
**The case of goodwill non-impairments: A study on the current situation with
evidence from the European market**

Master Thesis
Claes Christiansen
Master of Science in Strategic Management

*Submitted to:
Prof. Yann le Fur*

*HEC Paris
Jouy-en-Josas, France
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Abstract

This thesis examines the attitudes of both management and shareholders to goodwill impairments. Whereas management for a number of reasons tends to impair less than it would if only the shareholder value was the basis for their decision, the shareholders seem to particularly value accuracy in financial reporting in goodwill accounting. Based on changes in Price-to-Book ratio since acquisition of goodwill this thesis finds that 23 of the 50 companies of the EURO STOXX 50 have not impaired enough goodwill and should further impair 185 billion Euros or an average of eight billion Euros which represents 22 per cent of their total assets. This thesis also finds that new CEOs are more likely to impair goodwill than the CEOs that have accumulated the goodwill. The market, on the other hand, seems to attach less value to goodwill impairments than to other events reducing earnings. The study shows that stock prices of the companies that have impaired are one month after the impairment 3.8% higher compared with peers that have missed their EPS targets due to other reasons.

Table of Contents

1. INTRODUCTION.....	6
1.1 TOPICALITY	6
1.2 PURPOSE AND STRUCTURE OF THE THESIS	8
2. INTRODUCTION TO GOODWILL.....	9
2.1 RATIONALE BEHIND GOODWILL.....	9
2.2 COMPONENTS OF GOODWILL.....	9
3. ACCOUNTING OF GOODWILL.....	11
3.1 HISTORY OF GOODWILL ACCOUNTING.....	11
3.2 OVERVIEW OF IFRS GOODWILL ACCOUNTING RULES TODAY	12
4. LITERATURE REVIEW	14
4.1 INTRODUCTION TO LITERATURE REVIEW.....	14
4.2 EFFECT OF ACCOUNTING CHOICES ON MANAGEMENT	15
4.2.1 <i>Reasons for management to report manipulated figures.....</i>	<i>15</i>
4.2.2 <i>The case of management change</i>	<i>18</i>
4.3 REASONS FOR SHAREHOLDERS TO ALLOW MANAGEMENT ACCOUNTING CHOICES.....	18
4.4 REASONS OF REGULATORS TO ALLOW CHOICES IN ACCOUNTING	19
4.5 VALUE RELEVANCE OF GOODWILL WRITE-OFFS.....	19
5 HYPOTHESES.....	20
6 PRACTICAL APPLICATION	21
6.1 INTRODUCTION	21
6.2 IMPAIRMENT OF GOODWILL.....	22
6.2.1 <i>Conceptual design of the study.....</i>	<i>22</i>
6.2.2 <i>Practical implementation</i>	<i>23</i>
6.2.3 <i>Results and interpretation.....</i>	<i>25</i>
6.3 VALUE-RELEVANCE OF GOODWILL IMPAIRMENTS.....	26
6.3.1 <i>Conceptual design of the study.....</i>	<i>26</i>
6.3.2 <i>Practical implementation</i>	<i>26</i>
6.3.3 <i>Results and interpretation.....</i>	<i>29</i>
7 CONCLUSION AND IMPLICATIONS.....	31

Table of Figures

Figure 1: Evolution of M&A activity, goodwill and share prices7

Figure 2: Types of goodwill 10

Figure 3: Impairment of goodwill 14

Figure 4: Components of acquisition price at P/BV of 1.5..... 23

Figure 5: Components of acquisition price at P/BV of 1.2..... 23

Figure 6: Under-impairment of EURO STOXX 50 companies..... 25

Figure 7: Significant impairments..... 27

Figure 8: Impairment of Carrefour 28

Figure 9: Summary of performance of companies impairing compared to peers 29

Figure 10: Overview of performance of impaired companies compared to peers 30

Figure 11: Years after which goodwill impairments were made in the sample after
change in management..... 30

Appendices

Appendix 1: Average Price-to-book ratio of EURO STOXX 50 companies	36
Appendix 2: Total goodwill on the balance sheets of EURO STOXX 50 companies	37
Appendix 3: Goodwill on the balance sheets of EURO STOXX 50 companies as percentage of assets	38
Appendix 4: Should-impairments of the EURO STOXX 50 companies.....	39
Appendix 5: Overview of significant impairments from 2007 until 2011	51
Appendix 6: CEOs at impairment date	51
Appendix 7: Detailed performance analysis of the impairing company versus peers	51
Appendix 8: Summary of performance of impairing company versus peers.....	59

Table of abbreviations

DCF	Discounted Cash Flow
EPS	Earnings per share
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standards
GAAP	General Accepted Accounting Principles
M&A	Mergers and Acquisitions
P/BV	Price-to-book value
SEC	Security and Exchange Commission

1. Introduction

1.1 Topicality

In accounting for goodwill the interest of management is not necessarily aligned with that of shareholders. When companies announce goodwill impairments, this is often seen as a form of admitting past mistakes in their acquisition strategy. Managers and investors often see goodwill as “a scorecard for acquisitions – and for the executives driving them” (Thurm, 2012). Thus it seems natural that managers try to keep goodwill impairments low in order to protect their own reputation and compensation. On the other hand investors value accuracy of financial reporting, since financial reports are a key resource when making their investment decisions. It is obvious that investors prefer higher earnings, not only because of the positive effects on the share price, but also because of the effects on business matters. Examples could be the non-violation of covenants or the reduced transaction costs with stakeholders as a result of being seen as a healthy and growing company. But impairments of goodwill are non-cash and one-off items. In standard valuation they would accordingly not be directly value relevant.¹ Thus goodwill seems to be a special case, where investors have a particularly high interest in accurate reporting, and management is heavily motivated by the desire to improve their own “scorecard.” This agency problem can lead to decisions that benefit management but not necessarily the shareholders, particularly since goodwill accounting leaves room for judgment for the management.

Figure 1 shows the evolution of the EURO STOXX 50, Mergers & Acquisition (M&A) activity and goodwill on balance sheets. Declining market prices should in theory be an indication of the necessity to impair goodwill (e.g. Mintz, 2009). Goodwill arises, when one company acquires another one and pays more than the book value of the purchased assets. In times of high valuations and high M&A activity, relatively large amounts of goodwill are recorded, since prices are high compared to book value. According to the “Efficient Market Theory”, market value is equivalent to fair value. Thus if share prices decline, the value of the underlying asset declines as well. We would therefore expect declining stock prices to pressure goodwill impairments.²

¹ For example, discounted cash flow and multiples as the most common valuation techniques would exclude them for these reasons.

² Compare e.g. remarks by Robert G. Fox III before the 2008 AICPA National Conference on Current SEC and PCAOB Developments, December 8, 2008. Available at the SEC website.

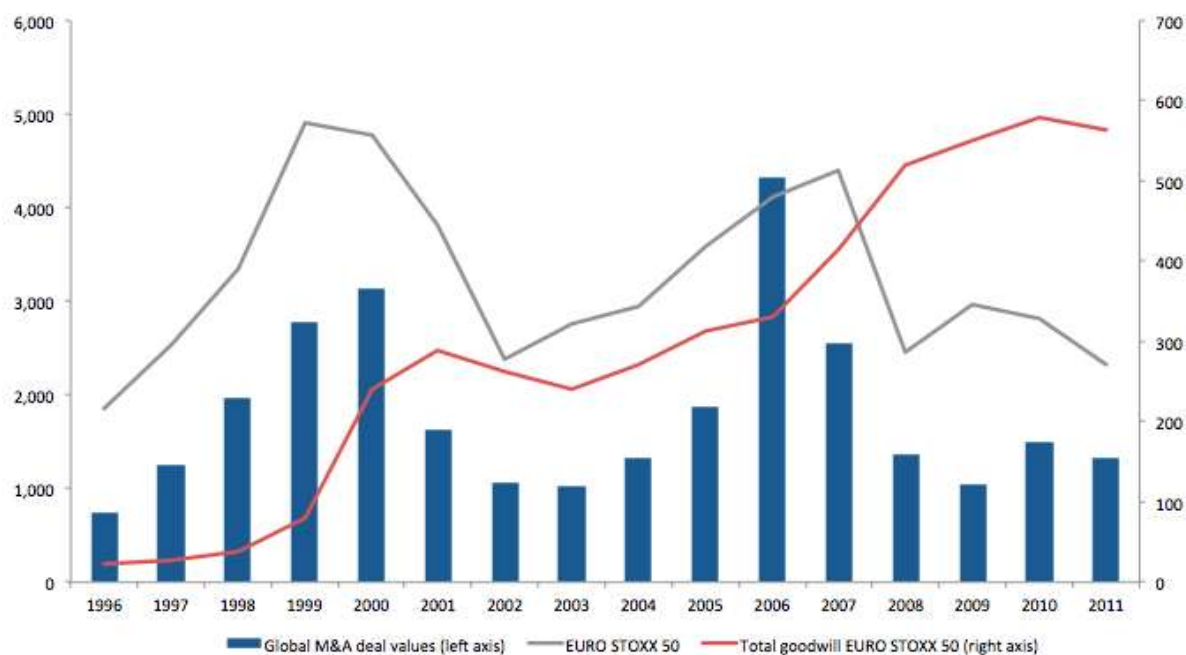


Figure 1: Evolution of M&A activity, goodwill and share prices

In reality, when looking at the development in the past years of the crisis that started in 2007, it becomes apparent that goodwill has not been impaired along with stock price declines, indicating under-impairment. The issue seems to have been realized by regulators. In fact, already in 2008 the Security and Exchange Commission (SEC) started to inquire whether companies whose market value had dropped below book value had taken sufficient action to understand if their goodwill had been impaired.³

If managers did not impair goodwill, because they feared for their reputation and compensation, it would be unacceptable for shareholders but also other stakeholders. For example, from a regulator’s point of view it is of high importance to know the true financial situation of a company to understand e.g. capital requirements. Lenders can also be interested in the amount of goodwill, if this was directly related to bond covenants. The processes in place to ensure reporting accuracy – in which auditors play a large role – apparently fail in controlling goodwill efficiently. Better understanding the incentives of (not) impairing goodwill would allow all stakeholders to realize whether regulation or controls need to be put in place that pre-empt management from managing goodwill against their interest.

³ Compare Regions Financial Corporation., Form CORRESP, filed July 1, 2008.

1.2 Purpose and structure of the thesis

This thesis examines the current situation of under-impairment and the motivation of management to not sufficiently impair goodwill. In order to do this, I will first examine, in how far the management of the EURO STOXX 50 companies have impaired enough goodwill from 2007 to 2011. After establishing that management has not impaired enough in this period, I will analyse its motivation not to impair. For this objective I will evaluate the value relevance of goodwill impairments. If goodwill impairments were not value relevant, this would indicate that management's interest in not impairing goodwill is rather their own reputation and compensation than the shareholders' benefits.

The thesis will start with an introduction into goodwill (chapter 2). It will provide an overview over the reasons why regulators demand companies to account for goodwill (2.1) and examine the parts that constitute goodwill on the balance sheet (2.2). In chapter 3 I will briefly look at the history of goodwill accounting (3.1) and outline the rules for goodwill accounting today (3.2). Chapter 4 will review the literature that has been published on the issue. First of all, the chapter will provide an understanding of the driving forces behind a management's decision, when it considers reporting figures (4.2.2) and examines the special case when management changes (4.2.3). Secondly, the question will be addressed why shareholders allow management an accounting choice (4.3) and why regulators do (4.4). Subsequently the thesis looks at previous literature that provides insights into the value relevance of goodwill impairments (4.5). The last part of the chapter (4.6) will outline the hypotheses of this thesis.

Chapter 5 will cover the practical application of the thesis. After outlining the structure (5.1), the first major part of the application will examine if companies of the EURO STOXX 50 have impaired enough goodwill (5.2). The second major part will examine the value relevance to shareholders, and in how far change in management results in higher goodwill impairments (5.3). Both application parts are structured similarly. After outlining its concept the approach will be explained in detail. Third and last, the results will be presented.

2. Introduction to goodwill

2.1 Rationale behind goodwill

Goodwill can occur and often occurs in an acquisition, when the purchase price exceeds the fair value of the identified assets. The rationale for goodwill can be deducted from its occurrence.⁴ When a company acquires another one, it can generally be assumed that it pays an amount at least close to the fair market price of the company, which may include a premium for intangible assets that are not captured by the General Accepted Accounting Principles (GAAP) (Johnson and Petrone, 1998). Especially in times when it can be argued that sometimes business success depends more on e.g. people than assets (e.g. Strack and Barber, 2005), they have to be accounted for properly, so that financial statements do not lose relevance. Goodwill can be defined as „the excess of the cost of the acquired company over the sum of the amounts assigned to identifiable assets acquired less liabilities assumed“ (Accounting Principles Board, 1970). According to Johnson and Petrone (1998) there are two ways to understand the concept of goodwill. The first way is to see goodwill as part of a larger asset. The acquirer expects certain earnings from that asset after the acquisition. The components of the asset are seen and accounted for as subsets. After the identified net assets have been accounted for, the goodwill is “what is left over” (Johnson and Petrone 1998). The second way to understand goodwill would be to take a bottom-up perspective. This looks at goodwill not as what is left, but what goodwill consists of. If the price includes a premium to the net identifiable assets, “presumably some other resources were acquired” (Johnson and Petrone, 1998). The bottom-up perspective would then try to identify the elements of the goodwill. Possible parts include but are not limited to brand name, customer base, intellectual property, or the skills of management.

2.2 Components of goodwill

The components of goodwill differ from one company to the next. Some companies understand their goodwill as a result of their brand or their reputation; others perceive

⁴ For completeness, there are researchers and practitioners who do not believe that goodwill should be accounted for as an asset. For example, Schuetze (1993) argues that an asset should be defined as „cash contractual claims to cash or services, and items that can be sold separately from cash.“ He argues that the benefit from such a definition would be better comparability.

it as their customer relationships. However, it is apparent that “goodwill [...] is far less transparent than many other assets on the balance sheet” (Murdoch 2011).

While the contextual reasons for goodwill are often diverse, i.e. from brands to customer relationships, and not clearly stated, goodwill can be conceptually divided. Johnson and Patrone (1998) distinguish between six components of goodwill: the excess of fair values over the book values, the fair values of other net assets not recognized by the acquired company, overvaluation paid by the acquirer, over- or underpayment by the acquirer, fair value of “going concern” element of acquired business, and the fair value of synergies from combining the businesses. However, only the last two parts can be called core-goodwill.

Goodwill component	Explanation	Core / Non-core
Excess of fair value over book value	Technically not a part of goodwill (IFRS, 3 p. 6), because fair values are recognized but it can be if difficult to ascertain fair value of net assets	Non-core
Fair values of other assets not recognized by acquirer	Not recognized identifiable intangibles that have not been recognized because they e.g. failed to meet recognition criteria (e.g. because of measurement difficulties)	Non-core
Fair value of “going concern”	Difference between return of combined assets compared to return if assets were operated individually	Core
Fair value of synergies	Result of synergies from the combination of the companies	Core
Overvaluation of the consideration	Possible errors in valuing the purchase considerations (e.g. in all-stock transaction where value of consideration is based on current market place)	Non-core
Overpayment / Underpayment	Overpayments occur especially after price was driven up by bidding war; underpayments often result of distressed sale	Non-core

Figure 2: Types of goodwill

The excess of fair value over book value reflects gains that were not recognized by the acquired company. The reason, why this can be part of the goodwill, is the difficulty in ascertaining the fair value of the asset or the desire to minimize the impact on net earnings, since goodwill is not amortized. The fair value of other net assets which have not been recognized by the acquired company is also conceptually not a part of goodwill, because they are intangibles that might be separately identified. They are normally not recognized as such, because they fail to meet the GAAP’s recognition criteria because of e.g. measurement difficulties. Both the overvaluation of the consideration paid by the

buyer and the over- or underpayment relate to the acquirer and are not conceptually part of the goodwill, because they are not assets. They represent a measurement error in the case of the overvaluation of the consideration and a gain or a loss in the latter case. The two parts that conceptually represent the core of the goodwill are the fair value of the “going concern” element of the acquired business and the fair value of synergies. The first represents the ability of the acquired business to earn – on a stand-alone basis – higher returns than if the assets of the acquired business were to operate separately. Put differently, this is the part of the core goodwill that a buyer would pay, if he did not expect any synergies from the transaction. The second part of the core goodwill is the synergies created in the combination. This value is unique to every transaction and dependent upon the value the combination creates compared to the two businesses operating on their own.

3. Accounting of goodwill

3.1 History of goodwill accounting

Goodwill has been a highly contentious issue both for practitioners and regulators for nearly 100 years. Accounting standards have varied from “charging it [goodwill] to equity to capitalizing it permanently, to amortizing it to earnings, retained earnings or additional paid in capital, and now to testing it for periodic impairment” (David, 2005). About the only factor agreed upon was the lack of consensus. Before the mandatory adoption of IFRS in 2005, European companies used local accounting standards. Following these local standards European companies used a wide variety of approaches to account for goodwill in an acquisition and in some cases could even choose between several alternatives (Carrara et al., 2005). Until 1997, companies in the United Kingdom had the choice between capitalizing goodwill and writing it off directly against equity (Brütting, 2011). On the other hand, even companies that continuously followed IFRS have had to change their way of reporting goodwill continuously. The first standard was IAS 22 “Accounting for Business Combinations” that was issued in 1983 and revised in 1993. IAS 22 stated that goodwill is an asset that must be amortized over its useful lifetime and tested for impairment at the end of every year. This lifetime was usually up to a maximum of five years but could in exceptional circumstances be extended to 20 years. IAS 22 was again substantially revised in 1998 for consistency with other IFRS standards. Now goodwill could – if supported by compelling evidence – be amortized in

a period longer than 20 years. In 2005, mandatory application of IFRS was introduced in 15 European countries (Carrara et al., 2005) and IFRS 3 replaced IAS 22. IFRS 3 states that goodwill cannot be amortized but only impaired in obligatory impairment tests at the end of each financial year. This is a move towards further convergence with US GAAP, which introduced the "impairment only" approach with SFAS 141 and 142 in 2001. Indeed one of the objectives and results of IFRS 3 was to move towards convergence with US GAAP. IFRS 3, IAS 36 and IAS 38 eliminated several differences that were present between IFRS and US GAAP before. However there is still a number of "significant differences" (Jerman and Manzin, 2008) that remain. The main differences are the identification of cash generating units under IFRS versus reporting units in US GAAP, a two-step approach that is used by US GAAP to calculate goodwill impairment and the recognition of contingent liabilities, which is allowed only in IFRS.⁵

3.2 Overview of IFRS goodwill accounting rules today

According to IAS 38, goodwill can "be recognized as an intangible asset only if it is acquired in a business combination" (Jerman and Manzin, 2008). "Goodwill recognised in a business combination is an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognised" (IAS 36). Acquired intangibles assets that are identifiable and have an infinite lifetime must be recognized in the balance sheet separately from goodwill and amortized over an estimated useful lifetime. If goodwill is generated internally, it cannot be capitalized in the balance sheet. The reasoning being that internally generated goodwill does not fulfil the criteria of an asset, because it is not an "identifiable resource controlled by the entity that can be measured reliably at cost" (IAS 36).

Under IFRS 3 the acquisition method is the only method allowed to account for business combinations (IFRS 3.4). According to the acquisition method the process of recognizing goodwill on the balance sheet can be divided into four steps (IFRS 3.5). The first step is the identification of an acquirer. It is obligatory to identify one company as the acquirer. If it is unclear who is the acquirer criteria are proposed to help identifying it (IFRS 3, B14-

⁵ For a comprehensive view of the differences refer to e.g. Murdoch (2011), "Accounting for Goodwill and Testing for Subsequent Impairment: A History, Comparison, and Analysis of Accounting treatment of goodwill in IFRS and US GAAP."

B18), e.g. the entity issuing equity in a deal that sees the companies swapping equity. The second step is the determination of the acquisition date at which the acquirer obtains control of the acquiree (IFRS 3.8). The third step is to recognize and measure the identifiable assets acquired, the liabilities assumed, and any non-controlling interest (IFRS 3.10). This step might result in the buyer recognizing assets and liabilities that have not been recognized before in the acquiree's financial statement (IFRS 3.13). The last step is to recognize goodwill. It is derived from subtracting the net of the identifiable assets and the liabilities assumed from the sum of the consideration paid, the non-controlling interest and – if existent – the previously held equity interest in the acquiree. The goodwill must be allocated to a cash-generating unit (CGU) or to a group of cash-generating units of the acquirer. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or group of assets (IAS 36.6). After recognition goodwill has to be tested for impairment annually on the level of the CGU (IAS 36.96). In this test the recoverable amount of the unit is compared to the carrying value. If the recoverable amount is higher than the carrying value, the goodwill is not impaired. If the carrying value is higher than the recoverable amount, goodwill must be impaired. In the case that the acquired business becomes part of a CGU, goodwill will be tested at the level of the CGU it was assigned to, therefore a bad performance of the acquired business can be compensated by a good performance of the rest of the CGU. Also if the target is resold, the goodwill will remain in the group's balance sheet, unless it is impaired in the process. Goodwill is first impaired at the level of the CGU or group of CGUs. If the impairment is higher than goodwill at the CGU, the impairment reduces the other assets of the CGU on a pro-rata basis (IAS 36.104). The carrying amount of an asset should not be reduced below the highest of the fair value less costs to sell, the value in use and zero (IAS 36.105).

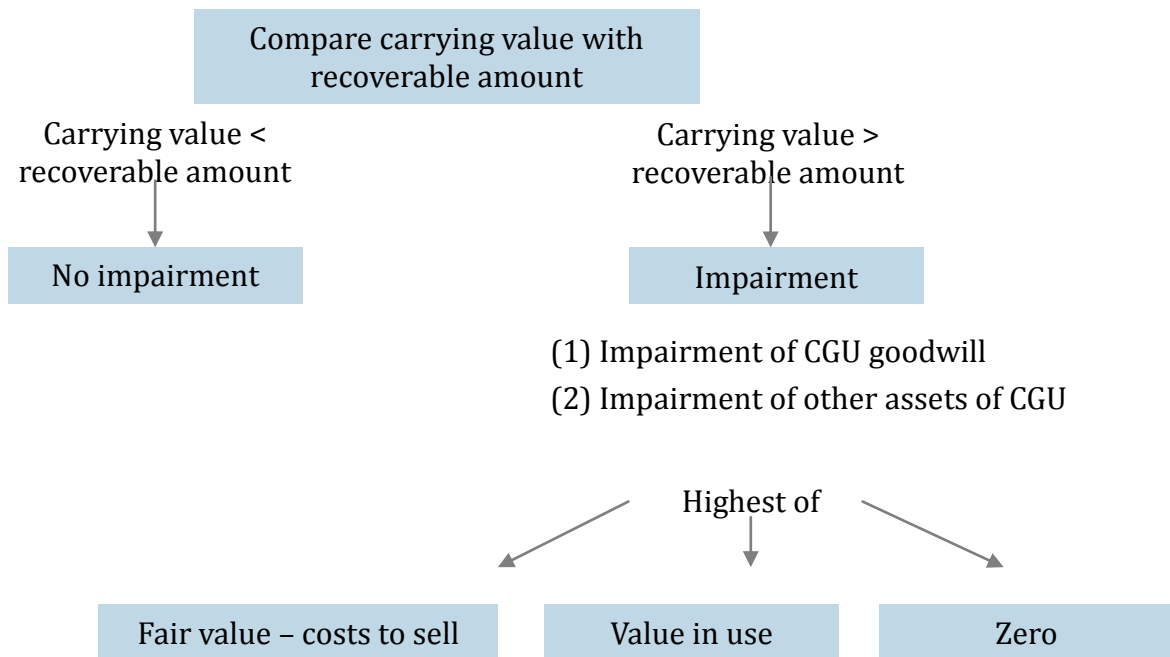


Figure 3: Impairment of goodwill

4. Literature review

4.1 Introduction to literature review

Accounting choices allow management flexibility when reporting financial figures. In order to understand how management will exercise this right and if this freedom will only benefit the readers of the financial statement, the first part of the literature review will give an understanding of the motivation management has when reporting accounting numbers. Given that management is obviously affected by the desire to maintain its reputation, it is an obvious question, why regulators and companies allow managers to apply choices in accounting. Regulators and companies could both have specific accounting rules or simply have the decision made by someone outside of the management, i.e. someone that is not incentivised by the result of the accounting choice.⁶

In order to answer these questions I will first outline the reasons for management to use choices in accounting and potentially make decisions that are not coherent with the interest of shareholders to have as much transparency in results as possible (4.2). One of the cases in which management may have high motivation to impair goodwill is, when the former management has accumulated it. This way the blame for failure – after all

⁶ This would obviously not affect the role of the auditors who would still be in charge of auditing the decisions.

goodwill impairment represents acceptance of overpayment – would stay with the former management. Secondly, in order to explain why companies leave the accounting choice with management, although there is sometimes an agency conflict between management and the shareholders, I will describe the motivation of the shareholders to leave the accounting choice in the hand of the management (4.3). Thirdly I will look at the rationale of choices in accounting from a regulator’s perspective (4.4). In the last part of this chapter (4.5) I will look at the value relevance of accounting decisions and specifically goodwill impairments. The respective literature to date has focused on companies that use US GAAP.

4.2 Effect of accounting choices on management

There are reasons for management to report figures to the best of their knowledge as well as to manipulate figures. Even if managers manipulate earnings, it is unclear to the outsider whether they do so for their own good or to maximize shareholder value. Particularly if managers’ contracts are aligned with shareholder interests, the manipulation of earnings “might well be beneficial to shareholders” (Fields et al., 2001).

4.2.1 Reasons for management to report manipulated figures

Manipulating earnings that is “consistent with the goal of influencing stock prices” (Fields et al., 2001)⁷ can take several forms. Managers “may maximize earnings in a given period, smooth earnings over time, avoid losses, or avoid earnings declines” (Fields et al., 2001). Market efficiency assumes that accounting choices that do not have direct cash flow implications would not influence the value of stocks. However, prior research indicates that even these accounting choices affect stock prices (Fields et al., 2001). The reasons are the irrationality of investors (e.g. mechanic response of investors to changes in earnings independent of source), signalling of management (e.g. private information is provided by management through accounting choice influencing the rational investor) and contractual motivations (e.g. management avoids breaching debt covenants, thus having an actual impact on the value of the firm).

Beatty and Weber (2006) argue that the decision to manipulate or delay goodwill impairments can have three reasons: debt contracting, compensation contracts and

⁷ Note that the reasons for manipulating earnings are not limited to influencing stock prices. Especially the reason of personal reputation comes to mind as another motive to manipulate earnings.

potential equity market effects. The reputation of management is another reason. But this has not been sufficiently covered in previous literature. One reason for this certainly is the difficulty to measure reputation and to establish proof of causation in between other factors.

Often contractual arrangements rely on financial accounting numbers that are structured to mitigate internal and external agency conflicts. The “Positive Accounting Theory” (Watts and Zimmerman, 1978, 1986) suggests that these contracts provide incentives for managers to manipulate financials to achieve the desired reporting figures.

Debt contracts: The “debt/equity hypothesis” (Watts and Zimmerman, 1986) predicts a correlation between the leverage of a firm and the likelihood of managers to try to improve the company’s income. Generally research verifies this correlation.⁸ For example, Sweeney (1994) finds that managers of companies that are close to debt covenant default are likely to use income increasing accounting changes. However, according to T.D. Fields et al. (2001) the inferences that have been made from these tests have generally been overstated.⁹ Since the studies do not target goodwill as such, it seems questionable in how far goodwill impairments are present in debt contracts and are used to judge violation of covenants.

Management contracts: Management contracts generally include a variable component based on reported accounting performance, e.g. return on equity and stock performance. It seems self-evident that the structure of the contracts provides incentives for management to manipulate earnings, in order to achieve higher compensation in the short and long term. Research also has provided evidence that managers particularly manipulate earnings between the upper and lower bound of the bonus scheme (Healy, 1985). Gaver and Gaver (1998) find that this is also true for nonrecurring items. They claim that managers have considerable incentives, when it comes to the timing of gains and losses.

A problem of these studies is their differentiation between manipulation and actual performance. What is labelled as manipulation in these studies may in fact be actual performance (T.D. Fields et al., 2001).

⁸ Holthausen (1981) and Healy (1985) fail to reject the null hypothesis of no association between leverage and accounting method choice.

⁹ For a comprehensive view of the reasons compare chapter 5 of Fields et al. (2001).

Stock market implications: The third reason for management to manipulate earnings is the potential positive stock market movements the manipulation results in. Higher earnings and cash flows – with everything else being constant – lead to a higher valuation in efficient markets. This does not surprise, but it is probably impossible to distinguish management manipulation of results from actual results. However, there are two situations, according to Burgstahler and Dichev (1997), in which it seems to be particularly desirable for management to manipulate earnings. The characteristics of these situations are that the benefits of higher earnings exceed the linear increase in stock price that higher earnings usually result in. The first pattern investors particularly value is constant earnings increases. Barth et al. (1995) confirm that firms which experience constant earnings increases trade at higher price-to-earnings (PE) ratios.¹⁰ Also the premiums grow with the lengths of the series. De Angelo et al. (1996) report that companies breaking a consistent earnings pattern experience a 14-per-cent negative abnormal return in that year. The second event in which companies exponentially benefit from earnings increases occurs, when earnings move from negative to positive. Burgstahler and Dichev (1997) assume that 30-44% of companies with “small pre-managed losses, manage earnings to create positive earnings.”

Two theories that could potentially account for these phenomena are the “Transaction Costs Theory” and the “Prospect Theory”. The former is based on transaction costs with shareholders and relies on two assumptions. Firstly, information about earnings affects the terms of transactions with stakeholders who prefer higher to lower earnings. Secondly, the costs for information processing are high enough that at least some stakeholders are influenced by heuristic cut offs, i.e. the levels from negative to positive (zero earnings) or the amount of earnings that would result in not having a decrease in earnings. Both these assumptions imply that a firm reporting a loss or an earnings decrease “bears sharply higher costs in transactions with stakeholders than if the firm had reported an earnings increase (or profit)” (Burgstahler and Dichev, 1997).

An alternative approach to explain the particular utility of manipulating earnings at heuristic cut offs is provided by the prospect theory of Kahneman and Tversky (1979). The idea of the prospect theory is that decision-makers derive value from changes in losses and gains at a point of reference instead of from absolute figures. The function describing utility is steepest around the reference point. This thus explains the large

¹⁰ The study controls for earnings levels.

value change around the reference point, which could be zero earnings or the earnings that represents no change to prior years.

4.2.2 The case of management change

After a change in management the new management might be particularly inclined to write off goodwill. According to Pourciau (1993), this has generally been confirmed by research.¹¹ The reason for this correlation between write-offs and change in management might be the fact that new management recognizes real problems that were ignored by the former management. Vancil (1987) provides a different reasoning based on the role of an incoming CEO. According to Vancil (1987), he has three distinct roles:

“Summing up, almost any CEO must face three critical tasks early in his tenure: (1) managing the expectations of his officers and directors; (2) taking ownership of the strategic thrust of the corporation during his tenure; and (3) building confidence among all parties by achieving an initial, realistic set of performance goals in his first year or two.”

In order to best achieve these goals new management may blame former executives for poor performance. If the initial performance is negatively influenced by e.g. impairments, it is also easier to subsequently achieve the performance goals because the impairment reduces the benchmark for future growth in earnings.

4.3 Reasons for shareholders to allow management accounting choices

Having outlined the motivations of management to manage goodwill impairments based on their reputation and compensation the question remains, why shareholders allow management accounting choices. Dye and Verrecchia (1995) propose that reporting flexibility would lead to more informative signals about the status of the firm. Possibly there is also a very pragmatic reason for shareholders to leave accounting choices with management, as Evans and Sridhar (1996) state. It might simply be too expensive for shareholders to eliminate reporting flexibility. A third theory justifying accounting choices is based on the belief of firms in efficient contracting. Watts and Zimmerman (1986) suggest that the discretion allowing managers to increase their compensation is also beneficial to shareholders. After all, higher earnings driving management compensation might also result in a higher share price.

¹¹ Compare e.g. Elliott and Shaw (1988) and Strong and Meyer (1987).

4.4 Reasons of regulators to allow choices in accounting

It is generally assumed by researchers and practitioners that, even in efficient capital markets, managers are in possession of knowledge affecting the future performance of the firm that is not accessible to outside investors (Healy and Palepu, 2011). The main rationale of giving managers freedom of choice in accounting decisions is to transfer private information to the market. Looking at the case of accounting for goodwill – which changed from amortisation over an “arbitrary lifetime” (Wang, 2011) to impairment tests – the main reason is to give management an opportunity to transfer their knowledge of the value change of goodwill to the market. Another problem of eliminating choice in accounting would be the necessity to provide “rules for all factors and circumstances” (Field et al., 2001). Also rules would need to be adjusted or created for every new situation. Therefore it seems to be likely that choice and flexibility in accounting exists “because it is impossible, or infeasible, to eliminate it” (Field et al., 2001).

4.5 Value relevance of goodwill write-offs

In theory goodwill should give information on the ability of the company to generate future income. Goodwill write-offs thus would be related to future cash flow generation and value of the company. However, goodwill write-offs are accounting adjustments, which do not “typically coincide with changes in tangible assets or cash flows” (Hirschey and Richardson, 2003). In fact, according to the Wall Street Journal many analysts disregard these write-offs, because “they don’t involve cash flow or operations.” Indeed, when accounting rules still demanded to amortize goodwill, it seemed that the goodwill amortization component of reported earnings had no information value for investors (Jennings et al., 2001). But goodwill accounting has changed from amortization to impairment with the intention of addressing the lack of information provided in goodwill write-offs. The approach is designed to provide users with “value-relevant information that more closely reflects the underlying economic value of goodwill” (AbuGhazaleh et al., 2012). However, this approach has also been criticized given the managerial discretion it allows. Massoud and Raiborn (2003) state that the standard has

been drafted in such a way to leave significant room for interpretation, managerial discretion, judgment, and bias.

Summing up, it is not clear how the market will perceive impairments under the new standards. Existing studies (e.g. Strong and Meyer, 1987, Elliot and Shaw, 1998) mostly focus on asset write-offs in general. They find a negative correlation between asset write-offs and share prices. Studies that specifically focus on goodwill are limited to non-IFRS studies and normally include the transition period in which companies could write-off goodwill as a simple charge to retained earnings, i.e. circumvent the profit and loss statement. For example, Bens and Heltzer (2004) show that the market reaction to impairments in the transition period are significantly less negative than reaction to impairments in later periods. Chen et al. (2008) find that goodwill impairments provide new information to the market in examining impairments in the transition year and subsequent years. While this study looks at the US market, Lapointe-Antunes et al. (2009) find the same results for the Canadian market. These are examples of studies in the US that show the value relevance of goodwill impairments. According to the author's knowledge, there is only one study that deals with companies employing IFRS. The study of AbiGhazaleh et al. (2012) is, however, limited to the UK and does not extend to other European companies. The results of the study are consistent with the results from US GAAP studies. Accordingly the authors suggest that "impairments are perceived by investors to reliably measure a decline in the value of goodwill and are incorporated in their firm valuation assessments" (AbiGhazaleh et al., 2012).

5 Hypotheses

I have shown that there are four potential reasons for management to manipulate earnings. Two of these reasons – namely stock market implications and avoidance of covenant breaches – benefit the shareholders. The other two reasons – compensation contracts and reputational reasons – benefit the management but not necessarily the shareholders. It is desirable to understand, in how far these incentives influence management to manipulate goodwill impairments. Accounting rules in goodwill impairment are very well designed to understand the influence because they give high flexibility to management.

The first hypothesis (H1) is thus:

H1: Management of EURO STOXX 50 companies has under-impaired goodwill

It is also of high relevance for shareholders to understand, if the impairments are in their best interest or only serve the management to look good or to satisfy a clause in their employment contract.

The second hypothesis (H2) is:

H2: The market attaches less value to goodwill impairments than to other sources of losses

If the hypothesis proves to be true, it is an indication of the reasons to impair goodwill. If the market does not react as sensibly to goodwill impairments as to other sources of earnings decreases, this seems to be an opportunity for management to gain the trust of the market cheaply and show good faith in their accounting numbers. If a management then does not impair, this will be an indication that this management acts in its own interest rather than in the interest of the shareholders. One particular case, where the incentive of the management to impair is high, is the case of a change in management. Here – as described in this thesis – the incentive for the new management to impair is usually quite high in order to set a low benchmark for future performance and to avoid a later impairment that could potentially be blamed on the new management. The case of a change in management therefore is very interesting for the dynamics of motivations behind goodwill impairment.

The third hypothesis (H3) thus is:

H3: New management impairs goodwill more frequently than old management

6 Practical application

6.1 Introduction

The study testing the hypotheses presented in 4.6 is divided into two main parts. The first part is designed to test whether managements of EURO STOXX 50 companies have indeed not impaired enough during the financial crisis from 2007 to 2011 (H1). In order to do this, a model has been developed that measures the impairments the companies should have made on the basis of the change of their Price-to-book value (P/BV). These “should-impairments” will be compared to actual impairments to find out whether companies have impaired enough. The second part of the study will address the reaction

of the market to major goodwill impairments of the EURO STOXX 50 companies in the same time period in order to understand, if the market indeed attaches less value to goodwill impairments than to other figures reducing earnings (H2). For this an event study will be used in which relevant goodwill impairments the EURO STOXX 50 companies have made since 2007 are identified. Subsequently the reaction of the market will be compared to (1) companies that have impaired goodwill and to (2) companies that have not. This will indicate how value relevant goodwill impairments are for investors. The study will also identify whether these impairments follow a change in management thus testing the third hypothesis H3). The data and information used mainly come from Datastream, Thomson One, Factiva, broker reports and annual reports of the respective companies.

6.2 Impairment of goodwill

6.2.1 Conceptual design of the study

In the first part of the study the goodwill impairments which the companies have made will be compared to those the companies should have made in order to test whether companies of the EURO STOXX 50 have under-impaired goodwill. The impairments the companies should have made are based on the change in their P/BV. The P/BV is defined as the market capitalisation divided by the book value of the assets. To simplify the language used, I will shorten the phrase “the impairments the companies should have made” to “should-impairments.” Should-impairments are based on changes in P/BV, because goodwill represents the amount that is paid in an acquisition above the book value of assets. Therefore, if the market capitalisation decreases with constant book value of assets except goodwill, the value of goodwill will decrease, as well. One implicit assumption is the existence of efficient markets, in which market capitalisation resembles the fair value of the company. Figure 4 and 5 illustrate the model with the example of a change in P/BV from 1.5 to 1.2 and the resulting goodwill change.¹²

¹² The P/BV of the acquirer is used as a proxy for the P/BV of the acquiree, since the acquiree is often not listed or delisted as a result of the acquisition.

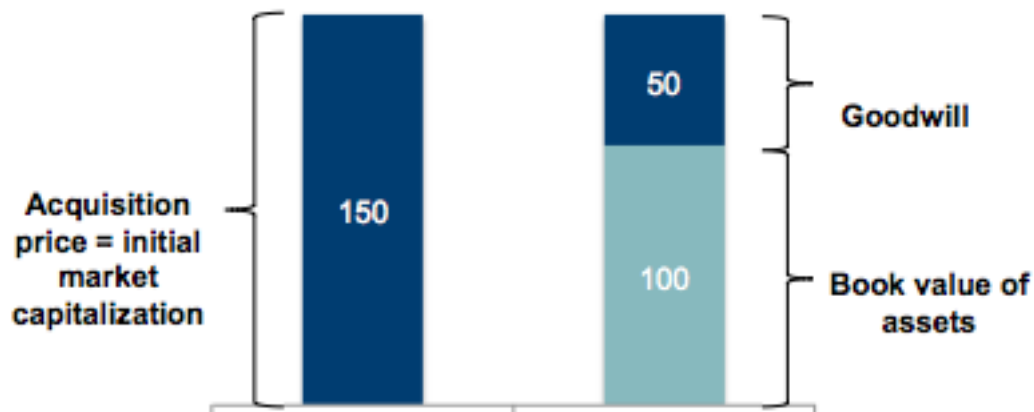


Figure 4: Components of acquisition price at P/BV of 1.5



Figure 5: Components of acquisition price at P/BV of 1.2

If a company is acquired for 150 and the fair value of its identified assets is 100, goodwill of 50 is recorded on the balance sheet. Its P/BV at acquisition is 1.5. If subsequently the P/BV declines to 1.2 with the fair value of the assets remaining constant, the value of goodwill has declined and thus should be impaired.¹³

6.2.2 Practical implementation

First, those companies in the EURO STOXX 50 have been identified that have (a) suffered a decline in P/BV from the beginning of 2007 to the end of 2011 and (b) have a significant amount of goodwill in their balance sheet to deliver meaningful results. In order to pass the threshold of having significant goodwill on the balance sheet, the respective company's goodwill should represent at least five per cent of the assets in at

¹³ It should be noted that this is the conservative case to calculate should-impairments. If the fair value of the assets decline simultaneously, the should-impairments of goodwill would be even higher.

least one of the years from 2007 to 2011. For the 23 companies that are left after this elimination step a model has been set up to measure under-impairment. For every company goodwill additions are recorded every year at the average P/BV of that year. Based on the difference of the average P/BV in the year of acquisition and the average P/BV in 2011 the should-impairment is then calculated. Taking the development of Nokia I will exemplify the process. The first step identifies the additions to goodwill in the years from 2007 until 2010.¹⁴ For Nokia this would be:

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Additions to goodwill (bnEUR)	1.384	4.913	0.032	0.552

The second step is to compare the average P/BV of these years with the average P/BV of 2011. If the P/BV of 2011 is lower than in year x, then goodwill should have been impaired according to the following formula:

$$\text{Should imp. year } x = \text{Goodwill addition year } x \times \left(1 - \frac{(\text{Max}(\frac{P}{BV} 2011,1) - 1)}{(\frac{P}{BV} \text{ year } x - 1)}\right)$$

For Nokia the should-impairments according to the formula above would be:

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Should-impairments (bnEUR)	1.19	4.03	0.02	0.25

The sum of the should-impairments is then compared to the actual impairments done, so:

$$\text{Under - impairment} = \Sigma \text{Shouldimpairments} - \Sigma \text{Actual impairments}$$

Some deductions that are not specifically declared as impairments in the annual reports have been included in the impairments, because they represent implicit impairments (e.g. reductions because of foreign exchange effects). For Nokia the under-impairment would thus be:

$$€5.49bn - €2.28bn = €3.21bn$$

This process has been repeated for the 23 companies of the EURO STOXX 50 that have experienced a decline in P/BV and have significant goodwill in their balance sheets. The P/BV data have been taken from Datastream. The goodwill impairments have been collected from the individual companies' annual reports.

¹⁴ For 2007 the goodwill that has been accumulated in total is taken. 2011 is excluded to account for the fact that goodwill is normally not impaired in the year of acquisition.

6.2.3 Results and interpretation

It can be observed that the 23 companies have significantly under-impaired goodwill during this period (compare figure 6 below). The companies have impaired 185 billion Euros, which on average is eight billion Euros less than the suggested should-impairments. The 185 billion Euros are equivalent to twelve per cent of the total assets of the 23 companies. Of these 23 companies ten account for 87 per cent of the under-impairments and just the top five are responsible for 60 per cent. It is interesting that only one (E.ON) of the 23 companies identified has impaired enough goodwill.

Company name	Goodwill (bnEUR)		Goodwill change in time period (bnEUR)	Goodwill as % of assets	Accumulated deductions (bnEUR)	Underimpairment (bnEUR)
	31/12/2007	31/12/2011				
Air Liquide	3.6	4.6	0.9	19%	0.12	1.08
Arcelor Mittal	12.7	12.5	-0.2	11%	4.06	12.09
Carrefour	11.7	8.7	-2.9	19%	3.99	0.88
CRH	3.5	4.3	0.8	20%	0.29	3.90
Danone	10.6	11.3	0.7	41%	1.18	2.20
Deutsche Telekom	30.3	27.4	-2.9	15%	3.38	9.33
EON	17.0	17.2	0.2	10%	0.00	14.90
ENEL	26.3	18.3	-7.9	11%	1.16	31.56
France Telecom	30.5	27.3	-3.2	30%	3.40	16.26
L'Oreal	4.3	6.2	1.9	24%	0.24	1.79
LVMH	4.8	7.0	2.1	15%	1.42	0.25
Nokia	1.4	4.8	3.5	14%	2.24	3.25
Philips	3.8	7.0	3.2	26%	2.09	-1.19
Repsol	3.3	4.6	1.3	7%	0.35	21.45
RWE	9.7	13.6	3.9	15%	1.49	8.20
Saint Gobain	9.2	11.0	1.8	24%	1.80	3.27
Sanofi	27.2	38.1	10.9	39%	1.45	20.89
SAP	1.4	8.7	7.3	38%	0.11	2.22
Schneider Electric	8.1	12.8	4.6	37%	0.95	1.90
Siemens	13.4	16.0	2.7	16%	2.51	0.90
Vinci	3.4	6.3	2.9	10%	0.14	2.77
Vivendi	15.4	25.0	9.6	46%	1.71	20.45
Iberdrola	8.1	8.3	0.2	9%	2.17	7.12
Sum	259.7	301.2	41.4		36.23	185.47

Figure 6: Under-impairment of EURO STOXX 50 companies

The results seem to confirm the hypothesis that management tends to impair less goodwill than it should. As outlined in this thesis the reasons are twofold – to benefit shareholders and to benefit management. But management seems to under-impair to different degrees. One reason for this may be the uncertainty to what extent their decisions actually create shareholder value. Another reason may be provisions in management contracts that have an impact on goodwill impairment decisions.

6.3 Value-relevance of goodwill impairments

6.3.1 Conceptual design of the study

In order to get a better understanding of the probable motivations behind not impairing enough goodwill, I have looked at the reaction of the market to goodwill impairments. The question is, if investors treat goodwill impairments differently than other items that have a negative impact on earnings. The stock market reaction to an impairment of goodwill provides an understanding of how value relevant these impairments are for investors. If the value of a share does not change after an event, it must be irrelevant for the value of the share. On the assumption that the stock market attaches some value to goodwill impairments, but not as much as to other items that effect earnings negatively, I will compare the reaction of the market to a company that has impaired with companies that have not impaired goodwill. To get a better understanding of the motivation of management I will examine, if the Chief Operating Executive (CEO) of the company has changed from the point of goodwill recognition to the point of the goodwill impairment. If goodwill impairments occurred frequently after a change of the CEO, a fair assumption would be that the old CEO has not impaired, because he did not want to admit past mistakes. It is also probable that the new CEO wants to start with a clean sheet and be able to achieve subsequent improvements. Both reasons support the argument that CEOs rather pursue their own interests than the companies' or the shareholders' respectively.

6.3.2 Practical implementation

In order to identify major goodwill impairments I examined the annual reports of the 23 companies from 2007 to 2011. The test if a goodwill impairment was major is based on its size, i.e. the impairment had to either account for ten per cent of the net income or five per cent of the existing goodwill in the current year. Also the goodwill impairment should not be less than 90 million Euros. Then the fiscal quarter where the respective goodwill announcement had been made was identified and it was determined, whether the impairments were expected or not. This was done with the help of news from Factiva and broker reports for the respective periods. Figure 7 shows an overview of the major goodwill impairments.

Company name	Date of impairment	Reason for impairment (related acquisition)	Impairment amount (m€)
Carrefour	31/12/2008	Italy (GS)	197
Carrefour	31/12/2009	Italy (GS)	266
Carrefour	30/06/2011	Italy (GS), Greece	481
Carrefour	31/12/2011	Italy (GS), Greece	1.461
France Telecom	31/12/2009	TP Group (Poland)	531
France Telecom	31/12/2010	Egyptian business	530
France Telecom	31/12/2011	Egyptian and Romanian business	476
Nokia	30/09/2009	Nokia Siemens Networks	908
Nokia	31/12/2011	Multiple divisions impaired	1.091
Philips	31/12/2008	Lumileds	301
Philips	31/12/2011	Multiple divisions impaired	1355
Saint Gobain	31/12/2009	Gypsum Division	210
Saint Gobain	31/12/2011	Gypsum Division	309
Schneider Electric	31/12/2009	Systron Donner	90
Siemens	30/09/2010	Dade Behring and Diagnostics Product Corporation	925
Vivendi	31/12/2009	Universal	616
Vivendi	31/12/2011	Canal+	390

Figure 7: Significant impairments

For the impairment dates the latest consensus forecasts¹⁵ of EPS were compared to actual EPS. On the basis of missing or outperforming EPS forecasts, peers from the EURO STOXX 50 were identified that performed in a similar manner, as concerned their EPS targets.¹⁶ In order to compare performance and identify abnormal returns, the Market Adjusted Returns Model (S.J. Brown and J.B. Warner, 1980) was used. In this model expected returns are equal across securities but not constant for a single security. Abnormal returns ex post are determined by comparing the stock performance with the performance of the market, thus:

$$\varepsilon_{it} = R_{it} - R_{mt}$$

with ε_{it} equal to the abnormal return and R_{it} and R_{mt} equal to the return of the security and the market respectively. The market return in this case is the return of the EURO STOXX 50 in the given time period. The market returns adjusted performance is then compared to the market adjusted performance of the identified peers for the periods of (a) one day after their respective quarterly report dates, (b) five days after, (c) one month after and (d) one year after. The performance is adjusted to the initial differences in EPS. The process is exemplified below with the Carrefour impairment from 2008.

¹⁵ Source: Datastream and Thomson One.

¹⁶ Performing similarly has been defined as +/- 5 per cent of consensus EPS forecasts versus actual EPS performance. In cases where no peers could be identified within this range, the range has been widened.

	Carrefour	Danone	Volkswagen
Difference actual EPS vs consensus	-36.0%	-31.7%	-33.7%
Report date	12/03/2009	20/03/2009	02/03/2009
Pre adjustment			
Performance after 1 day	5.6%	1.7%	5.3%
Performance after 5 days	-0.8%	2.6%	4.1%
Performance after 1 month	4.6%	-7.1%	17.1%
Performance after 1 year	-4.4%	-7.0%	23.9%
Post adjustment			
Performance after 1 day	5.6%	1.9%	5.7%
Performance after 5 days	-0.8%	3.0%	4.4%
Performance after 1 month	4.6%	-8.1%	18.3%
Performance after 1 year	-4.4%	-8.0%	25.6%
Average Performance			
Performance after 1 day	5.6%	3.8%	
Performance after 5 days	-0.8%	3.7%	
Performance after 1 month	4.6%	5.1%	
Performance after 1 year	-4.4%	8.8%	
Comparison of impaired company vs peers			
Performance after 1 day	1.8%		
Performance after 5 days	-4.5%		
Performance after 1 month	-0.5%		
Performance after 1 year	-13.2%		

Figure 8: Impairment of Carrefour

The first step is to identify peers for Carrefour. On the basis of deviation of reported EPS from consensus EPS, Danone and Volkswagen are identified. Then the performance in the period following the announcement date is compared across the three companies. This performance is market adjusted for EURO STOXX 50 performance as discussed before. To make the comparison valid, the performance is then corrected for the initial difference in EPS. In the case of Danone the adjustment is:

$$Adjustment = Performance * \left(\frac{Difference\ actual\ EPS\ vs\ consensus_{Carrefour}}{Difference\ actual\ EPS\ vs\ consensus_{Danone}} \right)$$

for the respective time period. This corrects the performance of Danone on the first day by 0.2%. The adjusted performance of the peers Volkswagen and Danone is then averaged and compared to the performance of Carrefour. In this case the performance after one day suggests that there is indeed a tendency to prefer goodwill impairment to other impacts by other unexpected earnings, but performance over the longer run suggests otherwise.

In addition I looked at the effect of management change on goodwill impairments. I compared who was CEO at the date of an acquisition and who was it at the date of the impairment. If there was a different CEO, the time between coming into position and impairing goodwill is looked at.

6.3.3 Results and interpretation

The results seem to confirm the hypothesis. Figure 9 shows that on average the performance of the company in which goodwill was impaired was better.

Average performance vs peers	
Performance after 1 day	0.4%
Performance after 5 days	0.3%
Performance after 1 month	2.4%
Performance after 1 year	1.9%
Expected impairments vs peers	
Performance after 1 day	-0.8%
Performance after 5 days	-1.3%
Performance after 1 month	0.6%
Performance after 1 year	0.7%
Unexpected impairments vs peers	
Performance after 1 day	1.4%
Performance after 5 days	1.5%
Performance after 1 month	3.8%
Performance after 1 year	2.7%

Figure 9: Summary of performance of companies impairing compared to peers

When differentiating between expected and unexpected impairments the difference becomes more evident. This gives more weight to confirming the hypothesis. The expected impairments are already accounted for in the EPS forecasts. The unexpected impairments consist of the impairments that contribute to the difference in EPS versus the estimates. For unexpected impairments the superior performance of the company seems also to be sustained in the longer run. On average the impairing companies performed 3.8 per cent better after one month and 2.7 per cent better after one year than its peers. Figure 10 gives an overview of the individual impairments made.

Company	Impairment date	Comparison of impaired vs peers				Impairment expected
		1 day	5 days	1 month	1 year	
Philips	31/12/2008	-1.0%	3.3%	0.1%	11.7%	Yes
Carrefour	31/12/2008	1.8%	-4.5%	-0.5%	-13.2%	No
Schneider Electric	31/12/2009	2.1%	2.6%	5.1%	43.4%	No
Vivendi	31/12/2009	1.2%	3.9%	4.3%	7.2%	No
Saint Gobain	31/12/2009	3.2%	3.6%	4.0%	7.6%	No
Carrefour	31/12/2009	1.6%	3.5%	9.3%	1.8%	Yes
France Telecom	31/12/2009	-5.3%	-0.5%	14.2%	31.6%	No
Siemens	30/09/2010	1.6%	4.2%	20.0%	60.3%	Yes
France Telecom	31/12/2010	2.5%	1.0%	-5.5%	-31.7%	Yes
Carrefour	30/06/2011	2.7%	3.0%	0.3%	-21.1%	No
Carrefour	31/12/2011	-0.9%	-3.5%	-1.4%	12.4%	Yes
France Telecom	31/12/2011	2.6%	0.3%	2.1%	-29.2%	No
Nokia	31/12/2011	-2.6%	-8.8%	-8.9%	-47.7%	Yes
Philips	31/12/2011	3.4%	1.1%	-0.4%	41.4%	No
Saint Gobain	31/12/2011	0.9%	4.4%	4.7%	-43.2%	No
Vivendi	31/12/2011	-6.5%	-8.6%	-9.8%	-1.8%	Yes

Figure 10: Overview of performance of impaired companies compared to peers

Looking at the timeframe when goodwill impairments are made in relation to CEO tenure, the sample gives a clear indication that new CEOs are inclined to impair past goodwill in order to set a low benchmark for future performance and to avoid a later impairment that could potentially be blamed on their management. Of the impairments 59 per cent were made in the first three years. Almost 40 per cent of the impairments were made within the first two years, after the new CEO had been put into place.

Not one of the goodwill impairments was made by the same CEO who had made the acquisition earlier. Figure 11 gives an overview of when goodwill impairments occurred, after the new CEO had been put into place.

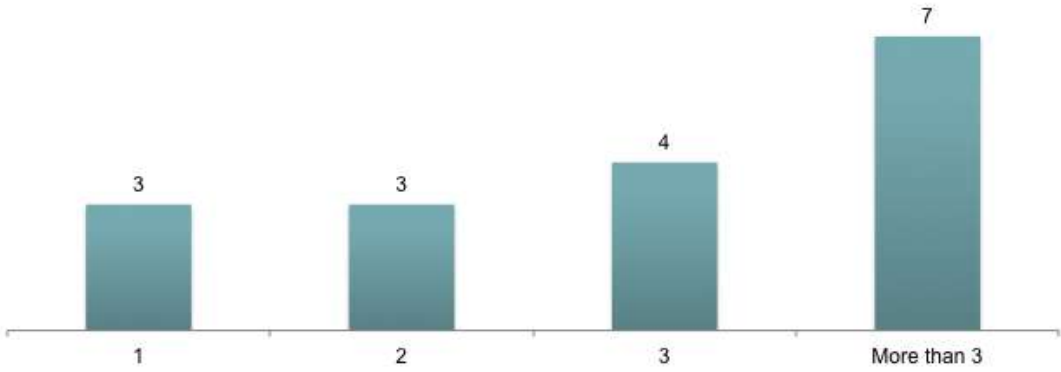


Figure 11: Years after which goodwill impairments were made in the sample after change in management

7 Conclusion and implications

In theory there are four main reasons for the management of a company to manipulate goodwill. The first two, maintaining reputation and compensation, are directly linked to its own benefit and do not reflect the shareholders' interests. The other two, affecting the share price positively and avoiding covenant breaches, are most likely in the interest of the firm. In order to validate that goodwill under-impairments are indeed an issue, this thesis has examined the impairments of the EURO STOXX 50 companies from 2007 to 2011. The change in P/BV has been used as a basis to judge whether and how much a company should have impaired. I have found significant under-impairment in the sample. Of the 50 companies in the EURO STOXX 50, 23 should have made impairments during the period. Only one of these 23 companies has impaired enough, and in total the companies have not impaired 185 billion Euro or twelve per cent of their total assets. Only ten companies account for 87 per cent of the under-impairment and just five are responsible for 60 per cent. Although the European Securities and Market Authority seems to have realized and voiced the issue "that listed companies were taking an excessively optimistic view of the value of takeovers agreed in more buoyant times" (Jones, 2013) companies are not changing their behaviour. The top five companies that account for 60 per cent of the goodwill under-impairment have impaired a total of 6.3 billion Euros in 2012 – not even 6 per cent of the total under-impairment.

In the second part of this thesis I have examined misalignment of interest between management interested in its own reputation and compensation and shareholders interested in accurate financial reporting. In order to understand whether this is indeed the case, I have examined the reaction of shareholders to goodwill impairments. In comparing the reaction of investors to unexpected goodwill impairments to other unexpected impacts on earnings I found that goodwill impairments are seen as less negative by the market. This indicates that investors indeed put less value on goodwill impairments and prefer accurate accounting of goodwill. The last part of this thesis provides a second indication of the assumption that managers act more in their own interest when impairing goodwill. Looking at the time frame of goodwill impairments I found that CEOs are more inclined to impair goodwill in the first years of their tenure. 60 per cent of the impairments were made during the first three years of a CEO after taking office. Thus they preserve their reputation of keeping their "scorecards" intact and set a lower benchmark for their future performance.

It seems that when it comes to goodwill impairment, shareholders' and management's interests are not aligned. In my opinion there are mainly three ways how this can be addressed: drawing up different contracts, leaving the goodwill impairment decisions to accountants and better controls of management decisions. The first suggestion refers to the tailoring of contracts. This includes both external contracts of the company and compensation contracts of the management. These contracts mitigate incentives to manipulate goodwill impairments. The second way would be to keep management from actually making the decision about goodwill impairments. Internal or external accountants could make this decision. Both of these ways obviously have negative aspects. If contracts were different, bad acquisition decisions would not be punished as severely anymore. This could lead to a moral hazard dilemma in which managers would be rewarded disproportionately higher than possibly punished. Moreover, this solution would not solve the problem of the reputation lost due to the impairments. The second solution – having accountants make the decision about goodwill impairments – would solve the problem of false incentives. One major question in this would be whether accountants are sufficiently qualified to make this decision. There also might be very beneficial non-impairments, e.g. when the so far minor earnings of a company turn into the negative. The third way would be to raise awareness of the issue and control management better. Simply raising awareness and questioning management on the impairment issue might lead to a higher responsibility and then accuracy in goodwill impairments. Also more emphasis could be put on internal audits.

Summing up, there is no simple solution to the various problematic aspects of goodwill impairment accounting, but there are several ways that might be able to improve it.

List of references

- AbuGhazaleh, N. M., Al-Hares, O. M., & Haddad, A. E., 2012. The Value Relevance of goodwill impairments: UK Evidence. *International Journal of Economics and Finance*, Volume 4, p206.
- Accounting Principles Board, 1970a, Opinion No. 16, Business Combinations, paragraph 87.
- Barber, F., Strack, R., 2005. The surprising economics of a people business. *Harvard Business Review*, pp. 80-90.
- Barth, M., Elliot, J., Finn, M., 1995. Market rewards associated with increasing earnings patterns. Working paper, Cornell University.
- Beatty, A., Weber, J., 2006. Accounting discretion in fair value estimates: An examination of SFAS 142 Goodwill Impairments, *Journal of Accounting Research*, Volume 44, No. 2, pp. 255-288.
- Brown, Stephen J. and Warner, Jerold B., 1980. Measuring security price performance. *Journal of Financial Economics* 8, pp. 205-258.
- Brütting, M., 2011. Goodwill impairment causes and impact. Doctoral Thesis, Cass Business School.
- Burgstahler, D., Dichev, I., 1997. Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economics*, Volume 24, pp. 99-126.
- Carrara, M., Baboukardos, D., Cunningham, G. M. and Hassel, L. 2005. The impact of IFRS on reporting for business communications: An in-depth analysis using the telecommunications industry. University of Oradea, Economics Science Series.
- Davis, M., 2005. Goodwill Impairment: Improvement or Boondoggle? University of Alaska Fairbanks.
- DeAngelo, H., DeAngelo, L., Skinner, D., 1996. Reversal of fortune: Dividend signalling and the disappearance of sustained earnings growth. *Journal of Financial Economics* 40, pp. 341-371.
- Dye, R.A., Verrecchia, R.E., 1995. Discretion vs. uniformity: choices among GAAP. *The Accounting Review* 70.
- Elliott, J. and W. Shaw. 1988. Write-offs as accounting procedures to manage perception. *Journal of Accounting Research* 16.
- Evans, J., Sridhar, S., 1996. Multiple control systems, accrual accounting, and earnings management. *Journal of Accounting Research* 34, pp. 45-65.
- Fields, T. D., Lys, T. Z., Vincent, L., 2001. Empirical research on accounting choice. *Journal of Accounting and Economics* 31, pp. 255-307.

- Fox III, R. G., 2008. AICPA National Conference on Current SEC and PCAOB Developments, December 8.
- Gaver, J., Gaver, K., 1998. The relation between nonrecurring accounting transactions and CEO cash compensation. *The Accounting Review* 73, pp. 235–253.
- Healy, P. M., 1985. The effect of bonus schemes on accounting decisions. *Journal of Accounting & Economics*, pp. 85-107.
- Healy, P. M., Palepu, K. G, 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, Volume 31, pp. 405-440.
- Hirschey, M., & Richardson, V. J., 2003. Investor underreaction to goodwill write-offs. *Financial Analysts Journal*, pp. 75-84.
- Holthausen, R. W., 1981. Evidence on the effect of bond covenants and management compensation contracts on the choice of accounting techniques: The case of the depreciation switch-back. *Journal of Accounting & Economics*, pp. 73-109.
- Jennings, R., LeClere, M., & Thompson, R. B., 2001. Goodwill amortization and the usefulness of earnings. *Financial Analysts Journal*, pp. 20-28.
- Jerman, M., Manzin, M., 2008. Accounting Treatment of Goodwill in IFRS and US GAAP. *Organizacija*, Volume 41. University of Primorska.
- Johnson, L. T. and Petrone, K. R., 1998. Is Goodwill an Asset?, *Accounting Horizons*, September 1998, pp. 293 – 303.
- Jones, A.: EU groups face questions over goodwill, *Financial Times*, January, 2013.
- International Accounting Standards Board, IAS 22, Accounting for Business Combinations.
- International Accounting Standards Board, IAS 36, Impairment of Assets.
- International Accounting Standards Board, IAS 38, Intangible Assets.
- International Accounting Standards Board, IFRS 3, Business Combinations.
- Kohler, E.L. 1983. *Kohler's Dictionary for Accountants*. 6th ed., Prentice Hall.
- Massoud, M. F., Raibom, C. A., 2003. Accounting for Goodwill: Are we better Off? *Review of Business* 24, p. 26- 32.
- Mintz, S. L., 2009. Goodwill hunting. *CFO Magazine*. January edition.
- Murdoch, E., 2009. Accounting for Goodwill and Testing for Subsequent Impairment: A History, Comparison, and Analysis. Departmental Thesis. The University Tennessee at Chattanooga.

On Amir, O. and Lobel; O., 2008. Stumble, Predict, Nudge: How behavioural economics informs law and policy, *Columbia Law Review*, Vol. 108, pp. 2099-2138.

Pourciau, S., 1993. Earnings management and non-routing executive changes. *Journal of Accounting and Economics* 16, pp. 317-336.

Schuetze, W.P. 1993. What is an asset. *Accounting Horizons*, September, pp. 66-70.

Statement of Standard accounting practice No. 22 "Accounting for Goodwill"

Strong, J. and J. Meyer. 1987. Asset writedowns: Managerial incentives and security returns. *Journal of Finance* 42, pp. 643-663.

Sweeney, A., 1994. Debt covenant violations and managers' accounting responses. *Journal of Accounting and Economics* 17, pp. 281-308.

Thurm, S., 2012. Buyers Beware: The Goodwill Games, Wall Street Journal, 14.8.2012, <http://online.wsj.com/article/SB10000872396390444042704577587302625535444.html>.

Tversky, A., Kahneman, D., 1991. Loss aversion in riskless choice: A reference-dependent model. *The Quarterly Journal of Economics* 5, pp. 1039-1061.

Vancil, R.F., 1987. Passing the baton: Managing the process of CEO succession (Harvard Business School Press, Boston. MA).

Wang, V., 2011. Is Amortization Good Enough? Evidence from the U.K. Goodwill Accounting. *Journal of International Management Studies* 6, p. 1-7.

Watts, R.L., Zimmerman, J.L., 1986. Positive Accounting Theory. Prentice-Hall, Englewood Cliffs, NJ.

Watts, R.L., Zimmerman, J.L., 1978. Towards a positive theory of the determination of accounting standards. *The Accounting Review*. Volume 53, No. 1, pp. 112-134.

Appendix 1: Average Price-to-book ratio of EURO STOXX 50 companies

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
AB Inbev	2,56	2,76	2,00	2,43	2,25	3,27
Sanofi	1,91	1,40	1,27	1,24	1,21	1,46
Total	2,75	2,16	1,69	1,49	1,29	1,27
LVMH	3,41	2,37	2,06	2,66	2,55	2,79
ENI	2,27	1,74	1,30	1,16	1,04	1,12
Banco Santander	1,58	1,44	1,02	1,03	0,83	0,69
Inditex	6,85	4,21	4,16	5,05	5,12	6,86
L'Oreal	3,77	3,58	2,60	3,19	2,75	3,16
BNP Paribas	1,35	1,02	0,75	0,83	0,69	0,55
Telefonica	4,28	4,66	3,49	3,20	3,30	2,31
Unilever	5,12	5,57	4,21	4,33	4,55	5,30
GDF Suez	1,96	1,40	1,03	0,96	0,85	0,64
BBV	2,46	1,75	1,23	1,15	0,92	0,78
AXA	1,54	1,12	0,75	0,74	0,69	0,61
Danone	3,08	2,77	1,75	2,28	2,35	2,47
Enel	2,53	1,91	1,10	0,97	0,94	0,66
Schneider	2,25	1,51	1,32	1,63	1,71	1,63
ING	1,99	1,39	0,71	0,72	0,63	0,53
Air Liquide	3,45	3,04	2,41	2,70	2,68	2,90
Iberdrola	1,88	1,74	1,18	1,04	0,98	0,72
Societe Generale	2,03	0,94	0,67	0,65	0,53	0,34
Arcelor Mittal	1,64	1,52	0,80	0,89	0,71	0,46
Unicredit	1,50	0,91	0,53	0,58	0,49	0,19
France Telecom	1,93	1,94	1,77	1,49	1,36	0,98
Intesa	1,34	1,00	0,62	0,59	0,58	0,43
Generali	3,21	2,67	1,56	1,38	1,21	0,99
Vinci	3,33	2,19	1,73	1,71	1,63	1,48
Vivendi	1,76	1,28	1,09	0,98	1,16	0,99
ASML	4,83	3,35	4,09	3,79	3,37	4,82
Philips	1,46	1,22	0,97	1,47	1,34	1,31
Repsol	1,71	1,29	0,99	0,92	1,14	0,85
Nokia	5,54	4,49	2,75	2,17	1,63	0,85
Unibail	1,06	0,91	1,00	1,10	1,14	1,22
Saint Gobain	1,84	1,14	0,93	1,01	1,12	0,89
Essilor	4,22	3,22	2,71	3,28	3,33	4,28
Carrefour	3,34	2,63	2,06	2,52	2,36	1,70
Daimler	1,73	1,24	0,97	1,21	1,19	1,07
Siemens	2,93	2,24	1,74	2,25	2,34	2,06
CRH	2,38	1,46	1,30	1,14	1,01	1,02
Deutsche Bank	1,35	1,07	0,70	0,83	0,61	0,53
BASF	2,23	2,03	1,67	2,02	2,17	2,37
Muencher Rueck	1,35	1,19	1,01	0,99	0,94	1,05
Allianz	1,89	1,50	0,94	0,98	0,98	0,98
E.ON	1,51	2,11	1,21	1,12	1,03	0,89
Bayer	2,38	2,39	1,89	2,23	2,20	2,56
SAP	6,83	5,30	4,26	4,33	3,89	4,82
RWE	3,33	3,42	2,47	2,09	1,65	1,43
Deutsche Telekom	1,41	1,25	1,11	1,12	1,20	1,08
BMW	1,35	0,98	0,92	1,20	1,42	1,54
Volkswagen	1,03	0,97	0,61	0,83	0,98	1,14

Appendix 2: Total goodwill on the balance sheets of EURO STOXX 50 companies

<i>(in bnEUR)</i>	<u>31/12/2011</u>	<u>31/12/2010</u>	<u>31/12/2009</u>	<u>31/12/2008</u>	<u>31/12/2007</u>
Allianz	11,72	12,02	12,01	11,22	12,45
Air Liquide	4,56	4,39	4,00	3,96	3,64
Arcelor Mittal	9,63	9,40	10,35	9,79	8,67
ASML-Holding	0,15	0,14	0,13	0,13	0,13
AB Inbev	39,61	39,22	36,38	35,61	13,83
AXA	15,86	16,74	16,47	16,97	16,31
BMW	0,37	0,11	N/A	N/A	N/A
Danone	11,29	11,21	12,93	12,32	12,87
Deutsche Bank	10,97	10,76	7,42	7,53	7,23
Deutsche Telekom	17,16	20,52	20,33	20,63	20,64
EON	14,08	14,59	16,90	17,17	16,76
ENEL	18,34	18,47	19,37	16,04	26,27
ENI	4,02	4,18	4,41	3,55	2,12
Essilor	1,88	1,52	1,06	0,96	0,59
France Telecom	27,34	29,03	28,17	30,81	31,39
GDF Suez	31,36	27,57	27,99	27,51	1,76
Generali	7,39	7,48	7,33	6,15	4,80
Inditex	0,22	0,13	0,13	0,13	0,13
ING Group	1,79	2,77	3,07	3,07	2,25
Indesa Sanpolo	8,69	19,22	18,84	19,69	17,59
L'Oreal	6,20	5,73	5,47	5,53	4,34
LVMH	6,96	5,03	4,27	4,42	4,82
Muencher Rueck	3,51	3,45	3,48	3,57	3,14
Nokia	4,84	5,72	5,17	6,26	1,38
Philips	7,02	8,04	7,36	7,70	4,14
Repsol	4,65	4,62	4,73	2,85	3,31
RWE	13,59	13,57	13,25	9,15	9,71
Saint Gobain	11,04	11,03	10,74	10,67	9,24
Sanofi	38,08	31,93	29,73	28,16	27,20
SAP	8,71	8,43	4,99	5,01	1,42
Schneider Electric	12,77	10,21	8,61	8,54	8,14
Siemens	17,07	15,71	15,76	15,82	16,00
Societe Generale	6,97	7,43	6,62	6,53	5,19
Telefonica	29,11	29,58	19,57	18,32	19,77
Total	0,91	0,90	1,16	1,07	1,07
Unibail-Rodamco	0,30	0,27	0,22	0,32	0,42
Unilever	14,90	13,18	12,46	11,67	12,24
Vinci	6,26	6,10	3,64	3,58	3,38
Vivendi	25,03	25,35	24,52	22,61	15,43
Volkswagen	4,15	3,41	2,93	2,77	0,20
Santander	25,09	24,62	22,87	18,84	13,83
Iberdrola	8,27	7,83	7,59	7,25	8,06
Unicredit	11,57	20,43	20,49	20,89	19,12
Total	42 009,05	41 666,70	41 238,35	40 838,29	40 321,05

Appendix 3: Goodwill on the balance sheets of EURO STOXX 50 companies as percentage of assets

	<u>31/12/2011</u>	<u>31/12/2010</u>	<u>31/12/2009</u>	<u>31/12/2008</u>	<u>31/12/2007</u>
Allianz	2%	2%	2%	1%	1%
Air Liquide	19%	20%	20%	20%	20%
Arcelor Mittal	11%	10%	12%	10%	10%
ASML-Holding	2%	2%	4%	3%	3%
AB Inbev	46%	46%	47%	44%	49%
AXA	2%	2%	2%	3%	2%
BMW	0%	0% NA	NA	NA	NA
Danone	41%	41%	49%	47%	48%
Deutsche Bank	1%	1%	0%	0%	0%
Deutsche Telekom	15%	17%	17%	18%	18%
EON	10%	10%	11%	11%	12%
ENEL	11%	11%	13%	13%	22%
ENI	3%	3%	4%	3%	2%
Essilor	31%	30%	26%	24%	17%
France Telecom	30%	32%	32%	34%	33%
GDF Suez	15%	15%	16%	17%	4%
Generali	2%	2%	2%	2%	1%
Inditex	2%	1%	2%	2%	2%
ING Group	0%	0%	0%	0%	0%
Indesa Sanpolo	1%	3%	3%	3%	3%
L'Oreal	24%	24%	24%	25%	19%
LVMH	15%	14%	14%	14%	16%
Muencher Rueck	1%	2%	2%	2%	2%
Nokia	14%	15%	15%	17%	4%
Philips	26%	26%	25%	24%	12%
Repsol	7%	7%	8%	6%	7%
RWE	15%	15%	14%	10%	12%
Saint Gobain	24%	25%	25%	25%	23%
Sanofi	39%	39%	39%	41%	39%
SAP	38%	42%	38%	36%	14%
Schneider Electric	37%	34%	35%	36%	36%
Siemens	16%	16%	16%	17%	17%
Societe Generale	1%	1%	1%	1%	0%
Telefonica	24%	24%	19%	20%	20%
Total	1%	1%	1%	1%	1%
Unibail-Rodamco	1%	1%	1%	1%	2%
Unilever	31%	32%	34%	33%	33%
Vinci	10%	11%	7%	7%	7%
Vivendi	46%	44%	44%	42%	35%
Volkswagen	2%	2%	2%	2%	0%
Santander	2%	2%	2%	2%	2%
Iberdrola	9%	9%	9%	9%	12%
Unicredit	1%	2%	2%	2%	2%

Appendix 4: Should-impairments of the EURO STOXX 50 companies

Arcelor Mittal

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	7,57	12,66	14,18	14,83	12,59	12,47
Impairments	0,04	0,56	0,00	0,02	0,00	
Other deductions to goodwill	0,26	0,75	0,01	2,22	0,20	
Disposed goodwill		0,00	0,00	0,00	0,00	
Sum of valid reductions to Goodwill	0,30	1,31	0,01	2,24	0,20	
Additions	5,39	2,83	0,66	0,00	0,08	
Goodwill in balance sheet from 2007	7,57	12,66	11,35	11,34	9,63	9,48
Goodwill in balance sheet from 2008	0,00	0,00	2,83	2,82	2,40	2,36
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,66	0,56	0,55
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,00	0,00
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,08
Sum goodwill in balance sheet	7,57	12,66	14,18	14,83	12,59	12,47
Accumulated impairments	0,30	1,62	1,63	3,87	4,06	4,06
Goodwill at end of year	12,66	14,18	14,83	12,59	12,47	
Avg. P/BV	1,64	1,52	0,80	0,89	0,71	
Should-impairment of 2007 Goodwill						12,66
Should-impairment of 2008 Goodwill						2,83
Should-impairment of 2009 Goodwill						0,66
Should-impairment of 2010 Goodwill						0,00
Sum should impairments						16,15
Should-Impairments - actual impairments						12,09

Air Liquide

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	2,61	3,64	3,96	4,00	4,39	4,56
Impairments		0,00	0,01			
Other deductions to goodwill	0,07	0,00	0,04	0,00	0,00	
Disposed goodwill	0,05	0,00	0,00			
Sum of impairments	0,07	0,00	0,05	0,00	0,00	0,00
Additions	1,15	0,31	0,09	0,39	0,17	
Goodwill in balance sheet from 2007	2,61	3,64	3,64	3,60	3,60	3,60
Goodwill in balance sheet from 2008	0,00	0,00	0,31	0,31	0,31	0,31
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,09	0,09	0,09
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,39	0,39
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,17
Sum goodwill in balance sheet	2,61	3,64	3,96	4,00	4,39	4,56
Accumulated impairments	0,07	0,07	0,11	0,11	0,12	0,12
Goodwill at end of year	3,64	3,96	4,00	4,39	4,56	
Avg. P/BV	3,45	3,04	2,41	2,70	2,68	
Should-impairment of 2007 Goodwill						1,15
Should-impairment of 2008 Goodwill						0,06
Should-impairment of 2009 Goodwill						-0,02
Should-impairment of 2010 Goodwill						0,01
Sum should impairments						1,20
Should-Impairments - actual impairments						1,08

Carrefour

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	10,85	11,67	11,36	11,47	11,83	8,74
Impairments		0,20	0,27	0,01	1,94	
Other deductions to goodwill	0,00	0,45	0,00	0,00	1,12	
Disposed goodwill	0,23	0,00	0,02	0,03	0,08	
Sum of valid reductions to Goodwill	0,00	0,65	0,27	0,01	3,06	
Additions	1,05	0,33	0,40	0,40	0,06	
Goodwill in balance sheet from 2007	10,85	11,67	11,03	10,77	10,76	7,98
Goodwill in balance sheet from 2008	0,00	0,00	0,33	0,33	0,33	0,24
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,40	0,40	0,29
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,40	0,29
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,06
Sum goodwill in balance sheet	10,85	11,67	11,36	11,49	11,88	8,87
Accumulated impairments	0,00	0,65	0,91	0,93	3,99	3,99
Goodwill at end of year	11,67	11,36	11,47	11,83	8,74	
Avg. P/BV	3,34	2,63	2,06	2,52	2,36	
Should-impairment of 2007 Goodwill						4,88
Should-impairment of 2008 Goodwill						0,06
Should-impairment of 2009 Goodwill						-0,11
Should-impairment of 2010 Goodwill						0,04
Sum should impairments						4,87
Should-Impairments - actual impairments						0,88

CRH

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	2,84	3,48	3,88	3,92	4,11	4,30
Impairments		0,00	0,01	0,09	0,00	
Other deductions to goodwill	0,17	0,00	0,02	0,00	0,00	
Disposed goodwill		0,00	0,00	0,01	0,07	
Sum of valid reductions to Goodwill	0,17	0,00	0,03	0,09	0,00	
Additions	0,81	0,40	0,06	0,29	0,26	
Goodwill in balance sheet from 2007	2,84	3,48	3,48	3,46	3,38	3,38
Goodwill in balance sheet from 2008	0,00	0,00	0,40	0,40	0,39	0,39
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,06	0,06	0,06
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,29	0,29
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,26
Sum goodwill in balance sheet	2,84	3,48	3,89	3,92	4,12	4,38
Accumulated impairments	0,17	0,17	0,19	0,28	0,29	0,29
Goodwill at end of year	3,48	3,88	3,92	4,11	4,30	
Avg. P/BV	2,38	1,46	1,30	1,14	1,01	
Should-impairment of 2007 Goodwill						3,46
Should-impairment of 2008 Goodwill						0,40
Should-impairment of 2009 Goodwill						0,06
Should-impairment of 2010 Goodwill						0,27
Sum should impairments						4,19
Should-Impairments - actual impairments						3,90

Danone

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	2,08	10,57	9,89	10,23	11,31	11,29
Impairments	0,03		0,00	0,01	0,02	
Other deductions to goodwill	0,17	0,88	0,00	0,02	0,06	
Disposed goodwill	0,84		0,00	0,00		
Sum of valid reductions to Goodwill	0,20	0,88	0,00	0,03	0,07	
Additions	9,53	0,20	0,34	1,11	0,05	
Goodwill in balance sheet from 2007	2,08	10,57	9,69	9,69	9,66	9,60
Goodwill in balance sheet from 2008	0,00	0,00	0,20	0,20	0,20	0,20
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,34	0,34	0,34
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	1,11	1,11
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,05
Sum goodwill in balance sheet	2,08	10,57	9,89	10,23	11,31	11,29
Accumulated impairments	0,20	1,07	1,07	1,10	1,18	1,18
Goodwill at end of year	10,57	9,89	10,23	11,31	11,29	
Avg. P/BV	3,08	2,77	1,75	2,28	2,35	
Should-impairment of 2007 Goodwill						3,67
Should-impairment of 2008 Goodwill						0,05
Should-impairment of 2009 Goodwill						-0,27
Should-impairment of 2010 Goodwill						-0,07
Sum should impairments						3,38
Should-Impairments - actual impairments						2,20

Deutsche Telekom

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	31,15	30,27	29,79	26,55	27,45	27,42
Impairments	0,00					
Other deductions to goodwill	1,63	1,42	0,00	0,26	0,08	
Disposed goodwill	0,01	0,00	5,95	0,02	0,04	
Sum of valid reductions to Goodwill	1,63	1,42	0,00	0,26	0,08	
Additions	0,76	0,94	2,72	1,17	0,09	
Goodwill in balance sheet from 2007	31,15	30,27	28,85	28,85	28,62	28,56
Goodwill in balance sheet from 2008	0,00	0,00	0,94	0,94	0,93	0,93
Goodwill in balance sheet from 2009	0,00	0,00	0,00	2,72	2,69	2,69
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	1,17	1,17
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,09
Sum goodwill in balance sheet	31,15	30,27	29,79	32,51	33,42	33,43
Accumulated impairments	1,63	3,05	3,05	3,31	3,38	3,38
Goodwill at end of year	30,27	29,79	26,55	27,45	27,42	
Avg. P/BV	1,41	1,25	1,11	1,12	1,20	
Should-impairment of 2007 Goodwill						15,46
Should-impairment of 2008 Goodwill						0,19
Should-impairment of 2009 Goodwill						-2,14
Should-impairment of 2010 Goodwill						-0,79
Sum should impairments						12,72
Should-Impairments - actual impairments						9,33

E.ON

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	15,60	17,05	20,77	20,31	17,59	17,22
Impairments						
Other deductions to goodwill	1,05	2,26	0,49	2,97	0,40	
Disposed goodwill	0,01	0,07	0,08			
Sum of valid reductions to Goodwill	1,05	2,26	0,49	2,97	0,40	
Additions	2,50	6,06	0,11	0,25	0,04	
Goodwill in balance sheet from 2007	15,60	17,05	14,78	14,44	12,34	12,06
Goodwill in balance sheet from 2008	0,00	0,00	6,06	5,91	5,05	4,94
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,11	0,09	0,09
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,25	0,25
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,04
Sum goodwill in balance sheet	15,60	17,05	20,84	20,46	17,73	17,37
Accumulated impairments	1,05	3,31	3,80	6,78	7,18	
Goodwill at end of year	17,05	20,77	20,31	17,59	17,22	
Avg. P/BV	1,51	2,11	1,21	1,12	1,03	
Should-impairment of 2007 Goodwill						15,93
Should-impairment of 2008 Goodwill						5,87
Should-impairment of 2009 Goodwill						0,09
Should-impairment of 2010 Goodwill						0,18
Sum should impairments						22,08
Should-Impairments - actual impairments						14,90

ENEL

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	2,27	13,84	15,71	19,05	18,47	18,34
Impairments			0,00	0,01	0,10	
Other deductions to goodwill	0,07	0,47	0,44	0,00	0,07	
Disposed goodwill	0,68	0,00		0,88		
Sum of valid reductions to Goodwill	0,07	0,47	0,44	0,01	0,16	
Additions	24,75	2,35	3,78	0,32	0,04	
Goodwill in balance sheet from 2007	2,27	26,27	25,81	25,40	25,39	25,26
Goodwill in balance sheet from 2008	0,00	0,00	2,35	2,31	2,31	2,30
Goodwill in balance sheet from 2009	0,00	0,00	0,00	3,78	3,78	3,76
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,32	0,31
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,04
Sum goodwill in balance sheet	2,27	26,27	28,15	31,49	31,79	31,66
Accumulated impairments	0,07	0,54	0,98	0,99	1,16	1,16
Goodwill at end of year	26,27	15,71	19,05	18,47	18,34	
Avg. P/BV	2,53	1,91	1,10	0,97	0,94	
Should-impairment of 2007 Goodwill						26,27
Should-impairment of 2008 Goodwill						2,35
Should-impairment of 2009 Goodwill						3,78
Should-impairment of 2010 Goodwill						0,32
Sum should impairments						32,71
Should-Impairments - actual impairments						31,56

France Telecom

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	30,62	30,49	29,92	27,80	29,03	27,34
Impairments	0,03	0,27	0,53	0,53	0,48	
Other deductions to goodwill	0,20	0,67	0,32	0,00	0,36	
Disposed goodwill	0,33	0,01	1,52	0,01	0,93	
Sum of valid reductions to Goodwill	0,23	0,95	0,85	0,53	0,84	
Additions	0,44	0,37	0,25	1,77	0,07	
Goodwill in balance sheet from 2007	30,62	30,49	29,55	28,70	28,18	27,41
Goodwill in balance sheet from 2008	0,00	0,00	0,37	0,36	0,35	0,35
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,25	0,25	0,24
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	1,77	1,72
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,07
Sum goodwill in balance sheet	30,62	30,49	29,92	29,32	30,56	29,80
Accumulated impairments	0,23	1,18	2,03	2,56	3,40	3,40
Goodwill at end of year	30,49	29,92	27,80	29,03	27,34	
Avg. P/BV	1,93	1,94	1,77	1,49	1,36	
Should-impairment of 2007 Goodwill						18,81
Should-impairment of 2008 Goodwill						0,23
Should-impairment of 2009 Goodwill						0,14
Should-impairment of 2010 Goodwill						0,48
Sum should impairments						19,65
Should-Impairments - actual impairments						16,26

LVMH

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	4,54	4,82	4,42	4,27	5,03	6,96
Impairments		0,03	0,06	0,05	0,04	
Other deductions to goodwill	0,06	1,06	0,12	0,00	0,00	
Disposed goodwill						
Sum of valid reductions to Goodwill	0,06	1,09	0,17	0,05	0,04	
Additions	0,34	0,69	0,02	0,81	1,97	
Goodwill in balance sheet from 2007	4,54	4,82	3,73	3,59	3,54	3,51
Goodwill in balance sheet from 2008	0,00	0,00	0,69	0,66	0,66	0,65
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,02	0,02	0,02
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,81	0,80
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	1,97
Sum goodwill in balance sheet	4,54	4,82	4,42	4,27	5,03	6,96
Accumulated impairments	0,06	1,15	1,33	1,38	1,42	1,42
Goodwill at end of year	4,82	4,42	4,27	5,03	6,96	
Avg. P/BV	3,41	2,37	2,06	2,66	2,55	
Should-impairment of 2007 Goodwill						1,72
Should-impairment of 2008 Goodwill						-0,09
Should-impairment of 2009 Goodwill						-0,01
Should-impairment of 2010 Goodwill						0,05
Sum should impairments						1,67
Should-Impairments - actual impairments						0,25

L'Oreal

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	4,05	4,34	5,53	5,47	5,73	6,20
Impairments						
Other deductions to goodwill	0,12	0,00	0,12	0,00	0,00	
Disposed goodwill						
Sum of valid reductions to Goodwill	0,12	0,00	0,12	0,00	0,00	
Additions	0,41	1,19	0,05	0,26	0,48	
Goodwill in balance sheet from 2007	4,05	4,34	4,34	4,25	4,25	4,25
Goodwill in balance sheet from 2008	0,00	0,00	1,19	1,16	1,16	1,16
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,05	0,05	0,05
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,26	0,26
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,48
Sum goodwill in balance sheet	4,05	4,34	5,53	5,47	5,73	6,20
Accumulated impairments	0,12	0,12	0,24	0,24	0,24	0,24
Goodwill at end of year	4,34	5,53	5,47	5,73	6,20	
Avg. P/BV	3,77	3,58	2,60	3,19	2,75	
Should-impairment of 2007 Goodwill						1,60
Should-impairment of 2008 Goodwill						0,38
Should-impairment of 2009 Goodwill						0,00
Should-impairment of 2010 Goodwill						0,05
Sum should impairments						2,03
Should-Impairments - actual impairments						1,79

Nokia

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	0,53	1,38	6,26	5,17	5,72	4,84
Impairments			0,91		1,09	
Other deductions to goodwill	0,03	0,01	0,21	0,00	0,00	
Disposed goodwill		0,04	0,00		0,00	
Sum of valid reductions to Goodwill	0,03	0,01	1,12	0,00	1,09	
Additions	0,88	4,91	0,03	0,55	0,21	
Goodwill in balance sheet from 2007	0,53	1,38	1,38	1,13	1,13	0,92
Goodwill in balance sheet from 2008	0,00	0,00	4,91	4,04	4,04	3,28
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,03	0,03	0,03
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,55	0,45
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,21
Sum goodwill in balance sheet	0,53	1,38	6,29	5,21	5,76	4,88
Accumulated impairments	0,03	0,04	1,15	1,15	2,24	2,24
Goodwill at end of year	1,38	6,26	5,17	5,72	4,84	
Avg. P/BV	5,54	4,49	2,75	2,17	1,63	
Should-impairment of 2007 Goodwill						1,19
Should-impairment of 2008 Goodwill						4,03
Should-impairment of 2009 Goodwill						0,02
Should-impairment of 2010 Goodwill						0,25
Sum should impairments						5,49
Should-Impairments - actual impairments						3,25

Philips

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	3,41	3,80	7,28	7,36	8,04	7,02
Impairments		0,30			1,36	
Other deductions to goodwill	0,37	0,00	0,07	0,00	0,00	
Disposed goodwill					0,01	
Sum of valid reductions to Goodwill	0,37	0,30	0,07	0,00	1,36	
Additions	0,76	3,78	0,15	0,67	0,35	
Goodwill in balance sheet from 2007	3,41	3,80	3,50	3,47	3,47	2,88
Goodwill in balance sheet from 2008	0,00	0,00	3,78	3,75	3,75	3,11
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,15	0,15	0,12
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,67	0,56
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,35
Sum goodwill in balance sheet	3,41	3,80	7,28	7,36	8,04	7,03
Accumulated impairments	0,37	0,67	0,73	0,73	2,09	2,09
Goodwill at end of year	3,80	7,28	7,36	8,04	7,02	
Avg. P/BV	1,46	1,22	0,97	1,47	1,34	
Should-impairment of 2007 Goodwill						0,98
Should-impairment of 2008 Goodwill						-2,17
Should-impairment of 2009 Goodwill						1,90
Should-impairment of 2010 Goodwill						0,18
Sum should impairments						0,90
Should-Impairments - actual impairments						-1,19

Repsol

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	3,42	3,31	3,06	4,73	4,62	4,65
Impairments			0,02	0,01		
Other deductions to goodwill	0,23	0,00	0,06	0,02	0,02	
Disposed goodwill	0,00	0,29	0,05	0,29	0,03	
Sum of valid reductions to Goodwill	0,23	0,00	0,07	0,03	0,02	
Additions	0,12	0,04	1,80	0,20	0,08	
Goodwill in balance sheet from 2007	3,42	3,31	3,31	3,24	3,22	3,21
Goodwill in balance sheet from 2008	0,00	0,00	0,04	0,04	0,04	0,04
Goodwill in balance sheet from 2009	0,00	0,00	0,00	1,80	1,79	1,78
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,20	0,19
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,08
Sum goodwill in balance sheet	3,42	3,31	3,35	5,08	5,25	5,30
Accumulated impairments	0,23	0,23	0,30	0,33	0,35	0,35
Goodwill at end of year	3,31	3,06	4,73	4,62	4,65	
Avg. P/BV	1,71	1,29	0,99	0,92	1,14	
Should-impairment of 2007 Goodwill						2,66
Should-impairment of 2008 Goodwill						0,02
Should-impairment of 2009 Goodwill						18,56
Should-impairment of 2010 Goodwill						0,55
Sum should impairments						21,79
Should-Impairments - actual impairments						21,45

RWE

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	13,05	9,71	9,15	13,25	13,57	13,59
Impairments						
Other deductions to goodwill	0,60	0,89	0,00	0,00	0,00	
Disposed goodwill	2,75			0,00	0,03	
Sum of valid reductions to Goodwill	0,60	0,89	0,00	0,00	0,00	
Additions	0,00	0,33	4,11	0,32	0,05	
Goodwill in balance sheet from 2007	13,05	9,71	8,81	8,81	8,81	8,81
Goodwill in balance sheet from 2008	0,00	0,00	0,33	0,33	0,33	0,33
Goodwill in balance sheet from 2009	0,00	0,00	0,00	4,11	4,11	4,11
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,32	0,32
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,05
Sum goodwill in balance sheet	13,05	9,71	9,15	13,25	13,57	13,63
Accumulated impairments	0,60	1,49	1,49	1,49	1,49	1,49
Goodwill at end of year	9,71	9,15	13,25	13,57	13,59	
Avg. P/BV	3,33	3,42	2,47	2,09	1,65	
Should-impairment of 2007 Goodwill						7,02
Should-impairment of 2008 Goodwill						0,24
Should-impairment of 2009 Goodwill						2,30
Should-impairment of 2010 Goodwill						0,13
Sum should impairments						9,69
Should-Impairments - actual impairments						8,20

Saint gobain

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	9,33	9,24	10,67	10,74	11,03	11,04
Impairments	0,08	0,07	0,21	0,09	0,31	
Other deductions to goodwill	0,47	0,58	0,00	0,00	0,00	
Disposed goodwill	0,08			0,02		
Sum of valid reductions to Goodwill	0,55	0,65	0,21	0,09	0,31	
Additions	0,54	2,08	0,28	0,40	0,32	
Goodwill in balance sheet from 2007	9,33	9,24	8,60	8,43	8,36	8,12
Goodwill in balance sheet from 2008	0,00	0,00	2,08	2,04	2,02	1,96
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,28	0,28	0,27
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,40	0,38
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,32
Sum goodwill in balance sheet	9,33	9,24	10,67	10,74	11,05	11,06
Accumulated impairments	0,55	1,20	1,41	1,49	1,80	1,80
Goodwill at end of year	9,24	10,67	10,74	11,03	11,04	
Avg. P/BV	1,84	1,14	0,93	1,01	1,12	
Should-impairment of 2007 Goodwill						7,87
Should-impairment of 2008 Goodwill						0,25
Should-impairment of 2009 Goodwill						0,80
Should-impairment of 2010 Goodwill						-3,85
Sum should impairments						5,07
Should-Impairments - actual impairments						3,27

Sanofi

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	28,47	27,20	28,16	29,73	31,93	38,08
Impairments						
Other deductions to goodwill	1,22	0,00	0,23	0,00	0,00	
Disposed goodwill	0,06	0,01	0,08			
Sum of valid reductions to Goodwill	1,22	0,00	0,23	0,00	0,00	
Additions	0,01	0,97	1,88	2,20	6,15	
Goodwill in balance sheet from 2007	28,47	27,20	27,20	26,98	26,98	26,98
Goodwill in balance sheet from 2008	0,00	0,00	0,97	0,96	0,96	0,96
Goodwill in balance sheet from 2009	0,00	0,00	0,00	1,88	1,88	1,88
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	2,20	2,20
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	6,15
Sum goodwill in balance sheet	28,47	27,20	28,17	29,82	32,02	38,17
Accumulated impairments	1,22	1,22	1,45	1,45	1,45	1,45
Goodwill at end of year	27,20	28,16	29,73	31,93	38,08	
Avg. P/BV	1,91	1,40	1,27	1,24	1,21	
Should-impairment of 2007 Goodwill						21,07
Should-impairment of 2008 Goodwill						0,47
Should-impairment of 2009 Goodwill						0,45
Should-impairment of 2010 Goodwill						0,35
Sum should impairments						22,34
Should-Impairments - actual impairments						20,89

SAP

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	0,99	1,43	4,98	4,99	8,43	8,71
Impairments						
Other deductions to goodwill	0,08	0,00	0,02	0,00	0,00	
Disposed goodwill				0,00	0,01	
Sum of valid reductions to Goodwill	0,08	0,00	0,02	0,00	0,00	
Additions	0,52	3,55	0,04	3,44	0,29	
Goodwill in balance sheet from 2007	0,99	1,43	1,43	1,42	1,42	1,42
Goodwill in balance sheet from 2008	0,00	0,00	3,55	3,53	3,53	3,53
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,04	0,04	0,04
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	3,44	3,44
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,29
Sum goodwill in balance sheet	0,99	1,43	4,98	4,99	8,43	8,72
Accumulated impairments	0,08	0,08	0,11	0,11	0,11	0,11
Goodwill at end of year	1,43	4,98	4,99	8,43	8,71	
Avg. P/BV	6,83	5,30	4,26	4,33	3,89	
Should-impairment of 2007 Goodwill						0,72
Should-impairment of 2008 Goodwill						1,16
Should-impairment of 2009 Goodwill						0,00
Should-impairment of 2010 Goodwill						0,45
Sum should impairments						2,33
Should-Impairments - actual impairments						2,22

Schneider

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	6,19	8,14	8,54	8,61	10,21	12,77
Impairments		0,06	0,09	0,02		
Other deductions to goodwill	0,71	0,05	0,03	0,00	0,00	
Disposed goodwill	0,22		0,00	0,00	0,02	
Sum of valid reductions to Goodwill	0,71	0,11	0,12	0,02	0,00	
Additions	2,89	0,51	0,19	1,62	2,58	
Goodwill in balance sheet from 2007	6,19	8,14	8,03	7,92	7,91	7,91
Goodwill in balance sheet from 2008	0,00	0,00	0,51	0,51	0,50	0,50
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,19	0,19	0,19
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	1,62	1,62
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	2,58
Sum goodwill in balance sheet	6,19	8,14	8,54	8,61	10,22	12,80
Accumulated impairments	0,71	0,82	0,94	0,95	0,95	0,95
Goodwill at end of year	8,14	8,54	8,61	10,21	12,77	
Avg. P/BV	2,25	1,51	1,32	1,63	1,71	
Should-impairment of 2007 Goodwill						3,51
Should-impairment of 2008 Goodwill						-0,21
Should-impairment of 2009 Goodwill						-0,23
Should-impairment of 2010 Goodwill						-0,21
Sum should impairments						2,85
Should-Impairments - actual impairments						1,90

Siemens

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	10,39	13,38	15,96	15,81	15,75	16,05
Impairments	0,06	0,07	0,31	0,92	0,20	
Other deductions to goodwill	0,51	0,18	0,27	0,00	0,00	
Disposed goodwill	1,18	0,03	0,03	0,05	0,12	
Sum of valid reductions to Goodwill	0,57	0,24	0,58	0,92	0,20	
Additions	4,73	2,86	0,45	0,92	0,62	
Goodwill in balance sheet from 2007	10,39	13,38	13,13	12,66	11,92	11,77
Goodwill in balance sheet from 2008	0,00	0,00	2,86	2,76	2,59	2,56
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,45	0,43	0,42
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,92	0,91
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,62
Sum goodwill in balance sheet	10,39	13,38	15,99	15,87	15,86	16,28
Accumulated impairments	0,57	0,81	1,39	2,31	2,51	2,51
Goodwill at end of year	13,38	15,96	15,81	15,75	16,05	
Avg. P/BV	2,93	2,24	1,74	2,25	2,34	
Should-impairment of 2007 Goodwill						4,07
Should-impairment of 2008 Goodwill						-0,22
Should-impairment of 2009 Goodwill						-0,37
Should-impairment of 2010 Goodwill						-0,06
Sum should impairments						3,41
Should-Impairments - actual impairments						0,90

Vinci

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	2,64	3,38	3,58	3,60	6,10	6,26
Impairments		0,02	0,01	0,00	0,01	
Other deductions to goodwill	0,02	0,07	0,01	0,00	0,00	
Disposed goodwill	0,01	0,00	0,00	0,00		
Sum of valid reductions to Goodwill	0,02	0,10	0,02	0,00	0,01	
Additions	0,77	0,30	0,08	2,51	0,17	
Goodwill in balance sheet from 2007	2,64	3,38	3,29	3,27	3,27	3,26
Goodwill in balance sheet from 2008	0,00	0,00	0,30	0,29	0,29	0,29
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,08	0,08	0,08
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	2,51	2,50
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,17
Sum goodwill in balance sheet	2,64	3,38	3,58	3,64	6,15	6,31
Accumulated impairments	0,02	0,11	0,13	0,14	0,14	0,14
Goodwill at end of year	3,38	3,58	3,64	6,10	6,26	
Avg. P/BV	3,33	2,19	1,73	1,71	1,63	
Should-impairment of 2007 Goodwill						2,47
Should-impairment of 2008 Goodwill						0,14
Should-impairment of 2009 Goodwill						0,01
Should-impairment of 2010 Goodwill						0,29
Sum should impairments						2,91
Should-Impairments - actual impairments						2,77

Vivendi

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	13,07	15,43	22,61	24,52	25,35	25,03
Impairments	0,01	0,02	0,62		0,39	
Other deductions to goodwill	0,44	0,00	0,18	0,00	0,06	
Disposed goodwill						
Sum of valid reductions to Goodwill	0,44	0,02	0,80	0,00	0,45	
Additions	2,80	7,20	2,70	0,83	0,14	
Goodwill in balance sheet from 2007	13,07	15,43	15,41	14,87	14,87	14,60
Goodwill in balance sheet from 2008	0,00	0,00	7,20	6,95	6,95	6,82
Goodwill in balance sheet from 2009	0,00	0,00	0,00	2,70	2,70	2,65
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,83	0,81
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,14
Sum goodwill in balance sheet	13,07	15,43	22,61	24,52	25,35	25,03
Accumulated impairments	0,44	0,46	1,26	1,26	1,71	1,71
Goodwill at end of year	15,43	22,61	24,52	25,35	25,03	
Avg. P/BV	1,76	1,28	1,09	0,98	1,16	
Should-impairment of 2007 Goodwill						12,18
Should-impairment of 2008 Goodwill						3,15
Should-impairment of 2009 Goodwill						-2,15
Should-impairment of 2010 Goodwill						8,99
Sum should impairments						22,16
Should-Impairments - actual impairments						20,45

Iberdrola

<i>(CYE-bnEUR)</i>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Goodwill at beginning of year	0,06	8,06	7,25	7,59	7,83	8,27
Impairments						
Other deductions to goodwill	0,79	1,38	0,00	0,00	0,00	
Disposed goodwill	0,02	0,00		0,08	0,01	
Sum of valid reductions to Goodwill	0,79	1,38	0,00	0,00	0,00	
Additions	8,82	0,57	0,34	0,32	0,45	
Goodwill in balance sheet from 2007	0,06	8,06	6,69	6,69	6,69	6,69
Goodwill in balance sheet from 2008	0,00	0,00	0,57	0,57	0,57	0,57
Goodwill in balance sheet from 2009	0,00	0,00	0,00	0,34	0,34	0,34
Goodwill in balance sheet from 2010	0,00	0,00	0,00	0,00	0,32	0,32
Goodwill in balance sheet from 2011	0,00	0,00	0,00	0,00	0,00	0,45
Sum goodwill in balance sheet	0,06	8,06	7,26	7,59	7,91	8,36
Accumulated impairments	0,79	2,17	2,17	2,17	2,17	2,17
Goodwill at end of year	8,06	7,25	7,59	7,83	8,27	
Avg. P/BV	1,88	1,74	1,18	1,04	0,98	
Should-impairment of 2007 Goodwill						8,06
Should-impairment of 2008 Goodwill						0,57
Should-impairment of 2009 Goodwill						0,34
Should-impairment of 2010 Goodwill						0,32
Sum should impairments						9,29
Should-Impairments - actual impairments						7,12

Appendix 5: Overview of significant impairments from 2007 until 2011

Company name	Date of impairment	Actual EPS	Forecast EPS	Difference to actual EPS	Actual reporting date	Expected	Reason for impairment (related acquisition)
Carrefour	31/12/2008	1,65	2,58	-36,0%	12/03/2009	No	Italy (GS)
Carrefour	31/12/2009	1,34	1,43	-6,3%	19/02/2010	Yes	Italy (GS)
Carrefour	30/06/2011	0,23	0,46	-50,0%	31/08/2011	No	Italy (GS), Greece
Carrefour	31/12/2011	0,89	1,03	-13,6%	19/01/2012	Yes	Italy (GS), Greece
France Telecom	31/12/2009	0,17	0,45	-62,2%	04/03/2010	No	TP Group (Poland)
France Telecom	31/12/2010	0,415	0,29	43,1%	24/02/2011	Yes	Egyptian business
France Telecom	31/12/2011	0,37	0,32	15,6%	22/02/2012	No	Egyptian and Romanian business
Nokia	30/09/2009	0,17	0,13	30,8%	15/10/2009	No	Nokia Siemens Networks
Nokia	31/12/2011	0,06	0,04	50,0%	26/01/2012	Yes	Multiple divisions impaired
Philips	31/12/2008	-0,19	0,48	-139,6%	26/01/2009	Yes	Lumileds
Philips	31/12/2011	-0,07	0,4	-117,5%	30/01/2012	No	Multiple divisions impaired
Saint Gobain	31/12/2009	0,86	0,81	6,2%	25/02/2010	No	Gypsum Division
Saint Gobain	31/12/2011	1,59	1,69	-5,9%	16/02/2012	No	Gypsum Division
Schneider Electric	31/12/2009	1,42	1,11	27,9%	17/02/2010	No	Systron Donner
Siemens	30/09/2010	0,84	1,21	-30,6%	11/11/2010	Yes	Dade Behring and Diagnostics Product Corporation
Vivendi	31/12/2009	0,37	0,33	12,1%	24/02/2010	No	Universal
Vivendi	31/12/2011	0,34	0,32	6,3%	01/03/2012	Yes	Canal+

Appendix 6: CEOs at impairment date

Company name	Date of impairment	CEO at impairment date	Same CEO than at acquisition date?	Impairment amount (m€)	Years since assuming role
Carrefour	31/12/2008	Lars Olofsson	No	197	1
Carrefour	31/12/2009	Lars Olofsson	No	266	2
Carrefour	30/06/2011	Lars Olofsson	No	481	3
Carrefour	31/12/2011	Lars Olofsson	No	1,461	4
France Telecom	31/12/2009	Stephane Richard	No	531	1
France Telecom	31/12/2010	Stephane Richard	No	530	2
France Telecom	31/12/2011	Stephane Richard	No	476	3
Nokia	30/09/2009	Olli-Pekka-Kallasvuo	No	908	3
Nokia	31/12/2011	Stephen Elop	No	1,091	2
Philips	31/12/2008	Gerard Kleisterlee	No	301	10
Philips	31/12/2011	Frans van Houten	No	1355	1
Saint Gobain	31/12/2009	de Chalendar	No	210	3
Saint Gobain	31/12/2011	de Chalendar	No	309	5
Schneider Electric	31/12/2009	Tricoire	No	90	5
Siemens	30/09/2010	Löscher	No	925	4
Vivendi	31/12/2009	Jean Bernhard Levy	No	616	8
Vivendi	31/12/2011	Jean Bernhard Levy	No	390	10

Appendix 7: Detailed performance analysis of the impairing company versus peers

Carrefour

December 2011

	Carrefour	Siemens	BMW
EPS vs exp	-13,6%	-15,6%	-13,5%
Pre adjustment			
Performance after 1 day	-1,0%	-1,7%	-2,2%
Performance after 5 days	-2,8%	-4,2%	-2,0%
Performance after 1 month	-2,5%	-4,2%	1,4%
Performance after 1 year	3,9%	-2,1%	-2,3%
Post adjustment			
Performance after 1 day	-1,0%	-1,4%	-2,2%
Performance after 5 days	-2,8%	-3,7%	-2,0%
Performance after 1 month	-2,5%	-3,7%	1,4%
Performance after 1 year	3,9%	-1,9%	-2,3%
Average Performance			
Performance after 1 day	-1,0%	-0,1%	
Performance after 5 days	-2,8%	0,7%	
Performance after 1 month	-2,5%	-1,2%	
Performance after 1 year	3,9%	-8,5%	
Comparison of impaired vs others			
Performance after 1 day	-0,9%		
Performance after 5 days	-3,5%		
Performance after 1 month	-1,4%		
Performance after 1 year	12,4%		

France Telecom December 2011

	France Telecom	CRH	Daimler	Schneider Electric
EPS vs exp	15,6%	15,6%	11,7%	11,1%
Pre adjustment				
Performance after 1 day	2,8%	-5,4%	2,2%	2,1%
Performance after 5 days	2,7%	-1,7%	4,3%	2,3%
Performance after 1 month	0,4%	-6,4%	1,4%	-0,5%
Performance after 1 year	-33,6%	-12,1%	-8,5%	7,2%
Post adjustment				
Performance after 1 day	2,8%	-5,4%	2,9%	3,0%
Performance after 5 days	2,7%	-1,7%	5,7%	3,2%
Performance after 1 month	0,4%	-6,4%	1,9%	-0,6%
Performance after 1 year	-33,6%	-12,1%	-11,3%	10,2%
Average Performance				
Performance after 1 day	2,8%	0,2%		
Performance after 5 days	2,7%	2,4%		
Performance after 1 month	0,4%	-1,7%		
Performance after 1 year	-33,6%	-4,4%		
Comparison of impaired vs others				
Performance after 1 day	2,6%			
Performance after 5 days	0,3%			
Performance after 1 month	2,1%			
Performance after 1 year	-29,2%			

Nokia December 2011

	Nokia	AB Inbev	Muenchner Ruck
EPS vs exp	50,0%	21,6%	25,3%
Pre adjustment			
Performance after 1 day	-2,2%	-0,2%	1,9%
Performance after 5 days	-5,9%	3,0%	2,5%
Performance after 1 month	-1,9%	7,9%	4,4%
Performance after 1 year	-22,5%	16,3%	19,4%
Post adjustment			
Performance after 1 day	-2,2%	-0,5%	3,7%
Performance after 5 days	-5,9%	6,9%	4,8%
Performance after 1 month	-1,9%	18,2%	8,8%
Performance after 1 year	-22,5%	37,5%	38,4%
Average Performance			
Performance after 1 day	-2,2%	0,5%	
Performance after 5 days	-5,9%	2,9%	
Performance after 1 month	-1,9%	7,0%	
Performance after 1 year	-22,5%	25,2%	
Comparison of impaired vs others			
Performance after 1 day	-2,6%		
Performance after 5 days	-8,8%		
Performance after 1 month	-8,9%		
Performance after 1 year	-47,7%		

Philips

December 2011

	Philips	Deutsche Telekom
EPS vs exp	-117,5%	-111,1%
Pre adjustment		
Performance after 1 day	1,1%	-2,2%
Performance after 5 days	0,4%	-0,6%
Performance after 1 month	0,3%	0,6%
Performance after 1 year	33,3%	-7,7%
Post adjustment		
Performance after 1 day	1,1%	-2,4%
Performance after 5 days	0,4%	-0,6%
Performance after 1 month	0,3%	0,7%
Performance after 1 year	33,3%	-8,2%
Average Performance		
Performance after 1 day	1,1%	-2,4%
Performance after 5 days	0,4%	-0,6%
Performance after 1 month	0,3%	0,7%
Performance after 1 year	33,3%	-8,2%
Comparison of impaired vs others		
Performance after 1 day	3,4%	
Performance after 5 days	1,1%	
Performance after 1 month	-0,4%	
Performance after 1 year	41,4%	

Saint Gobain

December 2011

	Saint Gobain	Total	Banco Santander	BBVA	Essilor	Danone	Bayer
EPS vs exp	-5,9%	-7,0%	-5,3%	-5,3%	-4,1%	-4,0%	-1,0%
Pre adjustment							
Performance after 1 day	3,6%	1,3%	-0,8%	-0,4%	2,0%	2,4%	1,7%
Performance after 5 days	6,4%	1,4%	1,9%	0,6%	4,6%	0,2%	0,1%
Performance after 1 month	4,7%	2,9%	-1,1%	-9,7%	15,7%	2,9%	-3,1%
Performance after 1 year	-15,7%	-9,8%	9,4%	-0,5%	18,8%	-3,3%	24,3%
Post adjustment							
Performance after 1 day	3,6%	1,1%	-0,9%	-0,5%	2,9%	3,6%	10,1%
Performance after 5 days	6,4%	1,2%	2,1%	0,7%	6,7%	0,3%	0,4%
Performance after 1 month	4,7%	2,5%	-1,3%	-10,9%	22,8%	4,3%	-17,7%
Performance after 1 year	-15,7%	-8,3%	10,6%	-0,5%	27,3%	-4,9%	140,9%
Average Performance							
Performance after 1 day	3,6%	2,7%					
Performance after 5 days	6,4%	1,9%					
Performance after 1 month	4,7%	-0,1%					
Performance after 1 year	-15,7%	27,5%					
Comparison of impaired vs others							
Performance after 1 day	0,9%						
Performance after 5 days	4,4%						
Performance after 1 month	4,7%						
Performance after 1 year	-43,2%						

Vivendi
December 2011

	Vivendi	LVMH	BASF	Telefonica	SAP	L'Oreal	Unibail	Schneider Electric
EPS vs exp	6,3%	1,7%	4,0%	5,1%	5,9%	7,7%	8,7%	11,1%
Pre adjustment								
Performance after 1 day	-6,4%	-1,1%	-1,5%	-0,9%	4,5%	1,9%	0,4%	2,1%
Performance after 5 days	-8,6%	-1,7%	1,5%	-0,6%	3,7%	4,5%	-6,3%	2,3%
Performance after 1 month	-9,4%	-1,3%	-0,2%	-2,4%	8,4%	7,1%	-5,3%	-0,5%
Performance after 1 year	2,8%	-1,1%	5,5%	-22,9%	26,6%	25,1%	3,4%	7,2%
Post adjustment								
Performance after 1 day	-6,4%	-3,9%	-2,4%	-1,1%	4,8%	1,6%	0,3%	1,2%
Performance after 5 days	-8,6%	-6,3%	2,3%	-0,8%	4,0%	3,6%	-4,5%	1,3%
Performance after 1 month	-9,4%	-4,8%	-0,3%	-2,9%	8,9%	5,8%	-3,8%	-0,3%
Performance after 1 year	2,8%	-4,1%	8,7%	-27,9%	28,3%	20,4%	2,5%	4,1%
Average Performance								
Performance after 1 day	-6,4%	0,1%						
Performance after 5 days	-8,6%	0,0%						
Performance after 1 month	-9,4%	0,4%						
Performance after 1 year	2,8%	4,6%						
Comparison of impaired vs others								
Performance after 1 day	-6,5%							
Performance after 5 days	-8,6%							
Performance after 1 month	-9,8%							
Performance after 1 year	-1,8%							

Carrefour
June 2011

	Carrefour	CRH	Siemens
EPS vs exp	-50,0%	-50,0%	-54,2%
Pre adjustment			
Performance after 1 day	1,0%	-3,5%	0,0%
Performance after 5 days	0,3%	-5,1%	-0,3%
Performance after 1 month	-2,0%	-1,3%	-3,6%
Performance after 1 year	-16,9%	16,4%	-8,7%
Post adjustment			
Performance after 1 day	1,0%	-3,5%	0,0%
Performance after 5 days	0,3%	-5,1%	-0,3%
Performance after 1 month	-2,0%	-1,3%	-3,3%
Performance after 1 year	-16,9%	16,4%	-8,0%
Average Performance			
Performance after 1 day	1,0%	-1,7%	
Performance after 5 days	0,3%	-2,7%	
Performance after 1 month	-2,0%	-2,3%	
Performance after 1 year	-16,9%	4,2%	
Comparison of impaired vs others			
Performance after 1 day	2,7%		
Performance after 5 days	3,0%		
Performance after 1 month	0,3%		
Performance after 1 year	-21,1%		

France Telekom

Dec 2010

	France Telekom	ENEL	ASML
	43,1%	42,9%	39,1%
Pre adjustment			
Performance after 1 day	-0,5%	1,6%	-6,8%
Performance after 5 days	-1,5%	1,0%	-5,5%
Performance after 1 month	-1,1%	2,7%	5,5%
Performance after 1 year	-15,7%	-8,7%	37,0%
Post adjustment			
Performance after 1 day	-0,5%	1,6%	-7,5%
Performance after 5 days	-1,5%	1,0%	-6,0%
Performance after 1 month	-1,1%	2,7%	6,0%
Performance after 1 year	-15,7%	-8,8%	40,8%
Average Performance			
Performance after 1 day	-0,5%	-3,0%	
Performance after 5 days	-1,5%	-2,5%	
Performance after 1 month	-1,1%	4,4%	
Performance after 1 year	-15,7%	16,0%	
Comparison of impaired vs others			
Performance after 1 day	2,5%		
Performance after 5 days	1,0%		
Performance after 1 month	-5,5%		
Performance after 1 year	-31,7%		

Siemens

September 2010

	Siemens	Societe General	Intesa Sanpaolo
EPS vs exp	-30,6%	-23,1%	-20,0%
Pre adjustment			
Performance after 1 day	1,7%	1,8%	-1,4%
Performance after 5 days	0,9%	0,7%	-5,0%
Performance after 1 month	7,2%	-6,4%	-11,2%
Performance after 1 year	7,3%	-42,9%	-32,3%
Post adjustment			
Performance after 1 day	1,7%	2,3%	-2,1%
Performance after 5 days	0,9%	1,0%	-7,7%
Performance after 1 month	7,2%	-8,5%	-17,2%
Performance after 1 year	7,3%	-56,7%	-49,3%
Average Performance			
Performance after 1 day	1,7%	0,1%	
Performance after 5 days	0,9%	-3,3%	
Performance after 1 month	7,2%	-12,8%	
Performance after 1 year	7,3%	-53,0%	
Comparison of impaired vs others			
Performance after 1 day	1,6%		
Performance after 5 days	4,2%		
Performance after 1 month	20,0%		
Performance after 1 year	60,3%		

Schneider Electric December 2009

	Schneider Electric	Philips	Deutsche Telekom	Nokia	Telefonica
EPS vs exp	27,9%	23,7%	31,3%	31,6%	31,7%
Pre adjustment					
Performance after 1 day	5,9%	3,0%	1,8%	11,7%	-0,1%
Performance after 5 days	7,0%	7,7%	-0,3%	10,5%	-0,9%
Performance after 1 month	7,9%	7,5%	-2,5%	9,0%	-4,1%
Performance after 1 year	38,5%	6,5%	-4,7%	-21,1%	-5,0%
Post adjustment					
Performance after 1 day	5,9%	3,6%	1,6%	10,3%	-0,1%
Performance after 5 days	7,0%	9,1%	-0,2%	9,3%	-0,8%
Performance after 1 month	7,9%	8,9%	-2,2%	8,0%	-3,6%
Performance after 1 year	38,5%	7,7%	-4,2%	-18,7%	-4,4%
Average Performance					
Performance after 1 day	5,9%	3,9%			
Performance after 5 days	7,0%	4,3%			
Performance after 1 month	7,9%	2,8%			
Performance after 1 year	38,5%	-4,9%			
Comparison of impaired vs others					
Performance after 1 day	2,1%				
Performance after 5 days	2,6%				
Performance after 1 month	5,1%				
Performance after 1 year	43,4%				

2009 Vivendi

	Vivendi	RWE	Iberdrola	Axa	Bayer
	12,1%	14,2%	15,4%	7,9%	7,1%
Pre adjustment					
Performance after 1 day	0,7%	0,8%	-0,1%	-3,5%	1,6%
Performance after 5 days	3,8%	-0,5%	0,4%	-4,8%	4,1%
Performance after 1 month	-0,5%	-6,8%	-0,6%	-5,3%	-2,9%
Performance after 1 year	0,5%	-27,1%	2,8%	-9,3%	5,1%
Post adjustment					
Performance after 1 day	0,7%	0,7%	-0,1%	-5,4%	2,6%
Performance after 5 days	3,8%	-0,4%	0,4%	-7,4%	7,0%
Performance after 1 month	-0,5%	-5,8%	-0,4%	-8,1%	-4,9%
Performance after 1 year	0,5%	-23,1%	2,2%	-14,3%	8,6%
Average Performance					
Performance after 1 day	0,7%	-0,5%			
Performance after 5 days	3,8%	-0,1%			
Performance after 1 month	-0,5%	-4,8%			
Performance after 1 year	0,5%	-6,7%			
Comparison of impaired vs others					
Performance after 1 day	1,2%				
Performance after 5 days	3,9%				
Performance after 1 month	4,3%				
Performance after 1 year	7,2%				

Saint Gobain

December 2009

	Saint Gobain	Bayer	Vinci	Danone	Allianz	Axa	LVMH
	6,2%	7,1%	7,1%	6,8%	6,7%	7,9%	5,6%
Pre adjustment							
Performance after 1 day	3,8%	1,6%	2,7%	2,3%	2,0%	-3,5%	-1,1%
Performance after 5 days	4,6%	4,1%	2,1%	3,3%	3,5%	-4,8%	-1,8%
Performance after 1 month	0,3%	-2,9%	-26,4%	1,4%	3,0%	-5,3%	3,2%
Performance after 1 year	14,7%	5,1%	1,1%	-4,8%	15,0%	-9,3%	32,0%
Post adjustment							
Performance after 1 day	3,8%	1,3%	2,4%	2,1%	1,9%	-2,7%	-1,3%
Performance after 5 days	4,6%	3,6%	1,9%	3,0%	3,2%	-3,8%	-2,0%
Performance after 1 month	0,3%	-2,5%	-23,1%	1,2%	2,7%	-4,1%	3,5%
Performance after 1 year	14,7%	4,4%	0,9%	-4,4%	13,7%	-7,3%	35,1%
Average Performance							
Performance after 1 day	3,8%	0,6%					
Performance after 5 days	4,6%	1,0%					
Performance after 1 month	0,3%	-3,7%					
Performance after 1 year	14,7%	7,1%					
Comparison of impaired vs others							
Performance after 1 day	3,2%						
Performance after 5 days	3,6%						
Performance after 1 month	4,0%						
Performance after 1 year	7,6%						

Carrefour

December 2009

	Carrefour	AB Inbev	Sanofi	Total	CRH	Essilor	Unibail	Unilever	BBVA
	-6,3%	-3,5%	-5,5%	-6,1%	-6,2%	-6,2%	-1,7%	-6,5%	-10,0%
Pre adjustment									
Performance after 1 day	-0,8%	-2,5%	-2,9%	0,8%	1,1%	2,0%	-4,6%	3,0%	-2,3%
Performance after 5 days	-1,0%	-5,3%	0,0%	1,0%	3,1%	1,7%	-8,9%	2,5%	-4,0%
Performance after 1 month	-1,1%	-24,6%	-2,8%	-4,4%	7,2%	3,0%	-9,5%	2,7%	-15,0%
Performance after 1 year	-8,5%	0,0%	-17,2%	-9,3%	-3,3%	6,5%	-10,0%	-6,2%	-22,3%
Post adjustment									
Performance after 1 day	-0,8%	-4,6%	-3,3%	0,9%	1,1%	2,0%	-16,7%	3,0%	-1,5%
Performance after 5 days	-1,0%	-9,5%	0,0%	1,1%	3,1%	1,7%	-32,0%	2,4%	-2,5%
Performance after 1 month	-1,1%	-44,1%	-3,2%	-4,6%	7,4%	3,0%	-34,3%	2,6%	-9,4%
Performance after 1 year	-8,5%	0,0%	-19,6%	-9,7%	-3,3%	6,6%	-36,2%	-6,0%	-14,1%
Average Performance									
Performance after 1 day	-0,8%	-2,4%							
Performance after 5 days	-1,0%	-4,5%							
Performance after 1 month	-1,1%	-10,3%							
Performance after 1 year	-8,5%	-10,3%							
Comparison of impaired vs others									
Performance after 1 day	1,6%								
Performance after 5 days	3,5%								
Performance after 1 month	9,3%								
Performance after 1 year	1,8%								

France Telecom December 2009

	Societe General	France Telecom	EON
	-52,1%	-62,2%	-68,8%
Pre adjustment			
Performance after 1 day	-5,1%	-0,5%	1,1%
Performance after 5 days	-0,3%	-0,6%	1,2%
Performance after 1 month	4,9%	-23,2%	1,1%
Performance after 1 year	18,5%	-16,0%	-16,9%
Post adjustment			
Performance after 1 day	-5,1%	-0,4%	0,9%
Performance after 5 days	-0,3%	-0,5%	0,9%
Performance after 1 month	4,9%	-19,4%	0,8%
Performance after 1 year	18,5%	-13,4%	-12,8%
Average Performance			
Performance after 1 day	-5,1%	0,2%	
Performance after 5 days	-0,3%	0,2%	
Performance after 1 month	4,9%	-9,3%	
Performance after 1 year	18,5%	-13,1%	
Comparison of impaired vs others			
Performance after 1 day	-5,3%		
Performance after 5 days	-0,5%		
Performance after 1 month	14,2%		
Performance after 1 year	31,6%		

	Philips	Intesa Sanpaolo
EPS vs exp	-139,6%	-142,9%
Pre adjustment		
Performance after 1 day	3,0%	4,1%
Performance after 5 days	8,9%	5,7%
Performance after 1 month	12,1%	12,2%
Performance after 1 year	25,4%	14,0%
Post adjustment		
Performance after 1 day	3,0%	4,0%
Performance after 5 days	8,9%	5,6%
Performance after 1 month	12,1%	11,9%
Performance after 1 year	25,4%	13,7%
Average Performance		
Performance after 1 day	3,0%	4,0%
Performance after 5 days	8,9%	5,6%
Performance after 1 month	12,1%	11,9%
Performance after 1 year	25,4%	13,7%
Comparison of impaired vs others		
Performance after 1 day	-1,0%	
Performance after 5 days	3,3%	
Performance after 1 month	0,1%	
Performance after 1 year	11,7%	

Carrefour December 2008

	Carrefour	Danone	Volkswagen
EPS vs exp	-36,0%	-31,7%	-33,7%
Pre adjustment			
Performance after 1 day	5,6%	1,7%	5,3%
Performance after 5 days	-0,8%	2,6%	4,1%
Performance after 1 month	4,6%	-7,1%	17,1%
Performance after 1 year	-4,4%	-7,0%	23,9%
Post adjustment			
Performance after 1 day	5,6%	1,9%	5,7%
Performance after 5 days	-0,8%	3,0%	4,4%
Performance after 1 month	4,6%	-8,1%	18,3%
Performance after 1 year	-4,4%	-8,0%	25,6%
Average Performance			
Performance after 1 day	5,6%	3,8%	
Performance after 5 days	-0,8%	3,7%	
Performance after 1 month	4,6%	5,1%	
Performance after 1 year	-4,4%	8,8%	
Comparison of impaired company vs peers			
Performance after 1 day	1,8%		
Performance after 5 days	-4,5%		
Performance after 1 month	-0,5%		
Performance after 1 year	-13,2%		

Appendix 8: Summary of performance of impairing company versus peers

Comparison of impaired vs others						
Company	Date of impairment	Performance after 1 day	Performance after 5 days	Performance after 1 month	Performance after 1 year	Expected
Philips	31/12/2008	-1,0%	3,3%	0,1%	11,7%	Yes
Carrefour	31/12/2008	1,8%	-4,5%	-0,5%	-13,2%	No
Schneider Electric	31/12/2009	2,1%	2,6%	5,1%	43,4%	No
Vivendi	31/12/2009	1,2%	3,9%	4,3%	7,2%	No
Saint Gobain	31/12/2009	3,2%	3,6%	4,0%	7,6%	No
Carrefour	31/12/2009	1,6%	3,5%	9,3%	1,8%	Yes
France Telecom	31/12/2009	-5,3%	-0,5%	14,2%	31,6%	No
Siemens	30/09/2010	1,6%	4,2%	20,0%	60,3%	Yes
France Telecom	31/12/2010	2,5%	1,0%	-5,5%	-31,7%	Yes
Carrefour	30/06/2011	2,7%	3,0%	0,3%	-21,1%	No
Carrefour	31/12/2011	-0,9%	-3,5%	-1,4%	12,4%	Yes
France Telecom	31/12/2011	2,6%	0,3%	2,1%	-29,2%	No
Nokia	31/12/2011	-2,6%	-8,8%	-8,9%	-47,7%	Yes
Philips	31/12/2011	3,4%	1,1%	-0,4%	41,4%	No
Saint Gobain	31/12/2011	0,9%	4,4%	4,7%	-43,2%	No
Vivendi	31/12/2011	-6,5%	-8,6%	-9,8%	-1,8%	Yes

Average performance vs peers	
Performance after 1 day	0,4%
Performance after 5 days	0,3%
Performance after 1 month	2,4%
Performance after 1 year	1,9%
Expected impairments vs peers	
Performance after 1 day	-0,8%
Performance after 5 days	-1,3%
Performance after 1 month	0,6%
Performance after 1 year	0,7%
Unexpected impairments vs peers	
Performance after 1 day	1,4%
Performance after 5 days	1,5%
Performance after 1 month	3,8%
Performance after 1 year	2,7%