accounting of corporate restructuring activities in terms of both purchase price allocation in corporate acquisitions and the subsequent write-downs. Although the Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB) new accounting standards provide a reference point for goodwill recognition, the complexity of fair value adjustments and the extensive subjectivity involved in assessing goodwill still make its allocation and the impairment-only approach limitedly transparent. Therefore, this study explores the impact of IFRS 3 (International Financial Reporting Standard 3) on management discretion in goodwill reporting. From a methodological standpoint, the hypotheses are tested on a sample of 68 acquisitions executed by Italian-listed acquirers in the 2012-2020 period. Our results confirm the potential for managerial opportunistic behavior in light of the signaling role of goodwill for investors.

Keywords: Goodwill, Accounting Discretion, Impairment Losses, Fair Value Accounting, IFRS 3

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1. INTRODUCTION

Goodwill represents the difference between the value of a company relative to the fair value of its identifiable net assets. Thus, it captures the competitive advantages expected to help the company generate excess earnings (Jennings et al., 2001). As a notion, goodwill is particularly relevant in the context of corporate acquisitions, as business combinations are one of the main routes to purchase goodwill.

The recognition of goodwill has historically been a controversial topic (Gros & Koch, 2018), and

both scholars and standard setters have extensively investigated its measurement and accounting treatment (Churyk, 2005; Zhang & Zhang, 2007). Different reporting requirements have been proposed over the last decades to ensure relevant, material, and reliable financial information to financial statement users, leading scholars to question the nature of goodwill and investigate its constituent parts from a theoretical and practical standpoint. In this scenario, Statement of Financial Accounting Standards No. 141 (SFAS 141) — *Business Combinations*, by the Financial Accounting Standards Board (FASB), and SFAS 142 — *Goodwill*



and Other Intangible Assets, along with the International Financial Reporting Standard 3 (IFRS 3) — Business Combinations. represent a milestone in goodwill accounting (Johansson et al., 2016) as they brought about essential changes relative to the prior goodwill accounting rules. Specifically, while SFAS 141 required adopting the purchase method to account for corporate acquisitions, SFAS 142 eliminated the possibility for goodwill amortization. Analogous requirements are contained in IFRS 3, in line with the FASB and the International Accounting Standards Board (IASB) convergence process (Whittington, 2008).

abolishing purchased goodwill However. amortization and introducing fair value adjustments and impairment tests produced ambiguous effects on the true and fair representation of firms' value creation process through mergers and acquisitions (M&A). In the context of corporate acquisitions, the valuation of goodwill should not be regarded merely as one individual balance sheet item, as it rather represents an essential determinant of the extent of the uncertainty of future cash flows for the firm. The implications of goodwill accounting are, however, highly controversial. On the one hand, requirements related to the purchase price allocation and the impairment-only approach may allow for a more consistent representation of postacquisition financial position and performance based on the belief that managers' access to superior and private information can improve the organization's transparency and decisionmaking opportunities. On the other hand, several authors argue that, because of fair value complexity adjustments and subjectivity in assessing goodwill and post-acquisition value decline, greater discretion is left to preparers, paving the way for managerial opportunistic behavior (LaFond & Watts, 2008). For instance, in the attempt to assess the fair value of goodwill, there is a need to obtain in-depth information on the specific operating units to which goodwill should be assigned, but even the determination of reporting units is far from being an easy task, thus leading to concerns on the complexity and cost of such a process. Indeed, the need for management's judgments and estimates has led several standard setters to express uncertainties and concerns. For instance, the European Securities and Markets has Authority (ESMA) admitted that the understandability of financial information on goodwill may be compromised due to off-balance sheet items or low additional disclosure in the notes to the accounts (ESMA, 2014).

Accordingly, this study is based on the following main research question:

RQ: How do IFRS requirements affect financial information usefulness on goodwill?

We, therefore, explore the implications of IFRS 3 goodwill accounting rules on managerial behavior by assessing how it is affected by post-acquisition fair value adjustments and impairment-only approach. From a conceptual standpoint, we build on prior studies (Churyk, 2005; Zhang & Zhang, 2007; Anwar & Suryaningrum, 2013; Shalev, 2009; Hellman & Hjelström, 2023) and explore the relationship between the purchase price and goodwill and the effect of goodwill on impairment losses and net income.

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From a methodological point of view, we test our conceptual framework on a sample of 68 acquisitions by Italian-listed firms from 2012 to 2020. We focus specifically on Italy as a single country, as previous studies testify that country-specific characteristics foster may management's subjectivity in accounting for goodwill, as low investor protection and less developed financial markets leave room for greater discretion and provide incentives to managers in the direction of earnings manipulation and favorable financial market signaling (Kabir & Rahman, 2016; d'Arcy & Tarca, 2018). Therefore, our study contributes to the extant literature by providing additional insights into managerial discretion in goodwill accounting following the release of IFRS 3 in a low investor protection context. Our results indicate that the purchase price positively affects goodwill, thus confirming that the new accounting rules on goodwill lead to a greater portion of the purchase price being allocated to goodwill. Our findings also suggest that the amount of goodwill being reported has a negative effect on impairment losses but a positive effect on net income.

The paper is organized as follows. In Section 2, we review the literature on goodwill accounting and provide the background for developing our hypotheses. Section 3 depicts the research design and methodology. Then, we describe our results in Section 4 and, finally, discuss our main findings and draw some conclusions in the last Section 5.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Goodwill accounting rules have been controversial among scholars, standard setters, and professionals (Churyk, 2005; Zhang & Zhang, 2007). In this regard, the nature and the consequent recognition of goodwill have been widely debated, as different approaches and views have been proposed over time (Anwar & Suryaningrum, 2013), questioning the opportunity of its capitalization (Gore & Zimmerman, 2010; Yehuda et al., 2019). Specifically, two contrasting notions of goodwill have emerged, namely the "excess earnings view" and the "hidden assets view" (Conrecode et al., 2017). The first conceives goodwill as an above-normal earning where the premium capacity. price in the acquisition, i.e., the excess price paid relative to the firm's market value of assets, reflects the management's anticipation of future abnormal returns. Accordingly, goodwill can be determined by discounting such expected earnings over a certain of years, thus subordinating number its measurement to the management's beliefs of future returns. In turn, this hinders its verifiability since each deal is a relatively unique event in the life of a company (Zollo, 2009). In contrast, under the hidden assets view, goodwill represents the target firm's assets that are not reported on its balance sheet. This implies their potential separate identification relative to the target assets being visible in the balance sheet, allowing for third parties' verifiability.

While both views have offered attractive domains to the investigation of goodwill, in recent times, scholars have started to argue that goodwill should be instead interpreted as an in-between construct for at least two main reasons. First, goodwill has a heterogeneous nature in terms of its constituent parts in preparers' actual accounting choices (Colley & Volkan, 1988; Ma & Hopkins, 1988); second, it is characterized by a synergistic and relatively obscure nature, as it results from the interplay between several factors involving both the acquirer and the target firm, along with their operating environments (Garzella et al., 2020).

In this scenario, a well-known turning point is represented by the release of SFAS 141, SFAS 142, and IFRS 3 since they dramatically change business combinations accounting treatment in terms of both goodwill recognition and post-acquisition value decline recording (Hamberg et al., 2011; Johansson et al., 2016). Under the prior accounting rules (e.g., Accounting Principles Board Opinions No. 16 and 17, and IAS 22), the value that could be attributed to goodwill was substantial in some cases. accounting for significant portions of the purchase price (Jennings et al., 2001). Thus, the introduction of new accounting rules under SFAS 141 and SFAS 142 substantially changed the prior practices by eliminating the pooling of interests and goodwill amortization. Though such changes were meant to increase the usefulness of earnings, criticisms remain as the introduction of fair value accounting, and the impairment-only approach leaves room for accounting discretion and earnings thus jeopardizing manipulation. financial information transparency and quality. Indeed, the replacement of amortization of acquired goodwill with impairment tests has added huge volatility to financial reporting (Ahmed & Neogy, 2009).

The standard setters have adopted a conceptual approach consistent with Johnson and Petrone's (1998) proposal that identifies the so-called "core goodwill" among six components of goodwill. In particular, this categorization distinguishes between components relating to the fair value of the target company's recognized or not recognized assets and liabilities (components 1 and 2); components arising from the acquired firms' assets synergies both on a stand-alone basis and stemming from its incorporation in the acquirer (components 3 and 4); components referred to errors associated with the consideration transferred or to the acquirers" overpayment or underpayment (components 5 and 6). While the latter are not considered assets, IFRS 3 requires recognizing components 3 and 4 as "core goodwill", aiming at reducing the inclusion of the first two components through fair value adjustments as at the acquisition date (Johansson et al., 2016). Consistently, IASB's objective lies in isolating the core goodwill, requiring an exact assessment of the consideration paid at fair value to minimize the risk of overpayment, as well as the recognition of identified or identifiable net assets that were not previously recorded in the acquired company's balance sheet at their respective fair values (Johnson & Petrone, 1998).

Nevertheless, concerns have been raised on the effectiveness of IFRS 3 requirements in allowing for a true and fair representation of the underlying economic values of the company (Kephart, 2017), as goodwill determination remains linked to the managerial evaluation of identifiable net assets being acquired. While the purchase price is relatively easy to determine, its allocation is much more ambiguous, especially in the recognition and valuation of previously unrecognized intangible assets. Thus, how the purchase price is allocated leaves room for potential manipulation of intangible assets and goodwill measurement (Ramanna, 2008): the more uncertain the amount of previously unrecognized intangible assets, the less reliable the goodwill generated by the business combination, as it is calculated as a residual. Furthermore, although intangible assets are required to be separately recognized, goodwill still represents a significant part of the purchase price, supporting the argument that managers are not inclined to identify and measure intangible assets separately from goodwill (Shalev, 2009), and tend to opportunistically use the flexibility of accounting rules depending on their financial reporting incentives (Amel-Zadeh et al., 2023; Hellman & Hjelström, 2023). In addition, the discretion may be driven by reasons other than the uncertainty in the purchase price allocation as, regardless of their ability to identify and measure intangible assets separately from goodwill effectively, managers may choose not to do so in order to benefit from lower amortization expenses in the period following the transaction.

Accordingly, Watts (2003) maintains that quantification considerable goodwill involves discretion due to fair value measurement, among other things, of previously unrecorded intangible assets in the target company's financial statements unless it is based on verifiable, actively traded market prices. In this perspective, it is argued that the significant level of professional judgment required by IFRS 3 may result in goodwill balances exceeding the economic value due to subjective accounting choices related to personal motives, such as managers' earnings-based compensation (Frii & Hamberg, 2021) or the aim to conceal overpayments (Bartov et al., 2021). Indeed, using level 3 inputs to determine intangibles' fair value may increase the likelihood of opportunistic disclosure (LaFond & Watts, 2008; Ramanna & Watts, 2012). Moreover, in a context where goodwill is not systematically expensed in the acquiring entity's income statement, there is a strong incentive to overestimate the price paid for goodwill (Masters-Stout et al., 2008).

Giuliani and Brännström (2011) have offered a more practical definition of goodwill to clarify that, despite the new principles' attempts to make goodwill a more transparent accounting item, it maintains its "black box" nature. According to the authors, doubts about how the management conducts the evaluation, review, and interpretation of goodwill remain, which raises a compelling issue as goodwill tends to be a significant part of the purchase price of a company. Significantly, acquired goodwill tends to be considered a residual value, i.e., the difference between the price paid and the net assets acquired, and its content remains hidden because the company's disclosure does not clearly describe its composition.

On the side of post-acquisition goodwill value decline, decisions related to the accounting impairment of goodwill are significant and

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infrequent events that impact the company's financial results (Filip et al., 2015). In this perspective, goodwill impairment is defined as the outcome of the deterioration in the economic performance of an acquired company (Hayn & Hughes, 2006), and according to the IFRS 3 guidelines, a company should recognize an impairment loss if the recoverable amount of a cashgenerating unit falls below it carrying amount. For instance, an ideal economic factor would be the unbiased expectations of managers regarding the future performance of cash-generating units, including goodwill (Riedl, 2004). Hirschey and Richardson (2002) argue that the informational value of these adjustments lies in their role as a signal of critical future changes in the business's financial position and performance (Omar & Mohd-Saleh, 2011). In this respect, the effect on stock prices depends on the timeliness of writedowns and how they are framed by management and interpreted by investors. Hirschey and Richardson (2002)argue that if goodwill write-down announcements represent significant information about the loss of goodwill, stock prices will have significant negative effects. In this perspective, it has been maintained that the goodwill impairment is based on management estimates, granting them discretion both on the amount and timing of goodwill write-downs (AbuGhazaleh et al., 2011; Choi & Nam, 2020), therefore, allowing for opportunistic behavior (Gros & Koch, 2020). Scholars argue that managers delay impairment losses recognition, especially in cases of high amounts of acquired goodwill, thus postponing their adverse effects on net income (Choi & Nam, 2020).

This is especially true for firms operating in low investor protection countries (Amel-Zadeh et al., 2023), as management discretion in goodwill accounting is found to be affected by both countryand firm-level characteristics based on corporate governance mechanisms (Kabir & Rahman, 2016; d'Arcy & Tarca, 2018). In this regard, the agency problem affects accounting opportunism (Beatty & Weber, 2006), as managers may make accounting decisions based on their interests and personal incentives rather than using their discretion to transmit relevant and valuable information in the balance sheets (Watts, 2003; Ramanna & Watts, 2008). Similarly, greater accounting secrecy and lower disclosure are found in countries having less developed financial markets (Gray, 1988: Merkl-Davies et al., 2011), as well as in contexts characterized by weak enforcement regimes, where greater public and private monitoring is needed in order to contrast managerial discretion (Gietzmann & Wang, 2020; Amel-Zadeh et al., 2023).

There are also challenges in determining whether such performance deterioration of the acquired business may be a derivative of limited data availability on the acquired business, which is indeed frequently operated within the parent company, thus potentially raising issues in the possibility of tracking its performance results separately. Furthermore, in other cases, the acquired firm is absorbed by multiple company reporting units, thus raising the need to allocate goodwill across all of them and making it extremely difficult to trace the performance of the acquired entity (Hayn & Hughes, 2006). Based on this, for instance, SFAS 142 has introduced several disclosure requirements intended to facilitate the linking of goodwill from an acquisition with the individual performance of the acquired entity.

To summarize, the complexity of the purchase price allocation, the absence of amortization charges on goodwill, and the greater discretion inherent in the impairment testing procedure may make managers more likely to overestimate goodwill to reduce the amount of costs that may affect the consolidated net result and the recognized return from the capital market. Based on this, we posit that in countries characterized by low investor protection, ownership concentration Hamberg, 2021) and less developed (Frii & financial markets, such as the Italian context (Volpin, 2002; Di Pietra et al., 2008: Matias Gama & Rodrigues. 2013), accounting choices related to goodwill initial recognition and subsequent measurements may be affected by management discretion. Given that our expectations are not directly observable because of poor disclosure levels (Carvalho et al., 2016), we follow an established route of investigation to proxy accounting choices related to goodwill allocation and impairment test. Our research hypotheses are therefore developed as follows. First, based on prior literature testifying both the uncertainty underlying the purchase price allocation (Jennings et al., 2001), managers' opportunism in avoiding the recognition previously undisclosed intangible of assets separately from goodwill (Ramanna, 2008), and family owners' tendency to disclose lower information (Frii & Hamberg, 2021), we posit that, at increasing purchase prices, more significant amounts of goodwill will be reported on the balance sheet. Thus, our first hypothesis is as follows:

H1: A positive relationship exists between the acquisition purchase price and the amount of goodwill recorded after a corporate acquisition.

Second, as the extant literature reports the potential negative impact of goodwill impairment on capital market perceptions of the business's financial position and performance, along with managers' inclination to postpone impairment losses recognition, especially in case of high amounts of purchased goodwill, we maintain that the greater the goodwill, the lower impairment losses reported (Han et al., 2021). Therefore, our second hypothesis posits that:

H2: There is a negative relationship between the amount of goodwill recorded after a corporate acquisition and the impairment losses.

Third, we believe that higher amounts of goodwill may be positively related to net income. On the one hand, delays in impairment losses recognition may lead to higher firms' performance in the short term (Han & Tang, 2020). On the other hand, newly acquired goodwill proxies for expected future performance (Churyk & Chewning, 2003), also potentially incentivizing managers to reinforce investors' expectations (Han & Tang, 2020). Hence, our third hypothesis follows:

H3: A positive relationship exists between the amount of goodwill recorded after a corporate acquisition and net income.

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3. RESEARCH METHODOLOGY

3.1. Sample and data collection

This paper uses a sample of Italian-listed companies that have executed a corporate acquisition from January 1, 2012 to January 1, 2020. We used the Zephyr database provided by Bureau van Dijk as a source of our data collection. The data collection has been conducted following several eligibility criteria. First, only transactions accounted for using the acquisition method model according to IFRS 3 were examined. Second, following prior studies, we excluded companies in the financial sector, as they are subject to different regulatory mechanisms (Chiaramonte et al., 2023). Third, we included in our sample only those transactions characterized by an Italian buyer to grant a consistency of accounting standards. As a civil law country, the Italian context has been extensively investigated in previous studies aiming to identify whether its characteristics influence financial reporting and disclosure quality (Devalle et al., 2017; Caruso et al., 2016; Biancone, 2012). The country-level focus is fully in line with prior research examining the specificities associated with single institutional contexts (Albersmann et al., 2020). Indeed, several previous accounting studies provide evidence that the effectiveness of IFRS adoption in fostering financial information usefulness is affected by country-level peculiarities, such as culture and the legal and institutional environments. Indeed, previous studies maintain changes in accounting standards that mav differently affect firms' financial disclosure depending on countries' legal (Houqe, 2012), political, and economic systems differences (Van Hulle, 1981), as not only financial information mirrors main stakeholders' demands (Soderstrom & Sun, 2007), but it is also affected by country-specific managerial incentives (Hail & Leuz, 2007). For instance. Albersmann et al. (2020) argue that civil law countries with weak minorities' protection, scarcely developed financial markets, and a clear-cut separation between executive and independent directors' duties and responsibilities, as the Italian one (Lagasio, 2021; Li, 2021; Rizzato et al., 2018), are characterized by lower firms' transparency and managerial actions monitoring, therefore, allowing for greater insiders' discretion and earnings management. This appears to be particularly true in the Italian context, where Mazzi et al. (2016) surveyed a sample of 48 chief financial officers (CFOs), finding that they perceive IFRS 3 requirements on goodwill accounting as adaptable to managerial needs and unable to limit creative accounting, mainly because of differences between IFRS and local GAAPs requirements (p. 29).

Finally, in line with previous studies (Very et al., 2012; Galavotti et al., 2017), our sample includes acquisitions of majority ownership of the target firm, i.e., those in which at least 50% of target shares are acquired, and excludes those cases for increased ownership, i.e., those in which the acquiring firm already possesses ownership stakes of the target. Duplicated deals were then deleted, and we kept only those with disclosed values (Kling et al., 2014).

After applying the abovementioned eligibility criteria, we conducted a careful skimming procedure that allowed us to consider only those transactions that IFRS adopter buyers executed and involved a complete change of control. Based on the above criteria, the final sample consists of 68 transactions. Regarding geographic distribution, the sample is relatively skewed towards European countries as target destinations of Italian acquisitions, thus suggesting that Italian acquirers prefer geographically and psychically closer target countries. Sampled deals are reported in the Appendix.

3.2. Variables

To test our three hypotheses, we built three different dependent variables: 1) the amount of goodwill recorded in the post-acquisition period, impairment losses, 2) the amount of and 3) the acquiring firm's *net income*. *Goodwill* is an accounting item we retrieved from the Bureau Van Dijk Zephyr database. Impairment losses are measured as the total amount of impaired goodwill. Net income is the total profit or loss at the end of the financial year as retrieved from the Bureau Van Dijk Aida database. Both impairment losses and net income were tested across multiple years including the year of the deal completion (t) and the two following years (t + 1, t + 2).

Regarding independent variables, our study includes the *acquisition purchase price*, which represents the deal value of the acquisition at the completion date (retrieved from the Zephyr database). We included two different variables related to goodwill, namely *goodwill on total assets*, measured as the ratio between the goodwill recorded and the total assets of the acquiring firm; and the *goodwill on the purchase price*, operationalized as the ratio between the goodwill recorded and the purchase price. Finally, *impairment losses* is a continuous variable that captures the amount of impaired goodwill at the end of each reporting period (*t*, *t* + 1, *t* + 2).

To control for potential additional effects, we included a variable capturing the acquiring firm's leverage (ElHawary & Hassouna, 2021), measured as the ratio between total liabilities and equity; the equity market concerns, operationalized as the ratio of the value of all traded shares and the average market value of equity; and the strategic motivation of the acquisition, in terms of whether the deal is executed to consolidate the market power in the existing businesses or whether it is aimed at diversifying the current business portfolio of acquiring firm. This variable has been the operationalized as a dichotomous variable based on 3-digit Standard the match of Industrial Classification (SIC) codes of the acquirer and target and takes the value of 1 if the acquirer and target operate in the same industry (horizontal acquisition) and 0 if the acquirer and target operate in different industries (diversifying acquisitions).

Table 1 offers a detailed overview of the variables and measures.

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| Variables | Description | | | | |
|-------------------------------|---|--|--|--|--|
| Goodwill | Post-acquisition accounting item (recorded from the Zephyr database). | | | | |
| Goodwill on purchase price | Ratio of the goodwill and the purchase price of the acquisition (retrieved from the database). | | | | |
| Acquisition purchase price | Purchase price at the acquisition completion date. | | | | |
| Goodwill on total assets | Ratio of the goodwill and the total assets of the acquiring firm. | | | | |
| Net income | Accounting item at the end of each reporting period $(t, t + 1, t + 2)$ — retrieved from the Aida database. | | | | |
| Impairment losses | Amount of impaired goodwill at the end of each reporting period $(t, t+1, t+2)$ — accounting item retrieved from the Aida database. | | | | |
| Leverage | Ratio between total liabilities and equity. | | | | |
| Equity market | Ratio value of all traded shares and the average market value of equity in each reporting period (t , t + 1, t + 2). | | | | |
| Strategic motivation | Dichotomous variable: 1 if the acquirer and target operate in the same industry (horizontal acquisition); 0 if the acquirer and target operate in different industries (diversifying acquisitions). | | | | |

Table 1. Variables and measures

3.3. Models specifications

To test the three hypotheses of this study, three regression models were run. The first hypothesis investigates the purchase price allocation choices in terms of the amount of goodwill recognized in the balance sheet. More specifically, to explore management's discretion, we posit that greater purchase prices correspond to higher amounts of goodwill recognized in the post-acquisition balance sheet due to the overstatement of the expected synergies from the transaction. To test *H1*, a simple linear regression model was conducted, where the dependent variable is represented by the *amount of post-acquisition goodwill capitalized*, and the independent variable is the *purchase price (PP*), as follows:

$$GW = \alpha + \beta * PP \tag{1}$$

Then, *H2* links the acquiring entity's decision to recognize goodwill impairment and the goodwill capitalized on the balance sheet. Accordingly, we run a regression model to assess the decision to reduce the amount of goodwill after impairment testing at the end of the year. For each transaction in the final sample, the decision to impair goodwill

should be associated with the amount of goodwill recorded at the acquisition date, controlling for the acquirer's financial position and management's concerns about the stock market performance. The model specification is reported in Eq. (2):

$$IMP_GW = \alpha + \beta 1 * GW_TA + \beta 2 * LEV + \beta 3 * EMC$$
(2)

Finally, *H3* examines the association between the allocation of the purchase price of goodwill and the future performance of the combined entity, represented by the net income reported at the end of the reporting period. For the purpose of testing this hypothesis, we performed a multiple linear regression model, where the dependent variable is the *company's net income* (*NI*), and the independent variables are the *acquired goodwill* and the *impairment losses* for the period while controlling for industry specificities. Thus, we propose the following equation:

$$NI = \alpha + \beta 1 * GW_PP + \beta 2 * IMP_GW + \beta 3 * IND (3)$$

Furthermore, we build on prior studies suggesting a time lag in goodwill accounting, for instance, in terms of the time between performance deterioration and the actual write-down of that goodwill (Hayn & Hughes, 2006). Consistently, we execute our analyses on three periods, namely time t, t + 1, and t + 2.

4. RESULTS

Before delving into the analysis of the empirical results, it is worth noticing that the majority of the purchase price in our sample is allocated to assets other than goodwill (> 50%), though goodwill still represents an important allocation destination (> 40%).

Table 2 shows the results of the three models, where we test our three hypotheses in Models 1, 2, and 3, respectively. In terms of our first hypothesis (*H1*) on the effect of the purchase price on the overall amount of goodwill, our results show a positive and significant association, indicating that at increasing purchase prices, the amount of goodwill being recorded increases. This result aligns with prior studies that report managers' tendency to manipulate purchase price allocation to lower or postpone amortization expense recognition (Shalev, 2009).

| Table | 2. | Regression | results |
|-------|----|------------|---------|
|-------|----|------------|---------|

| Variables | Model 1 Dep. variable: | Dep. vai | Model 2 riable: <i>Impairm</i> | ent losses | Model 3 Dep. variable: <i>Net income</i> | | | |
|-------------------------------|---------------------------|----------------|-----------------------------------|----------------|---|--------------|--------------------------|--|
| | Goodwill | t | t+1 | t+2 | t | t+1 | t+2 | |
| Goodwill on purchase price | | | | | 0.03 (0.00)** | 0.03 (0.00)* | 0.02 (0.00) | |
| Purchase price | 0.015 (0.00) * | | | | | | | |
| Goodwill on total assets | | -0.06 (0.19)** | -0.03 (0.06)* | -0.04 (0.05)* | | | | |
| Leverage | | 0.01 (0.00) | 0.016 (0.01) | 0.02 (0.00) | | | | |
| Equity market | | 0.13 (0.22)*** | 0.06 (0.01)*** | 0.03 (0.07)*** | | | | |
| Impairment losses | | | | | -0.00 (0.00) | -0.01 (0.06) | -0.02 (0.01) | |
| Strategic motivation | | | | | 0.06 (0.01) ⁺ | 0.03 (0.01)+ | 0.02 (0.01) ⁺ | |
| Observations | 68 | 68 | 68 | 68 | 68 | 68 | 68 | |

Note: Standard errors are in parenthesis. Significance levels: $\frac{1}{p} p < 0.1$; p < 0.05; p < 0.01; p < 0.

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Our second research hypothesis (H2) was designed to test the relationship between the decision to apply the impairment test to the acquired goodwill. Following prior studies, Model 2 assesses this effect at time *t*, t + 1, and t + 2to incorporate the potential time lag (Hayne & Hughes, 2006). The coefficient for the variable capturing the amount of goodwill on total assets is negative through all the periods, i.e., at time $t \ (\beta = -0.06, p < 0.01), t + 1 \ (\beta = -0.03, p < 0.05)$ and t + 2 ($\beta = -0.04$, p < 0.05). This finding is consistent with the prior studies arguing that those acquiring firms showing a more significant amount of goodwill on their balance sheet are less likely to recognize goodwill impairment at the end of each reporting year. In terms of control variables, the variable capturing the firms' leverage does not prove to be significant. This result indicates that the net financial debt recorded at the end of each year does not influence the impairment of the asset under consideration in the different periods studied. In contrast, the degree of management's concern about the stock market reactions incorporated in the equity market variable shows a statistically significant and positive effect across the three time periods ($\beta = 0.13$ at time *t*, $\beta = 0.06$ at *t* + 1, and $\beta = 0.03$ at *t* + 2). This finding is fascinating, especially considering that the sample is relatively limited in number of observations.

The findings obtained in Model 2 indicate that, relating to impairment losses of goodwill, managers may attentively consider the consequences that could spill over into the capital market, thus delaying their recognition, especially at increasing amounts of acquired goodwill.

Model 3 reports the results for our third hypothesis (H3) related to the effect played by goodwill on net income, reported at the completion date of the acquisition (time t) and in the following two years (t+1) and t+2). In this model, we employed two explanatory variables representing goodwill before and after applying the impairment test. The variable capturing the goodwill on the purchase price has a statistically significant and positive effect across the three time periods $(\beta = 0.03, p < 0.01 \text{ at year } t, \beta = 0.03, p < 0.01 \text{ at year}$ t + 1, and $\beta = 0.02$, p < 0.1 at year t + 2). This confirms our expectation of a positive relationship between goodwill and net income. It is, however, interesting to notice that the statistical significance of this variable reduces across years, thus suggesting that its effect may become negligible with time.

The independent variable capturing impairment losses and measuring the acquiring firm's write-downs does not provide any statistical significance: interestingly, although not significant, the impairment shows negative coefficients throughout the three time periods of observations, thus signaling the expected negative effect of impairment losses on the bottom line. The lack of significance may be due to companies' low recurrence of write-downs in the sample, thus confirming that management tends to avoid impairment tests on goodwill (Hamberg et al., 2011).

In this model, we also included a binary variable controlling whether the acquisition is carried out in the same industry (horizontal acquisition) or is executed for diversification purposes. The coefficient is positive across the three time periods; however, it is worth noticing that the p-value of the coefficients improves its significance in time t + 2 relative to time t + 1 and t. This may reflect the management's expectations of a time-driven escalation in terms of deployment of the potential synergies associated with the acquisition.

5. CONCLUSION

explores the impact of IFRS 3 This study requirements on management's discretion in accounting for goodwill. Overall, our results suggest that both goodwill and impairment losses recognition may be affected by managerial opportunism. In line with previous studies, price (PP) positively the purchase affects the recognized amount of acquired goodwill. This, in turn, could indicate that, at increasing purchase prices, the management tends to allocate more significant portions of the purchase price to goodwill, disregarding IFRS requirements related to post-acquisition fair value adjustments. Such a finding is consistent with previous studies (Bugeja & Loyeung, 2015) and confirms the expectation that this accounting standard could significantly increase the goodwill reported on corporate balance sheets (Jennings et al., 2001).

This positive relationship also shows consistency with previous studies reporting that managers overestimate post-acquisition may synergies and overpay the target company, recognizing higher goodwill values as a signal to statement users (Olante, financial 2013). Furthermore, this result may also be explained as a consequence of accounting rules not allowing for representing several intangible assets on the balance sheet (Zhang & Zhang, 2007).

In contrast, the negative association between goodwill and impairment losses indicates that the management prefers to delay goodwill writeportions downs, primarily when large of the purchase price are allocated to goodwill (Hamberg et al., 2011). Indeed, impairment losses decrease the bottom line and may also unfavorably affect investors' judgments of the firm's future financial performance, thus negatively affecting stock prices (Hirschey et al., 2002). This is particularly interesting in light of prior studies claiming that impairment losses tend to be associated with poor firm performance, so companies prefer to delay the recording of impairment losses in case of low positive or negative goodwill-related cash flows (Li & Sloan, 2017). The analysis of the relationship between goodwill and net income seems to indicate that although the positive effect of goodwill could be a derivative of realized synergies in the post-acquisition phase, the negative effect of impairment losses across the three time periods may testify managers' inclination to avoid write-downs recognition that would lower companies' net income, thus adversely impacting investors' forecasts (Paugam & Ramond, 2015).

Overall, this study contributes to the ongoing conversations on the importance of goodwill accounting and its implications in the context of corporate acquisitions by providing further insights into the impact of goodwill accounting rules on financial reporting transparency and reliability. Indeed, as poor disclosure levels on goodwill accounting are reported, the accounting treatment required by IFRS 3 may hinder the true and fair representation of firms' value creation through M&A. Such an occurrence is especially true in operating contexts characterized by low investor protection, accounting secrecy, and low financial market development, such as the Italian one.

Our study suffers from some limitations that, at the same time, suggest interesting future research avenues. First, our research does not include corporate governance variables in terms of both ownership structures and concentration and the board of directors' characteristics and composition. Thus, further studies could investigate how firms' corporate governance mechanisms affect managerial discretion in applying IFRS 3 requirements. Second, our research setting focuses exclusively on the Italian context. While single-country studies are quite common to provide a homogeneous picture, more intriguing findings could emerge from conducting multi-country studies, especially if considering countries characterized by different institutional and accounting systems. Finally, even though we consider multiple time periods to account for the time lag in goodwill write-downs, this evolutionary perspective could be further extended to explore whether the time lag can be better appreciated in more years (Hayne & Hughes, 2006).

In sum, we believe that this paper offers an interesting perspective on the controversial role of goodwill within the specific context of corporate acquisitions executed by Italian-listed firms. In doing so, we do not solely provide evidence of the potential for managerial opportunism in goodwill allocation choices and impairment losses delay but also add to literature questioning the effectiveness of the purchase method and fair value accounting in granting a true and fair view of firms' transactions.

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APPENDIX

Table A.1. Sampled deals (Part 1)

| N | Acquiror name | Acquiror country code | Target name | Target country code | Deal type | Final stake (%) | Completed date | Deal value (thousand EUR) |
|----|---|-----------------------------|---|---------------------------|--------------------------|--------------------|-------------------|---------------------------------|
| 1 | PRYSMIAN SPA | IT | GENERAL CABLE CORPORATION | US | Acquisition 100% | 100.00 | 06/06/2018 | 2,559,612.32 |
| 2 | ANIMA HOLDING SPA | IT | ALETTI GESTIELLE SGR SPA | IT | Acquisition 100% | 100.00 | 28/12/2017 | 1,010,000.00 |
| 3 | PRYSMIAN SPA | IT | DRAKA HOLDING NV | NL | Acquisition 100% | 100.00 | 27/02/2012 | 927,456.00 |
| 4 | TERNA - RETE ELETTRICA NAZIONALE SPA | IT | SOCIETA ELETTRICA FERROVIARIA SRL | IT | Acquisition 100% | 100.00 | 23/12/2015 | 757,000.00 |
| 5 | ENEL SPA | IT | ENEL ROSSIYA PAO | RU | Acquisition 56.43% | 56.43 | 11/07/2018 | 343,353.56 |
| 6 | DAVIDE CAMPARI-MILANO SPA | IT | LASCELLES DEMERCADO & CO LTD | JM | Acquisition 100% | 100.00 | 31/12/2012 | 314,350.48 |
| 7 | DIASORIN SPA | IT | FOCUS DIAGNOSTICS INC.'S TANGIBLE AND INTANGIBLE ASSETS | US | Acquisition 100% | 100.00 | 13/05/2016 | 263,649.96 |
| 8 | EDISON SPA | IT | EDF EN ITALIA SPA | IT | Acquisition 100% | 100.00 | 17/07/2019 | 172,300.00 |
| 9 | SNAI SPA | IT | COGEMAT SPA | IT | Acquisition 100% | 100.00 | 19/11/2015 | 144,637.00 |
| 10 | BUZZI UNICEM SPA | IT | CEMENTIZILLO SPA | IT | Acquisition 100% | 100.00 | 03/07/2017 | 136,806.00 |
| 11 | PARMALAT SPA | IT | LA CAMPESINA HOLANDESA | MX | Acquisition 100% | 100.00 | 03/02/2015 | 134,960.93 |
| 12 | DAVIDE CAMPARI-MILANO SPA | IT | FORTY CREEK DISTILLERY LTD | CA | Acquisition 100% | 100.00 | 03/06/2014 | 133,729.44 |
| 13 | ARNOLDO MONDADORI EDITORE SPA | IT | RCS LIBRI SPA | IT | Acquisition 99.99% | 99.99 | 14/04/2016 | 129,600.00 |
| 14 | ITALGAS SPA | IT | FONTENERGIA SPA | IT | Acquisition 60% and 100% | 100.00 | 03/12/2018 | 116,000.00 |
| 15 | LUXOTTICA GROUP SPA | IT | OTICAS CAROL LTDA | BR | Acquisition 100% | 100.00 | 06/07/2017 | 110,000.00 |
| 16 | DATALOGIC SPA | IT | ACCU-SORT SYSTEMS INC. | US | Acquisition 100% | 100.00 | 20/01/2012 | 104,103.57 |
| 17 | DAVIDE CAMPARI-MILANO SPA | IT | FRATELLI AVERNA SPA | IT | Acquisition 100% | 100.00 | 03/06/2014 | 103,750.00 |
| 18 | FABBRICA ITALIANA LAPIS ED AFFINI SPA | IT | CANSON SAS | FR | Acquisition 100% | 100.00 | 31/12/2016 | 100,000.00 |
| 19 | BREMBO SPA | IT | ASIMCO MEILIAN BRAKING SYSTEMS (LANGFANG) CO., LTD | CN | Acquisition 66% | 66.00 | 19/05/2016 | 78,257.59 |
| 20 | INTERPUMP GROUP SPA | IT | INOXPA SA | ES | Acquisition 100% | 100.00 | 03/02/2017 | 76.000.00 |
| 21 | PIRELLI & C SPA | IT | DÄCKIA HOLDING AB | SE | Acquisition 100% | 100.00 | 13/06/2012 | 70,634.49 |
| 22 | ITALGAS SPA | IT | AQUAMET SPA'S DIVISION | IT | Acquisition 100% | 100.00 | 30/04/2019 | 68,600.00 |
| 23 | SAFILO GROUP SPA | IT | POLAROID EYEWEAR INTERNATIONAL | CH | Acquisition 100% | 100.00 | 03/04/2012 | 65,669.69 |
| 24 | LA DORIA SPA | IT | GRUPPO PAFIAL SRL | IT | Acquisition 100% | 100.00 | 19/11/2014 | 65,200.00 |
| 25 | ALERION CLEAN POWER SPA | IT | FRI-EL ICHNUSA SRL | IT | Acquisition 100% | 100.00 | 01/08/2019 | 64.100.00 |
| 26 | NICE SPA | IT | FIBAR GROUP SA | PL | Acquisition 100% | 100.00 | 12/07/2018 | 63,000.00 |
| 27 | MASSIMO ZANETTI BEVERAGE GROUP SPA | IT | BONCAFE INTERNATIONAL PTE LTD | SG | Acquisition 100% | 100.00 | 21/05/2014 | 62,046.17 |
| 28 | CAREL INDUSTRIES SPA | IT | HYGROMATIK GMBH | DE | Acquisition 100% | 100.00 | 03/12/2018 | 59,000.00 |
| 29 | IMA INDUSTRIA MACCHINE AUTOMATICHE SPA | IT | TISSUE MACHINERY COMPANY SPA | IT | Acquisition 82.5% | 82.500 | 04/05/2018 | 58,500.00 |
| 30 | ESPRINET SPA | IT | VINZEO TECHNOLOGIES SA | ES | Acquisition 100% | 100.00 | 01/07/2016 | 57,600.00 |
| 31 | DAVIDE CAMPARI-MILANO SPA | IT | CK3 LLC | US | Acquisition 100% | 100.00 | 28/02/2017 | 55,109.92 |
| 32 | PRYSMIAN SPA | IT | GLOBAL MARINE SYSTEMS ENERGY LTD | GB | Acquisition 100% | 100.00 | 15/11/2012 | 53.000.00 |
| 33 | DAVIDE CAMPARI-MILANO SPA | IT | BISQUIT DUBOUCHE ET CIE SAS | FR | Acquisition 100% | 100.00 | 31/01/2018 | 52,500.00 |
| 34 | DIASORIN SPA | IT | SIEMENS HEALTHCARE GMBH'S ELISA IMMUNODIAGNOSTIC BUSINESS OPERATIONS | DE | Acquisition 100% | 100.00 | 29/09/2017 | 47,500.00 |
| 35 | RENO DE MEDICI SPA | IT | BARCELONA CARTONBOARD SA | ES | Acquisition 100% | 100.00 | 31/10/2018 | 46,400.00 |
| 36 | ARNOLDO MONDADORI EDITORE SPA | IT | BANZAI MEDIA HOLDING SRL | IT | Acquisition 100% | 100.00 | 08/06/2016 | 45,000.00 |
| 37 | ENAV SPA | IT | IDS INGEGNERIA DEI SISTEMI SPA' AIR NAVIGATION DIVISION | IT | Acquisition 100% | 100.00 | 18/07/2019 | 41,000.00 |
| 38 | TECNOINVESTIMENTI SPA | IT | WARRANT GROUP SRL | IT | Acquisition 70% | 70.00 | 30/11/2017 | 33,900.00 |



| N | Acquiror name | Acquiror country | Target name | Target country | Deal type | Final stake (%) | Completed date | Deal value (thousand |
|----|---|---------------------|--|-------------------|------------------|--------------------|-------------------|-------------------------|
| | | code | | code | | , , | | EUR) |
| 39 | TECNOINVESTIMENTI SPA | IT | COMARK SPA | IT | Acquisition 70% | 70.00 | 24/03/2016 | 33,900.00 |
| 40 | ITALGAS SPA | IT | ICHNUSA GAS SPA | IT | Acquisition 100% | 100.00 | 28/02/2018 | 26,200.00 |
| 41 | IMA INDUSTRIA MACCHINE AUTOMATICHE SPA | IT | EUROSICMA - COSTRUZIONI MACCHINE AUTOMATICHE SPA | IT | Acquisition 60% | 60.00 | 25/07/2017 | 26,000.00 |
| 42 | ITALGAS SPA | IT | MEDITERRANEA ENERGIA AMBIENTE SPA | IT | Acquisition 100% | 100.00 | 06/04/2018 | 24,100.00 |
| 43 | TECNOINVESTIMENTI SPA | IT | VISURA SPA | IT | Acquisition 60% | 60.00 | 20/07/2016 | 21,900.00 |
| 44 | NICE SPA | IT | V2 SPA | IT | Acquisition 100% | 100.00 | 31/07/2018 | 21,700.00 |
| 45 | SNAM SPA | IT | TEP ENERGY SOLUTION SRL | IT | Acquisition 82% | 82.00 | 30/05/2018 | 21,000.00 |
| 46 | ITALGAS SPA | IT | AMALFITANA GAS SRL'S NATURAL GAS DISTRIBUTION ASSETS IN CAMPANIA AND BASILICATA | IT | Acquisition 100% | 100.00 | 31/01/2018 | 18,500.00 |
| 47 | FALCK RENEWABLES SPA | IT | ENERGY TEAM SPA | IT | Acquisition 51% | 51.00 | 02/10/2018 | 18,300.00 |
| 48 | GAROFALO HEALTH CARE SPA | IT | POLIAMBULATORIO DALLA ROSA PRATI SRL | IT | Acquisition 100% | 100.00 | 05/02/2019 | 17,900.00 |
| 49 | SALCEF GROUP SPA | IT | COGET IMPIANTI SPA | IT | Acquisition 100% | 100.00 | 30/07/2019 | 15,520.00 |
| 50 | IMA INDUSTRIA MACCHINE AUTOMATICHE SPA | IT | SPREAFICO AUTOMATION SRL | IT | Acquisition 70% | 70.00 | 16/04/2019 | 15,500.00 |
| 51 | MASSIMO ZANETTI BEVERAGE GROUP SPA | IT | BEAN ALLIANCE, THE | AU | Acquisition 100% | 100.00 | 01/02/2019 | 15,247.72 |
| 52 | SERVIZI ITALIA SPA | IT | TINTORIA LOMBARDA DIVISIONE SANITARIA SRL | IT | Acquisition 100% | 100.00 | 07/07/2016 | 14,200.00 |
| 53 | GPI SPA | IT | NUOVA SIGMA SRL | IT | Acquisition 100% | 100.00 | 11/08/2017 | 13,000.00 |
| 54 | NICE SPA | IT | ET SYSTEMS (PTY) LTD | ZA | Acquisition 100% | 100.00 | 02/03/2015 | 12,348.64 |
| 55 | SOMEC SPA | IT | TOTAL SOLUTION INTERIORS SRL | IT | Acquisition 60% | 60.00 | 20/05/2019 | 12,000.00 |
| 56 | CSP INTERNATIONAL FASHION GROUP SPA | IT | PEROFIL FASHION SRL | IT | Acquisition 100% | 100.00 | 18/05/2017 | 11,700.00 |
| 57 | GPI SPA | IT | INSIEL MERCATO SPA | IT | Acquisition 55% | 55.00 | 31/12/2016 | 10,500.00 |
| 58 | HERA SPA | IT | ECOENERGY SRL'S BUSINESS UNIT | IT | Acquisition 100% | 100.00 | 27/11/2014 | 10,500.00 |
| 59 | ORSERO SPA | IT | FRUTTICA SAS | FR | Acquisition 100% | 100.00 | 07/05/2019 | 10,000.00 |
| 60 | DATALOGIC SPA | IT | SOREDI TOUCH SYSTEMS GMBH | DE | Acquisition 100% | 100.00 | 06/07/2017 | 10,000.00 |
| 61 | VALSOIA SPA | IT | NATURALIA INGREDIENTS SRL'S DIETE TIC BUSINESS | IT | Acquisition 100% | 100.00 | 02/10/2017 | 8,800.00 |
| 62 | B&C SPEAKERS SPA | IT | EIGHTEEN SOUND SRL | IT | Acquisition 100% | 100.00 | 11/12/2017 | 6,788.00 |
| 63 | ENGINEERING INGEGNERIA INFORMATICA SPA | IT | MHT SRL | IT | Acquisition 100% | 100.00 | 03/02/2014 | 6,000.00 |
| 64 | BIESSE SPA | IT | UNITEAM SPA | IT | Acquisition 100% | 100.00 | 19/05/2016 | 2,700.00 |
| 65 | CELLULARLINE SPA | IT | PEGASO SRL | IT | Acquisition 60% | 60.00 | 03/04/2019 | 2,500.00 |
| 66 | RCS MEDIAGROUP SPA | IT | POLIS MEDIALINK SRL | IT | Acquisition 100% | 100.00 | 04/03/2014 | 2,500.00 |
| 67 | ZIGNAGO VETRO SPA | IT | VETRO REVET SRL | IT | Acquisition 51% | 51.00 | 20/12/2017 | 735.00 |
| 68 | LANDI RENZO SPA | IT | EMMEGAS SPA | IT | Acquisition 70% | 70.00 | 07/03/2013 | 475.00 |

Table A.1. Sampled deals (Part 2)