Determinants of Goodwill Impairment Losses under IAS 36: The French Case

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Abstract

The present paper investigates the determinants of goodwill impairment losses under IAS 36. More specifically, this study examines the impact of earnings management, corporate governance and financial crisis on goodwill impairment losses reported by French firms following the adoption of IAS 36 on purchased goodwill. Based on a sample of 730 observations from 107 groups of companies that belong to the SBF 250 over the period 2006-2012, the findings of this research confirm largely our predictions. Indeed, main results show that managers impair goodwill to meet earnings management motives linked to CEO change, earnings smoothing, big bath accounting and financial crisis. Moreover, they reveal that French firms impair goodwill to respond to debt renegotiation hypothesis. In addition, the findings demonstrate that French firms audited by a Big Four auditor record lower goodwill impairment losses. Thus, they highlight the role of audit quality to constrain managerial opportunism associated to goodwill impairment.

This study illuminates the accounting standard-setters in understanding the determinants of goodwill impairment losses in France under IAS 36. Therefore, it contributes to the international actual debate on goodwill and to the international accounting literature.

1. Introduction

Goodwill has always been considered as the most litigious intangible asset both at its recognition and its valuation. After several years of debate concerning the impairment of goodwill, and believing that the goodwill doesn't depreciate at a constant way, the FASB and the CICA jointly, issued the SFAS N °142 and the section 3062, which substitute the goodwill amortization by an annual test of impairment, in order to provide a reliable representation of economic events and to better reflect the economic value of goodwill in the financial statements (FASB, 2001). The decision to replace the annual and systematic amortization of goodwill with an annual impairment test was subsequently taken by the IASB in 2004 in the IAS 36 "Assets impairment", which became mandatory in Europe from the exercise opened in 01/01/2005. By substituting the historical cost based measures by a fair value concept, the international standards setters aimed at improving transparency, comparability and the decision usefulness of accounting information (Jerman & Manzin, 2008; Hamberg et al., 2011).

However, the efforts of the standard-setters have been controversial about the utility of the new standard to improve the quality of the information provided on goodwill. Indeed, they offered to the preparers of the financial statements a greater flexibility inherent to the use of judgments and unverifiable estimates, both at the time of a merger and in future periods. Managerial discretion is exerted at many stages of the impairment test: the CGUs delimitation and number (Zang, 2008; Lapointe-Antunes et al., 2008), the allocation of the opening balance goodwill to its different CGUs identified (Massoud & Raiborn, 2003; Zang, 2008; Lapointe-Antunes et al., 2008; Van de Poel et al., 2009), and the assessment of the recoverable value of the CGUs using fair value and the determination of the goodwill impairment (Bouden et al., 2011). This led them to act opportunistically (Massoud & Raiborn, 2003; Watts, 2003; Ramanna & Watts, 2009; Van de Poel et al., 2009). Empirical researches have been done in this area and confirmed the existence of earnings management incentives related to the goodwill impairment approach (Lapointe-Antunes et al, 2005; 2008; Beatty & Weber, 2006; Guler, 2006; Ramanna, 2008; Van de Poel et al., 2009; Ramanna & Watts, 2012). Extending investigations included the governance determinants of goodwill impairment losses (Guler, 2006; Van de Poel et al., 2009; Al Dabbous et al., 2015). However, most of the previous work has only focused on the Anglo-American context and has been limited to a short test period. 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). One of the areas where further research would be undertaken is the accounting for goodwill, especially the effectiveness and complexity of goodwill impairment approach and the subsequent accounting for goodwill (IASB, 2015).

Motivated by the international debate surrounding the impairment test of goodwill, the present study investigates the determinants of goodwill impairment losses under IAS 36. More specifically, we examine the impact of earnings management, corporate governance and

financial crisis on goodwill impairment losses reported by French firms. The choice of the French context to do this study is motivated by two main reasons. First, most researches on goodwill impairment have been done upon the Anglo-American context. The study upon the French context will provide the standard-setters insights on the incentives driving the goodwill impairment in France and illuminate them on the relevance of the goodwill impairment approach under IAS 36 in the Euro-continental context. Moreover, it will shed new light on the specificity of the governance system in France which draws on both shareholders' governance model and stakeholders' governance model and will contribute to the international 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 this framework, Capkun and 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.

In this setting, we target the 250 biggest French groups (Note 1) in terms of market capitalization, namely the groups belonging to the SBF 250 and we focus on long term determinants with respect to annual impairment losses following the adoption of IAS 36 as opposed to the transitional impairment losses because this gives a more cleaner test of research questions addressed in this study (Guler, 2006).

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

We hypothesize that the magnitude of goodwill impairment losses is a function of economic determinants of goodwill, firm performance and firm specific factors, as well as earnings management incentives, corporate governance mechanisms and contextual factor of the financial crisis.

On the one side, 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 & Meckling, 1976). We hypothesize that the magnitude of goodwill impairment losses is positively linked to the change in CEO function, as it is motivated by a big bath option used to by the new CEO. In line with positive accounting theory and consistent with earlier researches (Beatty & Weber, 2006; Guler, 2006; Lapointe-Antunes et al, 2005; 2008; Van de Poel et al., 2009; Stumpell, 2012; Ramanna & Watts, 2012) on discretionary determinants of goodwill impairment losses, we expect that the magnitude of goodwill impairment losses is negatively associated with leverage and bonus. Goodwill impairment losses affect assets, equity and net income, which increases leverage and reduces income used to calculate bonuses. This creates for firms near to violate debt clauses and managers with bonus plans, an incentive to minimize goodwill impairment losses, in attempt to reduce leverage and maximize bonuses. Furthermore, Following Guler (2006), Stumpell (2012) and Al Dabbous et al. (2015), the magnitude of goodwill impairment losses is associated with earnings management configurations of "big bath accounting" and "income smoothing", generally used discretionarily. To our knowledge, no prior study has ever

examined the discretionary goodwill impairment incentives for a long period.

On the other side, the accounting literature highlighted the effectiveness of firm governance in limiting earnings management generally. Consequently, it would restrict the discretionary overstatements and/or understatements of the goodwill impairment losses reported by firms (Lapointe-Antunes et al., 2008). Following this idea and succeeding prior researches on governance determinants of goodwill impairment losses (Lapointe-Antunes et al., 2008; Guler, 2006; Van de Poel et al., 2009; Noraini & Norman, 2014; Al Dabbous et al., 2015), we hypothesize that firm-governance mechanisms influence the magnitude of goodwill impairment losses reported by French firms under IAS 36. We develop three main governance mechanisms to test in the French context. First, in line with the international tendency to separate the roles of CEO and chairman of the board and with the French code of governance Afep-Medef (Note 2), and following Guler (2006), we expect that firms with CEO-Chair separation record higher goodwill impairment losses. Following prior studies on the governance determinants of goodwill impairment losses, we also hypothesize that the audit quality (Vand de Poel et al., 2009; Al Dabbous et al., 2015) and the independence and competence of audit committee (Lapointe-Antunes et al., 2008) influence the magnitude of goodwill impairment losses reported by French firms.

In contribution to the existing literature, we included the context of financial crisis to be positively linked to the magnitude of goodwill impairment losses (Lenormand & Touchais, 2014).

The results of random-effects tobit regression, exploring the determinants of the amount of goodwill written off are consistent with most of our predictions. The discretionary part of the goodwill impairment losses is widely confirmed. Indeed, New CEOs report larger losses and the reported impairments are also larger when firms' earnings turn out to be above or below the expectations. In addition, the financial crisis seems to be an accelerator to goodwill impairment as it gives managers a pretext to bad results. The results are contrary to the expectations related to the debt-covenant and bonus plans motivations.

Concerning the governance determinants of goodwill impairment losses, only the audit quality is negatively and significantly linked to goodwill impairment losses, which indicates that audit quality restrict the recognition of more than the real impairment of goodwill. The separation of the titles of CEO and chairman as well as the independence and competence of audit committee don't seem to limit the discretion offered by the IAS 36 to account for goodwill impairment losses in the French context.

This paper is organized as follows. The next section gives a brief theoretical background on IFRS and French standards for goodwill and discusses related research. Section 3 develops the research hypotheses and section 4 describes the sample selection procedure and the research design. Section 5 presents the descriptive statistics and the main empirical results of the study and provides robustness tests analyses, and section 6 offers conclusion.

2. Background

2.1 Accounting for Goodwill: IASB versus France

2.1.1 International Accounting for Goodwill

As intangibles are generally difficult to price, goodwill is recognized as being the most complex one (Lhaopadchan, 2010). The goodwill 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 & Manzin, 2008, Hamberg et al., 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 income statement. As the number of corporate acquisitions worldwide was soaring all, investors, regulators and executives desired a more adequate way to identify measure and manage goodwill (Jerman & Manzin, 2008). Especially, critics about the amortization method for goodwill, intensified, because the amounts did not reflect the true value of goodwill and mislead investors and financial analysts about the true value of the firm (Lhaopadchan, 2010). Guided by its belief that externally purchased goodwill doesn't decrease in value on a constant way, and in response to critics about the amortization method used to write off goodwill, on July 2001, the FASB issued SFAS N°141 "Business Combinations", which replaces APB N°14 "Business Combinations" and eliminates the pooling of interests method in favor of the purchase method to recognize acquired goodwill, in order to improve the comparability of information about business combinations in the financial statements (SFAS N°141, 2001). Moreover, the FASB released SFAS N°142 " Goodwill and Other Intangible Assets", which replaces the APB N° 17 "Intangible Assets", and substitutes the amortization method of goodwill (Note 3) by a two stages impairment test, undertaken at least annually, to evaluate correctly their goodwill balance.

On July 2004, upon the increased demand for global financial harmonization and the request for similar changes in accounting standards for intangibles and goodwill and in order to improve the quality of financial reporting, the IASB followed the FASB and released IFRS 3 "Business Combinations", which superseded IAS 22 "Business combinations" and, similar to SFAS N°141, abolished the pooling of interests method and allowed business combinations only to be accounted for using the full-purchase method (Watrin et al., 2006). Moerever, 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' 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. Moreover, 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 necessary.

2.1.2 Goodwill Accounting Treatment in France

Before January 2005, date of IFRS/IAS adoption in France, the accounting treatment of goodwill was governed by the regulation 99-02 (Note 4) on consolidated accounting. According to the later, 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" (p.485) and is amortized over a period that should reflect, as reasonably as possible, the assumptions and objectives determined and documented during the acquisition (Note 5) (p.436). However, this period shouldn't exceed 40 years. In addition, an impairment test must complete depreciation whenever certain adverse changes occur (PricewaterhouseCoopers, 2003).

2.2 Relationship to Prior Literature

A growing body of literature has examined the determinants of goodwill impairment losses. We identify the two main subsets of literature to which our study is related.

The first stream of researches on the area analyses the discretionary determinants of transitional and annual goodwill write-offs. Indeed, Beatty and Weber (2006) find that transitional goodwill impairment losses recognition and amount under SFAS N°142 are driven by contracting and market incentives in the United States. In the same footing, Zang (2008) demonstrates that CEO change and debt contracting incentives influence transitional goodwill impairment magnitude in the American context. Extending these researches, Lapointe-Antunes et al. (2005, 2008), introduce both bonus plans and stock option compensation and listing motivations in the Canadian context, whereas Stumpell (2012) tests discretionary incentives, including income smoothing and big bath accounting, on the Euro-continental context after the transition period. Recently, Ramanna and Watts (2012) confirmed the previous finding in the American context for a wider testing period.

The second stream of papers on the field investigates, instead of the discretionary incentives, the role of the governance mechanisms as determinants of goodwill write-offs.

First, Guler (2006) demonstrates that annual goodwill impairment losses are linked to debt contracting, bonus plans incentives, earnings management patterns of "big bath accounting" and "income smoothing", as well as to board of directors' characteristics.

Second, Lapointe-Antunes et al. (2005, 2008) test the audit committee determinant of transitional goodwill impairment losses in the Canadian context and show that independent and competent audit committee constrains managerial opportunism related to goodwill impairment. Finally, Van de Poel et al. (2009) and Al Dabbous et al. (2014) investigate discretionary incentives and governance mechanisms determinants of the goodwill impairment losses reported under IAS 36 but for a short testing period. Van de Poel et al. (2009) prove that the audit quality is negatively associated to the goodwill impairment recognition, whereas Al Dabbous et al. (2014) fail to identify any association between goodwill impairment and audit quality or audit committee characteristics.

Our research focuses on the effect of earnings management, corporate governance and financial crisis on goodwill impairment losses reported by French firms. It is inspired from previous research, in using a set of reporting incentives (contracting incentives and earnings management patterns of "big bath accounting" and "earnings smoothing") and a number of governance determinants (audit quality and audit committee) developed earlier. However, it differs from all previous studies in two key aspects, giving contribution to the existing literature.

First, previous researches have tended to focus on the transitional goodwill impairment losses and annual goodwill impairment losses for only a short period rather than on annual goodwill impairment losses for a long period testing. As mentioned by Guler (2006), extending the testing period provides a cleaner test of the nature and the intensity of the discretionary and governance determinants associated with goodwill impairment losses under IAS 36. In an attempt to improve the quality of results, this study extends the testing era to a seven year time. Moreover, it includes the financial crisis years which permit to test the contextual factor effect of financial crisis on the goodwill impairment under IAS 36. For our knowledge, no prior research has tested this determinant.

Second, most of earlier researches have analyzed the goodwill impairment determinants in the Anglo-American context, mainly the United States and Canada, or in the Euro-Continental context as a whole. This raises many questions regarding the determinants of goodwill impairment losses upon single Euro-continental country contexts. Particularly, no prior study has examined the French setting in this topic. Exploring the French environment would enrich the research on goodwill impairment determinants.

Therefore, this study contributes to the stream of literature on the goodwill write-offs determinants.

3. Hypotheses development

3.1 Earnings Management Determinants of Goodwill Impairment Write-offs

The impairment testing approach of goodwill introduced by IFRS 3 and IAS 36 offered a greater flexibility of discretion exercised by making estimates and judgments regarding the fair value of goodwill. According to the agency theory (Jensen & Meckling, 1976), corporate managers, who are at the same time agents for equity and bond holders, who act in response to their self interest, can have incentives to manage the goodwill impairment charge, leading to a wealth extraction from those principles.

In this setting, we consider the role of both managerial reporting incentives and well known earnings management patterns (big bath accounting and income smoothing).

3.1.1 Managerial Reporting Incentives

Change in senior management

Contrarily to the CEO in position at the acquisition date, who tends to reduce goodwill impairment charges, the new installed CEO may be motivated to manage goodwill impairment losses upward for three main 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, p. 41), and protecting current and future earnings.

Earlier literature reported a positive association between the tenure of CEO and earnings management behaviors, as measured by discretionary accruals (Wells, 2002; Goodfrey, 2003) and assets write-offs (Strong & Meyer, 1987; Elliott & Show, 1988). More recently, researches have investigated the relation between CEO change and goodwill write-offs, in the transition period (Beatty & 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 & Watts, 2012; Al Dabbous et al., 2015) and have proved that new managers tend to use the discretion afforded by the goodwill impairment process under 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 conclude a change in CEO record higher 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 to avoid costly debt-clauses violation. Prior literature results about earnings management (Defond & Jiambalvo, 1994; Dichev & Skinner, 2002; Gu et al., 2005; Ben Othman & 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 in the American context.

Extending prior research to the French context, we anticipate a negative association between current-year leverage and goodwill write-offs.

This hypothesis is specifically linked to the nature of the French economy which is based on indirect-finance.

Hence, the second hypothesis is:

H2: Firms with higher leverage record lower goodwill impairment losses

Compensation hypothesis

To the extent that managerial compensation depends on current firm performance, executives may have an incentive to delay or avoid making accounting choices that lower reported earnings, including goodwill impairment (Glaum et al., 2015). This opens the door for executives to manage goodwill impairment loss in favor of their bonus interest. The empirical accounting literature validates this hypothesis. Beatty and Weber (2006) test the hypothesis in the American context during the adoption period, and find that managers with bonus payments based on earnings have the incentive to maximize goodwill impairment loss, to avoid future depreciations. Following, Guler (2006) investigates the bonus plans hypothesis in the American context after the adoption of SFAS N°142 and finds negative association

between annual goodwill impairment loss and the proportion of the CEO bonus, indicating that CEO with higher proportion of compensation paid in bonus reports lower goodwill impairment loss. In the same setting, Ramanna and Watts (2012) prove that the 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 bonuses record lower goodwill impairment losses

3.1.2 Earnings Management Patterns: Earnings Smoothing and Big Bath Accounting

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

Earnings smoothing

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 & Raiborn, 2003; Jordan & Clark, 2011). Empirical findings confirm this prediction. Guler (2006), Stumpell (2012), 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 out 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. Moreover, Glaum et al. (2015) validate the earnings smoothing hypothesis using a large varied sample-firms, from 21 countries applying IFRS. Hence, the fourth hypothesis is:

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

Big bath accounting

Massoud and Raiborn (2003) state that managers may record goodwill impairment charges when actual earnings are unexpectedly low, because goodwill write-offs would not be important in a context of downward trend. The empirical evidence (Guler, 2006; Van de Poel et al., 2009; Zhang et al., 2011; Stumpell, 2012; Al Dabbous et al., 2015) reveals a negative association between big bath accounting variable and goodwill impairment, suggesting that executives take goodwill impairment charges to reduce substantially earnings when they are under expectations. Thus, the fifth hypothesis is:

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

3.2 Governance Determinants of Goodwill Impairment Write-offs

Corporate governance mechanisms and regulations have been developed to alleviate the agency problems and to help improve the quality of financial reporting. The empirical accounting literature outlined the effectiveness of corporate governance to limit earnings management generally (Davidson et al., 1996; Becker et al., 1998; Francis et al., 1999; Chtourou et al., 2001; Abott et al., 2004; Bédard et al., 2004; Agrawal & Chadha, 2005; Noraini & Norman, 2014). As such, it would be able to restrict managerial opportunism related to goodwill impairment, as represented by the fictive overstatements and understatements of goodwill impairment losses. Therefore, corporate governance indicators should exert certain influence on the magnitude of goodwill impairment losses reported by firms. A recent review of literature on this topic suggests that governance factors influence the decision to report a goodwill impairment charge (Guler, 2006; Van de Poel et al., 2009) as well as the magnitude of the goodwill impairment loss recorded (Guler, 2006; Lapointe-Antunes et al., 2008; Al Dabbous et al., 2015).

We choose to focus on widely recognized governance factors. More specifically, we test the impact of separation of the titles of CEO and chairman, audit committee independence and competence and audit quality on goodwill impairment losses.

3.2.1 Separation of the Positions of CEO and Chairman of the Board

It is admitted that the CEO Chairman of the board has the possibility to control the overall role of the board, including the agenda, the meetings discussions, and the nomination process, leading to a reduction in the quality of managerial decisions (Noraini & Norman, 2014). If the CEO Chairman of the board acts in response to his self interests, he may avoid or delay the recognition of existing impairments, in order to manage earnings upward and maximize his bonus. According to Noraini and Norman (2014), the CEO-Chair separation is positively linked to the magnitude of goodwill impairment losses. Therefore, the separation of the titles of CEO and chairman of the board has been considered internationally as a sign of good governance (Noraini & Norman, 2014). As the French governance rules offer the choice to combine or to separate these roles to the board of directors and hypothesizing that the board of directors takes the good decision, we foresee that the separation of the titles of CEO and chairman of the board influences positively the magnitude of goodwill impairment losses. Therefore, the sixth hypothesis is:

H6: Firms with CEO-Chair separation record higher goodwill impairment losses

3.2.2 Audit Committee Independence and Competence

The audit committee has been considered as one of the primary constraints placed upon managerial discretion (Lapointe-Antunes et al., 2008; Al Dabbous et al., 2015). Independence and financial competence are essential characteristics for an audit committee to fulfill its oversight role (Lapointe-Antunes et al., 2008). Previous empirical literature supports the assertion that an independent and financially competent audit committee is better able to constrain managerial opportunism generally (Bédard et al., 2004; Abott et al., 2004) and managerial discretion upon goodwill impairment losses particularly (Lapointes-Antunes et al.,

2008). Accordingly, the presence of independent and financially literate audit committee members should limit managers' ability to use the discretion afforded by the impairment approach to overstate (understate) the goodwill impairment losses and to record annual goodwill impairment losses that differ from existing economic impairment.

Hence, the seventh hypothesis is:

H7: The proportion of independent and competent members in the audit committee influences the magnitude of goodwill impairment losses

3.2.3 Audit Quality

Previous literature highlighted the ability of audit quality, evaluated by its independence (Watts & Zimmerman, 1986), to constrain earnings management generally (Becker et al., 1998; Francis et al., 1999). More recent evidence (Van de Poel et al., 2009) shows that firms audited by a Big Four auditor are more able to constrain managerial opportunism afforded by the goodwill impairment approach under IAS 36 than firms non audited by a Big Four auditor. Accordingly, we predict that audit quality influences the magnitude of goodwill impairment losses. Thus, the eighth hypothesis is:

H8: The Audit quality influences the magnitude of goodwill impairment losses

3.3 Contextual Factor: The 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. This fact affects directly the magnitude of goodwill impairment losses. On the one hand, the goodwill impairment losses recorded can be linked to the negative trend of economics. In this context, investors would anticipate a decrease in the value of businesses and a rise in the amounts of goodwill impairment losses. On the other hand, the goodwill impairment charges recorded may be also related to managerial incentives. As overstating current goodwill impairment losses reduces future available annual impairment losses (Note 6), and thus increases future earnings, managers may use the economic tendency opportunistically, by recording higher goodwill impairment losses which do not reflect the true economic value of goodwill (Lenormand & Touchais, 2014). We anticipate that this procedure will be intensified during the crisis era since it may be justified by the negative trend of worldwide economics. Therefore, the ninth hypothesis is:

H9: Firms that experience the financial crisis record higher goodwill impairment losses

4. Method

4.1 Sample and Data

Table 1 outlines the sample selection procedure. The initial sample consisted 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 shrunk our sample to 134 firms.

Table 1. Sample selection

	Firms
Initial sample	**167**
Observations deleted:	
- Financial firms	**33**
- Firms without opening balance of goodwill	**02**
- Firms with missing data	**25**
Final sample (firms)	**107**
Final sample (firm-years)	**730**

Following earlier studies (Beatty & Weber, 2006; Guler, 2006; Lapointe-Antunes et al., 2005; 2008), 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 excluded firms with missing data. As far as governance factors, financial data and information about CEO' compensation and change in top management are concerned, they were drawn from sample firms 'annual reports, hand collected from Thomson database as well as firms web sites and AMF web site. Financial ratios were obtained directly from Thomson database. This leads to a sample fall of 25 firms. General completed data are available for 107 firms over the period 2006-2012, leading to a final sample of 730 firm-years.

4.2 Model and Variables

We use the following general model to assess the determinants of the magnitude of annual goodwill impairment losses recorded by French firms under IAS 36:

Goodwill impairment losses = f {economic determinants, goodwill characteristics, earnings management incentives, governance mechanisms, contextual factor of financial crisis}

For the reason that the dependent variable 'percentage of goodwill written-off' is censored at zero, we use the following multivariate Tobit model (Note 7):

$$GWIMP_{i,t} = \alpha + \mu_1*CHANGE_{i,t} + \mu_2*LEV_{i,t} + \mu_3*BONUS_{i,t} + \mu_4*SMOOTH_{i,t} + \mu_5*BATH_{i,t} + \mu_6*CRISIS_{i,t} + \mu_7*CEO\text{-}CHAIR_{i,t} + \mu_8*INDEP\_AC_{i,t} + \mu_9*AUDIT_{i,t} + \mu_{10}*EXCGWILL_{i,t} + \mu_{11}*GOODWILL_{i,t} + \mu_{12}*RUNITS_{i,t} + \mu_{13}*\Delta ROA_{i,t} + \mu_{14}*\Delta SALES_{i,t} + \mu_{15}*SIZE_{i,t} + \mu_{16}*CONSUM_{i,t} + \mu_{17}*INDUS_{i,t} + \mu_{18}*BASIC_{i,t} + \mu_{19}*OILGAZ_{i,t} + \mu_{20}*HEALTH_{i,t} + \mu_{21}*SERV_{i,t} + \mu_{22}*UTILITIES_{i,t} + \mu_{23}*TELECOM_{i,t} + \mu_{24}*TECH_{i,t} + \mu_{i,t} + \theta_{i,t}$$

Where:

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.

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, equal 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, equal 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.

CEO-CHAIR = 1 if the CEO is not Chairman of the board, 0 otherwise.

INDEP_AC = the proportion of independent and financially literate members in the audit committee.

AUDIT = 1 if the firm is audited by a Big Four auditor, 0 otherwise.

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

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

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.

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.

In order to control for industry-fixed effects, we include 9 industrial dummies (CONSUM, INDUS, BASIC, OILGAZ, HEALTH, SERV, UTILITIES, TELECOM, TECH), which represent respectively the industries (Note 8) (consumer goods, industrials, basic materials, oil and gas, health care, consumer services, utilities, telecommunications and technology).

4.2.1 Dependent Variable

The dependent variable 'percentage of goodwill written off' (GWIMP) captures both the decision to record a goodwill impairment loss and the magnitude of the goodwill written off. It 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.

4.2.2 Test Variables: Earnings Management, Corporate Governance and Financial Crisis

Five earnings management variables (LEV, BONUS, CHANGE, BATH, SMOOTH) and three governance variables (CEO-CHAIR, INDEP_AC, AUDIT) and a contextual factor variable (CRISIS) are included in the model as proxies for the determinants of annual goodwill impairment losses.

To measure the effect of CEO change, we define 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 of annual goodwill write-off.

To capture the impact of the PAT hypotheses, we introduce the variable BONUS as the CEO's bonus compensation divided by the CEO's salary for year t-1 (Guler, 2006; Stumpell, 2012) to proxy for bonus compensation hypothesis, and the variable LEV as the quotient of debts and total assets for year t to proxy for debt-covenant hypothesis (Guler, 2006). Each of these variables is expected to be negatively gathered with the magnitude of annual goodwill impairment.

In order to analyze managers' incentives to take big bath charges and/or income smoothing behaviors and following prior researches (Francis et al., 1996; Riedl, 2004; Guler, 2006), we define the ratio of change in firm's pre-write-off earnings from period t-1 to t and lagged total assets. On the 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 positive (negative) sign on SMOOTH (BATH).

We also include three keys governance variables expected to affect the percentage of annual goodwill write-offs: the CEO-Chair separation (CEO-CHAIR), the proportion of the independent and financially literate members in the audit committee (INDEP_AC), and the audit quality (AUDIT) measured as a dummy variable equal to one if the firm is audited by a Big Four auditor, and zero otherwise. Consistent with the sixth hypothesis, CEO-CHAIR is expected to be positively linked to GWIMP. However, no sign is predicted for INDEP_AC and AUDIT.

Finally, we add the variable CRISIS equals one if the firm experiences the financial crisis and zero otherwise, to examine the impact of the financial crisis on goodwill impairment. Consistent with the ninth hypothesis, we predict a positive join between CRISIS and the magnitude of annual goodwill impairment loss.

4.2.3 Control Variables

In order to improve the reliability of the research design to control for the economic determinants of goodwill impairment losses, we include 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 goodwill in their 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 (ΔROA and ΔSALE). The percent change in firm's ROA and 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.

5. Results and Discussion

5.1 Descriptive Statistics

Table 2 analyzes the sample partition by industry and by impairment decision. Industry membership is based on ICB indices. Two main conclusions emerge from the table. The first one is that industrials, consumer services and technology are the dominant industries of our sample with a percentage of 65.068% and also that consumer goods and health care constitute each other about 10% of the total sample. The other industries have minor contributions. The second one is that 42% of sample firms (305) record an annual goodwill impairment loss, and that the percentage of firms reporting an annual goodwill impairment loss varies by industry. Table 2 reveals that the telecommunications shows the highest percentage of annual goodwill impairment firms, followed by consumer services, industrials, consumer goods and technology with rates varying around 45%. This result is explained by the impact of the wave of mergers and acquisitions that the French firms conducted in the late of the 90s on goodwill impairment, especially in technology and telecommunications industries (Schevin, 2005).

Table 2. Annual goodwill impairment losses by industry

Industry group	All firms		AGIL firms	
	Number	Percentage	Number	Percentage
consumer goods	77	10.548 %	33	42.857%
Industrials	199	27.260 %	92	46.231%
Basic materials	42	5.753 %	15	35.714%
Oil and gaz	31	4.247 %	6	19.355%
Health care	74	10.137 %	15	20.270%
consumer services	143	19.589 %	68	47.552%
Utilities	24	3.288 %	15	62.5%
Telecommunications	7	0.959 %	7	100%
Technology	133	18.219 %	54	40.601%
Total	730	100%	305	41.781%

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

Table 3 details descriptive statistics on the variables used in the multivariate results.

Table 3. Descriptive statistics – Variables

Variable	AGIL firms		Zero-AGIL firms		Both		Test of différences			
	(N=305)		(N=425)		(N=730)					
	Mean	Median	Mean	Median	Mean	Median	Means (proportions) P>|t|		Medians P>|Z|	
IMPAIR	1	1	0	0	0.415	0				
GWIMP	0.057	0.015	0	0	0.024	0				
CHANGE	0.272	0	0.195	0	0.227	0	-2.442	(0.007)	-2.441 (0.014)	
LEV	0.645	0.646	0.599	0.600	0.618	0.622	-3.720	(0.000)	-3.558 (0.000)	
BONUS	0.759	0.753	0.595	0.438	0.595	0.438	-3.617	(0.000)	-5.091 (0.000)	
SMOOTH	0.013	0.003	0.018	0.005	0.016	0.003	1.597	(0.055)	1.438	(0.150)
BATH	-0.011	0	-0.011	0	-0.001	0	0.385	(0.349)	0.651	(0.514)
CRISIS	0.170	0	0.122	0	0.142	0	-1.835	(0.033)	-1.834 (0.066)	
CEO-CHAIR	0.413	0	0.364	0	0.383	0	-1.325	(0.092)	1.390	(0.164)
INDEP_AC	0.560	0.666	0.492	0.5	0.521	0.6	-2.721	(0.003)	-2.828	

										(0.004)
AUDIT	0.849	1	0.861	1	0.856	1	0.455	(0.324)	0.455	(0.649)
RUNITS	8.127	6	5.988	4	6.882	5	-5.275	(0.000)		-6.017
										(0.000)
GOODWILL	0.205	0.202	0.209	0.178	0.208	0.187	0.411	(0.340)		-0.850
										(0.395)
EXCGWILL	0.389	0.199	0.483	0.284	0.443	0.238	1.801	(0.036)	1.961	(0.049)
ΔROA	-0.093	-0.057	-0.097	-0.062	-0.095	-0.062	-0.0218	(0.491)	0.223	(0.823)
ΔSALES	0.059	0.063	0.094	0.071	0.079	0.044	2.487	(0.006)	2.468	(0.013)
SIZE	22.21	22.18	20.955	20.605	21.482	21.210	-9.438	(0.000)		-8.657
										(0.000)
CONSUM	0.108	0	0.104	0	0.105	0	-0.202	(0.419)		-0.202
										(0.839)
INDUS	0.301	0	0.262	0	0.272	0	-1.492	(0.068)		-1.491
										(0.135)
BASIC	0.049	0	0.063	0	0.057	0	0.820	(0.206)	0.821	(0.411)
OILGAZ	0.019	0	0.059	0	0.042	0	2.595	(0.000)	2.585	(0.009)
HEALTH	0.049	0	0.127	0	0.101	0	3.995	(0.000)	3.955	(0.000)
SERV	0.222	0	0.174	0	0.195	0	-1.561	(0.059)		-1.560
										(0.118)
UTILITIES	0.049	0	0.021	0	0.032	0	-2.096	(0.018)		-2.091
										(0.036)
TELECOM	0.022	0	0	0	0.009	0	-3.155	(0.000)		-3.136
										(0.001)
TECH	0.177	0	0.186	0	0.182	0	0.304	(0.380)	0.305	(0.760)

Notes:

1. Variable definitions: IMPAIR = A dichotomous variable equal to 1 if the firm recorded an annual goodwill impairment loss under IAS 36 at the end of t, and zero 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; 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, equal 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, equal 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; CEO-CHAIR=1 if the CEO is not Chairman of the board, 0 otherwise; INDEP_AC= proportion of independent and financially literate members in the audit committee; AUDIT = 1 if the firm is audited by a Big Four auditor, 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; CONSUM, INDUS, BASIC, OILGAZ, HEALTH, SERV, UTILITIES, 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.

The table reports the mean and median values of each variable for AGIL firms (305), Zero-AGIL firms (425) and all sample firms (N=730), and shows the significance level of the tests on the differences in means and in medians between AGIL firms and Zero-AGIL firms. In line with our expectations, AGIL firms are larger than Zero-AGIL firms, have more reporting units than Zero-AGIL firms and experience change in CEO position and financial crisis more than Zero-AGIL firms.

Moreover, AGIL firms have more CEO-Chair separation in their boards and higher proportions of independent and financially literate members in their audit committees than Zero-AGIL firms. AGIL firms have also less change in SALES and less EXCGWILL than Zero-AGIL firms and the industry of the firm seems to have an impact on the probability to record a goodwill impairment loss.

Contrarily to our predictions, leverage and proportion of CEO bonus are higher for firms reporting a goodwill impairment loss than for firms not recording a goodwill impairment loss.

These results can be explained by an effective violation of debt clauses for LEV and the attending of the higher limit of the bonus attributable to the CEO for BONUS. Finally, BATH, AUDIT, GOODWILL and ΔROA are not significantly different between AGIL firms and Zero-AGIL firms. The tests of differences in medians yield similar results. Therefore, univariate evidence is consistent with most of our hypotheses.

5.2 Multivariate Analysis

Findings of multivariate random-effects tobit analysis of the determinants of annual goodwill impairment losses are illustrated in table 4. The first column reports the coefficients associated to variables, whereas the second column shows the results of significance tests of coefficients based on Z-Statistics.

Table 4. The determinants of annual goodwill impairment losses

Variable	Prediction	Coefficients	P>IZI
CHANGE	+	0.033	0.027
LEV	-	0.108	0.082
BONUS	-	0.003	0.837
SMOOTH	+	0.620	0.002
BATH	-	-0.829	0.001
CRISIS	+	0.043	0.009
CEO-CHAIR	+	0.007	0.702
INDEP_AC	?	0.042	0.166
AUDIT	?	-0.053	0.063
RUNITS		0.002	0.221
GOODWILL		-0.127	0.091
EXCGWILL		0.014	0.296
ΔROA		-0.031	0.185
ΔSALES		-0.016	0.687
SIZE		0.020	0.006
CONSUM		-0.027	0.506
INDUS		-0.013	0.689
BASIC		-0.072	0.155
OILGAZ		-0.148	0.024
HEALTH		-0.075	0.091
SERV		-0.001	0.982
UTILITIES		-0.096	0.143
TELECOM		0.002	0.985
TECH			(Omitted)
Intercept		-0.552	0.000
Model summary statistics			
Log-likelihood			-9.485
Wald chi2(20) (Prob>chi2) (Note 9)			68.49 (0.000)
Chibar2(01)(Prob>Chibar) (Note 10)			49.11 (0.000)
N (censored observations)			**730 (425)**

Note:

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; 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, equal 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, equal 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; CEO-CHAIR=1 if the CEO is not Chairman of the board, 0 otherwise; INDEP_AC= proportion of independent and financially literate members in the audit committee; AUDIT = 1 if the firm is audited by a Big Four auditor, 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; CONSUM, INDUS, BASIC, OILGAZ, HEALTH, SERV, UTILITIES, TELECOM and TECH are dummy variables which control for industry fixed effects.

Multivariate results resumed in Table 4 are consistent with most of our predictions. Particularly, reporting incentives (CEO change, earnings smoothing, big bath accounting), audit quality, financial crisis and some control variables determine the magnitude of goodwill impairment losses in the French context.

First, most of the variables which proxy for the discretionary reporting incentives are significantly linked to the magnitude of goodwill impairment losses in the predicted direction.

Consistent with H1, CHANGE is positively and marginally significant (P<0.027), implying that firms which experience change in CEO position record higher annual goodwill impairment charges. This result agrees with others studies which investigate goodwill impairment during transition period (Riedl, 2004; Zang, 2008; Lapointe-Antunes et al., 2008) and following this era (Guler, 2006; Masters-Stout et al., 2008; Stumpell, 2012; Al Dabbous et al., 2015).

The results on PAT hypotheses are not conclusive, as LEV is significant (P<0.081) but not in the predicted sign and BONUS is not significant (P<0.843). Two remarkable conclusions emerge from the data. On the one hand, debt and bonus plans motivations do not seem to influence the magnitude of goodwill impairment losses in the French context.

This result is consistent with those of many prior studies (Stumpell, 2012; Al Dabbous et al., 2015) and in contradiction with earlier findings (Guler, 2006; Lapointe-Antunes et al., 2008) of studies undertaken mainly on the Anglo-Americain context.

On the other hand, interestingly, the positive and significant coefficient on LEV confirms the presence of debt renegotiation incentive. Managers tend to reduce substantially earnings when leverage is above the line, in order to create a dramatic situation and discuss well the new debt clauses. This can be seen as a characteristic of the French institutional context in which indirect finance play a vital role, and give a new contribution to the existent literature.

The results revealed that earnings management patterns of earnings smoothing and big bath accounting are two main determinants of goodwill impairment charges recorded by French firms.

Consistent with H4, coefficient on SMOOTH is significantly positive (P<0.002), indicating that French firms tend to use the discretion afforded by the impairment approach on goodwill to smooth unexpectedly high earnings. In line with H5, coefficient on BATH is significantly negative (P<0.001), suggesting that firms with unexpectedly low earnings use goodwill impairment losses as a mean of big bath accounting. These results lend support to substantiate previous findings in the literature (Riedl, 2004; Guler, 2006; Stumpell, 2012; Al Dabbous et al., 2015).

Second, from the governance variables, only the audit quality seems to influence the magnitude of annual goodwill impairment losses reported by French groups.

In line with H8, the coefficient on audit quality is negative and significant (P<0.063), indicating that French firms audited by a Big Four auditor are less inclined to impair goodwill than French firms non audited by a Big Four auditor. This result highlight that the audit quality plays a vital role to constrain managerial opportunism leading to unreal goodwill impairments in the French setting. This confirms previous findings of Van de Poel et al. (2009) who find that audit quality influences negatively the decision to impair goodwill. Contrarily to H6, the coefficient on CEO-CHAIR is no significant (P<0.702), implying that the CEO-Chair separation doesn't constrain unreal impairment of goodwill. Importantly, this finding proves that the CEO-Chair separation, which is decided by the board of directors, doesn't enhance the information regarding goodwill impairment losses in the French context.

In contrast to H7, the coefficient on INDEP_AC is also positive and no significant (P<0.166), suggesting that the audit committee independence and competence does not influence the magnitude of goodwill impairment losses. This confirms the previous findings of Lapointe-Antunes et al (2008) and Al Dabbous et al. (2015).

Third, our study was successful in proving that the crisis context influences positively the magnitude of goodwill impairment losses. Consistent with H9, the coefficient on CRISIS is significantly positive (P<0.009), implying that French firms which experience the financial crisis tend to accelerate the goodwill impairment losses, in order to concretize the value loss or in response to earnings management incentives. For our knowledge, no prior researches have tested the role of the financial crisis in determining the magnitude of goodwill impairment losses.

Finally, some control variables explain annual goodwill impairment loss.

Concerning the characteristics of goodwill, GOODWILL is negatively and significantly (P<0.091) associated to the magnitude of annual goodwill impairment loss, suggesting that firms with larger proportion of assets-goodwill tend to record less annual goodwill impairment loss, which contraries 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 loss, but their coefficients are not

significant.

The economic context of the firm (SIZE and IND) seems to have an effect on the annual goodwill impairment losses reported by French firms. SIZE is positive and marginally significant (P<0.006), meaning that larger groups report larger goodwill impairment losses, in accordance with PAT prediction and empirical researches (Guler, 2006; Beatty & Weber, 2006; Zang, 2008). Indeed, PETGAZ and HEALTH have a negative and significant association with GWIMP, which confirms that firms belonging to basic materials and health care industries tend to impair goodwill less than firms of others industries.

5.3 Sensitivity Analyses

Based on first results, we conduct a set of supplementary tests to give additional support for our findings on the determinants of goodwill impairment losses in the French context. For this, we revise the measures of BONUS, SMOOTH and BATH and test an alternative variable for firm performance.

5.3.1 BONUS Proxy Revision

Univariate tests of differences of means and medians demonstrate that the proportion of CEO bonus is higher for AGIL firms than for Zero-AGIL firms. We foresee that results can be related to attending the limit of bonus attributed to the CEO for BONUS. Managers attaining the maximal limit of bonus attributable will tend to impair goodwill, in order to create future earnings and maximize future bonuses. Therefore, we predict that firms with a higher proportion of CEO compensation paid in bonuses record lower annual goodwill impairment losses. To test this assumption, we substituted the proportion of bonus compensation of CEO in t-1 (BONUS) by the proportion in t (BONUS_t). Results of re-estimation of the model, using BONUS_t instead of BONUS are contrarily to our expectations, as coefficient on BONUS_t is negative and not significant (P<0.5). 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 plans motivation. This finding can be attributable to restrictions on remunerations implanted by the AFEP-MEDEF code of governance.

5.3.2 Earnings Smoothing and Big Bath Accounting Proxies Revision

With the objective to give additional support to our first findings on earnings management patterns of earnings smoothing and big bath accounting, we tested alternative measures for SMOOTH and BATH, linking them to 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. Results of re-estimations of the model match all previous findings on the incentives driving the decision and the amount of goodwill impairment losses, recorded by French firms under IAS 36.

5.3.3 Firm Performance Indicator: The Change in Operating Cash Flows

As the reliability of findings depends on how to control for past and actual firm performance (Zang, 2008), and following Lapointe-Antunes et al. (2008) and Stumpell (2012), we introduced the change in operating cash-flows (OCF) in the model and expected that it is negatively linked to the magnitude of goodwill impairment losses. The results of re-estimation refute any link between firm performance, represented by the change in ROA (P<0.182), the change in sales (P<0.691) and the change in OCF (P<0.747), and goodwill impairment losses in the French context.

6. Conclusion

The paper investigates the determinants of goodwill impairment losses under IAS 36. More particularly, it examines the impact of earnings management, corporate governance and financial crisis on goodwill impairment losses reported by French firms. The findings of our research are quite convincing, and thus the following three main conclusions can be drawn. First, our results 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 when they experience a change in CEO, to smooth earnings, to operate big bath accounting, and in response to the financial crisis factor. Second, While PAT hypotheses are not validated, the positive significant coefficient on leverage is consistent with firms recognizing and recording higher annual goodwill impairment losses to understate earnings and obtain favorable conditions of renegotiation of debt clauses. Robustness analyze confirms the fact that French firms do not use goodwill impairment as a tool for bonus plans incentive. Third, as the audit quality influences negatively the magnitude of goodwill impairment losses, it seems to play a vital role in retaining the discretionary overstatements of annual goodwill impairment losses reported by French firms under IAS 36. Indeed, the separation of the titles of CEO and chairman of the board and the independence and competence of audit committee are not determinants of the magnitude of goodwill impairment losses.

Our research provides contribution to the accounting literature at two levels. On the one side, the study analyzes the determinants of goodwill impairment losses in the medium to long term, which gives a cleaner test to the discretionary use of the annual goodwill impairment test under IAS 36. Furthermore, the period of test (2006-2012) includes the financial crisis year (2008) and thus, highlights the role of contextual factor of financial crisis as a motivation to impair goodwill.

On the other side, the study outlines the determinants of goodwill impairment losses in the French context. To our knowledge, no prior research has investigated the French setting.

The results of the research are useful to investors and financial analysts as well as to international standard-setters who are interested in understanding how the discretion afforded by accounting standards may be exploited and determining how good governance constrain it. By revealing that goodwill impairment test under IAS 36 is linked to discretionary incentives at a long term level in France, our results bring investors and financial analysts additional

tools to interpret financial reporting. Indeed, our findings provide standard-setters new insights into the potential benefits and costs of IAS 36. 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.

Moreover, our results illuminate the role of audit quality as a constrainer of unreal goodwill write-offs. Therefore, provide a governance tool against the discretionary use of the goodwill impairment approach under IAS 36 in France.

Certain limitations of the study should be considered. First, the power of the empirical analyses in this study is limited by the lack of public information on goodwill at a reporting-unit level. Due to this, crude proxies have to be used to determine the actual economic impairment. 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, potential interest lies in the direct impact the governance factors have on the discretionary incentives of goodwill impairment losses.

Notwithstanding these limitations, the findings of this research are of interest to standard setters in the international field and contribute to the existing international accounting literature.

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Notes

Note 1. The French groups experienced growth operations over the past decade which has led to the emergence of significant goodwill in their consolidated balance sheets (Schevin, 2005).

Note 2. The French code of governance AFEP-MEDEF offers the choice to unite or to separate the roles of CEO and chairman of the board to the board of directors.

Note 3. Goodwill was amortized for a period no to exceed 40 years.

Note 4. "The CRC Regulation n°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).

Note 5. Art. No. 2113 of Reg. 99-02.

Note 6. Firms cannot record an amount of impairment more than the book value of goodwill and previous impairment losses cannot be reversed according to IAS 36.

Note 7. The use of tobit specification is appropriate when data are censored (Green, 2003). Previous researches (Beatty and Weber, 2006; Guler, 2006; Lapointe-Antunes and al., 2008) used this technique.

Note 8. 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, and further divided into 41 sectors, which are partitioned into 114 subsectors.

Note 9. The Chi2 statistic is statistically significant, indicating that the model is globally significant.

Note 10. 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.

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