

# Earnings Management Behavior with Respect to Goodwill Impairment Losses under IAS 36: The French Case

Nour MALIJETOU HASSINE<sup>1</sup>  
Faouzi JILANI<sup>2</sup>

<sup>1,2</sup>Faculty of Economic Sciences and Management of Tunis, University of Tunis El Manar, Tunisia,  
<sup>1</sup>E-mail: [nourmalijetou@yahoo.fr](mailto:nourmalijetou@yahoo.fr) (Corresponding author)

**Abstract** This study investigates how reporting incentives influence firms' accounting choices when they are required to use standard IAS 36 to account for goodwill impairment. Specifically, we examine if earnings management motives are associated with the decision and the magnitude of annual goodwill impairment losses reported by French firms. Based on a sample of 720 observations derived from 105 groups of companies that belong to the SBF 250 during the period 2006-2012, results of this study confirm largely our predictions. Indeed, main results show that the decision to record goodwill impairment losses is driven by both CEO change and financial crisis motives. In addition, the findings indicate that managers overstate annual goodwill impairment losses to meet earnings management incentives related not only to CEO change and financial crisis but also to earnings smoothing and big bath accounting. The robustness tests reveal that firms with higher leverage tend to record an increased goodwill impairment loss in response to debt renegotiation incentive. This study illuminates the accounting standard-setters in understanding managers' reporting choices related to the use of discretion afforded by standard IAS 36 on goodwill impairment in France in order to state on its practical usefulness. Thus, it contributes to the international actual debate on goodwill impairment.

**Key words** IFRS 3, IAS 36, accounting for goodwill, goodwill impairment, earnings management

DOI: 10.6007/IJARAFMS/v7-i2/2993

URL: <http://dx.doi.org/10.6007/IJARAFMS/v7-i2/2993>

## 1. Introduction

Together with the growing significance of intangible assets and goodwill for companies worldwide, the critics surrounding the recognition and valuation of these assets also intensified. After several years of debate, and in response to these critics, the Financial Accounting Standard Board (FASB) issued Statement of Financial Accounting Standards SFAS 142 "Goodwill and Other Intangible Assets", which changed radically the accounting for goodwill, from an amortization approach to an impairment testing approach. Effective for fiscal years beginning after December 15, 2001, the standard requires companies to test goodwill for impairment each year, reflecting standard-setters' beliefs that the value of goodwill does not decline in a systematic and regular way (Guler, 2006).

In 2004, and following the FASB, the International Accounting Standards Board (IASB) introduced International Financial Reporting Standards IFRS 3 "Business Combinations" and IAS 36 "Impairment of Assets", containing similar goodwill reporting requirements. Since 2005, European firms have to stop goodwill amortization and conduct a three steps impairment test on goodwill in the same date every year. In the transitional era, goodwill charges are associated with retaining earnings while they reduce current earnings in subsequent periods. By substituting the historical cost based measures by a fair value concept, the international standard-setters aimed at improving transparency, comparability and the decision usefulness of accounting information (Jerman and Manzin, 2008; Hamberg *et al.*, 2011).

However, the new impairment approach was surrounded by controversy for many reasons. First, it introduces significant room for management interpretations, judgments and bias, both at the time of a merger and in future periods. This provides managers with more flexibility to determine not only the value of goodwill but also the existence and amount of impairment. As a result, opportunities arise from managers to engage in some sort of earnings management (Massoud and Raiborn, 2003; Guler, 2006; Van

de Poel *et al.*, 2009). Second, the decision made upon the adoption of the new standards' goodwill requirements is likely to affect more than one period. As prior research report, given a fixed pool of available impairments on a limited horizon, annual write-offs can be seen as possible facilitators for potential future earnings management, because understating (overstating) the goodwill impairment leaves room for more (less) important subsequent annual impairment losses. Thus, it gives at the same time opportunities for less (more) positive earnings management and more (less) negative earnings management. Finally, additional impairment tests which are based on unverifiable indices accentuated this dilemma.

The intensified critics around the goodwill impairment approach have pushed the IASB to conduct a post-implementation review of the IFRS 3 "Business Combinations" in order to consider whether the new standard is functioning as anticipated, has achieved its objectives and has improved financial reporting (IASB, 2015). Although main results show general support for the accounting requirements in the Standard, they identify some areas where further research would be undertaken, including accounting for goodwill, especially the effectiveness and complexity of goodwill impairment approach and the subsequent accounting for goodwill (IASB, 2015). At the same time, the ASBJ<sup>1</sup> has published a research paper on goodwill amortization with the view to enrich the global discussion of accounting requirements for goodwill.

Motivated by the growing international debate surrounding the impairment test of goodwill, the current study investigates how reporting incentives influence firms' accounting choices when they are required to use standard IAS 36 to account for goodwill impairment. More specifically, we examine the earnings management motives associated with the decision and the magnitude of goodwill impairment losses reported by French firms following the adoption of IFRS on purchased goodwill.

The choice of the French setting to do this study is justified by three reasons.

First, the new position related to the substitution of the goodwill amortization by an annual test of impairment has been adopted, in the first level in the Anglo-American context, then in Europe in 2005. Consequently, most researches have been done upon the Anglo-American context. The study upon the French context will provide the standard-setters insights on the discretionary incentives driving the goodwill impairment in France and illuminate them on the relevance of the goodwill impairment approach under IAS 36 in France. Therefore, it contributes to the accounting literature on goodwill.

Second, the transition from historical cost accounting towards fair value accounting, as in the case of France, can lead to increased bias and manipulation in financial reporting (Bens *et al.*, 2011). In the same vein, Bessieux-Ollier and Walliser (2007) state that France has sometimes discarded sensitively from accounting techniques adopted by the IASB upon the intangibles, especially the valuation of goodwill. Prior literature documents that the changeover towards the new goodwill accounting treatment could present new windows to earnings management. Moreover, Capkun *et al.* (2013) note that the wide flexibility offered by IAS 36 relating to goodwill impairment coupled with the complexity of the transition to the new rules may increase earnings management. For this, the French accounting environment is interesting to study.

Third, the growth operations experienced by French groups over the past decade have led to the emergence of significant goodwill in their consolidated balance sheets (Schevin, 2005). Hence, the French context constitutes a suitable site to test the discretionary incentives linked to the goodwill impairment under IAS 36. In this framework, we target the biggest French groups in terms of market capitalization, namely the groups belonging to the SBF 250 and we focus on long term managers' reporting choices with respect to annual impairment losses following the adoption of IAS 36 as opposed to the transitional impairment losses in connection with the adoption of IAS 36 because this gives a more cleaner test of research questions addressed in this study (Guler, 2006).

Our focus on French firms that impair goodwill at the period of 2006-2012, which includes the economic crisis, leads us to the use of a set of discretionary incentives that partially differs from previous studies and provides a wide period of incentives testing. Therefore, we open the opportunity for incremental contribution to the existing literature.

---

<sup>1</sup> Accounting Standards Board of Japan

In fact, managers' review of goodwill impairment as a form of accounting choice is likely to be affected by their incentives to act with opportunism, as implied by the agency theory (Jensen and Meckling, 1976). Following this idea, and consistent with earlier researches on goodwill impairment determinants, we hypothesize that the magnitude of goodwill impairment losses is a function of economic determinants of goodwill, firm specific factors, as well as earnings management motives. As previous researches (Ramanna, 2008; Ramanna and Watts, 2012; Li *et al.*, 2011) confirm that the use of unverifiable fair values under SFAS 142 (IAS 36) may lead to the opportunistic avoidance of impairment charges, and according to Guler (2006), we are going to extend the researches on the determinants of goodwill impairment losses to the determinants of goodwill impairment decisions.

Consistent with earlier researches (Beatty and Weber, 2006; Guler, 2006; Lapointe-Antunes *et al.*, 2005; 2008; Van de Poel *et al.*, 2009; Stumpell, 2012; Ramanna and Watts, 2012) on the discretionary determinants of goodwill impairment losses, and in line with positive accounting theory, we expect that the magnitude (the decision) of goodwill impairment losses is negatively associated with leverage and bonus. Goodwill impairment losses affects assets, equity and net income, which increases leverage and reduces income used to calculate bonuses. This creates an incentive for firms near to violate debt clauses and for managers with bonus plan, to minimize goodwill impairment losses, in attempt to reduce leverage and maximize bonuses. Furthermore, we hypothesize that the magnitude (the decision) of goodwill impairment losses is positively linked to the change in CEO, as it is motivated by a big bath option used by the new CEO. Following Guler (2006), Stumpell (2012) and Al Dabbous *et al.* (2015), the magnitude (the decision) of goodwill impairment losses is positively associated with earnings management configurations of "big bath accounting" and "income smoothing". Finally, in contribution to prior studies, we expect that the magnitude (the decision) of goodwill impairment losses is positively associated with the financial crisis, because managers may use the worse context of economic crisis as a justification to the reduction of goodwill value. To our knowledge, no prior study has examined the discretionary incentives linked to goodwill impairment (decision and magnitude) for a long period; or has included the effect of economic crisis as a discretionary motivation to manage the goodwill impairment .

The results of random-effects logistic regression exploring the determinants of the decision to record goodwill impairment losses are consistent with our anticipations regarding CEO change and financial crisis. They show that the decision to report goodwill impairment losses is positively affected by the change in CEO position and the context of financial crisis. The results of random-effects tobit regression analyzing the discretionary determinants of the amount of goodwill written off are consistent with most of our predictions. Firms that conclude a change in CEO report larger goodwill impairment losses. Recorded goodwill impairment losses are also larger for firms with earnings above or below the expectations. In addition, the financial crisis seems to be used to accelerate, both the decision and the amount of goodwill impairment, since it gives managers a pretext to bad results. Although the results are contrary to the expectations regarding the debt covenant hypothesis and the bonus plan hypothesis, robustness test about debt covenant motivation gave a contribution to the existent literature, by introducing the motivation of managers to reduce substantially earnings when leverage is above the line, in order to create a dramatic situation and discuss well the new debt clauses.

## **2. Literature review**

### **2.1. International accounting for goodwill**

Goodwill is recognized to be the most complex intangible asset (Lhaopadchan, 2010). It is recorded on the balance sheet only when it is purchased in a business combination, and it is deduced as the excess of a business acquisition price over the fair value of a target firm's net identifiable assets (Jerman and Manzin, 2008, Hamberg; Paananen and Novak, 2011; Stumpell, 2012). For many years, goodwill has been subject of international controversy and debates, related to its recognition as an asset and the treatment after its initial recognition, which is directly linked to net income. Particularly, critics about the amortization method for goodwill intensified, because the amounts do not reflect the true value of goodwill and mislead investors and analysts about the true value of the firm (Lhaopadchan, 2010). Guided by its conviction that purchased goodwill doesn't decrease in value at a constant way, and in response to critics about the amortization method used to write off goodwill, on July 2001, the FASB released SFAS 141 "Business

Combinations” and SFAS 142 “Goodwill and Other Intangible Assets”, which respectively superseded APB 14 “Business Combinations” and APB 17 “Intangible Assets”. The SFAS 141 substituted the pooling of interests method by the purchase method to recognize acquired goodwill, in the objective of improving the comparability of information on business combinations (SFAS 141, 2001). While the SFAS 142 eliminated the amortization method of goodwill<sup>2</sup> and replaced it by a two stages impairment test, undertaken at least once a year, to evaluate correctly goodwill. On July 2004, upon the increased demand for global financial harmonization and in order to improve the quality of financial reporting, the IASB followed the FASB and released IFRS 3 “Business Combinations”, which replaced IAS 22 “Business combinations” and allowed business combinations to be accounted for using the full-purchase method (Watrin *et al.*, 2006). Moreover, the IASB abandoned the amortization of goodwill and revised IAS 36 “Impairment of Assets” and IAS 38 “Intangible Assets”, to adopt an impairment-only approach.

Under the new goodwill’s accounting requirements, firms must stop goodwill amortization and conduct an annual impairment test for goodwill. Firstly, managers must define their ‘cash generating units’ (CGUs) and then allocate the recorded goodwill to CGUs. Secondly, the book value of each CGU is compared to its recoverable value. If the former exceeds the latter, then the firm must record an impairment write-off equal to the difference and allocated over the CGU assets, in priority the goodwill. Furthermore, managers must complete the annual impairment test by other tests once new indices of CGU impairment appear. They may revise the initial allocation of goodwill if necessarily. Although differences between the FASB and the IASB to account for goodwill still remain, especially technical differences, such as the definition of both CGU and Fair value concept, they moved towards each other. This fact increased the international global harmonization and the comparability of accounting standards.

## **2.2. Goodwill accounting treatment in France**

Before January 2005, date of effective application of IFRS/IAS in France, the accounting treatment of goodwill was governed by CRC regulation No. 99-02<sup>3</sup> on consolidated statements. According to this regulation, the goodwill is defined as “the difference between the cost of acquisition and the total valuation of assets and liabilities identified at the date of acquisition”, and goodwill amortization must be done consistently over a period that should reflect, as reasonably as possible, the assumptions and objectives determined and documented during the acquisition<sup>4</sup>. However, this period shouldn’t exceed 40 years. In addition, an impairment test must be undertaken whenever certain adverse changes occur (PricewaterhouseCoopers, 2003). Given that the conditions of recording of the intangible assets defined by the IAS 36 are stricter than those of the regulation No. 99-02, the French firms which experienced the transition to the IFRS know, in addition to the major change in goodwill valuation, a phenomenon of sliding of the not recognizable intangible elements towards goodwill (Bessieux-Ollier and Walliser, 2007).

## **2.3. Sources of managerial discretion**

The impairment approach imposed by the IAS 36 to account for goodwill removes the write-off recognition choice by requiring firms to test goodwill for impairment, at least annually, while still offering them considerable discretion regarding the measurement and the timing of impairment losses. Many researches indicate that the standard offers managers a greater flexibility inherent to the use of judgments and unverifiable estimations, during and after mergers (Massoud and Raiborn, 2003; Watts, 2003; Ramanna and Watts, 2009; Van de Poel *et al.*, 2009). Managerial discretion is exerted at many levels of the impairment approach:

- The goodwill CGUs delimitation and number (Lapointe-Antunes *et al.*, 2008; Zang, 2008).
- The allocation of the opening goodwill balance to its different CGUs identified (Massoud and Raiborn, 2003; Lapointe-Antunes *et al.*, 2008; Zang, 2008; Van de Poel *et al.*, 2009).

---

<sup>2</sup> Goodwill was amortized for a period no to exceed 40 years.

<sup>3</sup> “The CRC Regulation No. 99-02, approved by the ministerial decree of June 22nd, 1999, applies since January 1st, 2000 in an obligatory way in the accounts of French industrials and commercials companies” (PwC, 2002, p.9).

<sup>4</sup> Art. No. 2113 of Reg No. 99-02

- The assessment of the recoverable amount of each CGU, using the concept of fair value in determining the value of the CGU as a whole and the values of its net identifiable assets (Massoud and Raiborn, 2003; Lapointe-Antunes *et al.*, 2008; Van de Poel *et al.*, 2009; Bouden *et al.*, 2011), and the determination of goodwill impairment.

Firms' discretion regarding annual goodwill impairment loss, which flows directly into operating income, can be exercised in two ways: managers can either overstate the annual impairment loss and thus record a write-off greater than the real economic impairment, or understate or do not recognize the existing impairment, depending on their earnings management motivations.

#### **2.4. Relationship to prior literature**

Our research relates to two subsets of literature on the determinants of goodwill write-offs.

The first stream of papers on the area investigates the determinants of transitional goodwill write-offs, especially in the Anglo-American context. Beatty and Weber (2006) demonstrate that SFAS 142 adoption choices are related to contracting and market incentives, managed within a trade-off between the timing and the presentation of goodwill impairment recognition on the income statement, in the United States. In line with this research, Zang (2008) shows that debt contracting and CEO change influence goodwill impairment in the American context. While Lapointe-Antunes *et al.* (2005, 2008) introduce the motivations of bonus plan, stock option and foreign listing, in the Canadian context.

The second stream of papers on the field examines the determinants of annual goodwill write-offs, within different contexts. First, Guler (2006) finds that annual goodwill write-offs are associated with bonus plan discretionary motives, governance mechanisms and earnings management patterns of "big bath accounting" and "income smoothing", in the American context. In the same vein, Ramanna and Watts (2012) demonstrate that the magnitude of goodwill impairment losses reported by American firms is negatively linked to the PAT motives as well as to the CEO tenure. Second, Van de Poel *et al.* (2009) and Stumpell (2012) test discretionary incentives on the Euro-continental context, using samples of firms listed on the Euronext stock exchange. Except of Ramanna and Watts (2012), all of these papers use a short testing period of two years. Our study focuses on discretionary incentives subsequent to the adoption of IAS 36. It is inspired from earlier research, in using a set of reporting incentives, including both contacting incentives and earnings management patterns of "big bath accounting" and "income smoothing". However, it differs from all previous papers in two key aspects.

First, previous researches examine transitional goodwill impairment charges or annual goodwill impairment charges, but for only a short period. This study extends the testing era to a seven year's time, which provides a cleaner test of the intensity and the nature of managerial incentives associated with goodwill impairment losses under IAS 36. Moreover, this period includes the financial crisis year, and tests the management of the context of financial crisis as an additional motivation to goodwill write-offs. Second, while earlier researches tested goodwill impairment discretion in the Anglo-American context (especially United States and Canada) or in the Euro-continental context as a whole, rare research has focused on a single European setting (e.g. Giner and Pardo, 2015). Our research investigates the discretionary incentives of goodwill impairment test in the French context, which is a "single country context" that provides an ideal opportunity to test the discretionary behavior of managers in using goodwill impairment test under IAS 36, because it represents a country moving from a historical cost based accounting to a principles based accounting. Difficulties of moving are associated to discretion afforded by the IAS 36. This provides additional reasons for using discretion. Therefore, this contributes to the stream of literature on goodwill write-offs discretionary determinants in the Euro-continental context.

### **3. Hypotheses development**

Given the flexibility of discretion in making estimates regarding the fair value of goodwill introduced by IFRS 3 and IAS 36 in the impairment testing approach, and according to the agency theory (Jensen and Meckling, 1976), Corporate managers, who are both agents for equity and bond holders that act in response to their self-interest, may have incentives to manage the decision as well as the amount of goodwill impairment loss, leading to a wealth extraction from those principles. Accordingly, we consider

the effect of both managerial incentives and well known earnings management theories (big bath accounting and income smoothing) and of the contextual factor of financial crisis, on goodwill impairment.

### **3.1. Managerial incentives**

#### *Change in senior management*

CEOs in position at the acquisitions date are considered responsible for acquisitions' decisions. For this reason, they are less likely to record a goodwill impairment loss, in order to reduce the acquisition price and demonstrate that they are realizing the promised synergies from acquisitions (Lapointe-Antunes *et al.*, 2008). However, new installed CEOs may be motivated to manage goodwill impairment losses for at least three reasons (Riedl, 2004): Blaming predecessors for poor acquisitions, sending a positive signal to investors indicating that "bed times are behind the firm and that better times will follow" (Lapointe-Antunes *et al.*, 2008), and protecting current and future earnings. Existing literature shows a positive association between the tenure of CEO and earnings management behavior. First stream of studies finds a positive relation between the change of CEO and the earnings management measured by discretionary accruals (Wells, 2002; Goodfrey, 2003). Second stream of studies finds a positive link between CEO change and assets write-offs (Elliott and Show, 1988). Last stream of studies investigates the relation between CEO change and goodwill write-offs, in the adoption period (Beatty and Weber, 2006; Zang, 2008; Lapointe-Antunes *et al.*, 2008) and in the post adoption period (Guler, 2006; Masters-Stout *et al.*, 2008; Stumpell, 2012; Ramanna and Watts, 2012; Al Dabbous *et al.*, 2015) and demonstrates that new managers tend to use the discretion afforded by IAS 36 in order to reduce earnings. Following prior researches, we predict a positive association between CEOs change and goodwill write-offs. Hence, the first hypothesis is:

*H1: Firms that experience a change in CEO record higher annual goodwill impairment losses.*

#### *Debt covenant hypothesis*

According to the positive accounting theory (Watts and Zimmerman, 1978), managers whose lending contracts include accounting-based debt covenants, tend to manage positively earnings in order to avoid costly debt-clauses violation. Prior literature results about earnings management (Defond and Jiambalvo, 1994; Dichev and Skinner, 2002; Gu and *et al.*, 2005; Ben Othman and Zeghal, 2006) are in line with debt covenant assumption. As such, managers are motivated to delay an existing goodwill impairment charge because this loss will lower the firm earnings. Beatty and Weber (2006) and Zang (2008) find evidence of delaying expense recognition in order to avoid debt covenant violation, in the American context at the adoption period, while Ramanna and Watts (2012) validate the assumption after the transition period in the American context. Extending prior research to the French context, we anticipate a negative association between prior- year leverage and goodwill write-offs. Thus, the second hypothesis is:

*H2: Firms with higher leverage record lower annual goodwill impairment losses.*

#### *Bonus plan hypothesis*

As an emanation of the positive accounting theory, the bonus plan hypothesis suggests that managers whose compensations include a proportion of bonus would have the incentive to use accounting procedures that maximize accounting earnings, in order to maximize their bonus. Since annual goodwill impairment affects directly assets and operating income, it impacts immediately bonus payments based on accounting income and opens the door for executives to manage the goodwill impairment loss in favor of their bonus interest. The empirical accounting literature validates this hypothesis. Beatty and Weber (2006) test the management compensation hypothesis in the American context during the transition period, and find that managers with bonus payments based on earnings have the incentive to maximize the goodwill impairment loss, to avoid future impairments. Guler (2006) investigates the bonus plan hypothesis in the American context after the transition to SFAS 142 and finds negative association between annual goodwill impairment loss and the proportion of the CEO bonus, implying that CEO with higher proportion of compensation paid in bonus records lower goodwill impairment loss. In the same framework, Ramanna and Watts (2012) demonstrate that CEO whose compensation includes bonus records a goodwill impairment loss lower than the CEO not having bonus based compensation. Therefore, the third hypothesis is:

*H3: Firms with higher proportion of CEO compensation paid in bonus record lower annual goodwill impairment losses.*

### **3.2. Earnings management patterns: earnings smoothing and big bath accounting**

Previous literature documents that managers can use accounting discretion in financial reporting to smooth earnings and/or to take big bath charges (Schipper, 1989; Healy and Whalen, 1999). Empirical literature shows evidence of earnings management motives related to income smoothing and big bath accounting (Graham *et al.*, 2005; Ben Othman and Zeghal, 2006). As the opportunity of earnings manipulation is possible in goodwill impairment process under IAS 36, managers may have incentives to overstate goodwill impairment in order to, either smooth unexpectedly high earnings or take big bath charges when income is below the expectations (Guler, 2006).

#### *Earnings smoothing*

Ahmed *et al.* (2013) point an earnings smoothing behavior related to the IFRS adoption in the EU, including goodwill. Massoud and Raiborn (2003) argue that executives can take higher than the real economic goodwill impairment when actual earnings are above the expectations. Managers would accelerate goodwill impairment to improve future earnings (Massoud and Raiborn, 2003; Jordan and Clark, 2011). Empirical results confirm this prediction: Guler (2006), Stumpell (2012) and Al Dabbous *et al.* (2015) find a positive association between income smoothing and the magnitude of goodwill impairment loss, respectively in the American, European and United Kingdom contexts, indicating that managers take goodwill impairment charges to smooth earnings when they are over expectations. This view is also pointed by Capkun *et al.* (2013) who show that the adoption of the new standard induces earnings smoothing behavior from pre-2005 to post-2005, and that firms from countries with less local gaps flexibility (as France) exhibit greater evidence of increased earnings smoothing. Thus, the fourth hypothesis is:

*H4: Firms with unexpectedly high earnings record higher annual goodwill impairment losses.*

#### *Big bath accounting*

Massoud and Raiborn (2003) argue that managers may record large goodwill impairment losses when earnings are unexpectedly low. The rationale of managers would be that recording goodwill write-offs could not make significant difference in a context of downward trend. Empirical evidence (Guler, 2006; Van de Poel *et al.*, 2009; Stumpell, 2012; Al Dabbous *et al.*, 2015) show a negative association between big bath variable and goodwill impairment, suggesting that executives take goodwill impairment charges to reduce substantially earnings when they are under expectations. Hence, the fifth hypothesis is:

*H5: Firms with unexpectedly low earnings record higher annual goodwill impairment losses.*

### **3.3. Contextual factor: financial crisis**

It is admitted that the financial crisis, which took place over the world around the year 2008, affected negatively the valuations of firms. Hence, investors would expect a decrease in the value of businesses and a rise in the amounts of goodwill impairment losses. However, this is not always fair. Prior researches demonstrate that the goodwill impairment charges recorded may be also related to managerial incentives. As overstating current goodwill impairment losses reduces future available annual impairment losses<sup>5</sup>, and thus increases future earnings, managers may use this fact opportunistically, by recording higher goodwill impairment losses which do not reflect the true economic value of goodwill (Lenormand and Touchais, 2014). Accordingly, we predict that this procedure will be intensified during the crisis era since it may be justified by the worldwide negative trend of economics. Therefore, the sixth hypothesis is:

*H6: Firms that experience the financial crisis record higher annual goodwill impairment losses.*

---

<sup>5</sup> Previous goodwill impairment losses cannot be reversed according to IAS 36.

#### 4. Methodology of research

##### 4.1. Sample and Data

Table 1 outlines the sample selection procedure. The initial sample is composed of 167 French firms listed on Paris Stock exchange and belonging to the SBF 250, between 2006 and 2012. To obtain the sample of study, we first excluded financial industry firms. This left 134 firms.

Table 1. Sample selection

	<b>Firms</b>
<b>Initial sample</b>	<b>167</b>
Observations deleted	
- Financial firms	33
- Firms without opening balance of goodwill	02
- Firms with missing data	27
<b>Final sample (firms)</b>	<b>105</b>
<b>Final sample (firm-years)</b>	<b>720</b>

Following earlier studies (Beatty and Weber, 2006; Guler, 2006; Lapointe-Antunes *et al.*, 2005; 2008), we excluded firms without opening balance of goodwill. Thus, we restricted the sample to firms with positive goodwill balance at the beginning of year. This procedure resulted in 132 firms that are more likely to impair goodwill. Finally, we deleted firms with missing data. As far as the financial data and Information about managers' compensation and change in top management are concerned, they were obtained from sample firms' annual reports, hand collected from Thomson database as well as firms' web sites and AMF web site. Financial ratios were drawn directly from Thomson database. Missing data were at large about CEO compensation detail and leads to a sample fall of 27 firms. General completed data are available for 105 firms over the era 2006-2012, leading to a final sample of 720 firm-years.

##### 4.2. Model and variables

We use the following general model to assess the discretionary determinants of goodwill impairment losses:

Goodwill impairment losses = f {goodwill characteristics, firm-specific factors, earnings management motives}

At first, we examine the discretionary determinants of firms' decisions to take IAS 36 goodwill impairment charge. Because the decision to recognize an impairment loss is a dichotomous choice, we use the logit model (Cameron and Trivedi, 2010). At second, we investigate the discretionary determinants of the percentage of goodwill that is written-off. For the reason that the dependent variable is censored at zero, we use the tobit model (Green, 2003). Specifically, we use the following logistic and tobit regressions to test the effects of hypothesized incentives on executives' reporting choices on goodwill, under IAS 36.

In order to control for industry-fixed effects, we include 9 industrial dummies (CONSOM, INDUS, MATBASE, PETGAZ, HEALTH, SERV, UTILIT, TELECOM, TECH), which represent respectively the industries<sup>6</sup> (consumer goods, industrials, basic materials, oil and gas, health care, consumer services, utilities, telecommunications and technology).

##### Logistic regression

$$\text{IMPAIR}_{i,t} = \alpha + \mu_1 * \text{CHANGE}_{i,t} + \mu_2 * \text{LEV}_{i,t} + \mu_3 * \text{BONUS}_{i,t} + \mu_4 * \text{SMOOTH}_{i,t} + \mu_5 * \text{BATH}_{i,t}$$

<sup>6</sup> Referring to the Industry Classification Benchmark (ICB) which is industry classification taxonomy launched by both Dow Jones and FTSE in 2005, and actually owned exclusively by FTSE. It contains 10 industries (including financial services), partitioned into 19 super sectors, further divided into 41 sectors, which are partitioned into 114 subsectors.



$$\begin{aligned}
 & +\mu_6 * \text{CRISIS}_{i,t} + \mu_7 * \text{RUNITS}_{i,t} + \mu_8 * \text{GOODWILL}_{i,t} + \mu_9 * \text{EXCGWILL}_{i,t} + \mu_{10} * \Delta \text{ROA}_{i,t} + \mu_{11} * \Delta \text{SALES}_{i,t} \\
 & + \mu_{12} * \text{SIZE}_{i,t} + \mu_{13} * \text{CONSOM}_{i,t} + \mu_{14} * \text{INDUS}_{i,t} + \mu_{15} * \text{MATBASE}_{i,t} + \mu_{16} * \text{PETGAZ}_{i,t} + \mu_{17} * \text{HEALTH}_{i,t} \\
 & + \mu_{18} * \text{SERV}_{i,t} + \mu_{19} * \text{UTILIT}_{i,t} + \mu_{20} * \text{TELECOM}_{i,t} + \mu_{21} * \text{TECH}_{i,t} + \mu_{i,t} + \theta_{i,t}
 \end{aligned} \tag{1}$$

### Tobit regression

$$\begin{aligned}
 \text{GWIMP}_{i,t} = & \alpha + \mu_1 * \text{CHANGE}_{i,t} + \mu_2 * \text{LEV}_{i,t} + \mu_3 * \text{BONUS}_{i,t} + \mu_4 * \text{SMOOTH}_{i,t} + \mu_5 * \text{BATH}_{i,t} + \mu_6 * \text{CRISIS}_{i,t} + \mu_7 * \text{RUNITS}_{i,t} \\
 & + \mu_8 * \text{GOODWILL}_{i,t} + \mu_9 * \text{EXCGWILL}_{i,t} + \mu_{10} * \Delta \text{ROA}_{i,t} + \mu_{11} * \Delta \text{SALES}_{i,t} + \mu_{12} * \text{SIZE}_{i,t} + \mu_{13} * \text{CONSOM}_{i,t} + \mu_{14} * \text{INDUS}_{i,t} \\
 & + \mu_{15} * \text{MATBASE}_{i,t} + \mu_{16} * \text{PETGAZ}_{i,t} + \mu_{17} * \text{HEALTH}_{i,t} + \mu_{18} * \text{SERV}_{i,t} + \mu_{19} * \text{UTILIT}_{i,t} + \mu_{20} * \text{TELECOM}_{i,t} + \mu_{21} * \text{TECH}_{i,t} + \mu_{i,t} + \theta_{i,t}
 \end{aligned} \tag{2}$$

Where:

IMPAIR = A dichotomous variable equals to 1 if the firm records an annual goodwill impairment loss under IAS 36 at the end of t, 0 otherwise.

GWIMP = the annual goodwill impairment loss at the end of t divided by the opening balance of goodwill.

CHANGE = 1 if the firm experiences a CEO change in years t or/and t-1, 0 otherwise.

LEV = Debt to asset ratio of firm i at the end of t-1.

BONUS = Bonus compensation for the CEO at the end of t-1 divided by CEO's salary at the end of t-1.

SMOOTH = the proxy for 'income smoothing' reporting, equals to the change in firm's pre-write-off earnings from period t-1 to t divided by lagged total assets, when this change is positive, 0 otherwise.

BATH = the proxy for 'Big bath accounting' reporting, equals to the change in firm's pre-write-off earnings from period t-1 to t divided by lagged total assets, when this change is negative, 0 otherwise.

CRISIS = 1 if the firm experiences the financial crisis, 0 otherwise.

RUNITS = Number of cash generating units among which the opening balance of goodwill is switched or of operating segments if data on cash generating units are not disclosed.

GOODWILL = Opening balance of goodwill divided by lagged total assets.

EXCGWILL = Difference between the market value and the book value of firm i at the end of t-1 divided by lagged total assets.

$\Delta \text{ROA}$  = the percent change of return on assets for firm i from period t-1 to t.

$\Delta \text{SALES}$  = the percent change of sales for firm i from period t-1 to t.

SIZE = the natural logarithm of total assets for firm i at the end of t-1.

### Dependent variables

In the logistic regression model, the dependent variable goodwill impairment decision (IMPAIR) is measured, following Guler (2006), Van de Poel *et al.* (2009) and Stumpell (2012) as a dichotomous variable equals to 1 if the firm record an annual goodwill impairment loss under IAS 36 at the end of t, and 0 otherwise. In the tobit model, the dependent variable magnitude of annual goodwill impairment loss (GWIMP) is measured according to Riedl (2004) and Guler (2006) as the annual goodwill impairment loss scaled by the opening balance of goodwill, and expressed as a positive number.

### Control variables

As the reliability of our findings depends on the extent to which the research design captures for economics factors that drive the goodwill impairment numbers, our research design includes three sets of control variables:

First, following Guler (2006), Lapointe-Antunes *et al.* (2008) and Stumpell (2012), we incorporate three variables to proxy for the characteristics of goodwill (EXCGWILL, GOODWILL and RUNITS). EXCGWILL determines the expected impairment at a firm level. We expect that firms with higher excess fair value of goodwill to be less likely to record higher goodwill impairment loss. GOODWILL measures the proportion of goodwill in the assets composition. Firms that have a greater assets composition could incur more goodwill impairment. RUNITS represents the number of cash generating units into which goodwill is split. Firms with more cash generating units have a greater opportunity to manage goodwill impairment.

Second, as earlier researches (Guler, 2006; Van de Poel *et al.*, 2009; Stumpell, 2012) control for the change in economic performance of the firm, we add two variables to proxy for the change in economic performance of the firm ( $\Delta \text{ROA}$  and  $\Delta \text{SALES}$ ). ROA is measured by income before extraordinary items scaled by average total assets. Change in firm's ROA and in sales are both expected to be negatively associated

with goodwill impairment loss. Finally, similar to Zang (2008), Lapointe-Antunes *et al.* (2008) and Stumpell (2012), we control for the economic context of the firm by using two variables (SIZE and INDUSTRY). According to the PAT, the larger the firm is, the larger the goodwill impairment loss would be.

We use industry dummies derived from the Industry Classification Benchmark (ICB) in order to control for industry-fixed effects.

#### *Earnings management motives*

Six variables are included in the model as proxies for reporting incentives of managers to under-state or over-state annual goodwill impairment losses (CHANGE, LEV, BONUS, BATH, SMOOTH and CRISIS).

To capture the impact of CEO change, we introduce the dummy variable CHANGE, which takes the value 1 if there is a change in CEO position during the current or/and the preceding year, and zero otherwise (Pascale Lapointe-Antunes *et al.*, 2008; Stumpell, 2012). Consistent with the first hypothesis, we expect a positive association between CHANGE and the magnitude (the decision) of annual goodwill write-off. To measure the effects of the PAT hypotheses, we define the variable BONUS as the quotient of CEO's bonus compensation and the CEO's salary for year t-1 (Guler, 2006; Stumpell, 2012) as a proxy for bonus compensation hypothesis, and the variable LEV as the quotient of debts divided by total assets for year t-1 as a proxy for debt covenants hypothesis (Guler, 2006). Each of these variables is expected to be negatively gathered with the magnitude (the decision) of annual goodwill impairment.

To test managers' incentives to take big bath charges and/or income smoothing behaviors, we include proxies used when earnings are unexpectedly low or unexpectedly high. Following prior researches (Francis *et al.*, 1999; Riedl, 2004; Guler, 2006), we define the ratio of change in firm's pre-write-off earnings from period t-1 to t divided by lagged total assets. On one hand, if the value is negative, then BATH equals the negative value and SMOOTH equals zero. On the other hand, if the value is positive, then BATH equals zero and SMOOTH equals the positive value. Consistent with the fourth and the fifth hypotheses (Riedl, 2004; Guler, 2006), we expect a negative (positive) sign on BATH (SMOOTH).

Finally, we add the variable CRISIS to proxy for the discretionary using of the financial crisis' context as a motivation to write-off earnings. Consistent with the sixth hypothesis, we expect a positive link between CRISIS and the magnitude (the decision) of annual goodwill impairment loss.

## **5. Empirical results**

### **5.1. Descriptive statistics**

Table 2 reports the sample partition by industry and impairment decision. Industry membership is determined with ICB indices. Table 2 provides two main conclusions. First, it reveals that industrials, consumer services and technology are the dominant industries of our sample with a percentage of 65.28% of total sample. Health care and consumer goods represent each other about 10% of total sample. The other industries are not representative. Second, it shows on the one hand that 41.25% of sample firms (297) record an annual goodwill impairment loss, on the other hand that the percentage of firms recording an annual goodwill impairment loss varies by industry.

In the late 90s, French firms conducted a wave in mergers and acquisitions (Schevin, 2005), especially in technology and telecommunication industries. As a result, large goodwill was recorded and large annual goodwill impairment losses were expected in these industries. Consistent with our expectations, table 2 indicates that the telecommunications, utilities, consumer services, consumer goods and technology show the highest percentage of annual goodwill impairment firms.

Table 2. Annual goodwill impairment losses by industry

Industry group	All firms		AGIL firms	
	Number	Percentage	Number	Percentage
consumer goods	77	10.69 %	33	42.86 %
industrials	200	27.78 %	89	44.50 %
Basic materials	42	5.83 %	15	35.71 %
Oil and gas	31	4.31 %	6	21.43 %

Health care	69	9.58 %	15	21.74 %
consumer services	137	19.03 %	63	47.36 %
Utilities	24	3.33 %	15	71.43 %
Telecommunications	7	0.98 %	7	100 %
technology	133	18.47 %	54	40.60 %
Total	720	100 %	297	41.25 %

**Note:** AGIL-firms design firms recording annual goodwill impairment losses.

Table 3. Descriptive statistics – Variables

Variable	AGIL firms (N=297)		Zero-AGIL firms (N=423)		Both (N=720)		Test of differences	
	Mean	Median	Mean	Median	Mean	Median	Means P> t	Medians P> Z
IMPAIR	1	1	0	0	0.412	0		
GWIMP	0.058	0.0167	0	0	0.024	0		
CHANGE	0.276	0	0.196	0	0.229	0	-2.518 (0.012)	-2.509 (0.012)
LEV	0.652	0.652	0.600	0.605	0.622	0.627	-4.411 (0.000)	-4.233 (0.000)
BONUS	0.740	0.750	0.594	0.440	0.654	0.578	-3.227 (0.001)	-4.777 (0.000)
SMOOTH	0.014	0.003	0.018	0.004	0.016	0.003	1.618 (0.105)	1.434 (0.151)
BATH	-0.011	0	-0.011	0	-0.011	0	0.057 (0.954)	0.531 (0.595)
CRISIS	0.168	0	0.122	0	0.141	0	-1.721 (0.085)	-1.719 (0.085)
RUNITS	8.040	6	5.945	4	6.809	5	-5.117 (0.000)	-5.805 (0.000)
GOODWILL	0.199	0.198	0.207	0.178	0.204	0.185	0.753 (0.451)	-0.555 (0.578)
EXCGWILL	0.369	0.194	0.481	0.292	0.435	0.237	2.170 (0.030)	2.216 (0.026)
ΔROA	-0.088	-0.055	-0.106	-0.064	-0.099	-0.062	-0.092 (0.926)	0.018 (0.985)
ΔSALES	0.058	0.052	0.092	0.071	0.078	0.062	2.381 (0.017)	2.490 (0.012)
SIZE	22.176	22.165	20.953	20.593	21.458	21.180	-9.101 (0.000)	-8.322 (0.000)
CONSOM	0.111	0	0.104	0	0.106	0	-0.302 (0.762)	-0.303 (0.761)
INDUS	0.299	0	0.262	0	0.277	0	-0.1.098 (0.272)	-1.098 (0.272)
MATBASE	0.050	0	0.063	0	0.058	0	0.750 (0.453)	0.750 (0.453)
PETGAZ	0.020	0	0.059	0	0.043	0	2.539 (0.011)	2.530 (0.011)
HEALTH	0.050	0	0.127	0	0.095	0	3.486 (0.000)	3.460 (0.000)
SERV	0.212	0	0.174	0	0.190	0	-1.250 (0.211)	-1.250 (0.211)
UTILIT	0.050	0	0.021	0	0.033	0	-2.154 (0.031)	-2.149 (0.031)
TELECOM	0.023	0	0	0	0.009	0	-3.190 (0.001)	-3.171 (0.001)
TECH	0.181	0	0.186	0	0.184	0	0.168 (0.866)	0.168 (0.866)

**Notes:**

1. Variable definitions: IMPAIR = A dichotomous variable equals to 1 if the firm records an annual goodwill impairment loss under IAS 36 at the end of t, 0 otherwise; GWIMP=reported annual goodwill impairment loss at the end of t divided by the opening balance of goodwill; CHANGE=1 if the firm experiences a CEO change in years t or/and t-1, 0 otherwise; LEV = Debt to asset ratio of firm i at the end of t-1; BONUS = Bonus compensation for the CEO at the end of t-1 divided by CEO's salary at the end of t-1; SMOOTH = The proxy for 'income smoothing' reporting, equals to the change in firm's pre-write-off earnings from period t-1 to t divided by lagged total assets, when this change is positive, 0 otherwise; BATH = The proxy for 'Big bath accounting' reporting, equals to the change in firm's pre-write-off earnings from period t-1 to t divided by lagged total assets, when this change is negative, 0 otherwise; CRISIS = 1 if the firm experiences the financial crisis, 0 otherwise; RUNITS = Number of cash generating units among which the opening balance of goodwill is switched or of operating segments if data on cash generating units are not disclosed; GOODWILL = Opening balance of goodwill divided by lagged total assets; EXCGWILL = Difference between the market value and the book value of firm i at the end of t-1 divided by lagged total assets; ΔROA = The percent change of return on assets for firm i from period t-1 to t; ΔSALES = The percent change of sales for firm i from period t-1 to t; SIZE = The natural logarithm of total assets for firm i at the end of t-1; CONSOM, INDUS, MATBASE, PETGAZ, HEALTH, SERV, UTILIT, TELECOM and TECH are dummy variables which control for industry fixed effects.

2. AGIL-firms design firms recording annual goodwill impairment losses while Zero-AGIL firms represent firms not reporting annual goodwill impairment losses.

Table 3 summarizes descriptive statistics on the variables used in the multivariate analyses.

The table presents the mean and median values of each variable for firms recording an annual goodwill impairment loss (N=297), firms not reporting an annual goodwill impairment loss (N=423), and all sample firms (N=720). Moreover, it shows the significance level of the tests on the differences in means and medians between Zero-AGIL firms and AGIL firms. Consistent with our expectations, AGIL firms are larger than Zero-AGIL firms, have more reporting units than Zero-AGIL firms and conclude more changes in CEO position than Zero-AGIL firms. AGIL firms have also less change in SALES and less EXCGWILL than Zero-AGIL firms. Indeed, industry of the firm seems to have an impact on the probability to record a goodwill impairment loss. Contrarily to our expectations, leverage and proportion of CEO bonus are higher for firms recording a goodwill impairment loss than firms not reporting a goodwill impairment loss. These results can be related to an effective violation of debt clauses for LEV or to attending the limit of bonus attributed to the CEO for BONUS. Finally, SMOOTH, BATH and GOODWILL are not significantly different between AGIL firms and Zero-AGIL firms. Tests of differences in medians produce similar results. Thus, univariate results are in line with most of our predictions.

## **5.2. Multivariate results**

### **5.2.1. Discretionary determinants of the decision to record an annual goodwill impairment loss under IAS 36**

Results of multivariate random-effects logistic analysis of the discretionary determinants of the decision to record an annual goodwill impairment loss are presented in table 4. The first column shows the coefficients associated to variables while the second column reports the results of significance tests of coefficients based on Z-Statistics. The multivariate results resumed in (table 4) are consistent with some of our predictions. A part of control variables explain annual goodwill impairment loss decision. First, as a characteristic of goodwill, RUNITS is positively and significantly ( $P<0.022$ ) associated to the decision to take a goodwill impairment loss. Furthermore, GOODWILL and EXCGWILL are related to annual goodwill impairment loss decision in the predicted direction, but their coefficients are not significant. Second, the economic context of the firm (SIZE and IND) seems to have an effect on the decision to report an annual goodwill impairment loss by French firms. SIZE is positive and marginally significant ( $P<0.000$ ), meaning that larger groups are more inclined to report an annual goodwill impairment loss, in accordance with PAT prediction and empirical researches (Guler, 2006; Stumpell, 2012). Indeed, PETGAZ have a positive and significant sign ( $P<0.024$ ). Contrarily to Guler (2006), the coefficient on firm performance proxies  $\Delta$ ROA and  $\Delta$ SALES are negative and insignificant, which indicates that past firm performance does not seem to have an impact on the decision to take a goodwill impairment charge.

In addition, two of the variables representing the discretionary incentives have significant coefficients and are in the predicted direction. In line with H1, CHANGE is positive and marginally significant ( $P<0.091$ ), indicating that firms which experience a change in CEO position are more likely to take an annual goodwill impairment loss. This result is consistent with prior findings of researches studying the goodwill impairment decision after transition period (Guler, 2006; Stumpell, 2012). Consistent with H6, CRISIS is significantly positive ( $P<0.058$ ). This confirms that French firms belonging to SBF 250 are more likely to record goodwill impairment losses when they experience the crisis period.

Contrarily to our expectations, PAT hypotheses H2 and H3 are not supported, as respectively, LEV is positive and not significant ( $P<0.399$ ) and BONUS is positive and not significant ( $P<0.788$ ). Thus, debt and bonus plan motivations do not seem to influence the likelihood of annual goodwill impairment loss, in the French context. Results on PAT hypotheses are consistent with Guler (2006) and oppose to Stumpell (2012), regarding debt hypothesis. Moreover, they are contrary to Guler (2006) relatively to the bonus plan hypothesis. Surprisingly, Earnings management patterns of earnings smoothing and big bath accounting do not affect the decision to take annual goodwill impairment losses by French firms, as coefficients on these variables are not significant. Results on Smoothing incentive are consistent with Stumpell (2012). Those related to big bath accounting incentive are in line with Guler (2006) and contrary to other prior findings (Riedl, 2004; Stumpell, 2012).

Table 4. Discretionary determinants of goodwill impairment decision

Variable	Prediction	Coefficients	P>z
CHANGE	+	0.459	0.091
LEV	-	1.022	0.399
BONUS	-	0.071	0.788
SMOOTH	+	0.851	0.802
BATH	-	-2.390	0.602
CRISIS	+	0.551	0.058
RUNITS		0.088	0.022
GOODWILL		0.003	0.988
EXCGWILL		-1.035	0.469
ΔROA		-0.012	0.749
ΔSALES		-0.330	0.629
SIZE		0.527	0.000
CONSOM		-0.672	0.400
INDUS		-0.206	0.747
MATBASE		-1.153	0.241
PETGAZ		-2.927	0.024
HEALTH		-0.805	0.357
SERV		0.087	0.897
UTILIT		-1.195	0.367
TELECOM		15.178	0.990
TECH			(Omitted)
Intercept		-12.797	0.000

**Model summary statistics**

Log-likelihood	-373.248
Chi2 (20) (Prob>chi2) <sup>7</sup>	52.27(0.000)
Chibar2 (01) (Prob>Chibar2) <sup>8</sup>	103.01(0.000)

**N** **720**

**Note:**

Variable definitions: IMPAIR = A dichotomous variable equals to 1 if the firm records an annual goodwill impairment loss under IAS 36 at the end of t, 0 otherwise; CHANGE=1 if the firm experiences a CEO change in years t or/and t-1, 0 otherwise; LEV = Debt to asset ratio of firm i at the end of t-1; BONUS = Bonus compensation for the CEO at the end of t-1 divided by CEO's salary at the end of t-1; SMOOTH = The proxy for 'income smoothing' reporting, equals to the change in firm's pre-write-off earnings from period t-1 to t divided by lagged total assets, when this change is positive, 0 otherwise; BATH = The proxy for 'Big bath accounting' reporting, equals to the change in firm's pre-write-off earnings from period t-1 to t divided by lagged total assets, when this change is negative, 0 otherwise; CRISIS = 1 if the firm experiences the financial crisis, 0 otherwise; RUNITS = Number of cash generating units among which the opening balance of goodwill is switched or of operating segments if data on cash generating units are not disclosed; GOODWILL = Opening balance of goodwill divided by lagged total assets; EXCGWILL = Difference between the market value and the book value of firm i at the end of t-1 divided by lagged total assets; ΔROA = The percent change of return on assets for firm i from period t-1 to t; ΔSALES = The percent change of sales for firm i from period t-1 to t; SIZE = The natural logarithm of total assets for firm i at the end of t-1; CONSOM, INDUS, MATBASE, PETGAZ, HEALTH, SERV, UTILIT, TELECOM and TECH are dummy variables which control for industry fixed effects.

**5.2.2. Discretionary determinants of the percentage of goodwill written-off under IAS 36**

Findings of multivariate random-effects tobit analysis of the discretionary determinants of annual goodwill impairment losses are presented in table 5. The first column shows the coefficients associated to variables, whereas the second column reports the results of significance tests of coefficients based on Z-Statistics. Multivariate results resumed in table 5 are consistent with most of our predictions. Especially,

<sup>7</sup> The Chi2 statistic is significant, which indicates that the model is globally significant.

<sup>8</sup> The Chibar2 statistic is significant, confirming the presence of random effects.

control variables (characteristics of goodwill and economic context of the firm) and reporting incentives determine the magnitude of annual goodwill impairment losses in the French context.

A part of control variables explain annual goodwill impairment losses. First, as a characteristic of goodwill, GOODWILL is negatively and significantly ( $P < 0.044$ ) associated to the magnitude of annual goodwill impairment losses, indicating that firms with larger proportion of assets-goodwill tend to record less annual goodwill impairment losses, which opposes our prediction and earlier empirical findings (Lapointe-Antunes *et al.*, 2008; Stumpell, 2012). Moreover, EXCGWILL and RUNITS are both positively related to annual goodwill impairment losses, but their coefficients are not significant. Second, the economic context of the firm (SIZE and IND) seems to have an effect on annual goodwill impairment losses recorded by French firms. SIZE is positive and marginally significant ( $P < 0.001$ ), meaning that larger groups report larger annual goodwill impairment losses, in accordance with PAT prediction and previous empirical researches (Guler, 2006; Beatty and Weber, 2006; Zang, 2008). Indeed, PETGAZ, HEALTH and UTILIT have a negative and significant association with GWIMP, which confirms that firms belonging to basic materials, oil and gas and health care industries tend to impair goodwill less than firms of other industries.

Most of the variables which represent the discretionary incentives have significant coefficients and in the predicted direction. In line with H1, CHANGE is positive and marginally significant ( $P < 0.037$ ), implying that firms that experience a change in CEO position record higher annual goodwill impairment losses. This result is also consistent with prior findings of researches investigating impairment of goodwill during transition period (Riedl, 2004; Zang, 2008; Lapointe-Antunes *et al.*, 2008), and after this era (Guler, 2006; Masters-Stout *et al.*, 2008; Stumpell, 2008; Al Dabbous *et al.*, 2015).

PAT hypotheses H2 and H3 are not supported, as respectively, LEV is positive and not significant ( $P < 0.401$ ) and BONUS is positive and not significant ( $P < 0.904$ ). Hence, debt and bonus motivations do not seem to influence the magnitude of annual goodwill impairment losses in the French context. Results on PAT hypotheses are consistent with those of many prior researches (Stumpell, 2012; Al Dabbous *et al.*, 2015), and opposes to other earlier researches conducted mainly in the American context (Guler, 2006).

Contrarily to PAT' incentives, Earnings management patterns of earnings smoothing and big bath accounting are two determinants of annual goodwill impairment losses recorded by French firms.

Consistent with H4, Coefficient on SMOOTH is significantly positive ( $P < 0.003$ ), suggesting that French firms use the discretion afforded by the impairment test of goodwill to smooth earnings when they are unexpectedly high.

Table 5. Discretionary determinants of annual goodwill impairment losses

Variable	Prediction	Coefficients	P> ZI
CHANGE	+	0.031	0.037
LEV	-	0.054	0.401
BONUS	-	0.001	0.904
SMOOTH	+	0.591	0.003
BATH	-	-0.753	0.004
CRISIS	+	0.044	0.009
RUNITS		0.002	0.259
GOODWILL		-0.158	0.044
EXCGWILL		0.003	0.823
ΔROA		-0.003	0.208
ΔSALES		-0.003	0.937
SIZE		0.022	0.001
CONSOM		-0.036	0.373
INDUS		-0.032	0.321
MATBASE		-0.082	0.109
PETGAZ		-0.165	0.014
HEALTH		-0.083	0.067
SERV		-0.010	0.765
UTILIT		-0.115	0.083

TELECOM	-0.016	0.869
TECH		(Omitted)
Intercept	-0.579	0.000

**Model summary statistics**

Log-likelihood	-22.202
Wald chi2(20) (Prob > chi2) <sup>9</sup>	57.29 (0.000)
Chibar2(01) (Prob > Chibar2) <sup>10</sup>	52.92 (0.000)
<b>N (censored observations)</b>	<b>720 (423)</b>

**Note:**

Variable definitions: GWIMP=Reported annual goodwill impairment loss at the end of t divided by the opening balance of goodwill; CHANGE=1 if the firm experiences a CEO change in years t or/and t-, 0 otherwise; LEV = Debt to asset ratio of firm i at the end of t-1; BONUS = Bonus compensation for the CEO at the end of t-1 divided by CEO’s salary at the end of t-1; SMOOTH = The proxy for ‘income smoothing’ reporting, equals to the change in firm’s pre-write-off earnings from period t-1 to t divided by lagged total assets, when this change is positive, 0 otherwise; BATH = The proxy for ‘Big bath accounting’ reporting, equals to the change in firm’s pre-write-off earnings from period t-1 to t divided by lagged total assets, when this change is negative, 0 otherwise; CRISIS = 1 if the firm experiences the financial crisis, 0 otherwise; RUNITS = Number of cash generating units among which the opening balance of goodwill is switched or of operating segments if data on cash generating units are not disclosed; GOODWILL = Opening balance of goodwill divided by lagged total assets; EXCGWILL = Difference between the market value and the book value of firm i at the end of t-1 divided by lagged total assets; ΔROA = The percent change of return on assets for firm i from period t-1 to t; ΔSALES = The percent change of sales for firm i from period t-1 to t; SIZE = The natural logarithm of total assets for firm i at the end of t-1; CONSOM, INDUS, MATBASE, PETGAZ, HEALTH, SERV, UTILIT, TELECOM and TECH are dummy variables which control for industry fixed effects.

Consistent with H5, coefficient on BATH is significantly negative (P<0.004), providing support for the assumption that firms with unexpectedly lower earnings tend to use goodwill impairment losses as a mean of big bath accounting. These results are supported by the prior literature relatively to the American context (Riedl, 2004; Guler, 2006), the European context (Stumpell, 2012), and the United Kingdom context (Al Dabbous *et al.*, 2015). They are also expected because firms that belong to the SBF 250 index are the biggest groups in Paris stock exchange. Thus, they are subject of analysts’ attention. As a result, managers tend to use goodwill impairment as a tool to manage earnings in the desired direction. Finally, this study introduced the role of the contextual factor “financial crisis” as a facilitator of the use of IAS 36 goodwill impairment test to manage earnings. As predicted, CRISIS is significantly positive (P<0.009), suggesting that French firms belonging to the SBF 250 may use discretionarily the context of negative trend of economics as a justification of goodwill impairments. Especially, French firms tend to use the year 2008 of financial crisis, to accelerate goodwill impairment losses, and hence improve future earnings. Thus, H6 is supported.

**6. Sensitivity Analyses**

Based on first results, we conduct a set of supplementary tests to give additional support for our findings and new explanations to the discretionary use of goodwill impairment test introduced by IAS 36, in the French context. For this, we revise the measures of PAT variables (LEV and BONUS) and of earnings management patterns (big bath accounting and earnings smoothing).

*PAT proxies revision*

Univariate tests of differences of means and medians demonstrate that leverage and proportion of CEO bonus are higher for AGIL firms than for Zero-AGIL firms. We foresee that results can be related to an effective violation of debt covenants for LEV (Dichev and Skinner, 1994) or to attending the limit of bonus attributed to the CEO for BONUS. Following Dichev and Skinner (2004), we introduce actual debt to asset

<sup>9</sup> The Chi2 statistic is statistically significant, indicating that the model is globally significant.

<sup>10</sup> Chibar2 statistic of the likelihood ratio test, comparing random-effects tobit model against pooled model, is statistically significant, indicating that the random-effects tobit model is the suitable model.

ratio (LEV<sub>t</sub>) as a proxy of debt covenant motivation and predict that firms with higher current leverage will record higher annual goodwill impairment losses. We also foretell that managers attaining the maximal limit of bonus attributable will have a future vision and tend to impair goodwill, in order to create future positive results and maximize future bonuses. Therefore, we replace the proportion of bonus compensation of CEO in t-1 (BONUS) by the proportion in t (BONUS<sub>t</sub>) and predict that firms with a higher proportion of CEO compensation paid in bonuses record lower annual goodwill impairment losses.

Results of re-estimation of the models using LEV<sub>t</sub> as proxy of debt covenant motivation and BONUS<sub>t</sub> as bonus plan motivation are presented in table 6. On the one side, results on the decision to take goodwill impairment losses (not reported) do not change. On the other side findings on the amount of goodwill impairment are supported by a new explanation, which is specific to the French context. Consistent with our predictions, coefficient on LEV<sub>t</sub> is positive and significant (P<0.070), implying that French firms with higher current debt to asset ratio<sup>11</sup> record higher annual goodwill impairment losses. As leverage is higher than the limit indicated in debt clauses, managers will report larger annual goodwill impairment losses, in order to minimize earnings and obtain favorable conditions to the renegotiation of debt clauses. This result is consistent with the nature of the French context in which indirect financing is widespread, and contributes to the international accounting literature related to the French context.

Contrarily to LEV<sub>t</sub> and to our predictions, Coefficient on BONUS<sub>t</sub> is negative and not significant. Nevertheless, it is consistent with our first findings and confirms that French firms don't use discretion afforded by the impairment test of goodwill as a bonus plan motivation. This finding can be attributable to restrictions on remunerations implanted by the AFEP-MEDEF code of governance.

*Earnings smoothing and big bath accounting proxies revision*

In order to give additional support to our first findings on earnings smoothing and big bath accounting incentives, we tested alternative measures for SMOOTH and BATH, based on the industry median of the ratio (change in pre-impaired earnings before taxes/lagged total assets). Following Riedl (2004) and Stumpell (2012):

- Income smoothing equals the change in firm's pre-impaired earnings before taxes from t-1 to t divided by total assets t-1, when this change is above the industry median of non-zero positive values and 0 otherwise.
- Big bath accounting equals the change in firm's pre-impaired earnings before taxes from t-1 to t divided by total assets t-1, when this change is below the industry median of non-zero negative values and 0 otherwise.

Table 6. Discretionary determinants of annual goodwill impairment losses – Robustness tests

Variable	Prediction	Coefficients	P> Z
CHANGE	+	0.0315	0.038
LEV <sub>t</sub>	+	0.1167	0.070
BONUS <sub>t</sub>	-	-0.01129	0.480
SMOOTH	+	0.6268	0.002
BATH	+	-0.7204	0.006
CRISIS	+	0.0414	0.014
RUNITS		0.0022	0.233
GOODWILL		-0.1549	0.049
EXCGWILL		0.0073	0.607
ΔROA		-0.0029	0.234
ΔSALES		-0.0061	0.880
SIZE		0.0234	0.001
CONSUM		-0.0343	0.410
INDUS		-0.0299	0.367
MATBASE		-0.0771	0.136

<sup>11</sup> This is generally related to an effective violation of debt-covenant.



PETGAZ	-0.1546	0.021
HEALTH	-0.0756	0.102
SERV	-0.0063	0.856
UTILIT	-0.1272	0.059
TELECOM	-0.0210	0.838
TECH		(Omitted)
Intercept	-0.6256	0.000

**Model summary statistics**

Log-likelihood	-20.535
Wald chi2(20) (Prob > chi2) <sup>12</sup>	59.85 (0.000)
Chibar2(01) (Prob > Chibar2) <sup>13</sup>	52.58 (0.000)
<b>N (censored observations)</b>	<b>720 (423)</b>

**Note:**

Variable definitions: GWIMP=Reported annual goodwill impairment loss at the end of t divided by the opening balance of goodwill; CHANGE=1 if the firm experiences a CEO change in years t or/and t-1, 0 otherwise; LEV = Debt to asset ratio of firm i at the end of t-1; BONUS = Bonus compensation for the CEO at the end of t-1 divided by CEO's salary at the end of t-1; SMOOTH = The proxy for 'income smoothing' reporting, equals to the change in firm's pre-write-off earnings from period t-1 to t divided by lagged total assets, when this change is positive, 0 otherwise; BATH = The proxy for 'Big bath accounting' reporting, equals to the change in firm's pre-write-off earnings from period t-1 to t divided by lagged total assets, when this change is negative, 0 otherwise; CRISIS = 1 if the firm experiences the financial crisis, 0 otherwise; RUNITS = Number of cash generating units among which the opening balance of goodwill is switched or of operating segments if data on cash generating units are not disclosed; GOODWILL = Opening balance of goodwill divided by lagged total assets; EXCGWILL = Difference between the market value and the book value of firm i at the end of t-1 divided by lagged total assets; ΔROA = The percent change of return on assets for firm i from period t-1 to t; ΔSALES = The percent change of sales for firm i from period t-1 to t; SIZE = The natural logarithm of total assets for firm i at the end of t-1; CONSOM, INDUS, MATBASE, PETGAZ, HEALTH, SERV, UTILIT, TELECOM and TECH are dummy variables which control for industry fixed effects.

Main Results of re-estimations of the models (tobit model and logit model) match all previous findings on the incentives driving not only the decision but also the amount of goodwill impairment losses, reported by French firms under standard IAS 36.

**7. Conclusions**

This study investigates how reporting incentives influence firms' accounting choices when they are required to use standard IAS 36 to account for goodwill impairment. We examine the earnings management motives associated with the decision and the magnitude of goodwill impairment losses reported by French firms following the adoption of IFRS on purchased goodwill in 2005. The results of our analyses show that the decision to record goodwill impairment losses is driven by CEO change and financial crisis motives. In addition, our findings indicate a significant link between the magnitude of annual goodwill impairment losses and firms' incentives to understate them. They suggest that French firms record higher annual goodwill impairment losses to meet earnings management incentives linked to CEO change, earnings smoothing, big bath accounting and financial crisis. However, PAT hypotheses are not associated with the magnitude of annual goodwill impairment losses. Robustness tests are consistent with firms recognizing and recording higher annual goodwill impairment losses to understate earnings and obtain favorable conditions of renegotiation of debt clauses. Moreover, they confirm the fact that French firms do not use goodwill impairment as a tool for bonus plan incentive.

Our study provides contribution to the existing accounting literature at two levels. Firstly, we reveal managers' opportunistic behavior in the medium to long term, which gives a cleaner test to the discretionary use of the annual goodwill impairment test under IAS 36. Secondly, we develop a set of reporting incentives tailored with the French context as well as the period of the study, especially the debt

<sup>12</sup> The Chi2 statistic is statistically significant, indicating that the model is globally significant.

<sup>13</sup> Chibar2 statistic of the Likelihood ratio test, comparing random-effects tobit model against pooled model, is statistically significant, indicating that the random-effects tobit model is the suitable model.

renegotiation incentive, which is directly associated with the nature of the French context. In fact, we demonstrate that firms of the French context, in which indirect financing is widely used, use goodwill impairment as a debt renegotiation incentive. Furthermore, the period of the study (2006-2012) includes the financial crisis year (2008). For this, we validate the role of contextual factor of financial crisis as a motivation to impair goodwill.

Results of the research are useful to investors and financial analysts as well as to international standard-setters who are interested in understanding managers' reporting choices to determine how the discretion afforded by accounting standards may be exploited. On the one side, by revealing new discretionary incentives related to goodwill impairment, specifically linked to the French context, our results bring investors and financial analysts additional tools to interpret financial reporting. On the other side, by demonstrating that the goodwill impairment test is related to discretionary incentives at a long term level in France, our findings provide standard-setters new insights into the potential benefits and costs of IAS 36. Indeed, they imply that the goodwill impairment approach has not been entirely successful in improving transparency among firms with respect to the underlying economic value of goodwill, especially in the French context, which is consistent with criticism of IAS 36 earlier reported.

Overall, we believe that the impairment approach of goodwill provides managers with many windows to earnings management which alter the transparency of information on goodwill. Hence, it should be revised, especially in the Euro-continental context. Certain limitations of the study should be considered. First, the lack of information on goodwill at cash generating unit level limits the power of the empirical analyses. As we use firm level instead of cash generating unit level, crude proxies have to be used to determine the actual economic impairment. Any measurement error in these proxies might bias coefficients and tests results. As time goes on and data on cash generating unit level become available, future researches should examine the research question on cash generating unit level. Second, As negative valuation effects related to goodwill write-offs were reported in the Anglo-American context (Hirschey and Richardson, 2002; Pascale Lapointe-Antunes *et al.*, 2009; Li *et al.*, 2011), providing evidence that such accounting adjustments are valuable and informative, further studies should investigate the market reaction to goodwill impairment losses announcements in the French context.

Regardless of these limitations, the findings of this study are of interest to investors and financial analysts as well as to international accounting standards bodies, and contribute to the enrichment of the existing international accounting literature.

## References

1. Accounting Standard Board of Japan (ASBJ), European Financial Reporting Advisory Group (EFRAG) and Organismo Italiano di Contabilità (OIC). (2015). Should goodwill still not be amortised?. Retrieved from: [http://www.efrag.org/files/Goodwill%20Impairment%20and%20Amortisation/140725\\_Should\\_goodwill\\_still\\_not\\_be\\_amortised\\_Research\\_Group\\_paper.pdf](http://www.efrag.org/files/Goodwill%20Impairment%20and%20Amortisation/140725_Should_goodwill_still_not_be_amortised_Research_Group_paper.pdf)
2. Ahmed, A., Neel, M., and Wang, D. (2013). Does Mandatory Adoption of IFRS Improve Accounting Quality? Preliminary Evidence. *Contemporary Accounting Research*, 30 (4), 1344 -1372.
3. Al Dabbous., N and Abughazaleh., N. (2015). The Effect of Audit Quality and Audit Committees on Goodwill Impairment Losses. *International Journal of Accounting and Financial Reporting*, ISSN 2162-3082 2015, 5, N°. 1.
4. Beatty, A., and Weber, J. (2006). Accounting discretion in fair value estimates: An examination of SFAS 142 goodwill impairments. *Journal of Accounting Research*, 44(2), 257–288.
5. Ben Othman, H., and Zeghal, D. (2006). A study of earnings-management motives in the Anglo-American and Euro-Continental accounting models: The Canadian and French cases. *The International Journal of Accounting*, 41, 406-435.
6. Bens, D., Heltzer, W., and Segal, B. (2011). The information content of goodwill impairments and SFAS 142. *Journal of Accounting, Auditing and Finance*, 26 (3), 527-555.
7. Bessieux-Ollier, C., Walliser, E. (2007). La transition et le bilan de la première application en France des normes IFRS : le cas des incorporels. *Comptabilité-Contrôle-Audit* 13 (numéro spécial) : 219-246.

8. Bouden, I., Paugam, L. and Ramond, O. (2011): "LES DETERMINANTS DE LA DEPRECIATION DU GOODWILL : PROPOSITION D UN CADRE D ANALYSE », « Comptabilité, économie et société », Montpellier France.
9. Capkun, V., Collins, D.W., and Jeanjean, T. (2016). The effect of IAS/IFRS adoption on earnings management (smoothing): A closer look at competing explanations. *J. Account. Public Policy*, 35, 352–394.
10. Elliott, J., and Shaw, W. (1988). Write-offs as accounting procedures to manage perceptions. *Journal of Accounting Research*, 26, (Supplement), 91-119.
11. Defond, M. L., and Jiambalvo, J. (1994). Debt Covenant Violation and the Manipulation of Accruals. *Journal of Accounting and Economics*, 17, 145-176
12. Dichev, I. D., and Skinner, D. J. (2002). Large scale evidence on the debt covenant hypothesis. *Journal of Accounting Research*, 40, 1091-1123.
13. Francis, J., Hanna, J., and Vincent, L. 1996. Causes and effects of discretionary asset write-offs. *Journal of Accounting Research*, 34 (Supplement), 117-134.
14. Giner, B., and Pardo, F. (2015). How Ethical are Managers' Goodwill Impairment Decisions in Spanish-Listed Firms?. *Journal of Business Ethics*, 132, 21-40.
15. Godfrey, J., Mather, P., and Ramsay, A. (2003). Earnings and impression management in financial reports: the case of CEO changes. *Abacus*, 39 (1), 95-122.
16. Green, W. (2003). *Econometric Analysis*. Fifth Edition, Prentice Hall.
17. Graham, J. R., Harvey, C. R., and Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, 40, 3-73.
18. Guler, L. (2006). Goodwill Impairment Charges under SFAS No. 142: Role of Executives' Incentives and Corporate Governance. Working paper. Retrieved from: <http://proquest.umi.com/pqdlink?did=1394656061andFmt=7andclientId=79356andRQT=309andVName=PQD>.
19. Gu, Z., Lee, J. C., and Rosett, G. J. (2005). What Determines The Variability of Accounting Accruals?. *Review of Quantitative Finance and Accounting*, 24, 313-334.
20. Hamberg, M., Paananen, M., and Novak, J. (2011). The Adoption of IFRS 3: The Effects of Managerial Discretion and Stock Market Reactions. *European Accounting Review*, 20(2), 263-288;
21. Healy, P. M., and Wahlen, J. M. (1999). A Review of the Earnings Management Literature and Its Implications for Standards Setting. *Accounting Horizons*, 13, N°4, 365-383.
22. Hirschey, M. and Richardson, V.J. (2002). Information content of accounting goodwill numbers. *Journal of Accounting and Public Policy*, 21 (3), 173-191.
23. International Accounting Standard No.36, IAS36 "Impairment of assets", Issued by International Accounting Standards Board (IASB) (2004). Retrieved from: <http://www.iasb.org>.
24. International Accounting Standard No.38, IAS38 "Intangible assets", Issued by International Accounting Standards Board (IASB) (2004). Retrieved from: <http://www.iasb.org>.
25. International Financial Reporting Standard No.3, IFRS3 "Business combinations", Issued by International Accounting Standards Board (IASB) (2004). Retrieved from: <http://www.iasb.org>.
26. International Financial Reporting Standard No.3, IFRS3 "Business Combinations" Phase II; Issued by International Accounting Standards Board (IASB) (2008). Retrieved from: <http://www.iasb.org>.
27. International Accounting Standard Board (IASB) (2015). Report and Feedback Statement –Post-Implementation Review of IFRS3 Business Combinations. Retrieved from: [http://www.ifrs.org/Current-Projects/IASB-Projects/PIR/PIR-IFRS-3/Documents/PIR\\_IFRS%203-Business-Combinations\\_FBS\\_WEBSITE.pdf](http://www.ifrs.org/Current-Projects/IASB-Projects/PIR/PIR-IFRS-3/Documents/PIR_IFRS%203-Business-Combinations_FBS_WEBSITE.pdf)
28. Jensen, M. C., and Meckling, W. H. (1976). Theory of the Firm: managerial behaviour, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3, 305-360.
29. Jerman, M. and Manzin, M. (2008). Accounting Treatment of Goodwill in IFRS and US GAAP. *Organizacija*, 41(6), 218-225.
30. Jordan, C., and Clarck, S.J. (2011). Big Bath Earnings Management: The Case of Goodwill Impairment under SFAS No. 142. *Journal of Applied Business Research*, 20 (2), 63-70
31. Lapointe-Antunes, P., Cormier, D., and Magnan, M. (2005). Goodwill impairment loss: economic determinants, reporting incentives and constraints, Working paper.

32. Lapointe-Antunes, P., Cormier, D., and Magnan, M. (2008). Equity Recognition of Mandatory Accounting Changes: The Case of transitional Goodwill Impairment Losses. *Canadian Journal of Administrative Sciences*, 25(1), 37-54.
33. Lhaopadtchan, S. (2010). Fair value accounting and intangible assets: Goodwill impairment and managerial choice. *Journal of Financial Regulation and Compliance*, 18(2), 120-130.
34. Lenormand, G., and Touchais, L. (2014). Le test de perte de valeur avec l'IAS 36 : difficultés et risques Le cas du groupe PSA. *Revue Française de Comptabilité*. 473 (Février 2014).
35. Li, Z., Schroff, P.K., Venkataraman, R., and Zhang, I.V. (2011). Causes and consequences of goodwill impairment losses. *Review of Accounting Studies*, 16 (4), 745-778. Petersen, 2008.
36. Massoud, M., and Raiborn, C. (2003). Accounting for goodwill: Are we better off?". *Review of Business*, 24(2), 26–32.
37. Masters-Stout, B., Costigan, M.L., and Lovata, L., M. (2008). Goodwill impairments and chief executive officer tenure. *Critical Perspectives on Accounting*, 19, 1370-1383.
38. PricewaterhouseCoopers. (2003). IFRS 2005, Divergences France/IFRS, Editions Francis Lefebvre.
39. PricewaterhouseCoopers, (2002), Comptes consolidés, Règles françaises, Comparaison avec les normes IAS, Editions Francis Lefebvre, 3ème Edition.
40. Ramanna, K. (2008). The Implications of Unverifiable Fair-Value Accounting: Evidence from the Political Economy of Goodwill Accounting, *Journal of Accounting and Economics*, volume 45 (2-3), pp. 253-281.
41. Ramanna, K., and Watts, R.L. (2009). Evidence from goodwill non-impairments on the effects of using unverifiable estimates in financial reporting. Cambridge, Mass: Harvard Business School.
42. Ramanna, K., and Watts, R.L. (2012). Evidence on the use of unverifiable estimates in required goodwill impairment. *Review of Accounting Studies*, 17(4), 749-780.
43. REGLEMENT N°99-02 DU 29 AVRIL 1999 RELATIF AUX COMPTES CONSOLIDES DES SOCIETES COMMERCIALES ET ENTREPRISES PUBLIQUES. Retrieved from: [www.anc.gouv.fr](http://www.anc.gouv.fr).
44. Riedl, E.J. (2004). An examination of long-lived asset impairments. *The Accounting Review*, 79(3), 823–852.
45. Schevin, P. (2005). Dépréciation d'un goodwill: les nouvelles règles IAS/IFRS. *Revue Française de Comptabilité*, Nov 2005, 382-430.
46. Schipper, K. (1989). (Commentary) Earnings management. *Accounting Horizons* (December): 91-102.
47. Statement of Financial Accounting Standards No. 142 Goodwill and Other Intangible Assets (2001). Issued by Financial Accounting Standards Board (FASB) (2001). Retrieved from <http://www.fasb.org>
48. Stumpell, M. (2012). Goodwill Impairment After Implementation of IFRS 3: A Tool for Earnings Management?. Working paper.
49. Van de Poel, K., Maijoor, S., and Vanstraelen, A. (2009). IFRS goodwill impairment test and earnings management: the influence of audit quality and the institutional environment. Workingpaper. Retrieved from: [http://www.fdewb.unimaas.nl/isar2009/02\\_17\\_van\\_de\\_poel\\_maijoor\\_vanstraelen.pdf](http://www.fdewb.unimaas.nl/isar2009/02_17_van_de_poel_maijoor_vanstraelen.pdf).
50. Watrin, C., Strohm, C., and Struffert, R. (2006). The Joint Business Combinations Project. *The CPA Journal*, January 2006
51. Watts, R. (2003). Conservatism in Accounting Part I: Explanations and Implications". *Accounting Horizons*, 17 (September), 207-223.
52. Wells, P. (2002). Earnings management surrounding CEO changes. *Accounting and Finance*, 42, 169-193.
53. Zang, Y. (2008). Discretionary behavior with respect to the adoption of SFAS n° 142 and the behavior of security prices. *Review of Accounting and Finance*, 7 (1), 38-68.