

Making Acquisitions Transparent Goodwill Accounting in Times of Crisis

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with IFRS disclosures in the
field of M&A accounting
(IFRS 3, IAS 36) in 2009
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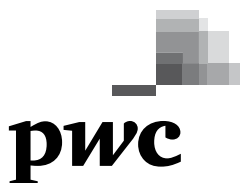
*By Prof Dr Martin Glaum, Justus-Liebig-Universität Gießen
and Sven Wyrwa M. A., Justus-Liebig-Universität Gießen*



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By Prof Dr Martin Glaum and Sven Wyrwa

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Preface

The downfall of Lehman Brothers in September 2008 triggered the most severe financial and economic crisis since the Great Depression of 1929. Worldwide gross domestic product declined dramatically and companies in almost every industry struggled. In such a depressed economic environment with an uncertain outlook, one question naturally arises: will the goodwill acquired in the past still be recoverable? This epochal moment of the crisis could provide the first answer to how the impairment-only approach introduced on 31 March 2004 is applied in practice in such an environment and how companies report in their financial statements.

In the impairment test standard, IAS 36, valuation-related issues play an important role. Explicit guidance is provided for the “value in use” concept, with relatively precise requirements on how valuation parameters have to be determined. For the second value concept, “fair value less costs to sell”, new guidance is provided by IASB’s Fair Value Measurement exposure draft, which highlights the importance of more standardised valuation approaches. However, valuation will still be a complex and difficult task if important forward-looking market-based valuation parameters are hardly assessable – this was particularly observable during the crisis. In such a case, providing capital market participants with meaningful information regarding applied valuation parameters and how they impact on the valuation results is of particular importance – in this context, a meaningful sensitivity analysis can increase transparency.

Another interesting question is whether companies were open for new acquisitions during the crisis and how they disclosed the purchase price allocation according to IFRS 3. Since IFRS 3 (revised 2008) has to be applied for accounting periods beginning on or after 1 July 2009, it is interesting to take a glance at early adoption of these new aspects, e.g. the full goodwill method, of this standard.

This PwC-sponsored study conducted by Prof. Martin Glaum and Sven Wyrwa analyses IFRS disclosures in 2009 financial statements for business combinations and impairment testing of 322 companies listed in twelve European countries. This analysis is exclusively based on publicly available information provided in the companies’ disclosure footnotes. It is the third study after 2005 and 2007 with the same research focus and an almost identical, very comprehensive European sample. Comparing the findings with these of both previous studies, it provides new insights into how the companies applied IFRS 3 and IAS 36 and communicated the results in their financial statements over time.

Thus, for the first time, this study delivers findings on the disclosure of purchase price allocation and impairment testing during the extreme conditions of the 2008/2009 crisis. It is revealing how companies dealt with this very complex and strongly valuation-based requirement of these transaction-related standards from its first time adoption in 2005 to the crisis stress test scenario in 2009.

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Contents

Preface.....	5
Figures.....	8
Tables.....	10
Abbreviations.....	11
A Introduction.....	13
B The market for mergers & acquisitions (M&A).....	17
C Accounting for acquisitions and impairment	23
D M&A-related disclosures – empirical study	29
1 Methodology and sample	29
2 Acquisitions in 2009.....	33
3 Goodwill in companies' 2009 financial statements	47
4 Impairment losses for goodwill and other assets.....	50
5 Testing goodwill for impairment.....	61
6 Measuring recoverable amount of CGUs	68
E Summary and conclusions	80
Contacts.....	86

Figures

Fig. 1	Worldwide M&A transactions from 1997 to 2010: Transaction volume	18
Fig. 2	Worldwide M&A transactions from 1997 to 2010: Number of transactions	19
Fig. 3	M&A Volume in 2009 by country of acquiring companies.....	21
Fig. 4	M&A Volume in 2009 by major industry of acquiring companies.....	22
Fig. 5	Companies reporting acquisitions for financial year 2009.....	33
Fig. 6	Frequency of acquisitions in 2009, by industry	35
Fig. 7	Materiality of acquisitions (individually reported): Costs of transactions to companies' total assets in 2009	37
Fig. 8	Materiality of acquisitions (reported in aggregate): Costs of transactions to companies' total assets in 2009	38
Fig. 9	Companies disclosing information on purchase price allocation (all sets of acquisitions reported separately) in 2009.....	40
Fig. 10	Goodwill resulting from 2009 acquisitions (individually reported transactions)	41
Fig. 11	Goodwill resulting from 2009 acquisitions (transactions reported in aggregate)	42
Fig. 12	Ratio of goodwill to cost of acquisition: Number of individually reported transactions 2009.....	44
Fig. 13	Ratio of goodwill to cost of acquisition: Number of transactions reported in aggregate 2009.....	45
Fig. 14	Ratio of goodwill to cost of acquisition in 2009, by industry	46
Fig. 15	Average goodwill and average intangibles (including goodwill) in 2009, by industry.....	48
Fig. 16	Average percentage of goodwill relative to total equity in 2009, by industry ..	49
Fig. 17	Number of companies recognising impairment losses in 2009	50
Fig. 18	Number of companies recognising goodwill impairment losses in 2009.....	50
Fig. 19	IMF Real GDP Forecasts for European Union.....	54
Fig. 20	Number of companies reporting goodwill impairment charges in 2005, 2007 and 2009, by industry	57
Fig. 21	Average goodwill impairment loss in 2005, 2007 and 2009, by industry	58

Fig. 22 Average percentage of goodwill written off in 2005, 2007 and 2009, by industry 59

Fig. 23 Number of cash-generating units disclosed as containing goodwill per company in 2009 62

Fig. 24 Number of cash-generating units disclosed as containing significant goodwill per company in 2009 63

Fig. 25 Classification criteria for determining cash-generating units in 2009 64

Fig. 26 Value concept applied for goodwill impairment testing in 2009 68

Fig. 27 Methods used to estimate cash-generating unit’s fair values less costs to sell in 2009 69

Fig. 28 Application of value in use concept: Maximum planning period in 2009 72

Fig. 29 Application of value in use concept: Maximum reported growth rates of expected cash flows for terminal value determination in 200974

Fig. 30 Application of value in use concept: Minimum reported discount rates in 2009 77

Tables

Tab. 1	Sample composition in 2009, by country	16
Tab. 2	Sample selection in comparison with previous studies	30
Tab. 3	Sample characteristics in 2009, by country	31
Tab. 4	Sample characteristics in 2009, by industry	32
Tab. 5	Total number of acquisitions reported per company in 2005, 2007 and 2009	33
Tab. 6	Cost of acquisitions in 2005, 2007 and 2009 (individually reported transactions only).....	36
Tab. 7	Impairment losses recognised for intangible assets in 2009, by industry	52
Tab. 8	Impairment losses recognised for intangible assets in 2009, by country	52
Tab. 9	Changes of companies' goodwill balances in 2009, by industry.....	55
Tab. 10	Changes of companies' goodwill balances in 2009, by country.....	55
Tab. 11	Disclosed timing of goodwill impairment testing in 2009	65
Tab. 12	Quarterly market-to-book ratios in 2009, by industry.....	66

Abbreviations

BC	Basis for Conclusion
bn	Billion
CGU	Cash-generating unit or group of cash-generating units
CGUs	Cash-generating units or groups of cash-generating units
DO	Dissenting Opinion
EBITDA	Earnings before interest, taxes, depreciation and amortisation
ED	Exposure draft
EFRAG	European Financial Reporting Advisory Group
EU	European Union
FASB	Financial Accounting Standards Board (U.S.)
FAZ	Frankfurter Allgemeine Zeitung
FEE	Fédération des Experts Comptables Européens
FRC	Financial Reporting Council
FREP	Financial Reporting Enforcement Panel / Deutsche Prüfstelle für Rechnungslegung
IMF	International Monetary Fund
GAAP	Generally Accepted Accounting Principles
GDP	Gross domestic product
GW	Goodwill
IAS	International Accounting Standard
IASB	International Accounting Standards Board
IDW	Institut der Wirtschaftsprüfer in Deutschland e.V.
IFRS	International Financial Reporting Standards
m	Million
M&A	Mergers and acquisitions
MtB	Market-to-Book

PPA	Purchase price allocation
SEC	Securities and Exchange Commission
SFAS	Statement of Financial Accounting Standards (US)
UK	United Kingdom
US	United States

A Introduction

In this study we provide a detailed assessment of the financial reporting related to business combinations (i.e. acquisitions) and impairment testing of assets, in particular goodwill, provided by leading stock-listed European companies in their year-2009 IFRS consolidated financial statements.

The respective standards – IFRS 3 “Business Combinations” and IAS 36 “Impairment of Assets” – are controversial. When the International Accounting Standards Board (IASB) introduced them in 2004 far-reaching changes were brought about. In particular, the acquisition method, the only method allowed to account for acquisitions, involves the measurement at fair values of all assets, liabilities and contingent liabilities of the acquired entity at the acquisition date. Goodwill from acquired companies is not amortised anymore on a regular basis. Instead companies must perform a goodwill impairment test at least annually, which is time consuming, complex and requires specific valuation expertise. Furthermore, the IFRSs require companies to disclose extensive and very detailed information in the notes to their financial statements.¹

The IASB claims that the new accounting rules, including the disclosure requirements, will improve transparency and will allow investors to better assess the financial consequences of acquisitions and, thereby, the quality of the company’s management. Critics, however, point to the complexity of the IFRS rules for business combinations and impairment testing of goodwill, and to the high costs of implementing and applying them. The widespread use of fair values is also contentious; it is argued that fair value estimates are highly subjective and open to manipulation when liquid markets do not exist for the assets and liabilities in question. Similar criticisms are brought forward against the “impairment-only approach” pertaining to goodwill. It is argued that the goodwill impairment test relies on subjective estimations and forecasts and is thus hard to verify by the auditors. Finally, doubts are raised about the usefulness of the extensive footnote disclosures.

Following up on earlier studies for 2005 and 2007

This study focuses on financial statements capturing the period of the crisis consistent with earlier studies analysing 2005 and 2007 data.

This study, which captures the crisis year 2009, follows up on earlier studies that were based on 2005 and 2007 financial statements.²

In our first study we evaluated financial statements for the financial year 2005, that is, for the first year of mandatory IFRS application in the European Union (EU). At that time, we concluded, “a majority of the leading European companies ... in general successfully navigated the transition to IFRS and the application of IFRS merger accounting in particular”. However, we also pointed out that in many instances the

¹ Reports by supervisory and enforcement agencies confirm that the reporting for business combinations and impairment testing are particularly challenging areas of IFRS accounting. A review conducted by the UK Financial Reporting Council, in 2008, concluded that UK stock-listed companies’ disclosures on goodwill impairment in many cases were “more generic than specific” and narrative information often tended to be vague. In half of the cases studied, the FRC concluded that the disclosures provided were “rather uninformative”. The Report is available at: <http://www.frc.org.uk/>. The German Financial Reporting Enforcement Panel identified the accounting for business combinations as the field with the highest number of accounting errors of listed companies in Germany over recent years. The FREP has announced that in its review of the financial statements of 2010 it will again concentrate on the accounting for business combinations and on impairment tests on tangible and intangible assets including goodwill. See FREP: Tätigkeitsbericht 2008, 2009 and 2010 available at: <http://www.frep.info>.

² See Glaum, M./Street, D./Vogel, S., *Making Acquisitions Transparent: An Evaluation on M&A-Related IFRS Disclosures by European Companies in 2005*, Fachverlag Moderne Wirtschaft, Frankfurt am Main, 2007, available at: <http://www.pwc.de>; Glaum, M./Vogel, S., *Making Acquisitions Transparent: An Evaluation of M&A-Related IFRS Disclosures by European Companies in 2007*, Fachverlag Moderne Wirtschaft, Frankfurt am Main, 2010, available at: <http://www.pwc.de>.

financial statements still left room for improvement. More precisely, we found that compliance with disclosure requirements was incomplete in many cases and that even when requirements were fulfilled, the information content and comparability often could have been improved.

2005 was the first year of mandatory IFRS adoption. In addition, IFRS 3 and IAS 36 had been issued in 2004 and were new to all companies in 2005. Given these factors and given further the complexity of the accounting and disclosure rules for acquisitions and impairment testing, the shortcomings uncovered by our first study were not really surprising.

Thus, it was highly interesting to revisit the same areas of accounting and disclosure in the 2007 financial statements. In this second study we first concluded that over the course of three years of IFRS application the quality of reporting had improved overall. Second, however, we also noted that the disclosures on the accounting for business combinations and impairment testing were still lacking in many instances.

Against this background, it is a primary objective of this study to find out whether companies have continued to improve the quality of their disclosures and whether disclosures have become more comparable for European blue-chip companies.

2009 – the crisis and its consequences

In 2009, the business environment in Europe and worldwide was shaped by the worst crisis in many decades.

In 2009, the business environment in Europe and worldwide was shaped by the worst crisis in many decades. The turmoil in the financial markets that ensued after the collapse of the US investment bank, Lehman Brothers, in September 2008 led to fears of a breakdown of the global financial system. The crisis spilled over to the real sector where foreign trade contracted sharply and industrial output in many countries fell substantially in the last quarter of 2008 and the first months of 2009. Even though the economy started to stabilise in the second half of 2009, for the total year 2009 gross domestic product (GDP) in the EU declined by 4.2% and exports of goods and services for the Euro-zone were down by 12.9%.³

The crisis had severe implications for the market for mergers and acquisitions (M&A). Compared to 2007, the volume of worldwide M&A transactions fell by about a third in 2008 and again in 2009. The squeeze in the credit markets and the general economic uncertainty meant that in particular the market for large M&A transactions effectively ceased to exist.⁴ Even in 2010, the M&A market is recovering only slowly, in particular in Europe, with numbers of transactions and transaction volumes that are lower than those seen before the crisis.⁵

It is expected that the crisis has consequences for the valuation in companies' balance.

The crisis and the darkening of the general economic outlook also have obvious consequences for the valuation in companies' balance sheets. Management must ask itself whether the book values of their companies' assets are still justifiable, or in the terminology of IAS 36, whether these values are "recoverable". This question must be asked in particular with regard to goodwill positions resulting from acquisitions.

To put it simply, goodwill is the difference between the cost of acquisition and the fair value of the net assets of the acquired company. Economically, one of the major reasons why companies are often willing to pay a price that is higher than the fair value of the target company's net assets is growth expectations. However, in the course of the crisis long-term growth forecasts were reduced substantially.⁶ Thus, one would expect

³ See EUROSTAT 2010, available at: <http://ec.europa.eu/eurostat>.

⁴ For details, see Kunisch, S./Wahler, C., *Deutscher M&A-Markt im „Tal der Tränen“ – Rückblick auf das M&A-Geschehen im Jahr 2009*, M&A Review, 2/2010, pp. 53-62.

⁵ See Frankfurter Allgemeine Zeitung (FAZ), 24 Sept. 2010, p. 11; FAZ, 27 Sept. 2010, p. 20.

⁶ For details, see footnote 4.

that in 2009 many companies had to revise downwards business plans that underlay acquisitions undertaken in earlier years, when markets looked more promising and valuations were much higher. However, when business plans are revised downwards, write-downs (impairments) of the respective goodwill positions may become inevitable.

The focus of this study

Our present study provides a comprehensive assessment of the 2009 M&A and impairment test related financial statement disclosures of 322 companies comprising the premium segments of twelve major European stock exchanges.

We analyse and comment on the companies' acquisition-related disclosures as well as disclosures related to goodwill and to asset impairment testing. Areas of specific interest include:

1. companies' acquisitions undertaken in the financial year 2009 (e.g. number of transactions, cost of acquisitions, goodwill resulting from acquisitions reported, etc.);
2. companies' overall goodwill position;
3. impairments on goodwill and other assets recorded in 2009;
4. key assumptions underlying the annual impairment reviews of tangible and intangible assets including goodwill.

We systematically analyse the information provided in companies' financial statements, particularly in the notes, in order to find out how companies apply the pertinent disclosure requirements and to evaluate how meaningful and comparable the resulting disclosures are. We thereby shed light on the question whether companies are in full compliance with IFRS disclosure requirements.

By comparing our results with the findings from our earlier studies of the 2005 and the 2007 financial statements, we can see if companies have made progress in the application of IFRS and in the development of best practices. Furthermore, we are interested to find out whether companies have reacted to the crisis, for example, by undertaking "trigger-based" impairment tests of goodwill and other assets throughout the year, in addition to their regular annual impairment reviews. We also analyse whether the crisis has had an impact on the methods and assumptions that underlay the companies' impairment reviews.

Our sample

Our sample includes the companies comprising the top stock-market indices of the most important twelve European countries at the end of 2009 (see Table 1). These companies are the largest and most important exchange-listed European companies. Companies without goodwill on their balance sheets throughout the year are excluded from the analysis. Further, we exclude companies with balance sheet dates before 31 December 2009 and later than 31 March 2010 and companies for which we were unable to obtain audited IFRS financial reports in English language. Our final sample comprises of 322 companies.⁷

Our sample includes the largest and most important exchange-listed European companies.

⁷ More details on the sample selection process and on the sample composition are provided in section D 1 of this report.

Tab. 1 Sample composition in 2009, by country

Country	Index	Number of companies comprising index (31 Dec 2009)	Companies satisfying sample criteria
Austria	ATX	20	16
Denmark	OMXC 20	19	15
Finland	OMXH 25	25	21
France	CAC 40	40	38
Germany	DAX 30	30	26
Ireland	ISEQ 20	20	13
Italy	FTSE MIB	40	36
Netherlands	AEX	25	19
Spain	IBEX 35	35	27
Sweden	OMXS 30	29	24
Switzerland	SMI	20	14
United Kingdom	FTSE 100	100	73
Total		403	322

Structure of this report

In Part B, we give a brief overview of the recent developments in the market for M&A transactions. In Part C, we briefly summarise the relevant IFRS accounting and disclosure rules for business combinations and impairment testing. Part D is devoted to our empirical study. We first describe the sample and the methodology applied. We then present and discuss the findings of our analysis and compare them to the results of our earlier studies. The report concludes with a short summary.

B The market for mergers & acquisitions (M&A)

The M&A markets have been very volatile over recent years (see Figure 1). Mirroring developments in the stock markets, M&A activity surged strongly in the second half of the 1990s, to then experience a dramatic downturn during the first years of the new millennium (burst of the new economy bubble). While the year 2000 saw a record worldwide transaction volume of €3,716.0 bn, three years later, in 2003, transaction volume had collapsed to €1,113.0 bn.

The markets recovered again over the years from 2004 to 2007, showing year-on-year increases both in the number of transactions and in total transaction volume. However, closer inspection of the data reveals that M&A activity peaked again in the first half of 2007, with many “mega deals” especially in the financial, energy, real estate, and industrials sectors.

In the second half of 2007, the sub-prime lending crisis started to unfold in the US capital market. This was the first phase of the crisis that eventually led to the near-collapse of the worldwide financial system. M&A market activity has been impacted strongly by the crisis. One consequence was a re-assessment of risks by banks and thus a steep increase in risk premiums. Hence, financing costs for takeovers rose strongly and funding was not available at all for some transactions, especially for highly leveraged deals, the hallmark of private equity funds. As a consequence, private equity sponsored deals, which before the crisis had accounted for more than 20% of worldwide transaction volume, plummeted. Even though strategic transactions by corporate buyers gained in market share, their volume also went down in absolute terms as economic uncertainty was extremely high and management in many cases was concerned primarily about preserving liquidity.

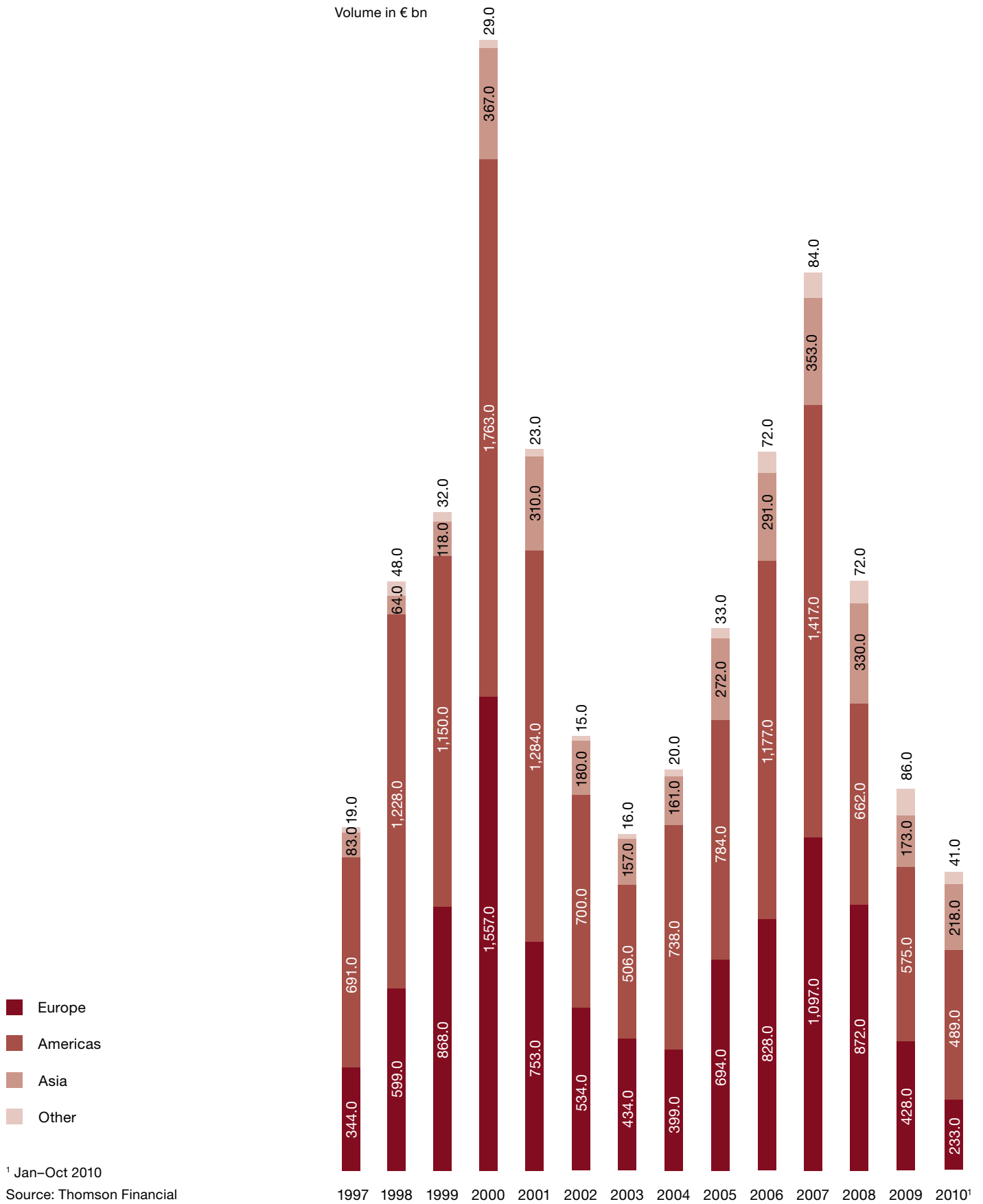
Since the second half of 2007, the volume of total worldwide M&A went down significantly.

In the second half of 2007, the volume of total worldwide M&A went down by more than a third, and it continued to fall in 2008 and 2009. Total worldwide M&A transaction volume was only €1,262.0 bn in 2009, almost 60% down from the volume of €2,951.0 bn in 2007. Market activity has remained subdued in the first half of 2010, particularly in Europe.

A comparison of Figure 1 (transaction volume) and Figure 2 (number of transactions) reveals that the number of M&A transactions is not as volatile as the deal volume. Furthermore, while the transaction volume never regained the peak volume reached in 2000, the total number of deals was actually higher in 2007 (and even in 2008!) than in 2000. By implication, this means that the average size of M&A deals has declined strongly over recent years.

Fig. 1 Worldwide M&A transactions from 1997 to 2010: Transaction volume

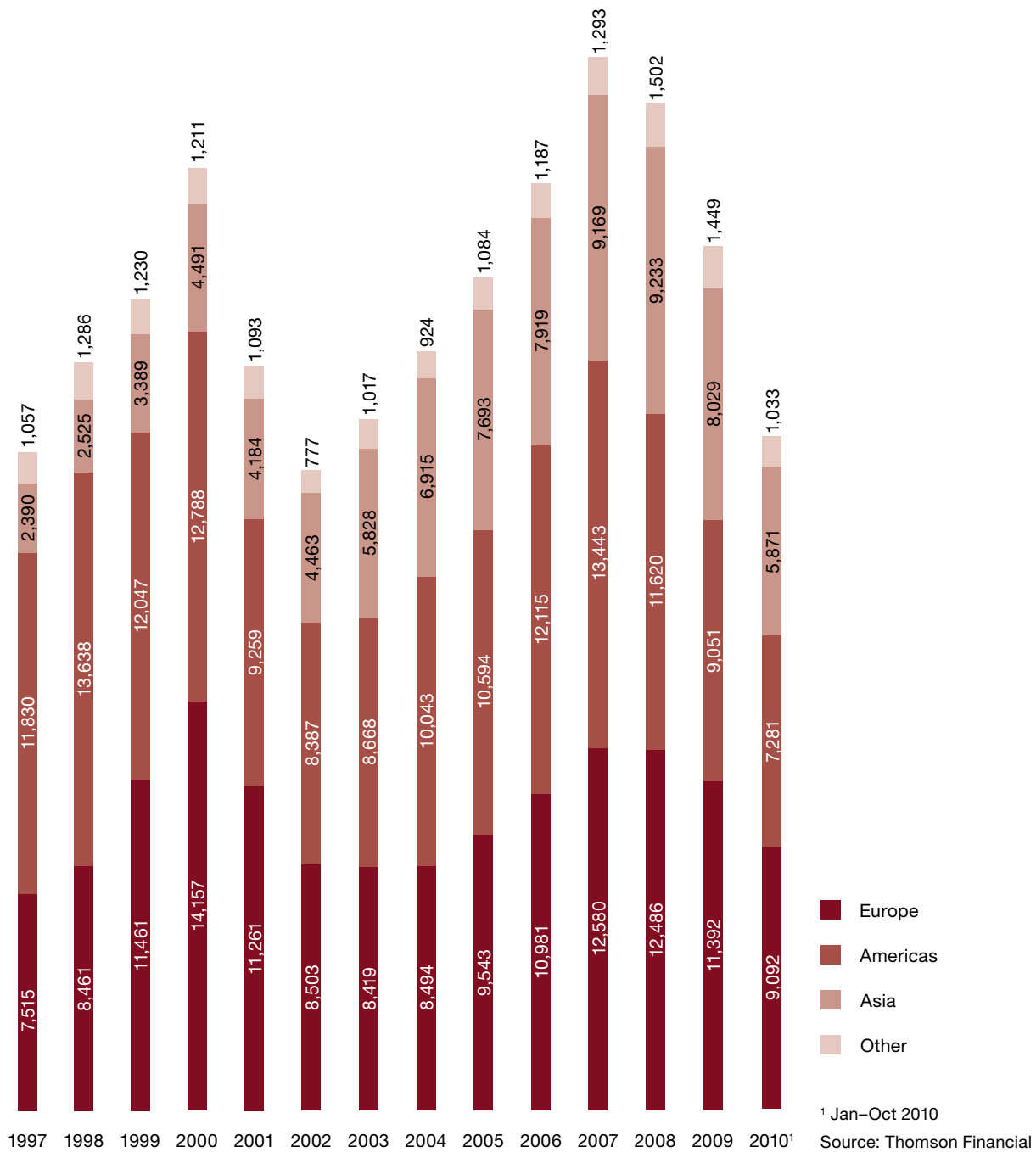
Volume in € bn



¹ Jan–Oct 2010

Source: Thomson Financial

Fig. 2 Worldwide M&A transactions from 1997 to 2010: Number of transactions



American acquirers are losing in importance relative to European and Asian acquirers.

Figure 1 and 2 present the regional distribution of M&A activity from the perspective of the acquirer. As a long-term trend, American acquirers are losing in importance relative to European and, in particular, to Asian acquirers.⁸ In the second half of the 1990s, American investors accounted for well over 60% of all acquisitions worldwide; in recent years their share was below 50%. In 2008 the total volume of companies acquired by European buyers even surpassed the volume of acquisitions by Americans. Acquisitions by Asian companies have steadily gained in importance. In terms of volume they now account for 15 to 20% of total worldwide deal volume. The number of transactions with Asian buyers is about a quarter of the total worldwide number of M&A deals, indicating that the average deal size is lower than that of European or American buyers.

Figure 3 depicts the distribution of M&A transactions in European countries for the year 2009 from the perspective of the acquiring companies. The transaction volume is presented in detail for the twelve countries represented in our empirical study. According to the Thomson Financial M&A database, these twelve countries in 2009 accounted for a total transaction volume of €395.3 bn, or 92.3% of all European M&A. The UK has been by far the most important market for transactions, with a volume of €123.7 bn. This is almost twice the volume of Germany (€64.8 bn), the next-biggest national European M&A market in 2009. France and Spain are the other two markets with volumes exceeding €50 bn.

The financial services industry clearly stands out, with a total transaction volume of €139.1 bn.

Figure 4 presents the industry structure of European M&A activity in 2009, again from the perspective of the acquiring companies. The financial services industry clearly stands out, with a total transaction volume of €139.1 bn. Thus, deals in the financial services sector alone account for more than 30% of the total volume of European M&A transactions in 2009. There are four countries where acquisitions by financial services sector companies exceed €10 bn, the UK with €44 bn, France with €28.3 bn, Germany with €17.7 bn and Spain with €15.0 bn. These transaction volumes may reflect the consolidation occurring in the European financial services sector after the crisis. However, it also has to be taken into consideration that private equity funds are classified as financial services companies so that acquisitions undertaken by them are also assigned to this sector.

The second most active European sector in 2007 was the energy sector with a total volume of €84.8 bn. M&A activity in the energy sector is dominated by relatively few very large transactions. Most of these were initiated by Spanish (€18.1 bn), UK (€16.3 bn), German (€14.2 bn) and Italian companies (€12.3 bn).

A specific phenomenon of the crisis years 2008/2009 were large transactions by European governments.

A specific phenomenon of the crisis year 2009 (and the preceding year 2008) were large transactions by European governments, mostly investments undertaken to stabilise banks and other financial institutions. Totalling €51.1 bn the largest part of these transactions took place in the UK followed by Germany (€3.8 bn), Belgium (€3.5 bn) and France (€3.0 bn), where respective governments invested substantially in financial institutions.

⁸ See Financial Times (FT), 20 Sept. 2010, p. 14; FAZ, 27 Sept. 2010, p. 20; FT, supplement: *Deals & Dealmakers Part three: the changing face of M&A*, 28 Sept. 2010, pp. 2-3.

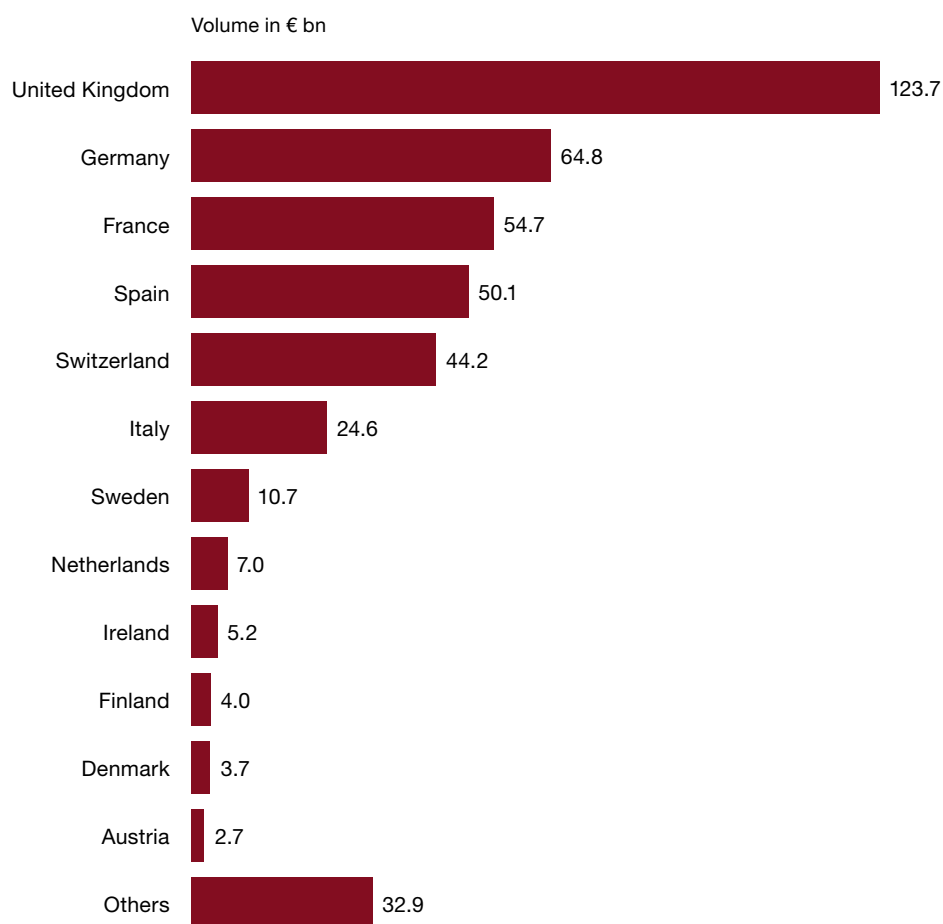
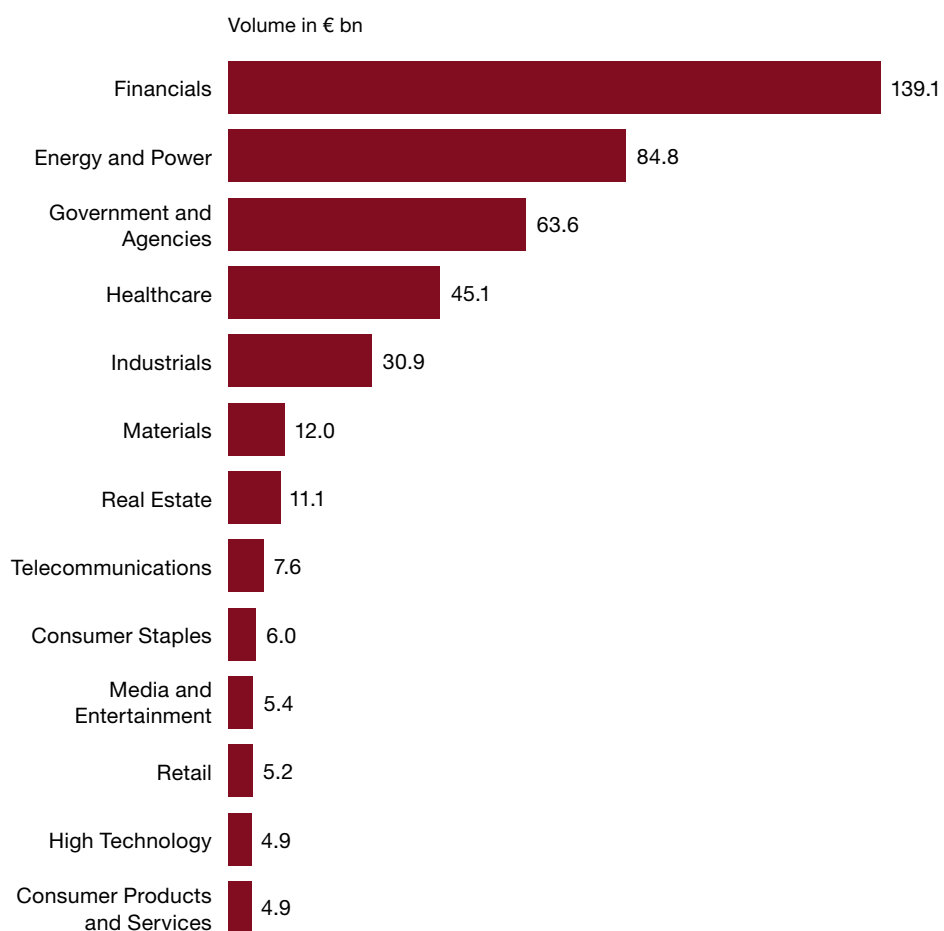
Fig. 3 M&A Volume in 2009 by country of acquiring companies

Fig. 4 M&A Volume in 2009 by major industry of acquiring companies



C Accounting for acquisitions and impairment

The relevant International Financial Reporting Standard for the accounting for acquisitions is IFRS 3 “Business Combinations”. The standard was originally issued by the IASB in March 2004, and it had to be applied to all M&A transactions that were agreed to on or after 31 March 2004. Parallel to IFRS 3, the IASB also published revised versions of IAS 36 “Impairment of Assets” (see below) and IAS 38 “Intangible Assets”.

In a subsequent “Business Combination Project”, the IASB and the US Financial Accounting Standards Board (FASB) addressed implementation aspects of the accounting for business combinations. An explicit goal of their cooperation also was to eliminate differences in the area of accounting for business combinations between IFRS and US GAAP. As a result of this joint project, the IASB published a revised version of IFRS 3 in January 2008.⁹ Together with the revision of IFRS 3, the IASB also amended IAS 27 “Consolidated and Separate Financial Statements”, IAS 36 “Impairment of Assets” and IAS 38 “Intangible Assets”. The revised standard and the amendments must be applied for accounting periods beginning on or after 1 July 2009. Earlier application was permitted. The EU endorsed the revised and amended standards in June 2009, so that European companies could voluntarily adopt them for their financial statements 2009. Hence, they are potentially relevant to our study. We outline important changes brought about by the revisions and amendments at the end of this chapter. Furthermore, in our empirical study we analyse which of our sample companies adopted IFRS 3 (revised 2008) and IAS 27 (amended 2008) voluntarily for financial year 2009.

Throughout this study, all references to IFRS 3 and other standards are references to the standards as revised and amended in 2008, unless the reference explicitly refers to the older versions published in 2004.

The acquisition method

According to IFRS 3, all acquisitions have to be accounted for using the acquisition method.

According to IFRS 3, all acquisitions have to be accounted for using the acquisitions (purchase¹⁰) method. Under this method, acquisitions have to be accounted for like “asset deals”. That is, the acquiring company recognises the individual assets and liabilities including contingent liabilities of the acquiree in its consolidated financial statements. Consistent with the asset deal notion, all assets and liabilities have to be valued at their respective acquisition-date fair values.

The application of the acquisition method involves the following steps.¹¹ First, the acquirer and acquiree to a transaction must be specified. In most cases, the answer to this question will be obvious. In the rare occurrences where it is not (e.g. so-called “merger of equals” or “reverse acquisitions”), factors listed in Appendix B of IFRS 3 furnish further guidance.

Second, the acquisition date – the date on which the acquirer obtains control of the acquiree – has to be determined. This usually is the closing date of the transaction, that is, the date on which the acquirer legally transfers the consideration, acquires the assets and assumes the liabilities of the acquiree.

⁹ The corresponding revision of SFAS 141 “Business Combinations” was already issued by the FASB in December 2007.

¹⁰ In IFRS 3 (2004), the method was called “purchase method”.

¹¹ See IFRS 3, para. 5.

The determination of fair values often relies on estimations of future cash flows and on the application of complex valuation methods.

Third, the cost of the acquisition has to be determined. Under the 2004 version of IFRS 3, the cost of the acquisition was defined as the acquisition-date fair value of the consideration paid to the former owners of the acquiree plus other costs “directly attributable to the business combination“. The consideration paid can consist of cash, other assets, liabilities assumed from the former owners, or equity interests issued by the acquirer. Costs directly attributable to the business combination include, for instance, fees paid to accountants, legal advisers and other consultants. According to IFRS 3 as revised in 2008, however, acquisition related costs generally must be expensed in the period in which they occur.

In a fourth step, the cost of the acquisition has to be allocated to the individual assets acquired and the liabilities and contingent liabilities assumed (“purchase price allocation”, PPA). In order to achieve this, all assets and liabilities including contingent liabilities¹² of the acquiree must be identified, including self-generated intangible assets and contingent liabilities that are not recognised in the acquiree’s pre-acquisition balance sheet. Furthermore, all assets, liabilities and contingent liabilities have to be (re)valued at their respective acquisition-date fair values. This is a relatively straightforward exercise for assets and liabilities for which market prices are readily available (e.g. securities or commodities). It is, however, a challenging task for specific assets and liabilities such as specialised machinery, brand names and most other intangible assets, or for contingent liabilities. In these cases, the determination of fair values often relies on estimations of future cash flows and on the application of complex valuation methods. This requires skills, which traditionally were not required in accounting departments, and now must be developed or acquired by company management.¹³

Deferred taxes

Deferred taxes have to be considered when new assets or liabilities are recognised in the consolidated statements or when assets and liabilities are re-valued in the course of the PPA. More precisely, companies are required to recognise deferred tax liabilities whenever the fair values of assets acquired at the acquisition date are higher than the corresponding acquiree’s tax book values, or whenever the acquirer recognises (intangible) assets that are not recognised in the balance sheet of the acquiree. Deferred tax liabilities also have to be recognised if the fair values of liabilities assumed are lower than their book values in the acquiree’s balance sheet. Conversely, deferred tax assets are recognised if fair values are lower for assets, or higher for liabilities, in comparison to the respective book values in the acquiree’s financial statement. Furthermore, tax assets are recognised when the acquirer recognises contingent liabilities.¹⁴

Goodwill (and “badwill”) from acquisitions

Finally, it has to be determined whether the acquisition leads to the recognition of goodwill or a “badwill”, i.e. an “excess of acquirer’s interest in the net fair value of acquiree’s identifiable assets, liabilities and contingent liabilities over cost” in the terminology of IFRS 3 (2004).¹⁵

Economically speaking, goodwill represents the value of the target’s going-concern elements and growth options as well as synergy expectations embodied in the purchase

¹² Contingent liabilities are either possible obligations whose existence depends on uncertain future events or existing obligations that cannot be measured with sufficient reliability or where it is not probable that the company will have to make payments to settle the obligation, see IAS 37, para. 10. According to IAS 37, para. 27, companies normally are not allowed to recognise contingent liabilities. However, as an exception, IFRS 3 requires that contingent liabilities a company assumes in the context of an acquisition have to be recognised at fair value if they are present obligations and can be measured reliably; see IFRS 3, para. 47; also see IFRS 3, Appendix B, para. B51 to B62.

¹³ It also has to be pointed out that such fair values are hard to verify by auditors or external users of financial statements. In the terminology of the US SFAS 157 “Fair Value Measurements” and the IASB Exposure Draft “Fair Value Measurements”, these fair values are based on unobservable “level 3 inputs”.

¹⁴ For details, see IAS 12, para. 66 to 68.

¹⁵ In IFRS 3 (revised 2008) the expression “badwill” has been renamed “bargain purchase”.

price of the acquisition.¹⁶ Technically, in simple terms goodwill arises when the cost of the acquisition exceeds the fair value of the target company's net assets. Deferred taxes have to be considered in this calculation. Usually the total amounts of deferred tax liabilities in a PPA outbalance the tax assets, and this difference increases the amount assigned to goodwill.

In exceptional cases, the cost of the business combination may actually be lower than the fair value of the acquired company's net assets. The resulting negative goodwill ("badwill") can have different causes. First, it is possible that the acquirer paid a price that was lower than the economic value of the acquiree. However, in a competitive business environment such "bargain purchases" are unlikely events. Second, the acquiring company and the previous owners of the target can have agreed on a price that compensates for expected future losses not yet recognised on the acquiree's balance sheet. Third, the difference can stem from IFRS requirements that prohibit certain assets or liabilities from being measured at their fair value, thus leading to an overvaluation of net assets.¹⁷

The IASB doubts whether "bargain" purchases take place in reality. Therefore, IFRS 3 stipulates that whenever the purchase price allocation results in a badwill the company has to reassess whether it has correctly identified and measured all assets acquired and all liabilities assumed.¹⁸ If the badwill remains after the reassessment, it is recognised immediately as a gain in the income statement.

Testing goodwill for impairment

Testing goodwill for impairment involves a comparison of its carrying amount with its recoverable amount. The recoverable amount is defined as the higher of an asset's fair value less costs to sell and its value in use. If the recoverable amount of an asset is lower than its carrying amount, the asset must be written down and the difference must be recorded as an impairment charge in profit and loss.

Testing goodwill for impairment poses problems. Goodwill cannot be separated from the company and sold in the market place. By the same token, goodwill does not generate cash inflows independently of a company's other assets or groups of assets. Hence, neither its fair value less costs to sell nor its value in use can be determined in isolation. Therefore, according to IAS 36, at the time of the acquisition goodwill has to be allocated to cash-generating units or groups of cash-generating units (CGUs)¹⁹ of the combined company that are expected to benefit from the growth opportunities and the synergies of the business combination that are the underlying reasons for the goodwill. The goodwill impairment test is then performed on the level of the CGUs. It is important to note that the impairment test for goodwill is performed after all other assets that are allocated to the CGUs have been tested for impairment.

IAS 36 defines a CGU as "the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets".²⁰ Thus, the definition follows a bottom-up perspective and large diversified companies may be comprised of a large number of CGUs. If companies had to allocate the goodwill from acquisitions to all of their CGUs, this would invoke extremely high administrative costs due to the large numbers of annual impairment tests that would then be required. Therefore with respect to the allocation of goodwill IAS 36 takes a

The impairment test for goodwill is performed after all other assets that are allocated to the CGUs have been tested for impairment.

¹⁶ An alternative reason for an acquisition price that exceeds the fair value of a target's net assets is that the management of the acquiring company paid a price that was too high given the economic circumstances. In this case, the company will eventually have to record an impairment loss on the goodwill.

¹⁷ For instance, according to IFRS 3 and IAS 12, the amounts assigned to deferred tax assets and deferred tax liabilities are not discounted.

¹⁸ See IFRS 3, para. 34 to 36.

¹⁹ For practical reasons, in the following, unless otherwise indicated our references to CGUs are meant to include single units as well as groups of CGUs.

²⁰ IAS 36, para. 6.

top-down approach, i.e. goodwill has to be allocated to the lowest organisational level within the company for which goodwill is monitored for internal management purposes (management approach); however, the level cannot be larger than the company's operating segments determined in accordance with IFRS 8 "Operating Segments", paragraph 5.

If the recoverable amount of a CGU exceeds its carrying amount, i.e. the sum of the carrying amounts of the assets that make up the unit, the CGU and any goodwill allocated to it are not impaired. However, if the recoverable amount of the CGU is lower than its carrying amount, the company has to recognise an impairment loss. In this case, the difference between the carrying amount and CGUs recoverable amount is first recognised as an impairment loss for any goodwill that is allocated to the CGU. If the difference is larger than the carrying amount of the goodwill, the remaining loss is allocated pro rata to the other assets of the CGU. Impairment losses for goodwill must not be reversed in subsequent periods.

Goodwill must be tested for impairment annually and whenever there is an indication that the book value might be impaired („triggering event“).

Companies have to review whether their goodwill positions have maintained their book value at least annually. The same requirement holds true for any other intangible assets with indefinite useful lives recognised by a company (e.g. brand names acquired in the course of acquisitions) as well as for intangible assets that are not ready for use. The annual impairment tests may be performed at any time during the year, provided they are conducted at the same time every year.

In addition to the mandatory annual review, goodwill must be tested whenever there is an indication that the book value might be impaired, i.e. when a so-called "triggering event" occurs.²¹ In paragraphs 12 to 17, IAS 36 presents a list of possible internal and external sources of information that could indicate that goodwill or other types of assets are impaired.

Impairment tests are time-consuming and complex and place great demands on companies' management and system. In order to perform the tests, companies have to value their operational business units on the basis of forward-looking information (business plans with expected future cash in- and outflows, etc.). Traditionally, this has not been the perspective taken in companies' accounting departments. Therefore, compliance with the impairment test procedures requires companies to systematically integrate their accounting with their planning and controlling functions, and to acquire competencies that allow them to develop and run complex valuation models.

Disclosure requirements related to acquisitions and goodwill impairment testing

The objective of the IFRS 3 and IAS 36 disclosures is to provide financial statement addressees with information that enables them to evaluate the nature and financial effects of acquisitions.

IFRS 3 and IAS 36 contain extensive disclosure requirements. Items that have to be disclosed with regard to M&A transactions include the costs of the acquisitions, the fair values assigned to the acquired assets and liabilities, the corresponding book values of the assets and liabilities in the acquiree's balance sheet, and explanations of the amounts assigned to goodwill.²² The objective of the disclosure requirements is to provide investors, analysts and other addressees of financial statements with meaningful and transparent information that enables them to evaluate the nature and financial effects of the acquisitions.²³

Disclosures are also required with respect to impairment tests for goodwill and other assets. In paragraph 194 of the Basis for Conclusions to IAS 36, the IASB observes that the non-amortisation of goodwill (and other indefinite-lived intangible assets) increases the reliance that has to be placed on companies' impairment tests for those assets. At the

²¹ See IAS 36, para. 90.

²² See IFRS 3, para. 59 to 63 and B64 to B67 of Appendix B (for the application of IFRS 3, para. 59 and 61).

²³ See IFRS 3, para. 59.

same time, however, the tests are based on managements' assumptions and expectations that, by their very nature, are subjective and, therefore, hard-to-verify. Because of this, the IASB concluded that "entities should be required to disclose information that assists users in evaluating the reliability of the estimates used by management to support the carrying amounts of goodwill and indefinite-lived intangibles".²⁴ To achieve this, IAS 36 requires companies to disclose information about the estimates used to measure the recoverable amounts of CGUs that contain goodwill or intangible assets with indefinite useful lives. Additional disclosure requirements apply when it is reasonably possible that changes in key assumptions would result in impairment losses. Finally, for each class of a company's assets, the amount of impairment losses and reversals recognised during the period must be disclosed. More detailed information is required with respect to material impairment losses and reversals.²⁵

IFRS 3 (revised 2008) and the full goodwill method

The publication of IFRS 3 and of the revised versions of IAS 36 and IAS 38 in March 2004 marked the completion of the first phase of the IASB's business combinations project. In the subsequent "Phase 2", the IASB together with the FASB addressed implementation issues that resulted from the application of the purchase method. The two standard setters also hoped to eliminate remaining differences between IFRS and US GAAP in this area of accounting. In June 2005, the IASB issued an exposure draft to amend IFRS 3. After receiving feedback from various interest groups and further deliberations, the IASB issued a revised version of IFRS 3, in January 2008. At the same time, the IASB issued an amended version of IAS 27 "Consolidated and Separate Financial Statements", and it amended IAS 36 "Impairment of Assets" and IAS 38 "Intangible Assets".

The most prominent change proposed by the IASB and the FASB was the introduction of the so-called full goodwill method.²⁶ Under this variant of the acquisition method, goodwill represents the excess of the fair value of the acquiree, as a whole, over the net amount of the recognised identifiable assets acquired and liabilities assumed. This requirement remains valid even when the acquiring company owns less than 100% of the equity interests in the target company and a minority interest exists – or rather using IFRS 3 terminology, there is a non-controlling interest. In other words, while in the past minority interests have been measured without considering their share in the goodwill ("partial goodwill method"), under the full goodwill method the goodwill of the target company at the time of acquisition will be completely recognised, including that part that relates to the minority interests. This is consistent with the control and completeness concepts underlying the preparation of consolidated financial statements. The minority interest in the fair value of the acquiree has to be estimated in order to determine the full goodwill. This is time-consuming for the preparers of financial statements and it increases the scope for subjective judgement and errors in consolidated financial statements. For these reasons, critics are doubtful about the usefulness of the additional information generated by this method.²⁷

The most prominent change proposed by the IASB and the FASB was the introduction of the so-called full goodwill method.

²⁴ See IFRS 36, BC205.

²⁵ See IFRS 36, para. 126 to 135.

²⁶ Other important changes pertain to accounting for transaction costs, the accounting for contingent considerations and business combinations that are achieved in stages. For an overview of the changes brought about by the revised version of IFRS 3, see PricewaterhouseCoopers: IFRS 3 (revised): Impact on Earnings available at: http://www.pwc.com/at/pdf/publications/IFRS_3R.pdf.

²⁷ See IFRS 3 DO2, Stibi, B., Goodwill: ein immaterieller Vermögenswert wie jeder andere?, in: BB-Special, 10/2005 Goodwill-Bilanzierung, Supplement to Betriebs-Berater, 60(39), p. 1; Küting, K./Wirth, J., Full Goodwill approach des Exposure Draft zu IFRS 3 – Firmenwertbilanzierung unter Geltung des Business Combinations Project Phase II, in: BB-Special, 10/2005 Goodwill-Bilanzierung, Supplement to Betriebs-Berater, 60(39), pp. 10-18; also see the comment letters received by the IASB and the FASB in the course of their Business Combinations Project as summarised in: Exposure draft, business combinations – comment letter summary, available at: http://www.fasb.org/project/Joint_Business_Combinations_CL_Summary.pdf.

Companies have the option to choose between the traditional partial goodwill method and the newly introduced full goodwill method.

The full goodwill method is controversial and many constituents especially in Europe opposed the introduction of the method when it was proposed by the FASB and the IASB in their Business Combination Projects. The IASB finally gave in to the criticism. The revised version of IFRS 3 issued by the IASB in January 2008 does not stipulate the use of the full goodwill method. Instead companies have the option to choose between the traditional partial goodwill method and the full goodwill method. This choice can be made separately for each transaction. In the Basis for Conclusion to IFRS 3, the IASB openly states that introducing this accounting choice was not its first preference because it impairs the comparability of financial statements. However, the board could not agree on a single measurement basis for non-controlling interests and thus took to this compromise.²⁸

The FASB, on the other hand, has made the use of the full goodwill method mandatory when it issued its revised version of SFAS 141 in December 2007. So ironically the original efforts to harmonise IFRS and US GAAP M&A accounting has really ended up creating a new material difference between the two set of rules.

²⁸ See IFRS 3, para. BC210; see also the dissenting views of three members of the IASB to the IFRS 3, DO2 to DO10.

D M&A-related disclosures – empirical study

1 Methodology and sample

Methodology

The goal of our empirical study is to assess how leading European companies apply IFRS in the area of business combinations and impairment testing in their 2009 financial statements, that is, in a year characterised by a severe financial and economic crisis. To achieve this goal, we thoroughly analyse required and recommended disclosures set forth in IFRS 3 and in IAS 36 for business combinations and for impairment testing of goodwill and other assets, for a total sample of 322 major European listed companies (see below for a detailed description on the sample selection process).

Inter alia, our analysis focuses on

- the number and size of the acquisitions undertaken in 2009;
- the costs of, and the consideration given for, these acquisitions; as well as
- the goodwill (or badwill) resulting from them;
- the total goodwill positions appearing on companies' consolidated balance sheets, accruing also from acquisitions in previous periods;
- changes to goodwill positions during the reporting period;
- the details of the goodwill impairment tests conducted;
- the number and the amount of impairment charges related to tangible and intangible assets, in particular goodwill, in 2009.

Where appropriate, we also compare our findings to the results of our earlier studies on the 2005 and 2007 financial statements in order to find out whether and how reporting practices have changed over the first five years of mandatory IFRS application. Special attention is given to the specific economic situation of the year 2009. That is, we are particularly interested in investigating whether the severe financial and economic crisis had an impact on companies' goodwill impairment tests and ultimately on goodwill positions.

Sample selection

Our sample includes companies comprising the premier stock-market indices of the twelve most important European stock exchanges. Adding up the total number of companies included in each of the individual indices yields a total number of 403 companies. However, 13 of the companies are cross-listed (listed on at least two of the twelve stock exchanges).²⁹ Thus, effectively our total potential sample is made up of 390 companies. We collected the year-2009/2010 annual reports of these companies in order to analyse the IFRS consolidated financial statements. For practical reasons, we can only include companies with financial years ending between 31 December 2009 and 31 March 2010 in our analysis. To simplify our following discussion, we will refer to all statements in our sample as 2009.

Twenty-eight companies, which end their years after with year endings later than 31 March 2010 had to be excluded. Furthermore, we also eliminated another seven

Our sample includes companies comprising the premier stock-market indices of the twelve most important European stock exchanges.

²⁹ Where possible, we include double-listed companies in the countries where they are domiciled and eliminate them from other country subsamples. In a few cases, however, companies are listed on stock exchanges outside their home countries without being included in the stock market index of their home country. For instance, one of the companies that make up the FTSE 100 index is legally domiciled in Switzerland, and it is not included in the Swiss SMI index. Such companies voluntarily submit themselves under the regulatory framework of the country of listing. Therefore, we include these companies in the primary country where they are listed and included in the stock market index (in our example, the company is included in the UK country subsample).

companies for which IFRS financial statements were not publicly available in the English language and nine other companies which do not report according to IFRS.³⁰

Our final sample consists of 322 companies.

After reviewing the annual reports of the remaining 346 companies, we find that 24 do not have any goodwill from previous transactions on their consolidated balance sheets. Hence, these companies have also been eliminated, leaving a final sample consisting of 322 companies. Table 2 illustrates how the companies are distributed over the twelve countries.

Tab. 2 Sample selection in comparison with previous studies

Country	Index	Companies in index as of 31 Dec 2005	Thereof satisfying selection criteria 2005	Companies in index as of 31 Dec 2007	Thereof satisfying selection criteria 2007	Companies in index as of 31 Dec 2009	Thereof satisfying selection criteria 2009
Austria	ATX	20	16	21	19	20	16
Denmark	OMXC 20	20	14	19	13	19	15
Finland	OMXH 25	24	21	25	23	25	21
France	CAC 40	40	34	40	35	40	38
Germany	DAX 30	30	21	30	27	30	26
Ireland	ISEQ 20	20	14	20	13	20	13
Italy	FTSE MIB	40	33	39	32	40	36
Netherlands	AEX	23	18	22	17	25	19
Spain	IBEX 35	35	28	34	25	35	27
Sweden	OMXS 30	29	20	29	22	29	24
Switzerland	SMI	26	18	20	15	20	14
United Kingdom	FTSE 100	100	75	100	67	100	73
Total		407	312	399	308	403	322

In principle, the sample selection process for our 2005 and 2007 studies followed the same procedure. However, while the previous two studies rather broadly covered companies from 17 European countries, in the current study we focus on the twelve most relevant European stock markets.³¹ Throughout this report, whenever we compare the 2009 findings with the results for 2005 and 2007 we base our comparisons on the same set of twelve countries.

Nevertheless the three samples differ in detail for several reasons (see Table 2). First, the composition of the stock-market indices has changed over time, for example due to takeovers. Second, in 2005 EU companies that were listed in the US under certain conditions were exempted from the requirement to publish IFRS financial statements. This exemption has expired and in 2007 and 2009 all EU exchange-listed companies had to prepare their consolidated financial statements in accordance with IFRS. Third, over time more companies make their annual reports available online in the English language. Finally, there are differences in the publication dates of some annual reports.

³⁰ The nine companies not reporting according to IFRS are comprised of six companies from Switzerland and one company from Italy, Austria and the UK.

³¹ In comparison to our 2005 and 2007 studies, we no longer include companies from Belgium, the Czech Republic, Hungary, Luxembourg and Poland.

Sample characteristics

In Table 3 and 4, our 2009 sample companies are characterised by key financial data. Table 3 presents data for companies across the twelve countries; Table 4 provides the industry perspective.

The statistics in Table 3 show that company size is very heterogeneous across countries as well as within the country subsamples.³² In terms of total assets, the largest companies are headquartered in France, with mean total assets of €199.4 bn. The next largest companies come from Germany, the UK, and Switzerland; the sample companies from these three countries also have, on average, total assets of more than €100 bn.³³ On the other side of the spectrum, companies domiciled in Finland are, on average, markedly smaller than companies from other countries, with mean total assets of €8.8 bn. Other countries with relatively small companies are Austria and Ireland; in both country subsamples mean total assets are lower than €25 bn.

In terms of revenues, the largest companies in our sample come from Germany (average: €35.5 bn), followed by French companies (€30.6 bn). The smallest sample companies in terms of revenues on average come from Ireland, Austria, Finland, Sweden and Denmark. In all of these country subsamples, average revenues are less than €10 bn.

Table 4 documents that our sample is broadly spread across industries. The most heavily represented industries are industrial products (69 companies), retail & consumer goods (47) and utilities (39). Other industry groupings that include at least 20 companies are banks (34), services (32) and insurance (21). A total of 68 companies belong to one of the financial services industries (i.e., banks, insurance or other financial services).

Tab. 3 Sample characteristics in 2009, by country

Country	Number of companies	Total assets		Revenue		Net income	
		average (in € m)	standard deviation (in € m)	average (in € m)	standard deviation (in € m)	average (in € m)	standard deviation (in € m)
Austria	16	22,772.3	53,441.2	4,691.0	5,134.6	213.0	324.8
Denmark	15	36,691.7	105,819.4	6,117.5	8,983.5	219.1	455.9
Finland	21	8,820.6	11,157.2	5,734.2	8,571.2	141.8	413.6
France	38	199,441.4	440,993.8	30,585.4	28,253.4	1,403.7	2,265.2
Germany	26	170,101.7	331,442.2	35,545.4	30,200.2	1,055.2	2,452.7
Ireland	13	23,033.6	50,340.3	3,908.0	4,593.9	-128.4	695.0
Italy	36	78,498.1	183,329.0	11,730.4	18,625.0	619.4	1,473.9
Netherlands	19	87,036.6	269,043.8	14,527.6	18,292.8	201.1	736.8
Spain	27	95,900.5	226,690.8	12,557.7	14,872.1	1,558.1	2,412.6
Sweden	24	53,806.1	117,112.3	5,761.7	5,516.5	261.8	758.9
Switzerland	14	111,080.7	237,549.4	18,357.6	20,939.1	2,059.7	2,521.2
United Kingdom	73	126,205.3	362,344.8	18,026.3	33,192.6	1,518.4	2,807.6
Total	322	101,022.4	281,991.7	16,065.4	24,632.9	940.8	2,077.1

³² One reason for the particularly high variance of the data for total assets is that banks and insurance companies typically have much higher total assets than companies from other industries. If banks, insurance companies and other financial services companies are not included in the computation, average total assets for the remaining companies is only €25.4 bn, instead of €101.0 bn.

³³ It should be noted that the average size of the country subsamples is influenced by the number of companies in the respective indices. For instance, the leading German stock-market index comprises only 30 companies, whereas its UK counterpart is made up of 100 companies. Obviously, the 30 biggest UK companies have much higher averages for total assets and other key variables than the FTSE 100 companies. Furthermore, the average size of the country subsamples is also influenced by the industry-composition of the respective stock-market indices; this holds true in particular for the data on total assets which is affected by the distribution of banks and insurance companies who tend to have very large balance sheets.

Tab. 4 Sample characteristics in 2009, by industry

Country	Number of companies	Total assets		Revenue		Net income	
		average (in € m)	standard deviation (in € m)	average (in € m)	standard deviation (in € m)	average (in € m)	standard deviation (in € m)
Banks	34	620,847.8	613,599.9	15,715.3	16,000.8	1,604.7	3,131.1
Basic Materials	18	19,962.6	24,306.9	9,448.1	11,751.3	419.1	1,073.8
Chemicals	9	21,771.7	18,058.8	15,560.4	15,669.1	725.6	532.2
Entertainment & Media	13	10,970.5	15,737.2	5,581.2	7,177.1	324.4	574.5
Industrials	69	19,519.7	31,344.2	12,719.4	18,573.2	174.4	839.6
Insurance	21	220,704.4	290,454.1	28,884.0	28,965.0	860.9	1,413.4
Other Financial Services	13	41,109.3	48,457.4	1,559.8	1,357.6	-29.1	629.9
Pharmaceuticals	10	30,862.8	29,463.4	16,683.5	14,205.4	3,577.0	3,685.6
Retail & Consumer Goods	47	13,298.8	16,201.9	13,483.9	19,956.7	827.1	1,337.2
Services	32	12,806.1	14,052.5	9,559.7	11,603.5	147.9	498.7
Telecommunications	17	46,733.4	51,920.4	22,863.4	21,082.4	1,825.4	2,830.0
Utilities	39	53,038.3	65,034.5	32,215.9	48,096.6	2,306.2	3,027.1
Total	322	101,022.4	281,991.7	16,065.4	24,632.9	940.8	2,077.1

Banks and insurance companies tend to have much larger total assets than companies that operate in the “real economy”. This is confirmed by the data in Table 4. The banks in our sample have by far the largest total assets, with an average of €620.8 bn. Insurance companies come next, with averages of €220.7 bn. The largest non-financial companies are in utilities (€53.0 bn) and telecommunications (€46.7 bn) sector. The smallest companies are found, on average, in the entertainment & media industry (€11.0 bn), services industry (€12.8 bn) and retail & consumer goods industry (€13.3 bn).

Utilities, on average, have the largest revenues with an average of €32.2 bn. They are followed by companies in the insurance industry (€28.9 bn), telecommunications industry (€22.9 bn) and, with quite a large gap, by industrial products companies (€12.7 bn). The industry with the smallest revenues by far is other financial services (€1.6 bn), which includes real estate and other financial services companies (stock exchanges, asset management companies, etc.).

The 2009 net income average for the entire sample amounts to €0.9 bn. Again, there are large differences between companies; the standard deviation being €2.1 bn. Of the 322 companies in our sample, 273 showed positive income for the year 2009 and 49 reported a loss. Given the severity of the downturn of the economy in late 2008 and in early 2009, the resilience of companies' incomes is quite surprising. The only industry that shows a loss on average is the 'other financial services' industry. Only four of the 34 banks in our sample showed a loss in 2009. Apart from other financial services, the industries that were hit the hardest are basic materials (seven loss-making companies out of 18) and industrials (15 out of 69), where we find a relatively high number of loss-making automobile producers.

2 Acquisitions in 2009

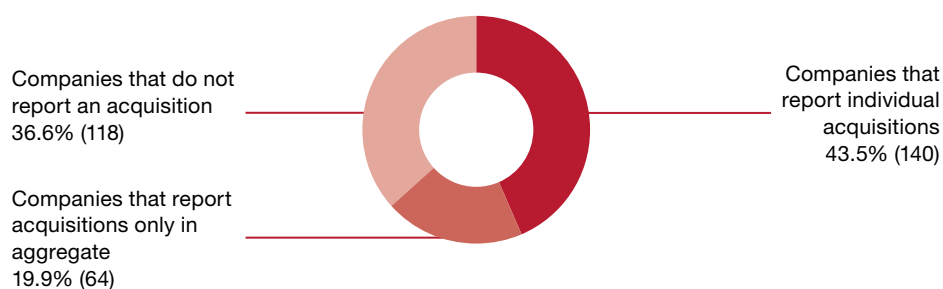
In the following section, we first provide an overview of the acquisitions undertaken by the sample companies in 2009. We then analyse important disclosures, in particular the cost and materiality of the acquisitions and the goodwill or “badwill” resulting from them.

Of the 322 companies comprising our sample, 204 (63.4%) reported acquisitions that have taken place during their financial year 2009. The remaining 118 companies (36.6%) reported no acquisitions. Against the background of the financial crisis it may be surprising that almost two thirds of the companies engaged in M&A transactions. However, the proportion of companies reporting acquisitions is notably lower than in 2007 (73.1%) and in 2005 (68.7%).

204 companies reported acquisitions in 2009. The proportion of companies reporting acquisitions (63,4%) is notably lower than in 2007 and in 2005.

According to IFRS 3, companies are required to disclose detailed information on business combinations that occur during the reporting period. For individually immaterial transactions, companies are only required to report in aggregate. As shown in Figure 5, 140 companies reported on individual transactions (43.5%). Of these, 41 (29.3%) also reported in aggregate on “other”, usually minor, transactions. Furthermore, 64 companies only provided aggregated disclosures for their acquisitions (19.9%). By reporting some or all of their 2009 transactions in aggregate, companies imply that none of these were individually material.

Fig. 5 Companies reporting acquisitions for financial year 2009



Tab. 5 Total number of acquisitions reported per company in 2005, 2007 and 2009

Number acquisitions reported by company	0	1	2	3	4	5	6	7	8	9	10	11–20	> 20	Total
2005	99	65	51	36	15	14	11	6	2	0	5	7	1	312
2007	83	38	42	38	30	17	18	16	10	4	2	8	2	308
2009	118	64	55	36	16	12	4	3	5	4	1	4	0	322

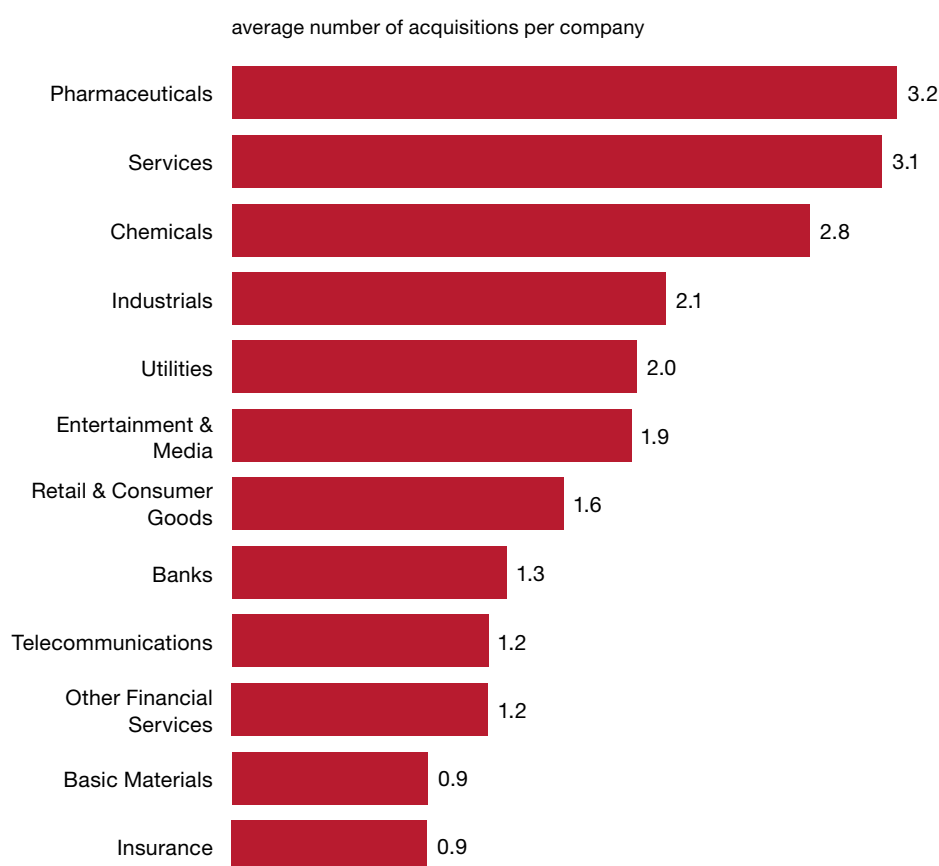
Based on all the information provided in the notes to the annual reports, the 204 companies reporting acquisitions completed at least 593 transactions in 2009.³⁴ As shown in Table 5, 64 companies undertook only one acquisition in 2009, 55 companies reported on two transactions, numerous others undertook three, four or five acquisitions; four companies recorded more than ten acquisitions. One company, a Swedish service company, reported 17 acquisitions in 2009. Based on our sample of 322 companies, the average number of acquisitions per company is 1.8.

If we compare the results with our earlier studies in 2007 and 2005, we find that in these two years the total number of acquisitions reported were higher than in the crisis-year 2009. In 2007, the sample companies from the twelve countries covered in the current study reported a total number of 1,001 acquisitions; in 2005 the equivalent number was 715. If we relate the total number of acquisitions to the subsamples of companies that report acquisitions in the respective years, the average number of acquisitions per company is 2.9 for 2009, 4.5 for 2007 and 3.4 for 2005. If, on the other hand, we relate the number of acquisitions to the total number of companies in the respective samples, the ratios are 1.8 for 2009, 3.3 for 2007 and 2.9 for 2005.

Pharmaceuticals, services and chemical companies had the highest takeover activity in 2009.

As expected, the number of acquisitions varies greatly by industry. In order to illustrate this, we compute the average numbers of acquisitions per industry (number of acquisitions in industry divided by total number of companies in industry). Figure 6 shows that within our sample of European blue-chip companies, pharmaceuticals, services and chemical companies had the highest takeover activity in 2009, with averages of 3.2, 3.1 and 2.8 acquisitions per company, respectively. The services and the chemical industry have consistently ranked as a sector with relatively high numbers of acquisitions per company in our two earlier studies. Companies in the pharmaceutical industry, on the other hand, were much less active in the M&A markets in 2005 and 2007. The sectors with the lowest numbers of acquisitions per company are insurance, basic materials and other financial services. Further investigations show that, with the exception of pharmaceuticals and retail and consumer goods industry, the 2009 average number of acquisitions per company was lower in all industries than the comparable number in 2007.

³⁴ In some cases, the number of acquisitions reported upon in aggregate is not disclosed. Several companies only declare that there had been “other” transactions. In these cases, we assume at least two such transactions occurred during the year. In cases where companies describe in detail one or two (or n) transactions and communicate there had been “other” (minor) transactions as well, we assume there had been two “other” transactions. Thus, the total number of 593 acquisitions is a conservative estimate of the total number of M&A transactions undertaken by the sample companies.

Fig. 6 Frequency of acquisitions in 2009, by industry

Cost of acquisitions

To assess the size of the M&A transactions undertaken in 2009, we collected information on the cost of the acquisitions. IFRS 3 requires companies to disclose the cost of acquisitions for all business combinations. For business combinations that are individually immaterial, the cost can be disclosed in aggregate.

In 2009 companies report individually on 250 transactions. Table 6 shows the distribution of the cost of the individually reported transactions. The numbers reveal a high degree of variance. In ten of the cases, the cost is below one million Euros while 26 transactions cost at least one billion Euros each. The average acquisition cost for all individually reported transactions is €644.8 m, with a large standard deviation of €1,934.8 m.

In 2009 companies report individually on 250 transactions with average acquisition cost of € 644.8 m.

**Tab. 6 Cost of acquisitions in 2005, 2007 and 2009
(individually reported transactions only)**

Cost (in € m)	Number of transactions		
	2005	2007	2009
< 1.00	14	9	10
1.00–4.99	22	25	32
5.00–9.99	13	24	20
10.00–19.99	15	25	24
20.00–49.99	27	48	24
50.00–99.99	29	35	17
100.00–249.99	38	48	23
250.00–499.99	28	34	19
500.00–999.99	15	21	16
1,000.00–4,999.99	27	30	20
5,000.00–9,999.99	3	5	4
≥ 10,000.00	1	7	2
cost not disclosed	15	15	39
Total	247	326	250

The average transaction volume of M&A transactions is markedly smaller in 2009 than in 2007.

In line with the generally lower intensity of M&A activity in 2009, the number of individually reported acquisitions (250) is much lower than the corresponding number in 2007 (326). The number for 2005 was 247 and thus almost the same as in the current year. If we compare the acquisition costs of M&A transactions over the three years we find firstly that the numbers of small transactions with acquisition costs of up to €20 m is similar in 2009 and 2007 (and higher than in 2005). However, there are much fewer medium-sized transactions in 2009 than in 2007, and the number of mega-deals with costs of €1 bn or more is also lower in 2009 (26) than in 2007 (42) and in 2005 (31). As a consequence, the average transaction volume of the M&A transactions is markedly smaller in 2009 (€644.8 m) than in 2007 (€942.6 m); however, it is higher than in 2005 (€560.7 m).

Another difference over time can be observed with regard to the number of cases where the cost of the transactions is not disclosed. Table 6 documents that this occurrence is much more frequent in 2009 than in the two previous studies. In 2009, the cost of the transactions is not disclosed in 39 cases (15.6%) compared to 15 cases in both 2007 (4.6%) and 2005 (6.1%). We do not know whether the much higher number of undisclosed transaction costs is in any way related to the economic crisis. One may surmise that many of these cases pertain to small and potentially immaterial acquisitions. However, from informal discussions with company representatives and auditors we also know that in some M&A transactions the selling and the buying parties agree to keep the purchase price secret. Company managers should be aware that this practice is incompatible with the disclosure requirements of IFRS 3, which clearly stipulate that companies must disclose “the acquisition-date fair value of the total consideration transferred”, i.e. the price paid for the target company, for each business combination that occurs during the reporting period.³⁵

³⁵ Companies must also disclose details of the classes of consideration (payments), including contingent payment arrangements. For details, see IFRS 3, para. 59 in combination with para. B64(f).

Materiality of acquisitions

We attempt to assess the materiality of the transactions for the acquiring companies by comparing the cost of the acquisitions to the acquirers' total assets. More precisely, we compute the ratio between the cost of the acquisitions and total assets in the acquiring companies' financial statements.

Fig. 7 Materiality of acquisitions (individually reported): Costs of transactions to companies' total assets in 2009

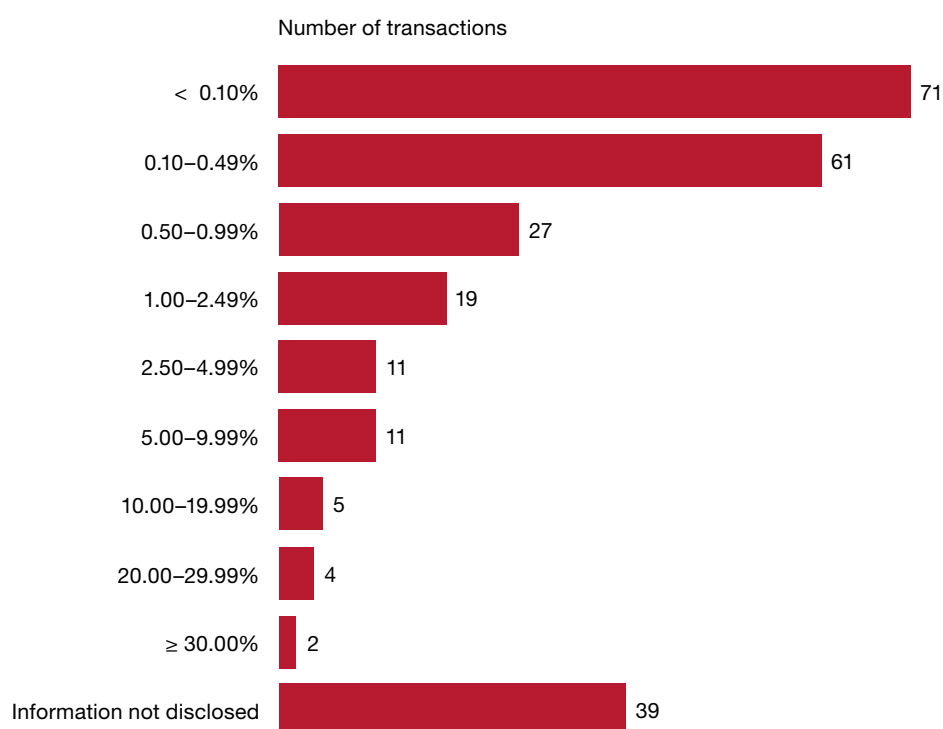
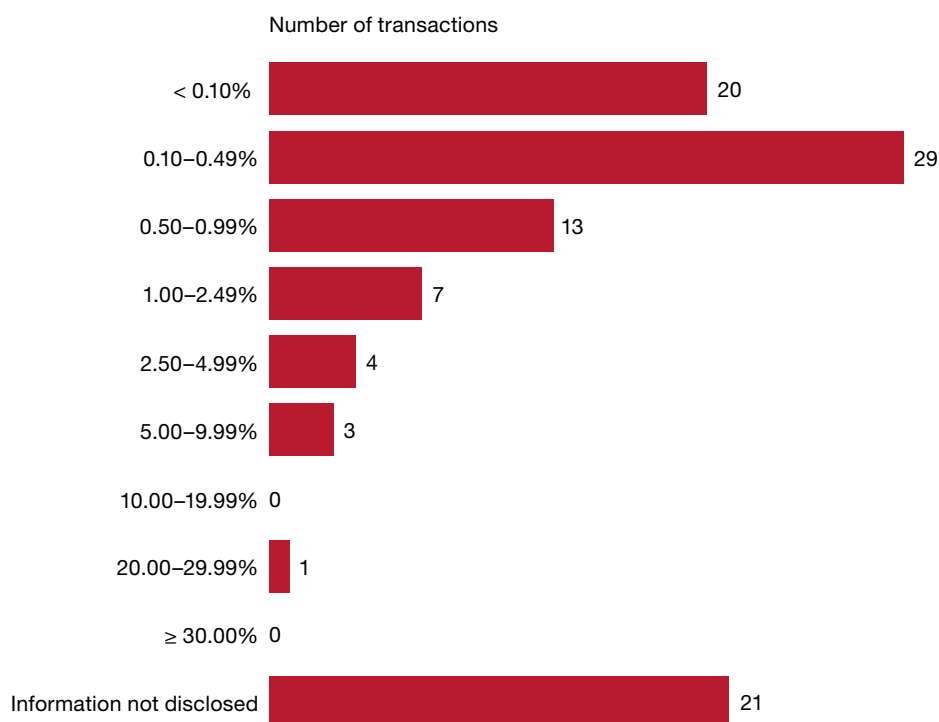


Figure 7 depicts the distribution of the ratio of the cost of the acquisitions to companies' total assets for the individually reported acquisitions. The diagram documents that most individually reported transactions are very small in relation to the size of the acquiring companies. In fact, in 71 of the 250 cases the cost of the business acquisition is less than 0.1% of the companies' total assets, and in 159 transactions the cost is less than 1% of the companies' total assets. Based on this information alone, many of the individually reported acquisitions would be considered immaterial. However, there may be reasons other than the cost of the acquisition why some of these transactions are of strategic importance to the companies, and the information about them is viewed as being relevant to financial statement users.

Fig. 8 Materiality of acquisitions (reported in aggregate): Costs of acquisitions to companies' total assets in 2009



Some transactions are very large in relation to the companies' total assets. In 22 of the 250 individually reported transactions the cost of the business combination exceeds 5% of companies' total assets. In 6 cases the ratio of cost to total assets actually exceeds 20%. The highest ratio of acquisition cost to total assets is 34.8% for an acquisition undertaken by a Spanish utilities company.

As far as the acquisitions reported in aggregate are concerned, in several cases we can only estimate the number of acquisitions. We also cannot determine how the reported aggregated costs are distributed over the respective transactions. Therefore, we consider aggregated costs in relation to total assets. Out of the 204 companies reporting acquisitions, 105 companies reported acquisitions in aggregate. Of these, 41 also reported individual acquisitions while 64 reported on their acquisitions only in aggregate.

As shown in Figure 8, the acquisitions reported in aggregate can in many cases indeed be considered immaterial. In 20 cases, the total aggregated cost is less than 0.1% of the companies' total assets. For 62 cases the ratio is below 1%. However, in some cases the cost of acquisitions reported in aggregate is very large. In four cases the total cost is larger than 5% of total assets, in one case the ratio even exceeds 20%. These companies come from different industries and from different countries. In one case, the number of transactions reported by the company is rather large and no information is given whether any one of them was individually large and significant. Thus, it may have been appropriate to report them in aggregate. In the other three cases, however, acquisitions that are individually very large are reported in aggregate, either together with other large transactions or with undisclosed numbers of smaller transactions. In these instances, we doubt whether the aggregated disclosure format is appropriate.

Purchase price allocation

IFRS 3 requires companies to provide information about their acquisitions and the related PPAs. The guiding principle, laid out in paragraph 66 of the standard, is that the information disclosed should enable users of financial statements to evaluate the nature and financial effects of the business combinations. More precisely, according to IFRS 3, para. 67 (f), companies are required to disclose, inter alia, “the amounts recognised at the acquisition date for each class of the acquiree’s assets, liabilities and contingent liabilities, and, unless disclosure would be impracticable, the carrying amounts of each of those classes, determined in accordance with IFRSs, immediately before the combination”. Furthermore, the standard stipulates that in cases where such disclosure is found to be impracticable, this fact has to be disclosed, “together with an explanation of why this is the case”.³⁶

The guiding principle is that information disclosed on M&A transactions should enable users of financial statements to evaluate the nature and financial effects of the business combinations.

In our two earlier studies, we pointed out that many companies did not fully comply with the requirements to disclose information concerning the PPA. In 2005, the relevant information was missing in 17.0% of all cases, i.e. individually reported acquisitions and sets of acquisitions reported in aggregate. In 2007, we concluded that companies’ reporting practices had improved somewhat, but that the required PPA disclosures were still not provided in 14.2% of all cases.

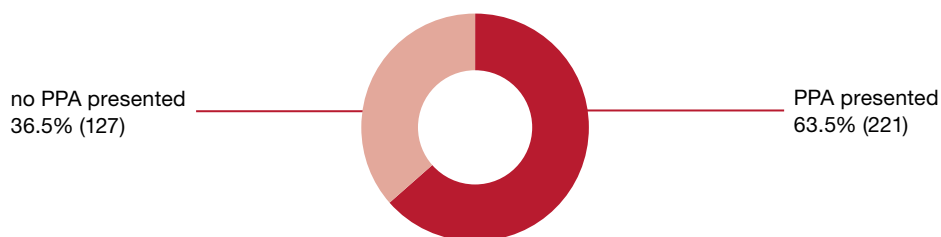
In 2009, companies were again more reluctant to provide PPA-related disclosures. Only in 221 of all 348 cases (63.5%) did companies provide a breakdown of the assets acquired and liabilities assumed, together with their respective fair values and book values before the transactions. In 127 cases (36.5%) companies did not provide this information (see Figure 9).

In 13 cases (10.2% of the cases where PPA disclosure is not provided), companies indicated that the accounting for the business combinations was determined only provisionally. In ten of these cases, the companies explained why the disclosure was impracticable. Mostly, the reason given is that the takeover had taken place close to the reporting date.

In those cases where companies reported at least the cost of the acquisitions, we find that most of the transactions where PPA-related information is not presented, are small or very small in relation to companies’ total assets. However in 14 cases, the ratio of the cost of the acquisition to total assets is larger than 1% in five cases the cost of the acquisition amounts to more than 3% of the companies’ total assets (as measured after the acquisition). In these cases information regarding the assets the companies acquired and the liabilities they assumed might have been relevant to investors and other addressees of the financial statements. Obviously in those cases (47 acquisitions) where the cost of the acquisition is also not reported we cannot ascertain whether the information might have been relevant.

³⁶ The term “impracticable” is defined in IAS 8, para. 5: “Applying a requirement is impracticable when the entity cannot apply it after making every reasonable effort to do so”.

Fig. 9 Companies disclosing information on purchase price allocation (all sets of acquisitions reported separately) in 2009



In our previous 2005 and 2007 reports we had highlighted that compliance with PPA disclosures was particularly problematic in the banking industry. In 2009, banks are still more prone than companies in other sectors not to provide this required information. In fact, of the 38 acquisitions reported by the banks included in our sample, the PPA is not disclosed in 22 cases (57.9%). Other sectors with high incidences of non-disclosure of PPAs in 2009 are basic materials and chemicals where the PPAs in both cases are not presented in 50.0% of all acquisitions. The sector with the highest proportion of PPA disclosures is the services sector. The services companies in our sample report a total of 43 transactions and PPAs are missing in “only” six cases (14.0%).

PPA disclosures in 2009 are also very heterogeneous across countries. Disclosure of PPA information is missing only in one case for each subsample in Ireland and Denmark. In most cases companies domiciled in the UK as well as in Finland, Switzerland and Italy have provided PPA disclosures. In all of these countries PPA disclosures are missing for less than 25% of all reported acquisitions. On the other hand, in Spain and in France companies relatively often do not report this type of information. PPA disclosures are not provided for 20 out of a total number of 34 acquisitions (58.8%) in Spain and for 37 out of 53 acquisitions in France (69.8%).

Goodwill (and “badwill”) resulting from 2009 acquisitions

Under the 2004 version of IFRS, goodwill results if the cost of the business combination is higher than the acquirer’s proportionate share in the acquiree’s re-valued net assets, taking into account deferred taxes.³⁷ If the target’s net assets measured at their acquisition-date fair values exceed the purchase price paid, the resulting “excess value” is commonly called “badwill”.

For 38 transactions no information was provided to assist the user in determining whether the transaction resulted in the recognition of goodwill or „badwill“.

As illustrated in Figure 10, 17 out of the 250 individually recognised M&A transactions (6.8%) resulted in “badwill”. In one case neither goodwill nor “badwill” was recognised, that is, the fair value of the recognised net assets equalled the cost of the acquisition. The great majority of individually reported acquisitions led to the recognition of goodwill. In many cases, the amount assigned to goodwill is relatively small. For seven transactions, goodwill recognised is less than one million Euros, and for a total of 59 transactions the amount of goodwill recognised is less than ten million Euros. Goodwill ranges between €100 m and €1 bn for 55 acquisitions. In 23 cases, goodwill amounted to more than €1 bn. For 38 transactions (15.2%) no information was provided to assist the user in determining whether the transaction resulted in the recognition of goodwill or “badwill”.

³⁷ See below for a discussion of the voluntary adoption of IFRS 3 (revised 2008) and the application of the full goodwill method.

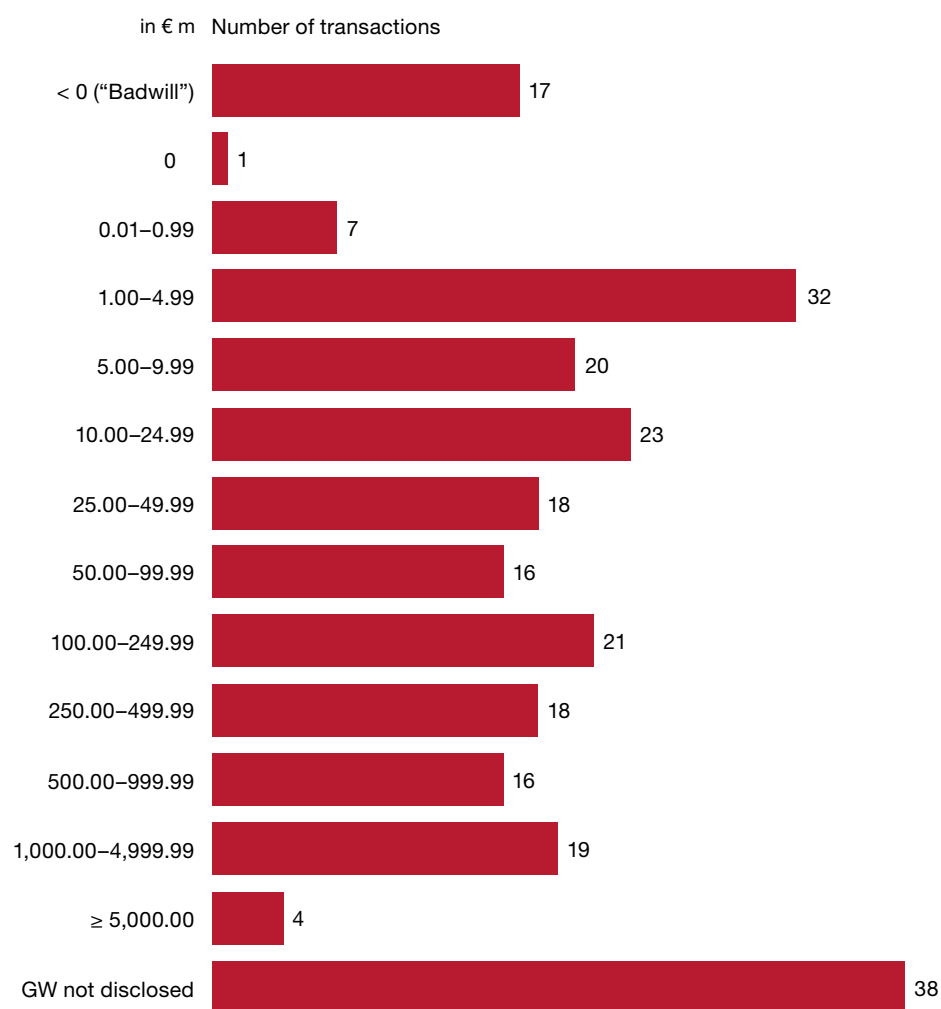
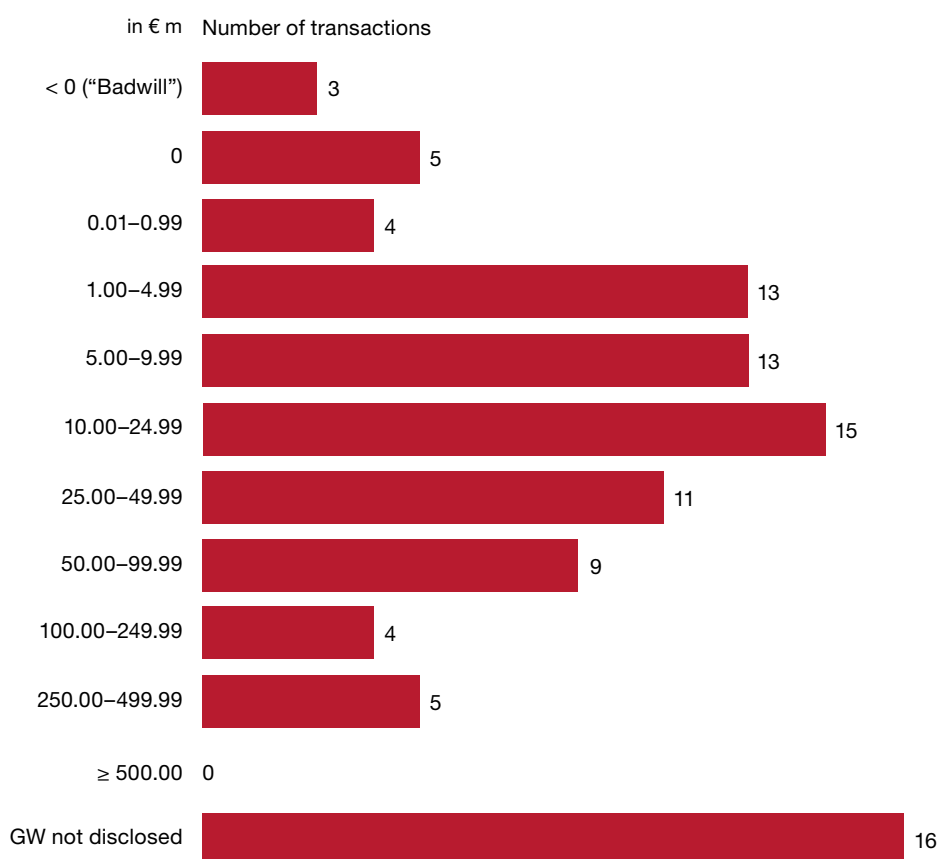
Fig. 10 Goodwill resulting from 2009 acquisitions (individually reported transactions)

Fig. 11 Goodwill resulting from 2009 acquisitions (transactions reported in aggregate)

In Figure 11, we report on the goodwill and badwill recognised in connection with acquisitions that are reported in aggregate. There are only three sets of acquisitions where the summation of the transactions resulted in badwill. This is not surprising, given that the amounts assigned to badwill are rather small in most cases, so that these “badwill” transactions tend to be cancelled out in the aggregated reporting format by transactions yielding relatively larger amounts of goodwill. Mostly, the aggregated sets of transactions lead to relatively modest amounts of goodwill. In the majority of cases (70, or 71.4%), goodwill recognised on the aggregated acquisitions is lower than €100 m. However, there are also nine cases where acquisitions reported in aggregate resulted in goodwill between €100 m and €500 m. In 16 cases (15.3%) the companies did not report any information on the goodwill (or badwill) resulting from the transaction.

In 2009 companies could decide to voluntarily adopt the new version of IFRS 3.

Voluntary application of IFRS 3 (revised 2008) and the full goodwill method

As explained in Chapter C “Accounting for acquisitions and impairment”, application of the 2008 revised version of IFRS 3 and amended version of IAS 27 is mandatory for accounting periods beginning on or after 1 July 2009, that is, for companies’ 2010 financial statements. However, following the EU’s endorsement of the newly revised standards in July 2009 our sample companies could decide to voluntarily adopt the new version of IFRS 3 (together with the amended version of IAS 27) for their 2009 financial statements.

Under the 2008 version of IFRS 3, companies have a choice regarding the determination of goodwill. They can choose a method that is effectively the same as under the old 2004 version of IFRS 3 where the “non-controlling interests” are recognized based on their share in the fair value of the targets’ net assets, that is, without considering the goodwill

attributable to the minorities (“partial goodwill method”). Alternatively they can opt for the full goodwill method. Here, goodwill is the difference between the fair value of the target company and the acquirer’s total re-valued net assets. With this method, the full goodwill of the target is recognised.

Whenever accounting standards present companies with accounting choices regarding the recognition or measurement of assets or liabilities, comparability and, thus, the decision-usefulness of financial statements are impeded. In such instances transparent disclosures are of great importance so as to allow analysts, investors and other interested parties to understand which accounting method has been applied by the companies and which impact this choice has had on income and on other key accounting figures. We closely inspected our sample companies’ disclosures to ascertain whether they had decided to voluntarily adopt IFRS 3 (revised 2008) and IAS 27 (amended 2008) early on for their 2009 financial statements and whether any of them had applied the full goodwill method.

Out of the total number of 322 sample companies, 24 companies indicated that they had voluntarily adopted IFRS 3 (revised 2008). However, only ten of these 24 companies reported acquisitions undertaken in 2009.³⁸ Three of these ten companies indicated in their accounting policy footnote that in the case of acquisitions where less than 100% ownership of the targets are acquired they measured the non-controlling interests at their proportionate share in the targets’ net assets, i.e. they indicate that they do not apply the full goodwill method. One of the remaining seven companies has undertaken only one 100% acquisition in 2009, that is, the question of whether to apply the full goodwill method did not arise.

Out of the 322 companies, 24 companies indicated that they had voluntarily adopted IFRS 3 (revised 2008).

This leaves six companies that do report acquisitions with less than 100% in 2009. One of them explains in the notes to their financial statements that they decided to adopt IFRS 3 (revised 2008) as of 1 July 2009. Furthermore, the company points out that all acquisitions undertaken in 2009 had taken place in the first half of the year so that the new standard did not apply to them. One company clearly explains that they had decided not to apply the full goodwill method. For two other companies the acquisition-related disclosures do not mention whether the traditional partial goodwill method or the full goodwill method has been applied.

Consequently, we could identify only two companies that had applied the full goodwill method in the financial year 2009. It is noteworthy that in one of these cases, the resulting goodwill is larger than the acquiring company’s acquisition cost of its controlling share in the target. One of the two companies that applied the full goodwill method explains that the fair value of the non-controlling interests had been determined based on a third-party evaluation of the fair value of the target company. The other company estimated the fair value of the minority interests based on a tender offer made for the outstanding shares after the close of the financial year.

We could identify only two companies having applied the full goodwill method in 2009.

Overall, we can conclude that only a small number of companies voluntarily applied the 2008-revised version of IFRS 3 and the amended version of IAS 27 in their 2009 financial statements, and only in very few cases did companies actually decide to apply the full goodwill method. A further observation is that in some cases disclosures with regard to the method used to measure goodwill are not as clear and transparent as they could be.

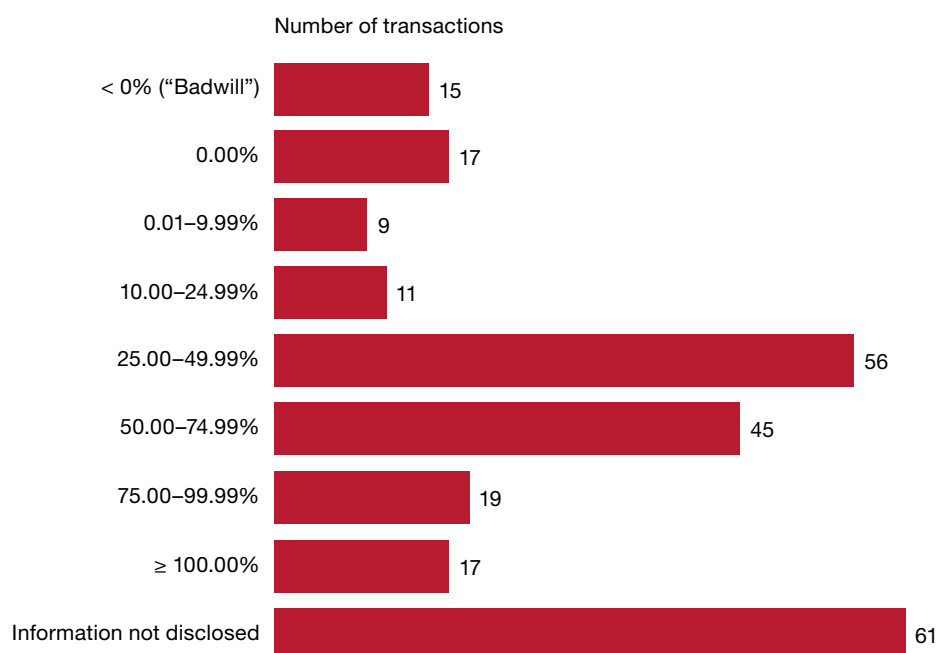
³⁸ We note that an Italian company that did not report any acquisitions in 2009 in their financial statements explains that management had decided to apply IFRS 3 (revised 2008) retrospectively to acquisitions undertaken in 2008. The company thus recalculated the purchase price allocations of these transactions and adjusted its 2008 figures accordingly, which resulted in substantial consequences for (identifiable) intangible assets and goodwill. Incidentally, even though one of the restated 2008 acquisitions did involve non-controlling interests, the company’s disclosures do not explain whether the company measured them based on the fair value of the target company’s net assets or whether it applied the full goodwill method.

Importance of goodwill (and “badwill”) resulting from 2009 acquisitions

Since the publication of IFRS 3 and the revision of IAS 38 in 2004, intangible assets that are individually identifiable have to be recognised separately in the consolidated financial statements, if their fair values can be estimated reliably (and IAS 38 further presumes that this condition generally is fulfilled in business combinations³⁹). The far-reaching recognition requirements for individually identifiable intangible assets should cause the residual goodwill to be smaller in the purchase price allocations.⁴⁰

In order to put the amounts assigned to goodwill in companies’ year-2009 acquisitions in perspective, we compute the ratio of goodwill to the cost of the acquisition. We can compute this ratio for 189 of the 250 individual transactions and for 70 of the 98 (72.4%) sets of acquisitions reported in aggregate. For the other cases, either the cost of the acquisition or the resulting goodwill (or both) is not disclosed.

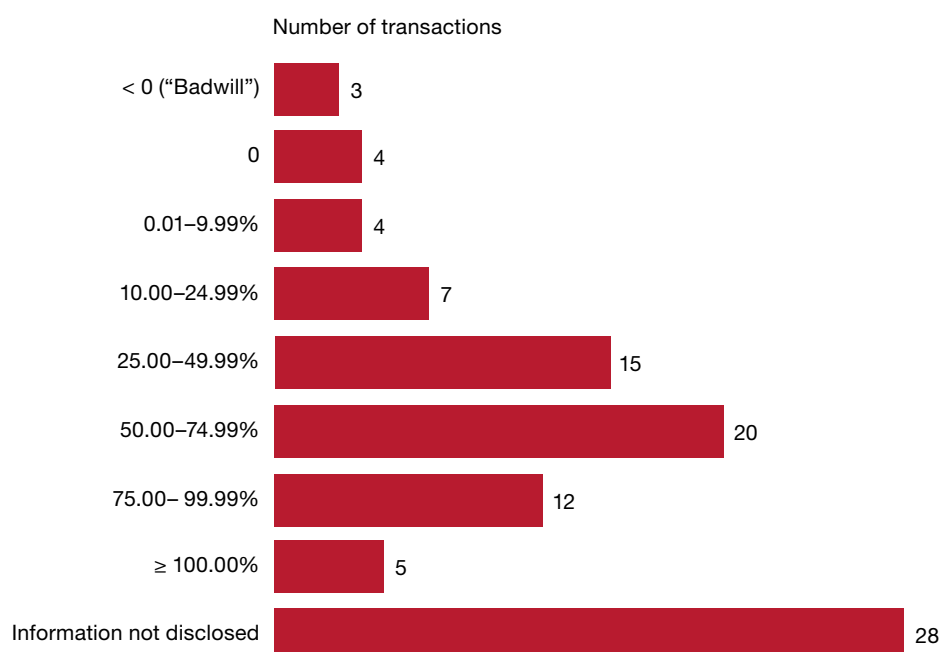
Fig. 12 Ratio of goodwill to cost of acquisition: Number of individually reported transactions 2009



³⁹ See IAS 38, para. 35 to 41, in particular para. 38.

⁴⁰ Interestingly, as Hughes (2008) points out, financial analysts, a major group of financial statement users, are not really interested in companies recognising separately intangible assets from acquisitions. In their valuation models financial analysts use earnings data to approximate future cash flows. As Hughes (2008) explains, analysts will add back to earnings any amortisation of intangible assets because they believe that these amounts have no predictive value. Thus, according to Hughes (2008), the recognition and amortisation of intangible assets actually complicates the work of analysts. See Hughes, J., Little value in making goodwill even more intangible, FT, 8 May 2008, p. 20.

Fig. 13 Ratio of goodwill to cost of acquisition: Number of transactions reported in aggregate 2009



The findings from our analysis indicate that despite the far-reaching regulation for the recognition of individually identifiable intangible assets, goodwill resulting from M&A transactions continues to be of high importance in relation to acquisition cost.⁴¹ The average ratio for all acquisitions, that is, all individually reported transactions and all sets of aggregated transactions without cases that resulted in “badwill”, is 61.5%.

Goodwill resulting from M&A transactions continues to be of high importance in relation to acquisition cost.

Figures 12 and 13 demonstrate the importance of goodwill in purchase price allocations. For individually reported transactions, in 81 (42.9%) cases for which the respective information is available the value assigned to goodwill amounts to 50% or more of the total cost of the acquisition. For the transactions reported in aggregate, this holds true even for more than half of all sets of information (37 out of 70).

For 17 individual transactions and for five sets of aggregated transactions, the amounts assigned to goodwill even exceed the cost of the acquisition. In all but one of these cases this result occurs because the net fair value of assets acquired minus liabilities and contingent liabilities assumed is negative. In the one remaining case the company has decided to apply IFRS 3 (revised 2008) early and has applied the full goodwill method to measure goodwill, meaning that the goodwill reported includes the goodwill attributable to minorities. This case exemplifies that the full goodwill method can have significant consequences for companies' balance sheets and that the parallel application of two methods to measure goodwill can impede comparability.

Finally, in Figure 14 we demonstrate that the relative importance of goodwill varies greatly by industry. Acquisitions in the entertainment & media industry have the highest ratios of goodwill to cost of acquisition (75.4%) on average. The sector with the second highest ratio is industrials (59.7%). The sector with the lowest ratio of goodwill

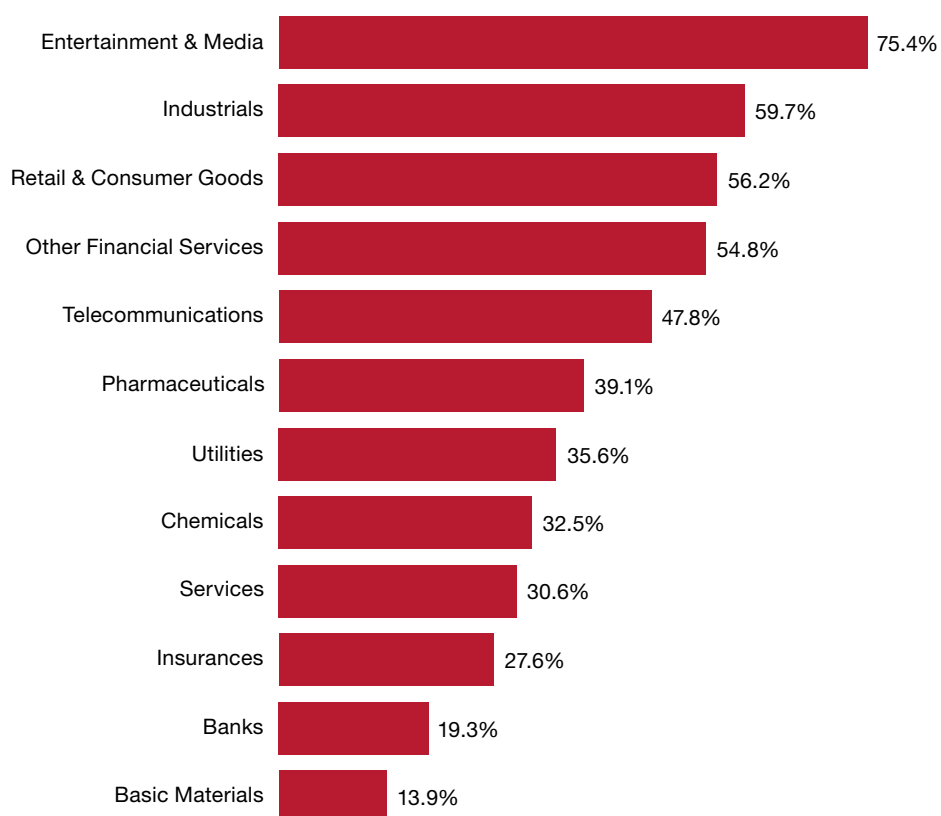
Acquisitions in the entertainment & media industry have the highest ratios of goodwill to cost of acquisition.

⁴¹ As has been explained in more detail in Chapter C, one factor that helps to explain the importance of goodwill is deferred taxes. Usually the amounts of deferred tax liabilities recognised in a PPA are greater than the deferred tax assets, and this difference increases the goodwill.

to acquisition cost is basic materials. Here goodwill only amounts to 13.9% of the cost of the acquisition on average.

It is worth mentioning that in most industries the ratio of goodwill to cost of acquisition is markedly lower in 2009 than in 2007. Many reasons could be driving this. However, one contributing factor could be that market prices of target companies were lower in 2009 than in 2007 on average.

Fig. 14 Ratio of goodwill to cost of acquisition in 2009, by industry



3 Goodwill in companies' 2009 financial statements

In the following section, we look at companies' total goodwill positions, that is, the sum of the goodwill on companies' balance sheets that results from 2009 acquisitions as well as from acquisitions undertaken in prior periods. We first analyse companies' goodwill positions at the end of the financial year 2009, and we set these positions in relation to companies' total intangible asset positions and to total equity.

Companies' goodwill and total intangible asset positions

At year-end 2009, the average total intangible asset balance including goodwill for all 322 sample companies is €5.5 bn. However, the importance of intangible assets differs greatly between companies, the standard deviation being €9.3 bn. The average goodwill balance from our sample companies is €3.6 bn (again, there is a large standard deviation of €6.4 bn). This documents that goodwill is by far the most important component of companies' total intangible assets.⁴²

The average goodwill balance is € 3.6 bn, documenting that goodwill is by far the most important component of companies' total intangible assets.

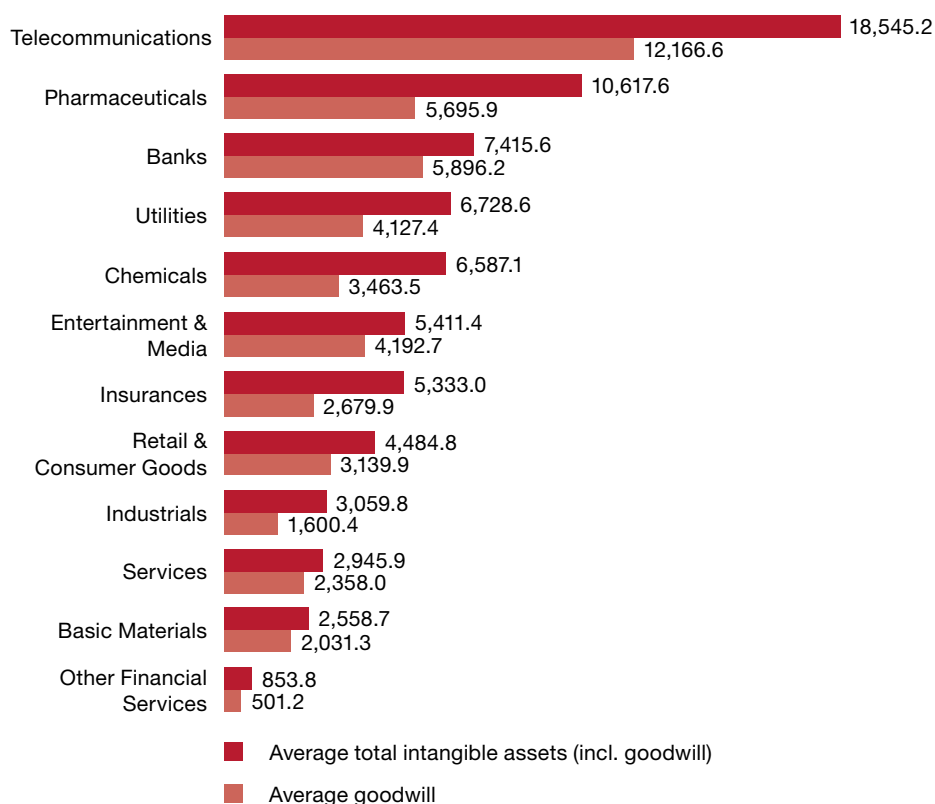
Figure 15 depicts companies' goodwill and total intangible positions by industry. The telecommunications industry has by far the largest average balances for total intangible assets (€18.5 bn) and for goodwill (€12.2 bn). Telecommunication companies also held the no. 1-position in our earlier studies in 2005 and in 2007. Interestingly, the average intangibles positions of the telecommunications companies included in our studies grew strongly between 2005 and 2009, despite some very large goodwill write-offs that took place in this industry.

Another industry with a very large average intangible assets position is the pharmaceutical industry. Here total intangible assets amounted to €10.6 bn on average, and goodwill is €5.7 bn. The intangible assets balances of pharmaceuticals companies have almost doubled since our first study in 2005. We presume that the major reason for this is large acquisitions undertaken by some European pharmaceutical companies in recent years, which have resulted in the recognition of substantial individually identifiable intangible assets and of large residual goodwill positions.

Magnitude of goodwill in balance sheets varies significantly across industries.

⁴² Comparisons of companies' goodwill positions are impeded by the effects of the adoption of IFRS. Prior to the introduction of IFRS, local accounting treatments of goodwill differed throughout European countries. Some countries required goodwill to be capitalised and amortised (e.g. UK, Ireland), while others allowed it to be offset against equity without any effect on profit and loss (e.g. Germany, Switzerland, Luxembourg). The majority of the companies included in our study adopted IFRS for the first time in 2005. IFRS 1 "First-time adoption of IFRS", the standard that dictates how companies had to move over from their respective local accounting standards to IFRS, stipulates that companies must present their first IFRS statements as if they had always used IFRS. However, there are exceptions to this rule, and one of them relates to business combinations: Companies can select whether or not to restate acquisitions that took place in prior periods (see IFRS 1, para. 15). Restating historical M&A transactions is very burdensome and most companies chose not to restate. This means that companies that under local GAAP chose to offset goodwill against equity started with an initial balance of zero for goodwill. In contrast, companies that reside in countries that required capitalisation of goodwill had to carry-over their local GAAP goodwill positions into their first IFRS balance sheets. Thus, companies' goodwill positions in their 2009 financial statements are not only determined by the characteristics and performance of their past M&A transactions, but they also depend on (i) how long companies have already been reporting under IFRS, (ii) whether they restated historical M&A transaction upon adoption, and, if they chose not to restate, (iii) how goodwill was treated under their respective local accounting rules. Hence, comparisons of goodwill positions between companies have to be treated with caution.

Fig. 15 Average goodwill and average intangibles (including goodwill) in 2009, by industry



A further sector with large intangible positions and, in particular, large goodwill positions is the banking industry followed by the utilities and chemicals industries. It may be surprising that the large European banks in our sample still carry goodwill positions on their balance sheets that on average amount to €5.9 bn even in the aftermath of the most fundamental crisis affecting the financial sector. In fact, the banks' average goodwill positions are almost unchanged from 2007 and they are much higher than they were in our earlier 2005 study.

Finally, relatively low total intangible asset and goodwill positions are found in industrials, in services, in basic materials, and in "other financial services", a sector that includes real estate and other financial services companies.

Goodwill in relation to equity

In the following, we examine companies' goodwill positions in relation to their total equity balances. This ratio demonstrates the relative importance of goodwill, and it provides an indication of companies' vulnerability to possible goodwill impairment charges. As explained in Chapter C of this study in more detail, goodwill is a highly specific and somewhat "ephemeral" asset. Above all it embodies the expectations an acquirer holds and pays for at the time of the takeover regarding the target company's future growth opportunities and the synergies that can be realised after the business combination. It is well known that such expectations do not always materialise.⁴³

⁴³ Survey studies undertaken by consulting firms as well as academic research in the areas of industrial economics and corporate finance find that a high percentage of M&A transactions fail to meet their operational and financial goals. For surveys of this literature, see Glaum, M./Hutzschenreuter, Th., *Mergers & Acquisitions – Management des externen Unternehmenswachstums*, Gießen/Vallendar, 2010, Kohlhammer; Sudarsanam, S., *Creating Value from Mergers and Acquisitions*, 2nd edition, 2010, FT Prentice Hall.

In particular, one would expect that the severe crisis of 2008/2009 would have put into question many business cases that were the bases for the decision-making for acquisitions undertaken in the previous years.

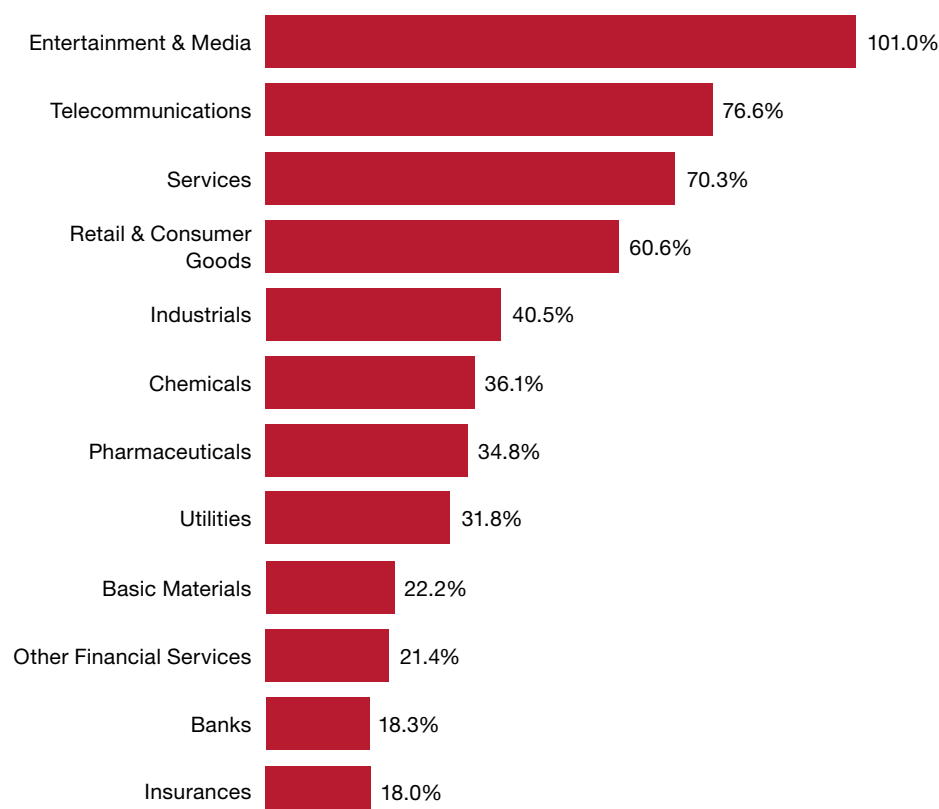
Average goodwill in our sample represents 43.8% of shareholders' equity. Figure 16 presents the ratio of goodwill to shareholders' equity by industry. The industry with by far the highest average ratio is entertainment & media - where the average ratio is greater than 100%. Three other sectors with significant goodwill positions are telecommunications (76.6%), services (70.3%), and retail & consumer goods (60.6%).

Overall, there are 31 companies in our sample where goodwill positions are larger than shareholders' equity. The highest number of companies with goodwill balances larger than total equity are found in the services industry. This is true for ten of the 32 sample companies. We also find eight companies in the retail & consumer goods industry and four companies in entertainment & media where goodwill exceeds equity. Two companies in the telecommunications industry have goodwill balances that are larger than total equity and eleven of the remaining 15 companies in that industry report goodwill to equity ratios higher than 50%, reflecting the intensive M&A activity in this sector in the past.

Average goodwill in our sample represents 43.8% of shareholders' equity.

There are 31 companies where goodwill positions are larger than shareholders' equity.

Fig. 16 Average percentage of goodwill relative to total equity in 2009, by industry



4 Impairment losses for goodwill and other assets

In this section, we concentrate on impairment losses for assets covered under IAS 36. That is, we look at impairments of property, plant and equipment and, especially, at impairment losses for goodwill and other intangible assets.⁴⁴

The ratio of companies reporting impairments in 2009 increased markedly compared to 2007 and 2005.

Frequency and size of goodwill impairment charges in 2009

According to IAS 36, companies are required to disclose information on impairment losses recognised during the reporting period for each class of assets. Of the 322 companies comprising our sample, 244 (75.8%) reported impairment charges during 2009 (Figure 17). As one would expect, the ratio has increased markedly in comparison to our earlier studies in 2007 and 2005 when the corresponding ratios were 49.7% (2007) and 52.2% (2005). As shown in Figure 17, 33 companies reported only impairments of tangible assets, 67 only impairments of goodwill and other intangible assets, and 144 companies impairments of both tangible and intangible assets (including goodwill).

Before turning to impairment losses associated with goodwill and other intangible assets, we briefly summarise our findings for impairment losses associated with tangible assets. For the 177 companies reporting impairment losses on tangible assets, the average impairment charge was €96 m, with a standard deviation of €226.1 m. Industries with the highest average impairment losses on tangible assets are basic materials (€371.7 m) and utilities (€185.3 m).

Fig. 17 Number of companies recognising impairment losses in 2009

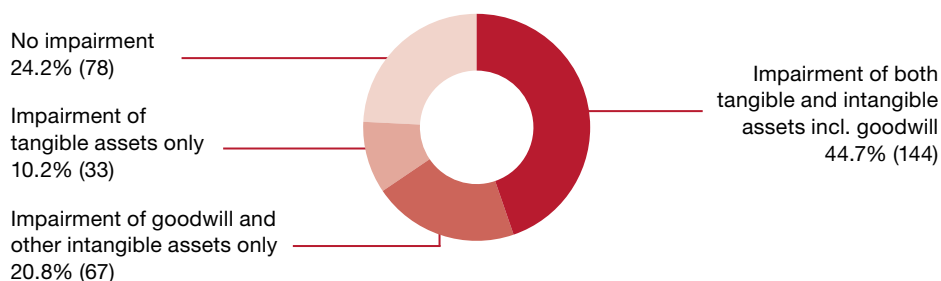
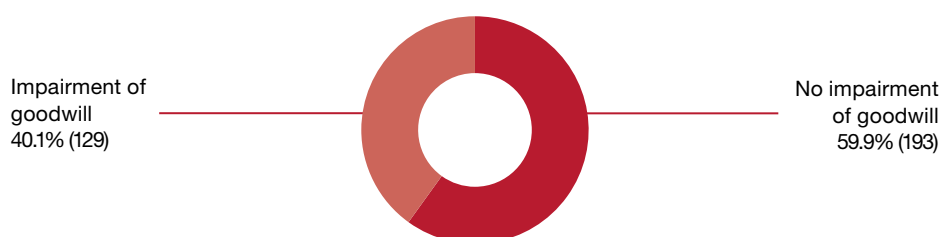


Fig. 18 Number of companies recognising goodwill impairment losses in 2009



⁴⁴ Our analysis does not address impairment of inventories, financial assets or investment property. Inventories and financial assets are excluded from the scope of IAS 36, and investment properties are only covered by IAS 36, if they are measured at cost.

As shown in Figure 18, 129 companies in our sample (40.1%) recognised impairment charges associated with goodwill during 2009. In Tables 7 and 8, we present our findings regarding impairment losses associated with goodwill and other intangible assets in more detail. The average goodwill impairment charge is €179.2 m. This average is strongly influenced by a small number of large write-downs – the median impairment charge for the total sample is only €19.8 m. Five companies in our sample reported goodwill impairment losses exceeding one billion Euros. In fact, these five companies accounted for more than 40% of the total impairment losses in our sample. The highest charge is a loss of €2.9 bn recorded by an Italian provider of building materials. Two telecommunication companies, one large utility company and a bank recorded the other four billion Euros impairment losses.

129 companies recognised impairment charges associated with goodwill in 2009.

Table 7 looks at impairment charges from an industry perspective. Goodwill impairment losses were reported by 40.1% of our sample companies in 2009 and, as we see, are distributed unevenly across industries. The highest proportion of companies with goodwill impairment losses in 2009 is the entertainment & media industry where 61.5% of our sample companies reported a write-down of goodwill. With €198.4 m, the average goodwill impairment loss in that industry was substantial. The sector with the second-highest incidence of goodwill impairment losses is the banking industry where just over one half of our sample companies reported an impairment loss. Here the average loss is €274.2 m. Telecommunications, services and insurance are three further sectors where goodwill impairment losses were relatively common with ratios ranging between 42.9% (in the insurance industry) and 52.9% (in the telecommunications industry). The average goodwill impairment loss of €734.7 m in the telecommunications industry is the highest observable average of all sectors. Low frequencies of goodwill impairment losses in 2009 are found in the basic materials sector (22.2%) and in the pharmaceutical industry, where not a single of the ten sample companies recorded a goodwill impairment loss in 2009.

The highest proportion of companies with goodwill impairment losses in 2009 is the entertainment & media industry.

From a geographical perspective, French companies recorded the highest amounts of goodwill impairment charges (see Table 8). This holds true both in absolute terms and in relation to the size of the country subsample: 25 French companies (65.8%) wrote down goodwill positions in 2009. This represents almost two thirds of the number of companies in that country subsample. The average size of their impairment charges is €170.9 m. In the other country subsamples, the ratio of companies with goodwill impairment losses is much lower. The second highest relative frequency is found in Sweden where 50.0% of the companies wrote down goodwill, followed by Spain with a ratio of 44.4%. Low frequencies of goodwill impairment losses are found in Switzerland, Denmark and Ireland, where only 28.6%, 26.7% and 23.1%, respectively, reported goodwill impairment charges.

French companies recorded the highest amounts of goodwill impairment charges.

Interestingly, in both our 2007 and 2005 studies, France also was the country with the highest amounts of impairment losses. It may be an interesting question for future in-depth research to investigate whether the over-proportionally high number of goodwill impairments by French companies in our empirical studies for 2009, 2007 and 2005 is simply a random effect or not. If it turns out to be systematic, it could be due to the higher failure rate of French companies' acquisitions or to a stricter interpretation of the IAS 36 impairment test for goodwill in France than in other European countries.

Tab. 7 Impairment losses recognised for intangible assets in 2009, by industry

Industry	Total sample size	Companies reporting goodwill impairment	Average goodwill impairment loss (in € m)	Companies reporting loss on other intangible assets	Average impairment loss on other intangible assets (in € m)
Banks	34	19	274.2	24	72.9
Basic Materials	18	4	191.2	8	27.9
Chemicals	9	3	130.3	7	55.2
Industrials	69	23	55.6	28	48.7
Insurances	21	9	60.5	10	35.4
Entertainment & Media	13	8	198.4	10	70.1
Other Financial Services	13	5	39.8	5	92.5
Pharmaceuticals	10	0	0.0	10	155.5
Retail & Consumer goods	47	18	73.6	19	26.2
Services	32	15	255.0	12	30.4
Telecommunications	17	9	734.7	6	93.7
Utilities	39	16	86.3	21	87.1
Total	322	129	179.2	160	62.8

Tab. 8 Impairment losses recognised for intangible assets in 2009, by country

Industry	Total sample size	Companies reporting goodwill impairment	Average goodwill impairment loss (in € m)	Companies reporting loss on other intangible assets	Average impairment loss on other intangible assets (in € m)
Austria	16	6	82.0	8	27.8
Denmark	15	4	68.1	7	21.6
Finland	21	6	154.9	6	28.0
France	38	25	170.9	21	103.1
Germany	26	8	455.3	20	96.0
Ireland	13	3	4.9	6	18.2
Italy	36	14	222.1	24	64.1
Netherlands	19	7	78.5	10	15.2
Spain	27	12	104.9	11	66.0
Sweden	24	12	69.3	11	42.0
Switzerland	14	4	198.2	6	107.8
United Kingdom	73	28	248.3	30	59.6
Total	322	129	179.2	160	62.8

Frequency and size of impairment charges for intangible assets other than goodwill in 2009

The impairment charges associated with intangible assets other than goodwill are on average smaller than those associated with goodwill. The average impairment charge was €62.8 m in 2009. From an industry perspective, average impairment charges for other intangibles assets were the largest in the pharmaceuticals industry (€155.5 m), where no company recorded impairment losses on goodwill. Further industries where such losses were quite substantial are the telecommunications industry, other financial services and utilities industries, with average impairment losses on other intangible assets of €93.7 m, €92.5 m and €87.1 m, respectively.

From a country perspective, the largest average impairment charges for other intangible assets were for Swiss (€107.8 m), French (€103.1 m) and German (€96.0 m) companies.

The economic crisis, goodwill impairment and goodwill derecognition

In late 2008 and early 2009, Europe and the rest of the world were shaken by a severe financial and economic crisis. At the time, the international banking system was on the verge of collapse and had to be saved by massive government intervention. The extreme uncertainty spread to the “real sector” where demand almost ground to a standstill in some industrial sectors. The economy began to stabilise again in the second half of 2009. However, 2009 GDP in the EU declined by 4.2% and exports of goods and services for the Euro-zone were down by 12.9%.⁴⁵ Throughout 2009 uncertainty persisted about long-term economic development. It was not clear whether the economy would recover quickly and sustainably or whether further serious downturns would occur (“double-dip recession”) because of the need to further “downsize” the financial sector, or as a result of the massive increase in public debt in several countries, for instance.

GDP in the EU declined by 4.2% and exports of goods and services for the Euro-zone were down by 12.9%.

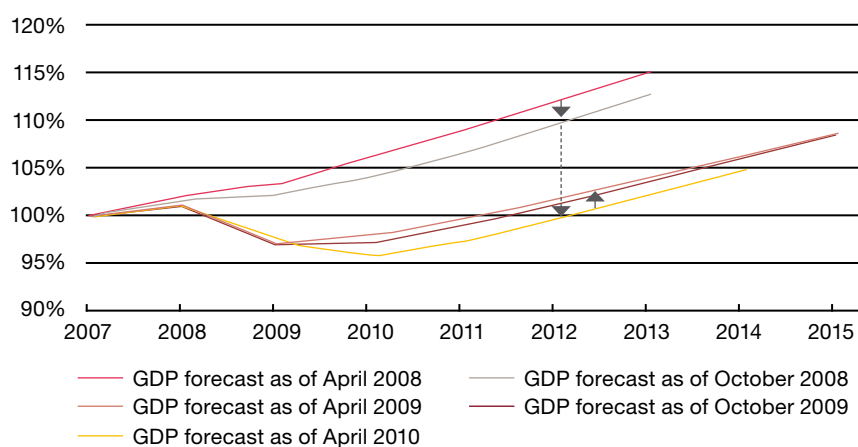
As the US investment bank Houlihan Lokey points out in a recent report, the International Monetary Fund’s (IMF) five-year forecasts for economic growth in the EU had only decreased moderately between April and October 2008.⁴⁶ However, as shown in Figure 19, the IMF’s outlook worsened dramatically between October 2008 and the next forecast in April 2009. It is important to note that the IMF’s expectations did not improve much throughout 2009. Instead, as can be seen in Figure 19, the IMF held on to its depressed outlook even in its forecast of April 2010. Thus, the IMF expects that European GDP will remain on a markedly lower growth path than anticipated before the outbreak of the crisis.

As a consequence of these developments, one would expect that in 2009 many companies had to revise their expectations downwards regarding future sales revenues, future margins and consequently, future profits and cash flows. Revision of business plans, however, might “trigger” impairments of goodwill positions that result from acquisitions undertaken in previous years, when markets looked more promising and prices paid for acquisitions were much higher.

Revision of business plans might „trigger“ impairments of goodwill.

⁴⁵ See EUROSTAT 2010, available at: <http://ec.europa.eu/eurostat>.

⁴⁶ See Houlihan Lokey – Investment Banking Services: The European Goodwill Impairment Study 2010-2011, p. 7, available at: <http://www.HL.com>.

Fig. 19 IMF real GDP forecasts for European Union

Source: Houlihan Lokey 2010

Leading European companies wrote-off „only“ about 2% of the total goodwill in their balance sheets in 2009.

Against this background it comes as somewhat of a surprise that “only” 129 companies (40.1%) in our sample recognised goodwill impairment charges in 2009 while the great majority (193, or 59.9%) did not. If we relate the total goodwill charges of all 322 sample companies of €23.1 bn to the companies’ goodwill positions (before impairment) of €1,184.8 bn, we find out that our sample of leading European companies wrote off “only” about 2% of the total goodwill in their balance sheets in 2009.⁴⁷

Furthermore, as shown in more detail in Tables 9 and 10, it is interesting to note that throughout 2009 our sample companies actually added more goodwill to their balance sheets through new acquisitions than they wrote-off through goodwill impairments or derecognised for other reasons (see below). This holds true for six out of the twelve industries and for seven out of the twelve countries covered in our analysis on average. Thus, our sample companies’ total goodwill position at the end of 2009 was actually higher than at the beginning. The total goodwill balance across all sample companies at the beginning of 2009 was €1,144.4 bn (average per company: €3,554.0 m); at year-end 2009 it was €1,161.7 bn (average per company: €3,607.8 m).

⁴⁷ One may note that impairment losses for goodwill were also relatively modest in 2008. Based on data from the Datastream Worldscoop database, our sample companies reported goodwill impairment losses amounting to a total of €68.1 bn in 2008. This number is higher than the respective number for 2009 (€23.1 bn), but it is still small in relation to the companies’ overall goodwill balances, and it is heavily influenced by two very large single impairment losses of €37.2 bn and €7.1 bn reported by two British banks.

Tab. 9 Changes of companies' goodwill balances in 2009, by industry

Industry	Number of companies	Goodwill at begin of financial year (in € bn)	Goodwill recognized from acquisitions during financial year (in € bn)	Goodwill impairment losses during financial year (in € bn)	Goodwill disposed of during financial year (in € bn)	Goodwill reclassified according to IFRS 5 in financial year (in € bn)	Goodwill at end of financial year (in € bn)
Banks	34	201.3	7.9	(5.2)	(2.4)	(3.9)	226.2
Basic Materials	18	37.0	0.2	(0.8)	(0.0)	(0.5)	36.6
Chemicals	9	29.9	1.3	(0.4)	(0.3)	–	31.2
Entertainment & Media	13	54.8	3.2	(1.6)	(0.0)	(0.1)	54.5
Industrials	69	110.8	2.8	(1.3)	(0.1)	(0.1)	110.4
Insurances	21	52.6	1.6	(0.5)	(0.0)	(0.7)	52.9
Other Financial Services	13	6.2	0.2	(0.2)	(0.1)	(0.0)	6.0
Pharmaceuticals	10	51.1	4.2	–	(0.1)	(1.4)	56.9
Retail & Consumer Goods	47	146.2	3.4	(1.3)	(0.3)	(2.5)	151.0
Services	32	74.8	1.5	(3.8)	(1.4)	(0.4)	75.5
Telecommunications	17	249.9	4.6	(6.6)	(0.1)	(6.8)	206.8
Utilities	39	129.9	25.1	(1.4)	(0.5)	(0.7)	153.7
Total	322	1,144.4	56.0	(23.1)	(5.4)	(17.1)	1,161.7

Tab. 10 Changes of companies' goodwill balances in 2009, by country

Country	Number of companies	Goodwill at begin of financial year (in € bn)	Goodwill recognized from acquisitions during financial year (in € bn)	Goodwill impairment losses during financial year (in € bn)	Goodwill disposed of during financial year (in € bn)	Goodwill reclassified according to IFRS 5 in financial year (in € bn)	Goodwill at end of financial year (in € bn)
Austria	16	9.1	0.8	(0.5)	(0.0)	(0.0)	9.1
Denmark	15	11.6	0.7	(0.3)	–	(0.2)	11.9
Finland	21	13.2	0.3	(0.9)	(0.0)	(0.0)	12.4
France	38	344.2	15.7	(4.3)	(1.2)	(2.4)	316.6
Germany	26	136.4	10.6	(3.6)	(0.4)	(6.0)	143.5
Ireland	13	9.7	0.4	(0.0)	(0.0)	(0.1)	10.2
Italy	36	151.5	4.5	(3.1)	(1.6)	(1.4)	154.4
Netherlands	19	36.4	0.5	(0.6)	(0.0)	(0.1)	36.4
Spain	27	82.7	10.6	(1.3)	(1.3)	(0.6)	94.4
Sweden	24	33.2	2.5	(0.8)	(0.6)	(0.0)	58.9
Switzerland	14	56.9	1.4	(0.8)	(0.2)	(3.2)	55.3
United Kingdom	73	259.4	8.2	(7.0)	(0.0)	(2.9)	258.8
Total	322	1,144.4	56.0	(23.1)	(5.4)	(17.1)	1,161.7

The amount of goodwill derecognised and reclassified according to IFRS 5 is almost the same as the sum of all goodwill impairment.

Another observation that can be made from Tables 9 and 10 is that companies derecognise goodwill not only because of impairment charges but also as a result of corporate restructuring. More precisely, in 2009 our sample companies have derecognised a total of €5.4 bn from their goodwill balances as a result of disposals, i.e. goodwill that was attributed to groups of assets that were divested in 2009. Furthermore, in the context of reclassifications of groups of assets according to IFRS 5 “Non-current Assets Held for Sale and Discontinued Operations” companies further reduced their goodwill balances by the amount of €17.1 bn. The sum of these positions is €22.4 bn, which is almost the same as the sum of all goodwill impairment losses reported by the sample companies. In fact, in five of the twelve industries the sum of goodwill positions derecognised was larger than the goodwill impairment charges (banking, insurance, pharmaceuticals, retail & consumer goods, telecommunications).

There are many reasons why companies sell off (or spin off) parts of their business portfolios. For example, company management may want to get rid of businesses that generate losses or, more generally, do not produce the expected returns on assets. In other instances management has decided that the businesses no longer belong to their companies’ strategic “core” activities. It may also be the case that companies sell off segments of target companies they have recently acquired, either because these parts of the targets do not fit with their strategic plans or because of cartel restrictions. There is anecdotal evidence that shows that companies, at least over some periods of time, can be as active divesting existing business segments as they are acquiring new ones.⁴⁸ Thus overall, the extent of goodwill derecognised by our sample companies in 2009 may not really be surprising.

Goodwill impairment in 2009 in comparison to earlier periods

In order to analyse further how companies reacted to the financial and economic crisis we compared 2009-reporting for goodwill impairment losses to the same reporting for goodwill impairment losses in 2007 and 2005. We first look at the relative frequency of companies that report goodwill impairment losses, that is, the number of companies reporting goodwill impairment losses to the total number of companies in the respective industries or countries. Following that we compare average (absolute) amounts of goodwill impairment losses over time. In a third and final time series, we analyse in relative terms which proportion of their total goodwill positions (before impairment) companies wrote off in 2009, 2007 and 2005.

In most industries the proportion of companies reporting goodwill impairment losses is higher in 2009 than in 2007 and 2005.

Figure 20 compares the relative frequency per industry across the three reporting periods 2009, 2007 and 2005. We find that in eight of the twelve industries the proportion of companies reporting goodwill impairment losses is markedly higher in 2009 than in the two earlier reporting periods. This is most apparent in entertainment & media, banking, telecommunication and services industries. Given the nature of the crisis, it is not surprising to find that the proportion of banks reporting goodwill impairment losses has practically doubled from 26.5% in 2007 to 55.9% in 2009. The other three sectors with substantially higher percentages of companies reporting goodwill impairment losses are the three sectors with the highest average ratios of goodwill to equity, that is, the sectors that are most exposed to the risk of the goodwill impairments. Sectors where the relative frequency of goodwill impairment in 2009 is lower than those in 2005 or 2007 are industrial products, basic materials, and pharmaceuticals (where not a single company reported a goodwill impairment loss in 2009).

⁴⁸ See, for instance, Glaum, M./Hutzschenreuter, Th., *Mergers & Acquisitions – Management des externen Unternehmenswachstums*, Gießen/Vallendar, 2010, Kohlhammer, Chapter 15; and Sudarsanam, S., *Creating Value from Mergers and Acquisitions*, 2nd edition, 2010, FT Prentice Hall, Chapter 10.

Fig. 20 Number of companies reporting goodwill impairment charges in 2005, 2007 and 2009, by industry

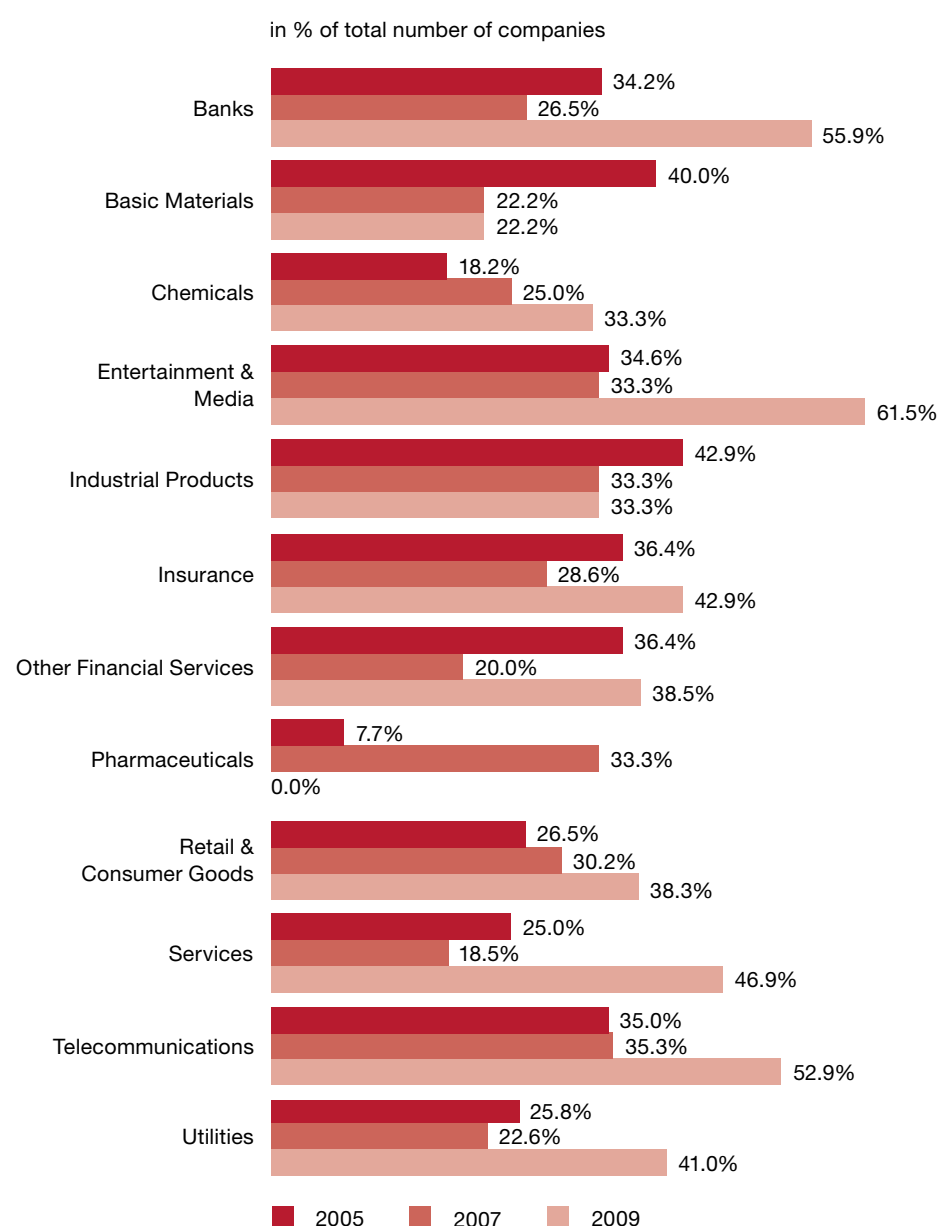


Figure 21 depicts the average amounts in Euros for goodwill impairment losses in 2005, 2007 and 2009 per industry. In eight out of the twelve industries depicted, the average goodwill impairment loss in 2009 is higher than the corresponding numbers in 2007 and in 2005. As one would expect, this again holds true in particular for the banking industry, where the average goodwill impairment loss in 2009 is more than four times as high as in 2007 and almost twenty times as high as in 2005.

Industries where the volume of goodwill write-downs in 2007 or 2005 exceeded those in 2009, are pharmaceuticals (where no company wrote off goodwill in 2009), other financial services (where the 2007 average was influenced by an exceptionally high goodwill impairment loss by an Italian property development company), utilities and finally telecommunications. In fact, the 2005 goodwill write-downs in the telecommunications industry dwarf goodwill losses in all other

industries in all years covered by our studies. However, the 2005-average in this industry was heavily influenced by the massive €34.2 bn goodwill impairment loss of one British company. This example demonstrates that one has to treat our comparisons of industry and country averages over time with caution. Given that our subsamples are relatively small, the averages can be heavily influenced by exceptionally large individual observations.

Fig. 21 Average goodwill impairment loss in 2005, 2007 and 2009, by industry

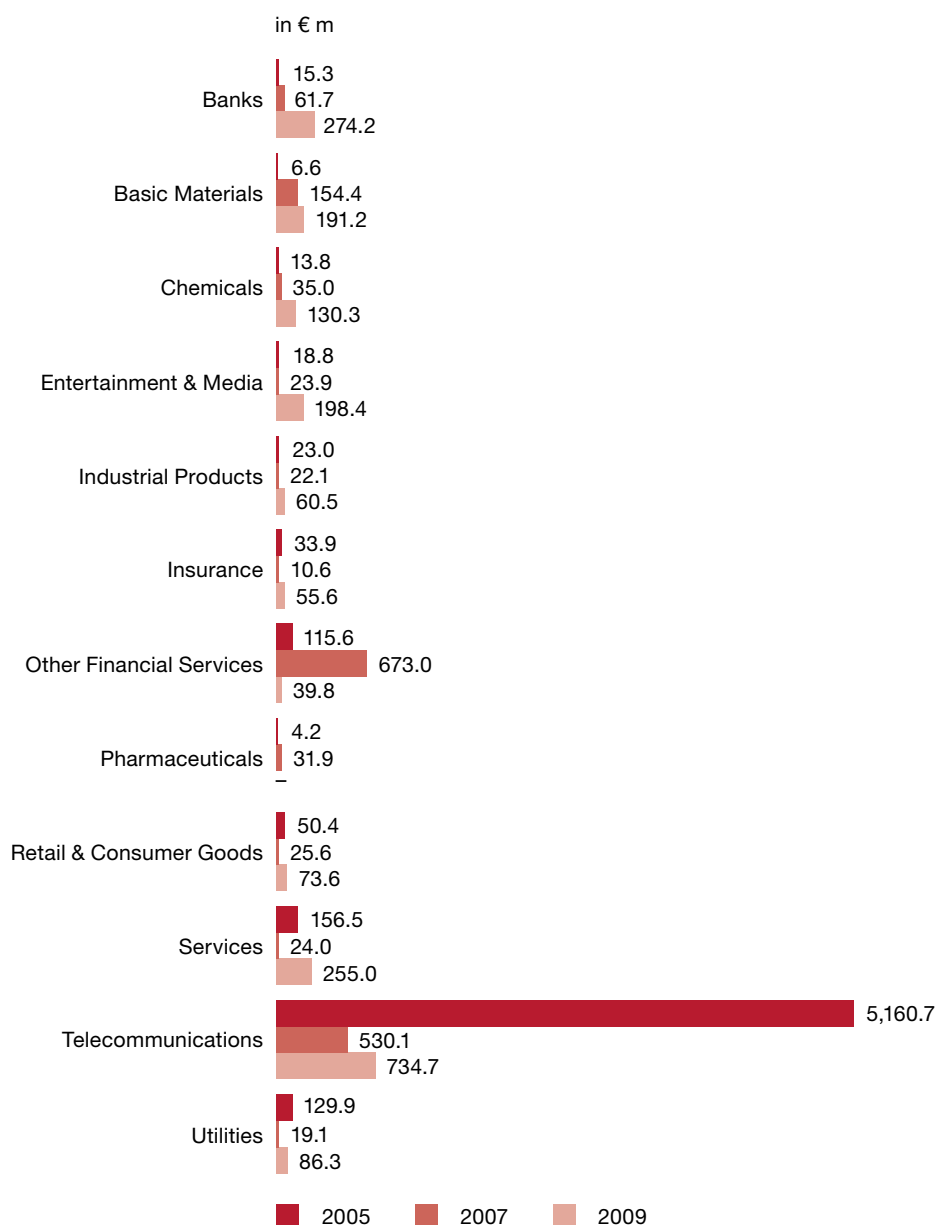
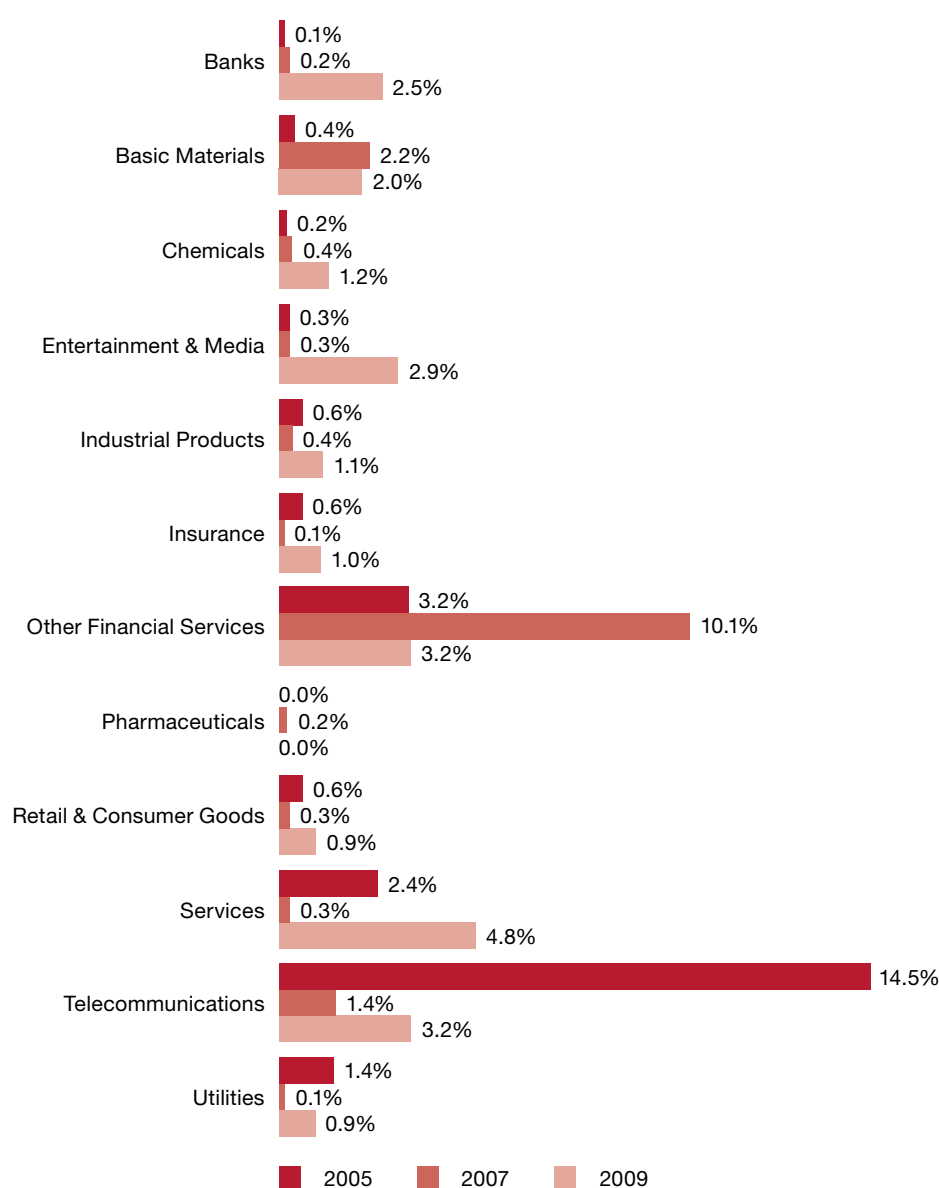


Figure 22 shows the proportion of goodwill companies wrote off in 2005, 2007 and 2009 on average. We have the sum of all goodwill impairment losses (per period) for the companies in our industry subsamples and set this in relation to the sum of companies' goodwill positions (before impairment). Again, one must be aware that some averages are influenced by large individual observations. This holds true, in particular, for industries with relatively small overall goodwill positions (e.g. other financial services).

Two observations can be made. First, in seven of the twelve industries the ratios for 2009 are higher than in both 2007 and in 2005. Second, the proportion of goodwill written off in 2009 in most industries is rather small. Even our sample companies in the banking sector, the sector that was at the epicentre of the crisis of 2008/2009, wrote off only about 2.5% of total goodwill in 2009. Similarly, companies in the entertainment & media sector, where almost two thirds of all sample companies reported a goodwill impairment loss, overall charges amounted to just under 3% of companies' total goodwill positions. Industrial products (1.1%), retail & consumer goods (0.9%), utilities (0.9%), insurance (1.0%) and, of course, pharmaceuticals (0.0%) are other companies with low proportions of write-offs.

Fig. 22 Average percentage of goodwill written off in 2005, 2007 and 2009, by industry



To conclude, the above analysis indicates that in the financial year 2009 in a majority of industries, companies reported more cases and higher total amounts of goodwill than in 2007 and in 2005. However, the differences between the years are not striking. The fact

that overall companies' goodwill balances remain almost unaffected by the most severe crisis for decades raises questions.

The impairment test according to IAS 36 does not have the purpose to evaluate the economic validity of acquisitions. Its „only“ purpose is to assess whether the carrying amounts of the goodwill are still „recoverable“.

An aspect one has to keep in mind in this context is that the impairment test according to IAS 36 does not have the purpose to provide rigorous ex-post evaluations of the economic validity of acquisitions undertaken by companies, or of the forecasts and business plans that originally underlay the respective investment decisions. Moreover, in a strict sense, it is also not the purpose of the tests to investigate whether companies' goodwill positions lost value during the reporting period. Instead the “only” purpose of the IAS 36 impairment test is to assess whether the carrying amounts of the goodwill are still “recoverable”, that is, whether their fair value less costs to sell or their value in use exceed the book value. Thus, it is possible (and indeed likely) that in 2008/2009 in most companies the fair values less costs to sell and the carrying amounts of goodwill positions declined substantially. However, as long as these values still exceeded the respective carrying amounts, impairment charges were not required.

Going-concern elements, growth options and other intangible assets that are created internally can provide an impairment cushion.

Another factor that is likely to contribute to the resilience of goodwill balances is that the impairment-only approach prescribed by IFRS means that goodwill from acquisitions is inextricably mixed up with the original goodwill generated by the company. Thus, going-concern elements, growth options and other intangible assets that are created internally and are not recorded on a company's books provide a cushion to the impairment testing of acquired goodwill. This provides an incentive for companies' management to allocate goodwill from acquisitions to those CGUs that generate internally the most goodwill. Furthermore ceteris paribus, there is an incentive to allocate goodwill from acquisitions to a small number of large CGUs so as to benefit from internal diversification effects.

The goodwill impairment test relies to a certain degree on subjective forecasts and assumptions whose determination requires judgement.

Finally as already mentioned, the goodwill impairment test relies to a certain degree on subjective forecasts and assumptions (e.g. discount rates, etc.) whose determination requires judgement. It is reasonable to expect that in 2008 and 2009 under the impression of an extreme financial and economic crisis and faced with high uncertainty pertaining to longer-term financing prospects, management will often have used its discretion to prevent impairment losses to the extent possible in order to protect earnings, equity positions and other key financial ratios and thereby the companies' position in the capital markets.

5 Testing goodwill for impairment

In this fourth and final section of our empirical study we report on how our sample companies report on the impairment tests for goodwill in their year-2009 financial reports. According to IAS 36 companies have to disclose details of their impairment testing practices in the notes to their financial statements. We have collected and analysed this information. Subsequently, we describe:

- how the companies allocate goodwill to cash-generating units (CGUs),
- when during the year they conduct goodwill impairment tests,
- whether companies responded to the economic crisis and conducted impairment tests more than once during the year (“trigger-based” impairment tests),
- which value concept they use in order to determine the recoverable amounts of CGUs (fair value less costs to sell or value in use), and
- how the respective values are estimated.

Allocation of goodwill to cash-generating units (CGUs)

In the preceding section it was shown that goodwill is a very important asset category. For many companies it is the single most important position on their balance sheet and in numerous cases goodwill positions are even larger than companies’ total shareholders’ equity. At the same time, goodwill is an asset that is less concrete than other intangible assets. For users of financial statements to fully comprehend the allocation of goodwill and the subsequent impairment testing, companies would have to disclose transparent information on how CGUs (here and in the following: or groups of CGUs) are defined (e.g., product lines, geographical segments, operations, plants, etc.), how many CGUs there are in total, to how many CGUs goodwill has been allocated and which amounts of goodwill the CGU or groups of CGUs contain. However, IFRS does not require companies to disclose such detailed information. Instead, according to IAS 36, companies are required only to disclose basic information about CGUs that contain significant amounts of goodwill (or other intangibles assigned indefinite lives). In addition, companies must present more information for CGUs for which material impairment losses have been recognised.

Of the 322 companies in our sample, 269 (83.5%) voluntarily disclose the total number of CGUs containing goodwill. The ratio of companies disclosing this information is higher than the ratios found in our two earlier studies (2007: 77.3%; 2005: 70.8%). We present the data in Figure 23. Most companies allocate goodwill to relatively low numbers of CGUs. In fact, 19 companies report that their total goodwill position is allocated to a single CGU, and for more than half of the companies that provide this type of information the number of goodwill-containing CGUs is five or smaller (140 companies, 52.0%). Only 45 companies allocate goodwill to more than ten CGUs (16.7% of all companies that provide information on the number of goodwill-containing CGUs). The company with the highest number of CGUs containing goodwill is a large French industrial company; here an overall very high goodwill position is allocated across no less than 96 CGUs.⁴⁹ There are seven other companies where the number of CGUs containing goodwill is higher than 30. Again, these are mostly very large companies with very substantial goodwill balances.

Figure 24 shows the number of CGUs that according to companies’ disclosures contain significant goodwill. 278 companies (voluntarily) provided this information; 86.3% of our sample companies. Again, the graph demonstrates that (significant) goodwill for most companies is concentrated in a small number of CGUs; in most cases four or less. 60 companies report that only one CGU contains a significant amount of goodwill.

For many companies goodwill is the single most important position on their balance sheet and in numerous cases goodwill positions are even larger than companies’ total shareholders’ equity.

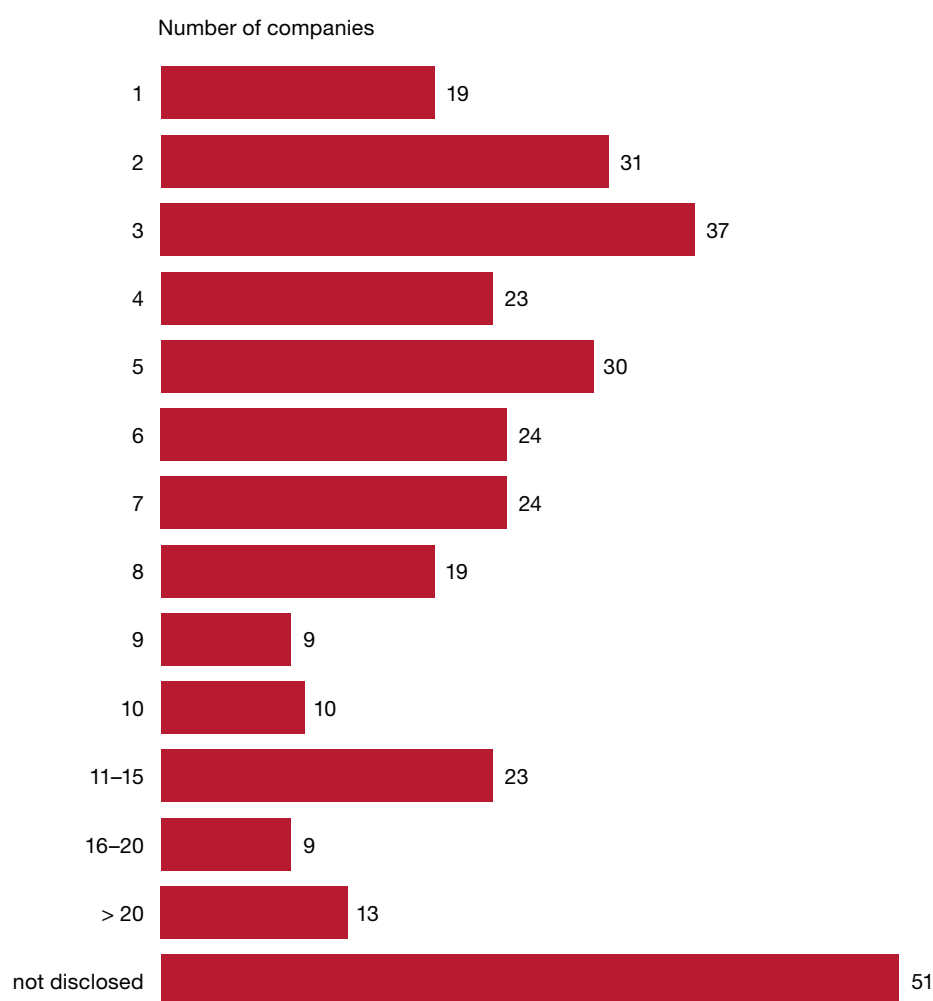
Most companies allocate goodwill to relatively low numbers of CGUs.

⁴⁹ However, the company reports only three CGUs as containing significant goodwill.

Goodwill has to be allocated to the lowest organisational level within the company for which it is monitored for internal management purposes.

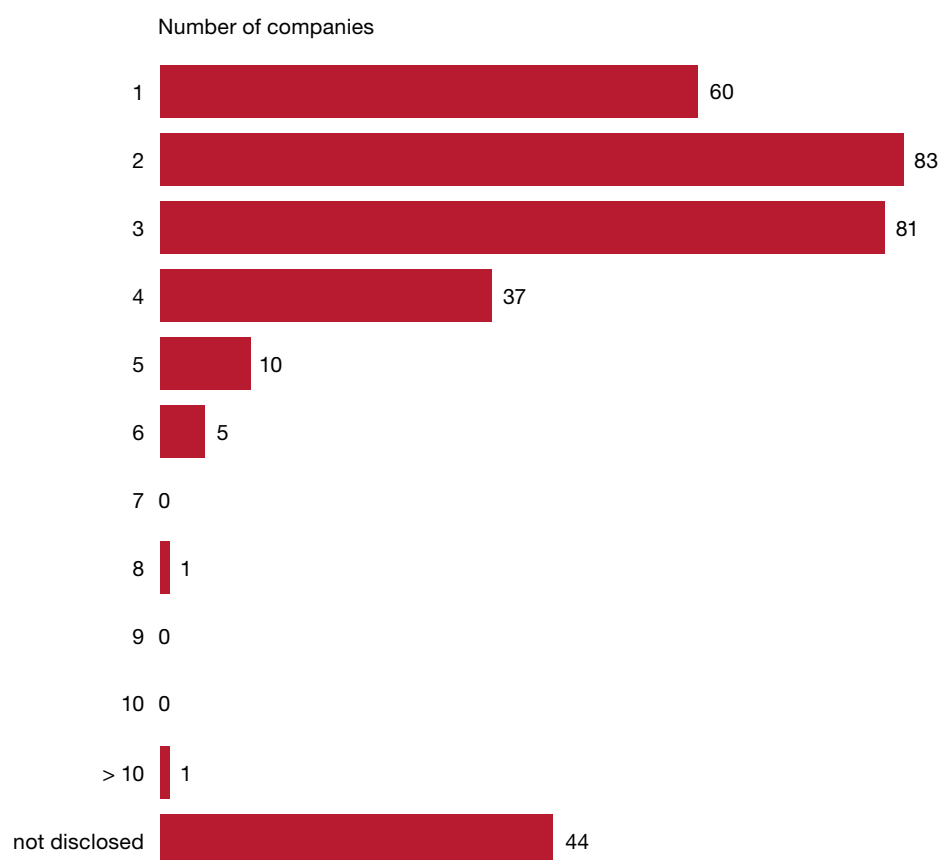
In order to understand why goodwill is allocated mostly to only few CGUs, it is important to recall that the structure of CGUs within companies is likely to differ for “normal” asset impairment testing (e.g., for tangible assets – property, plant and equipment). As was pointed out in section C of this report, IAS 36 generally defines a CGU as the “smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets”.⁵⁰ While this definition is based on a “bottom-up” perspective, the rules for the allocation of goodwill follow a “top-down” approach. Goodwill has to be allocated to the lowest organisational level within the company for which goodwill is monitored for internal management purposes. At a minimum, however, it has to be allocated to units at the level of the company’s operating segments according to IFRS 8 “Operating Segments”. According to the footnote disclosures, a majority of our sample companies do allocate goodwill at the level of their segment reporting format. This explains why the number of CGUs containing goodwill is usually much smaller than the total number of CGUs for any given company.

Fig. 23 Number of cash-generating units disclosed as containing goodwill per company in 2009



⁵⁰ See IAS 36, para. 6.

Fig. 24 Number of cash-generating units disclosed as containing significant goodwill per company in 2009

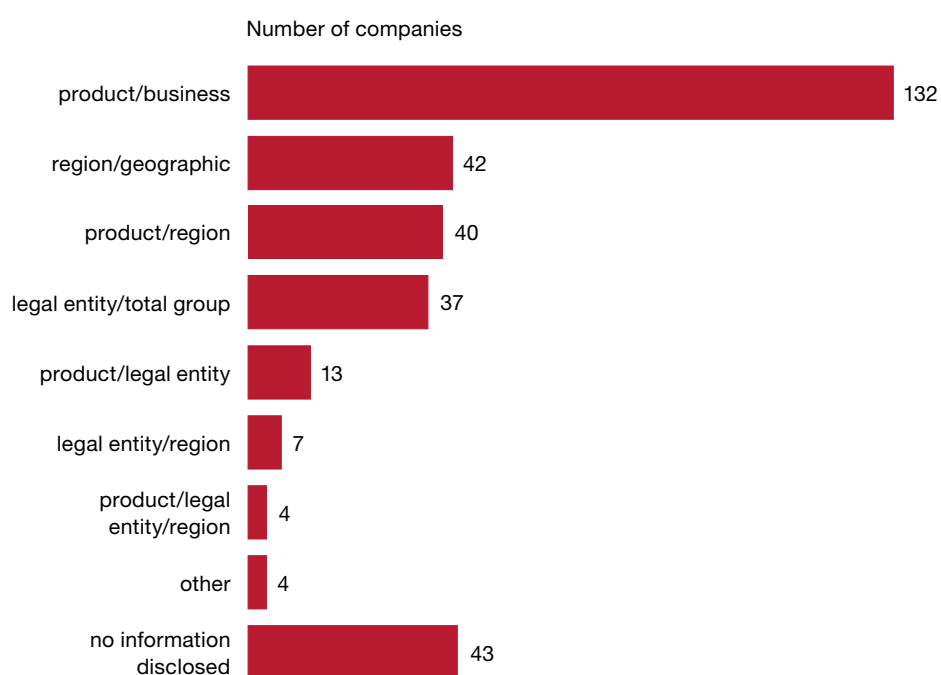


There may be other reasons why goodwill is often concentrated in only few CGUs. For instance, highly focused companies may be active in only few markets, or they may follow acquisition strategies that are focused on only one or few business units. At the same time, it should be noted that in many cases judgement by company management is required in order to allocate goodwill to those CGUs within the company that are “expected to benefit from the synergies of the combination”, as required by IAS 36, para. 80. Finally, as mentioned above, managers may have an interest in allocating goodwill from acquisitions in only few, relatively high aggregated CGUs. Firstly, this means that fewer goodwill impairment tests will have to be conducted in subsequent periods. Secondly, allocating goodwill in few large CGUs reduces the probability of future impairment losses.⁵¹

Of our 322 sample companies, 279 (86.6%) disclose information on how they define CGUs for the purpose of allocating goodwill. As depicted in Figure 25, almost half of all companies for which this type of information is available (132 companies, or 47.3%) report that they define CGUs along product lines. Forty-two companies (15.1%) define CGUs using geographical criteria. Thirty-seven companies (13.3%) use the legal structure to distinguish CGUs. The remaining 68 companies (24.4%) use a combination of criteria. In most instances, these companies combine product lines and geographical criteria or product lines and legal criteria.

Most companies report that they define CGUs along product lines.

⁵¹ Also see Pellens, B./Sellhorn, Th., *Neue Goodwill-Bilanzierung nach US-GAAP – Der Impairment-Only Approach des FASB*, Der Betrieb, 54(14), 2001, pp. 713-720.

Fig. 25 Classification criteria for determining cash-generating units in 2009

Over time the proportion of companies that define CGUs along product lines and geographical criteria has increased.

If we compare our findings regarding the definition of goodwill-containing CGUs to those from our 2007 and 2005 analysis, it is interesting to note that the proportion of companies that define CGUs along product lines and geographical criteria has increased while the proportion of companies defining CGUs based on their legal structure has diminished. In 2005 33.3% of companies that made this type of information available defined CGUs for the purpose of allocating goodwill along their product lines, in 2007 the proportion was 42.1%, and in 2009 it has further increased to 47.3%. The respective ratios for geographically defined CGUs are 11.0% in 2005, 11.9% for 2007, and 15.1% for 2009. Concomitantly, the proportion of companies defining CGUs on the basis of their legal structures has shrunk from 25.1% in 2005 to 10.3% in 2007 and prevails at a low level of 13.3% in 2009. It seems plausible that more and more companies define goodwill-carrying CGUs along product lines or geographical criteria. Presumably, this aligns the structure of the CGUs with the companies' segment structure and thus the structure of their internal management reporting.

Timing of goodwill impairment tests

We also collected information from the note disclosures to financial statements regarding the timing of companies' goodwill impairment tests. IAS 36 specifies that the annual goodwill impairment test "may be performed at any time during an annual period, provided the test is performed at the same time every year".⁵² The standard, furthermore, allows companies to conduct impairment tests of different CGUs at different times during the year. In addition to the regular annual test, companies are required to perform an impairment test whenever there is an indication that a CGU containing goodwill may be impaired ("triggering event").

⁵² See IAS 36, para. 96.

Tab. 11 Disclosed timing of goodwill impairment testing in 2009

	Number of companies (multiple entries per company possible)
The annual goodwill impairment test is performed ...	
... during the first quarter	2
... during the second quarter	3
... during the third quarter	10
... during the fourth quarter	26
... at the half-year balance sheet date	4
... at, or shortly before, the balance sheet date	89
... at more than one time during the year	14

IAS 36 does not explicitly require companies to disclose the timing of the annual test. However, 128 companies (39.8% of our 322 sample companies) voluntarily provide this information in their notes while 194 (60.2%) companies do not provide information on the precise timing of their impairment test.

As presented in Table 11, the majority of companies (89 companies) perform the test at, or shortly before, the end of the financial year. Another 26 companies regularly perform the impairment test during the fourth quarter. As we already remarked in our 2005 study, we find it surprising that so many companies decided to perform the goodwill impairment test at the financial year-end. For most companies' accounting departments, and for most auditors, the end of the financial year is a time of heavy workload and extreme time pressure ("busy season"). One would therefore expect companies to shift complex and time-consuming tasks such as goodwill impairment testing to other time periods, if possible. Furthermore, conducting goodwill impairment tests means that companies mostly have to determine the recoverable amount of CGUs on the basis of forward-looking information. This information is contained in the companies' mid to longer-term financial and business plans. Thus, to prevent unnecessary replication of work it would appear rational to coordinate the timing of impairment testing with the planning cycle of the company.⁵³

Most companies perform the goodwill impairment test at, or shortly before, the end of the financial year.

"Trigger-based" goodwill impairment tests

According to IAS 36, para. 90, "a cash-generating unit to which goodwill has been allocated must be tested for impairment annually, *and whenever there is an indication that the unit may be impaired*" (emphasis added by authors).

In paragraph 12, the standard lists factors that could indicate that an asset is impaired. A rather obvious indication for a possible impairment arises when "evidence is available from internal reporting that indicates that the economic performance of an asset is, or will be, worse than expected" (IAS 36, para. 12 (g)). An example for a potential external indicator is "significant changes with an adverse effect on the entity have taken place during the period ... in the ... economic environment in which the entity operates" (IAS 36, para. 12 (b)). There cannot really be any doubt that the financial and economic crisis of late 2008, early 2009, which has been characterised as the worst crisis since the Great Depression that started in 1929, would qualify for this description for many, if not most companies in our sample.

IAS 36 para. 12 lists factors that could indicate that assets are impaired.

⁵³ See Epstein, R./Pellens, B./Ruhwedel, P. (2005): *Goodwill bilanzieren und steuern*, Frankfurt am Main: Deloitte Consulting; see also Pellens, B./Epstein, R./Barth, D./Ruhwedel, P./Sellhorn, Th. (2005): *Goodwill Impairment Test – ein empirischer Vergleich der IFRS- und US GAAP-Bilanzierer im deutschen Prime Standard*, in: BB-Special, 10/2005 Goodwill-Bilanzierung, Supplement to Betriebs-Berater, 60(39), pp. 10-18.

One external indicator mentioned in IAS 36 is when the market value of entity's equity is below its book value.

Another external indicator mentioned in IAS 36, para. 12 (d), is given when “the carrying amount of the net assets of the entity is more than its market capitalisation”, that is, when the ratio of the market value of equity to the book value of equity is smaller than one. We calculated market-to-book ratios (MtB ratio) for our sample companies as of 30 March 2009, 30 June 2009, 30 September 2009 and 31 December 2009. Table 12 reports the results. First, one can see that on average market-to-book ratios were at their lowest at the end of the second quarter 2009. They improved over the rest of 2009 reflecting the strong recovery in the stock markets. Second, we see that as of 30 June 2009 for more than a third of our sample companies 122 (or 40.0%) the MtB ratio was smaller than one, that is, the market value of the ordinary (common) equity divided by the balance sheet value of the ordinary (common) equity in the company.⁵⁴ As one would expect, the proportion of companies with MtB ratios smaller than one was relatively high in the banking industry where the average for the subsample was only 0.5. Another sector where shares, on average, traded below their book value was basic materials. However, Table 12 shows that at the end of the first half of 2009, there were also numerous companies in other sectors of the economy with market-to-book ratios smaller than one, thus indicating a possible impairment of assets, in particular of goodwill.

Tab. 12 Quarterly market-to-book ratios in 2009, by industry

Industry	Number of companies	30 March 2009		30 June 2009		30 September 2009		31 December 2009	
		Average MtB ratio	Number of companies less than 1	Average MtB ratio	Number of companies less than 1	Average MtB ratio	Number of companies less than 1	Average MtB ratio	Number of companies less than 1
Banks	34	0.6	28	0.5	31	0.7	25	1.0	19
Basic Materials	18	0.8	15	0.7	14	1.1	10	1.3	7
Chemicals	9	1.8	2	1.7	2	1.9	2	2.1	0
Entertainment & Media	13	1.8	2	1.7	2	2.0	3	2.5	0
Industrials	69	1.6	25	1.5	25	1.9	17	2.3	8
Insurances	21	1.5	8	1.3	12	1.5	10	1.8	7
Other Financial Services	13	1.6	4	1.4	5	1.8	5	2.0	3
Pharmaceuticals	10	5.0	1	4.8	1	4.8	1	5.4	1
Retail & Consumer Goods	47	3.1	7	3.2	7	3.6	7	4.1	3
Services	32	1.8	11	1.7	12	2.0	10	2.3	5
Telecommunications	17	6.4	3	2.5	4	2.5	3	2.7	3
Utilities	39	1.7	6	1.6	7	1.9	2	2.1	1
Total	322	2.1	112	1.8	122	2.1	95	2.4	57

In their notes on goodwill and goodwill impairment testing, numerous companies refer to the economic crisis. For example, many companies explain that the crisis has implications for expected future revenues and profits, or they point out that as a result of the crisis their cost of capital has changed. On the other hand, only few companies report in their footnote disclosures that they have conducted “trigger-based” goodwill impairment tests in addition to their routine annual tests. It should be noted, however, that IAS 36 does not require companies to report whether they have conducted additional, “trigger-based” goodwill impairment tests.

⁵⁴ Source: Worldscope, November 2010, item 03501.

Overall, we have identified a total of 14 companies that indicate in their disclosures that they performed goodwill impairment tests more than once during the year (see above, Table 11). In thirteen of these cases, companies explicitly referred to additional impairment tests that were triggered by the turmoil in the financial markets and the effects on customer orders, capacity utilisation, cash flow, etc. Several companies appear to have tested goodwill for impairment in 2009 on a quarterly basis. Two companies explained that the crisis had induced them to conduct additional impairment tests, but that no impairment losses resulted from these tests. In the other nine cases, according to the disclosures, the additional tests led to goodwill impairment losses.

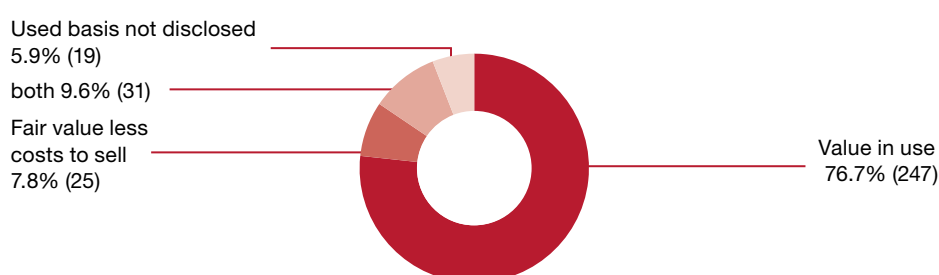
Only few companies indicate that they performed additional „trigger-based“ goodwill impairment tests in 2009.

6 Measuring recoverable amount of CGUs

“Fair value less costs to sell” versus “value in use”

IAS 36, para. 134, requires that companies disclose how they estimate the recoverable amounts of CGUs that contain significant goodwill positions (“significant” meaning “in comparison with the entity’s total carrying amount of goodwill”). In other words, they have to explain whether the recoverable amounts are being estimated using fair value less costs to sell or value in use. Furthermore, as will be discussed in detail below, companies are also required to describe in detail how the respective valuation models are applied.

Fig. 26 Value concept applied for goodwill impairment testing in 2009



As shown in Figure 26, 303 companies disclose how they estimated the recoverable amounts of CGUs containing significant goodwill positions, i.e. more than 94.1% of our sample companies. A large majority – 247 companies (76.7%) – reports that impairment testing of CGUs containing significant goodwill is based on estimates of value in use only. Twenty-five companies (7.8%) only use fair value less costs to sell, and 31 companies (9.6%) employ both value concepts to determine the recoverable amount. Nineteen companies (5.9%) do not report any information.

The majority of companies applied the value in use concept testing CGUs containing goodwill.

If we compare these findings to the results of our earlier studies, we can note firstly that the proportion of companies that supply information on the concept applied to determine the recoverable amount of goodwill has increased over time; from 84.3% in 2005 to 90.3% in 2007 and to 94.1% in the 2009 reports. Secondly, the proportion of companies that use value in use to determine the recoverable amount of goodwill-containing CGUs has increased since our first study in 2005. The ratio was 81.4% in 2005, it increased to 86.4% in 2007 and it remained on this high level in 2009 (86.3%). One may conclude that over the years the practices of large European companies in the area of goodwill impairment testing appear to become more similar, and thus more comparable, at least with regard to the value concept applied.

Application of the fair value less costs to sell concept

In IAS 36, paragraphs 25 to 27, a “hierarchy” is defined for the data to be used in the determination of an asset’s or a CGU’s fair value less costs to sell. According to these rules, the best evidence of an asset’s (or a CGU’s) fair value less costs to sell is a price in a binding sales agreement in an arm’s length transaction. If no such agreement exists but the asset is traded in an active market, the best estimate for fair value less costs to sell is the asset’s market price. For CGUs as well as for single assets, however, normally neither binding sales agreements nor active markets exist. In such circumstances, companies must estimate fair value less costs to sell based on “the best information available to reflect the amount that an entity could obtain, at the balance sheet date, from the

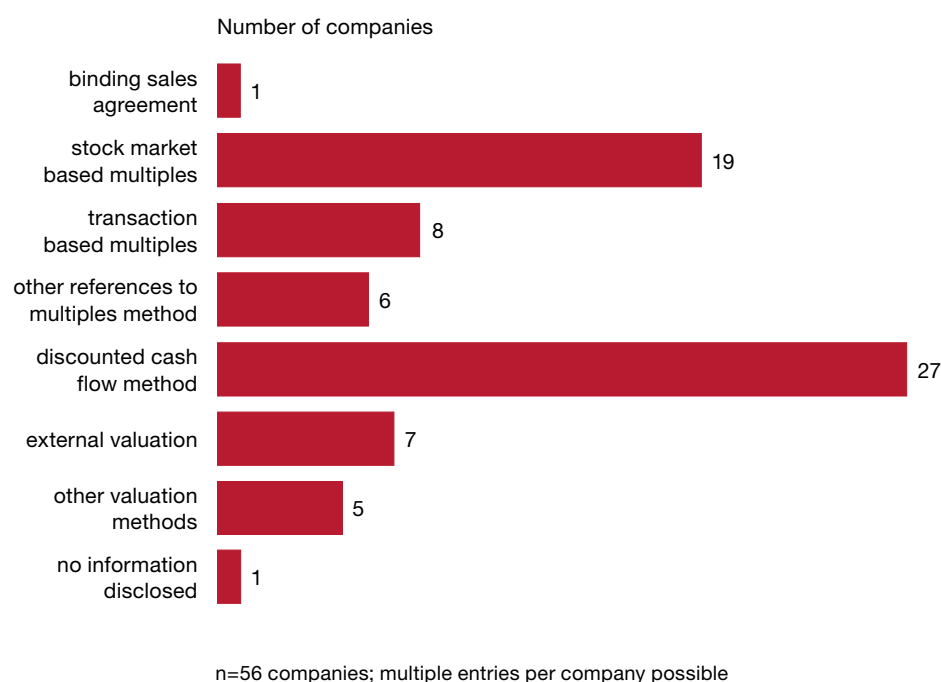
disposal of the asset in an arm's length transaction between knowledgeable, willing parties, after deducting the costs of disposal".⁵⁵

IAS 36 adds that companies, in estimating the fair value less costs to sell in the described way, are to consider the outcome of recent transactions for similar assets within the same industry. However, since CGUs are typically unique combinations of factors of production, identifying transactions for "similar assets" will often be difficult or even impossible. Whenever there is "no basis for making a reliable estimate of the amount obtainable from the sale of [a CGU] in an arm's length transaction between knowledgeable and willing parties", companies may use only value in use to estimate the recoverable amount.⁵⁶

Fifty-six companies report that they apply fair value less costs to sell to determine the recoverable amount of CGUs containing goodwill either as the sole concept or in combination with the value in use concept (Figure 26). We find that a relatively high proportion of Italian and German companies and, to a somewhat lesser extent, Dutch and French companies apply this concept. Within our Italian country subsample, 38.9% use fair value less costs to sell, among the German companies the proportion is 38.5%. The ratios are 26.3% for Netherlands and 23.7% for France. In other countries the usage of the fair value less costs to sell concept is much less common. A clear industry pattern is not observable.

CGUs are typically unique combination of factors of production; thus, identifying transactions for „similar assets“ will often be difficult or even impossible.

Fig. 27 Methods used to estimate cash-generating unit's fair values less costs to sell in 2009



Companies employ different methodologies to estimate fair value less costs to sell. Figure 27 summarises this information. One company actually refers to a binding sales

⁵⁵ IAS 36, para. 27. It should be noted that the IAS 36 rules concerning the determination of fair value less costs to sell are about to be changed by the forthcoming Exposure Draft on Fair Value Measurement. According to paragraph D24 of the Exposure Draft that was published by the IASB on 29 June 2010, the above discussed paragraphs 25 to 27 of IAS 36 will be deleted. They will be replaced by a simple reference to the new IFRS on fair value measurement. This planned amendment is important because it will explicitly confirm that companies in the context of IAS 36 impairment tests can determine the fair value less costs to sell of assets and CGUs using discounted cash flow valuation methods based on internally generated data (level 3 inputs).

⁵⁶ See IAS 36, para. 20.

agreement for one of its CGUs. Thirty-three companies refer to the use of multiples, either multiples based on stock market valuations (19), or on recent transactions (8), or multiples based on earnings, EBITDA, or on some other basis (6). Twenty-seven companies estimate fair values using the discounted-cash-flow method, and seven companies report that the fair values are determined through an external, independent appraisal (without mentioning which method is being used by the appraiser employed). Finally, five companies refer to other, sometimes industry-specific, valuation approaches.

One might question the reliability of valuations based on simple multiples, especially in cases where multiples appear to be the only method used to determine the fair values less costs to sell of CGUs. Multiples will only produce valid estimates of companies' (or CGUs') values if the recent M&A transactions or the stock market valuations that are used as points of reference are efficient, and if the companies (CGUs) to be valued are comparable to the companies that underlay the M&A or the stock market valuations. Both assumptions can be violated. First, if recent M&A transactions or valuations in the stock markets are inflated (depressed), then the fair values derived from the multiples method will also be inflated (depressed). Second, as has been mentioned above, CGUs are typically unique combinations of factors. They will always differ in some respects from the businesses that have been the subject of recent M&A transactions, or from companies traded in the stock market. In particular, since normally only assets are tested with no inclusion of financing allocated to CGUs, they cannot be directly compared to companies that are financed with equity and debt. Thus, unless the differences in the financial structure as well as other material differences between the CGU and its "peer companies" are properly accounted for, multiples can produce biased valuations.

In the absence of binding sales agreements, the estimation of the fair value less costs to sell of a CGU will always involve judgement and therefore discretion on the side of company management.

In the absence of binding sales agreements, the estimation of the fair value less costs to sell of a CGU will always involve some degree of judgement and therefore discretion on the side of company management. Because of this, IAS 36, para. 134 (e) specifies that unless fair values of CGUs containing significant goodwill are determined by observable market prices, companies must disclose descriptions of the key assumptions used to estimate the fair values as well as descriptions of "the approaches to determining the values assigned to these assumptions". Only 23 companies (41.1%) provide this information.

Application of value in use concept: disclosure requirements

Determining value in use of an asset or a CGU involves the following procedure:⁵⁷

1. estimating the future cash inflows and outflows to be derived from continuing use of the asset or the CGU, and from its ultimate disposal; and
2. applying the appropriate discount rate to calculate the net present value of those future cash flows.

Following standard valuation procedure, and the requirements of IAS 36, para. 33, companies have to differentiate between cash flow projections over a near- to mid-term horizon and longer-term forecasts. The standard requires the estimates of near to mid-term cash flow projections to be based on the most recent budgets or forecasts that are used for internal decision-making purposes and have been approved by management. The time horizon for these projections should not exceed five years. Projections beyond the internal planning horizon must be extrapolations of the short-term projections based on steady or declining growth rates (terminal values).

Companies that employ the value in use concept have to disclose detailed information on these estimations.

According to IAS 36, para. 134 (d), companies that employ the value in use concept to determine the recoverable amounts of CGUs have to disclose detailed information on these estimations for each CGU that contains significant portions of the company's

⁵⁷ See IAS 36, para. 31.

overall goodwill balance. More precisely, among other things, the following disclosures are required:

- a description of each key assumption used to forecast cash flows for “the period covered by the most recent budgets/forecasts”;
- a description of management’s approaches to determining the values assigned to each key assumption;
- the period over which management has projected cash flows based on financial budgets/forecasts approved by management;
- the growth rate used to extrapolate cash flow projections beyond the period covered by the most recent budgets/forecasts; and
- the discount rates applied to the cash flow projections.

As mentioned previously, 278 companies report that they apply the value in use concept to estimate the recoverable amount of CGUs containing significant amounts of goodwill. Of these, 247 companies apply value in use as the sole concept. An additional 31 apply value in use parallel to estimations of fair value less costs to sell. Of the 278 companies utilising value in use, 239 (86.0%) provide the required description of the key assumptions used to forecast cash flows for the period covered by the most recent budgets or forecasts. Many companies fulfil this disclosure requirement by providing lists or tables of key assumptions.

Of the 278 companies utilising value in use, 239 provide the required description of the key assumptions.

The second disclosure requirement, the description of management’s approaches to determining the values assigned to each key assumption, is fulfilled by 255 or 91.7% of all companies applying the value in use concept. Furthermore, most companies (252, or 90.6%) disclose the planning period for the projected cash flows based on approved financial budgets or forecasts. Information concerning the growth rate underlying the calculation of the terminal values is reported by 217 companies (78.1%). 252 companies (90.6%) report the discount rate applied to the projected cash flows and 198 companies (71.2%) report all three key assumptions.

We can conclude firstly that the great majority of our sample companies provide the minimum required disclosure items with respect to value in use estimations for CGUs containing goodwill. Secondly for all disclosure items discussed, the proportions of companies that provide the required information have increased in comparison to 2007 and 2005.

The proportions of companies that provide the required information have increased in comparison to 2007 and 2005.

Thirdly however, there are still a number of companies that do not provide some or indeed all of the prescribed disclosure items. This is regrettable as financial statement users can assess the efficacy and rigour, and accordingly the reliability, of the impairment tests for goodwill (and other intangible assets assigned indefinite useful lives) only if the concepts, assumptions and parameters underlying these tests are disclosed.

Value in use concept: the planning period

The discounted-cash-flow method is the standard method applied by appraisers, investment bankers, and other professionals to value projects or businesses.⁵⁸ Usually, two phases are distinguished with respect to the expected future cash flows to be discounted. In the first phase, typically covering three to five years, cash flows are forecasted in detail on a year-by-year basis. The second phase covers the remaining lifetime of the project or the business. For this long-term horizon precise yearly forecasts are usually not made. Instead a continuous cash flow stream is assumed using either a constant annual cash flow stream or a stream with a constant or declining growth rate.

⁵⁸ For details, see for instance, Brealey, R. A./Myers, S. C./Allen, F. (2006): Principles of Corporate Finance, 9th edition, Princeton (N.J.), McGraw-Hill.

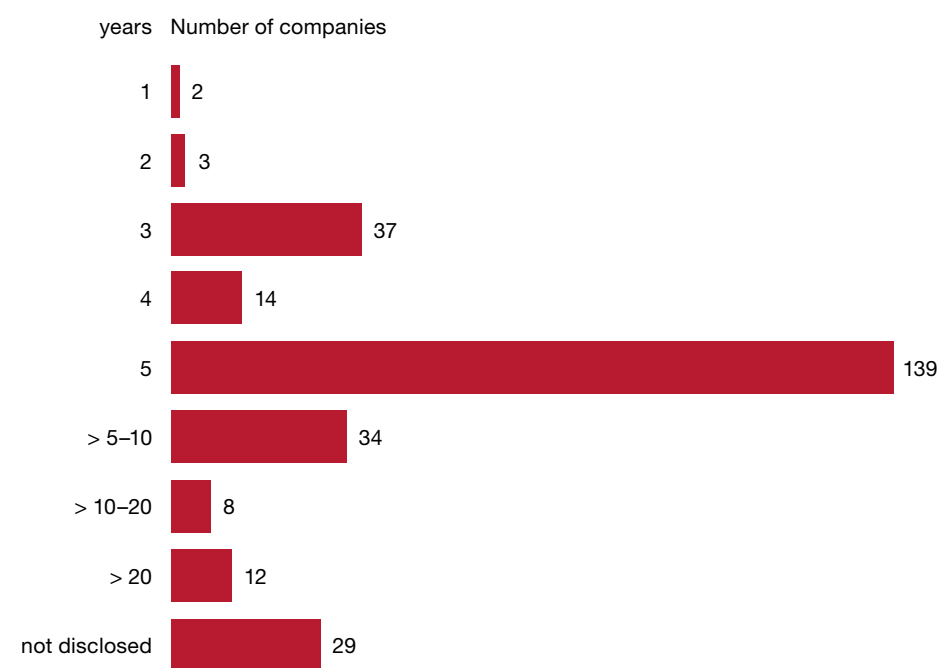
As has already been mentioned, the procedure prescribed in IAS 36 for the estimation of the value in use of assets and CGUs follows this two-stage concept. IAS 36, para. 35, states: “Detailed, explicit and reliable financial budgets or forecasts of future cash flows for periods longer than five years are generally not available. For this reason, management’s estimates of future cash flows are based on the most recent budgets/forecasts for a maximum of five years.” As an exception, companies may use detailed cash flow projections over periods longer than five years if the management “is confident that these projections are reliable and it can demonstrate its ability, based on past experience, to forecast cash flows accurately over that longer period”.⁵⁹

As mentioned above, companies that employ the value in use to determine the recoverable amount of CGUs containing significant amounts of goodwill are required to disclose the period covered by the detailed cash flow forecasts. This disclosure is provided by 249 of the 278 companies that apply the value in use (89.6%). Planning horizons vary greatly, not only between companies but also within some companies for different CGUs; 49 companies report several planning horizons or ranges of years.

Most companies make detailed annual cash flow forecasts for a five-year period.

The companies’ disclosures are summarised in Figure 28.⁶⁰ Most companies (139; 55.8% of all companies providing the information) make detailed annual cash flow forecasts for a five-year period, which represents the horizon IAS 36 suggests as the maximum time frame. The shortest planning horizon disclosed as the cash-flow estimation period is a one-year horizon, which is utilised by only two companies. This of course is a very short forecasting time frame resulting in a very high proportion of the CGU’s value in use being captured in the terminal values. Furthermore, the detailed annual cash flow forecasts for the first valuation phase form the basis for the estimation of the continuous cash flows assumed for the terminal value determination. Thus, a detailed cash flow planning horizon of only one (or two) year(s) makes the extrapolation of the continuous cash flows very difficult and rather unreliable.

Fig. 28 Application of value in use concept: Maximum planning period in 2009



⁵⁹ See IAS 36, para. 35.

⁶⁰ When companies report more than one planning horizon or ranges of years, the longest planning horizon is utilised in our analysis. For instance, if a company explains in its notes that for different CGUs planning horizons from three to five years apply, this company is counted in Figure 28 as using a horizon of five years.

Representing the other extreme, 54 companies exceed the IAS 36 maximum time frame of five years. In 34 cases companies report that they employ detailed cash flow plans of six to ten years, in 20 cases the forecast period goes beyond ten years, in 12 cases beyond 20 years. Extraordinarily long planning horizons are found relatively often in mining and in utilities companies.

IAS 36, para. 134 (d) (iii), requires that, when companies use detailed planning periods greater than five years in the determination of the value in use of a goodwill-containing CGU, they have to provide an explanation in their notes as to “why that longer period is justified”. The required explanation is provided by 28 of the 54 companies to which this clause applies. These explanations normally refer to finite planning periods for certain projects or to durations of exploration rights, patents, licences, etc.

In order to find out whether the planning practices underlying companies’ goodwill impairment tests have changed over time in reaction to the crisis of 2008/2009, we match and compare the disclosures of those companies that are included and provide the required information in both the current study and in the earlier 2007 study. We have to acknowledge that such a comparison is difficult and requires judgement as the format in which companies provide this information is heterogeneous and can change over time. Thus, the following observations have to be interpreted with caution. We find that in 2009 fewer companies use planning horizons of three or four years than in 2007; while a higher number of companies use a planning horizon of five years. We believe that this finding reflects a tendency for companies reporting practices to become standardised over time, analogously to our earlier observations concerning the definition of CGUs (more wide-spread use of product/business lines) and the concept used to determine the recoverable amounts of CGUs (more wide-spread use of value in use concept). Second, in 2009 a higher number of companies appear to use relatively long detailed planning horizons, that is, horizons exceeding five years. As a result of the economic crisis one would expect that in 2009 the uncertainty of planning was markedly higher than in previous years and that companies would, therefore, use shorter rather than longer planning horizons. Thus, it is rather difficult to explain why a higher number of companies in 2009 feel comfortable with planning horizons exceeding five years than in 2007.

Value in use concept: terminal value and long-term growth expectations

When performing discounted cash flow valuations of companies or CGUs containing goodwill (or other intangible assets with indefinite useful lives), major proportions of the total values normally result from the cash flows expected beyond the detailed planning periods (terminal value). For example, assuming a discount factor of 10%, the present value of the first five years of a constant eternal annual income stream makes up only 38% of the total present value; the remaining 62% of the present value is represented by the terminal value.⁶¹ If cash flows are growing instead of being constant or if the discount rate is lower than 10%, the relative weight of the terminal value is even higher. Therefore, estimating parameters for the terminal value is crucial for the determination of the value in use of CGUs.

The growth rate should reflect the expected sustainable long-term growth of the goodwill-containing CGUs’ cash flows. Mostly, companies’ planning and valuation models are based on nominal cash flow forecasts and nominal discount rates. Thus, the growth rate must incorporate an element that takes into account long-term inflation expectations. The standard valuation model assumes an indefinite time horizon for the cash flows underlying the terminal value. Therefore, the growth rate is effectively an eternal growth rate. It should not exceed the expected long-term nominal growth rate of the CGU’s sector or indeed the long-term growth rate of the economy as a whole.

The growth rate should reflect the expected sustainable long-term growth of the goodwill-containing CGUs’ cash flows.

⁶¹ See IDW, WP Handbuch, 13th edition, Volume II, Chapter A, para. 172.

The growth rates vary significantly between companies, and, analogously to the planning horizons, many companies differentiate growth rates for different CGUs.

Of the 278 sample companies employing value in use to estimate recoverable amounts of CGUs containing goodwill, 217 (78.1%) disclose information on the growth rate underlying the calculation of terminal values. The growth rates vary significantly between companies, and, analogously to the planning horizons, many companies differentiate growth rates for different CGUs. While some companies disclose growth rates (and other key parameters) precisely per CGU, often in tabular form, others only provide summaries by giving ranges of the growth rates used. A total of 53 companies report ranges. These can be very broad – for example, certain companies report ranges from 1.5% to 4.0%, from -0.8% to 3.4%, or from -1.2% to 1.5% – and some companies do not give any further explanation as to when or how the individual rates are applied. In these cases, the companies' goodwill impairment tests are not fully transparent and understandable to outside addressees of financial statements.

Fig. 29 Application of value in use concept: Maximum reported growth rates of expected cash flows for terminal value determination in 2009

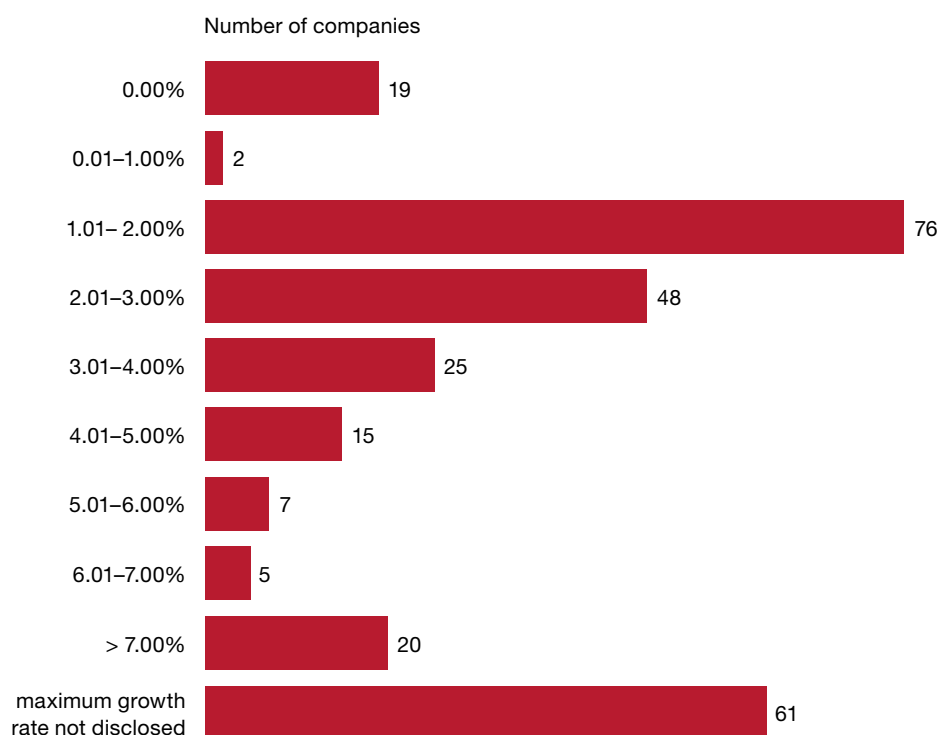


Figure 29 presents the maximum growth rates reported by the companies providing the relevant disclosures.⁶² Nineteen companies calculate terminal values with zero growth rates (8.8% of the 217 companies disclosing information on the growth rate). A majority of the companies employ long-term growth rates of CGU cash flows falling between 1% and 3%. Interestingly, 47 companies assume (maximum) growth rates of more than 4% in the valuation of some or all of their CGUs containing goodwill; 20 companies even use growth rates of 7% or higher. In most cases, these rates relate to companies that disclose several growth rates, or ranges of growth rates, that are applied in the valuation of different CGUs, and some companies explain explicitly that the unusually high rates are applied to CGUs active in high-growth product markets, or in regions of the world with

⁶² When companies report more than one growth rate, or ranges of growth rates, the highest reported rate is utilised in our analysis. Several companies use discounted cash flow models with three phases, a first phase with detailed cash flow forecasts, an intermediate second phase with a relatively high (and sometimes declining) growth rate, and a third phase covering the remaining life of the CGUs with lower growth rates or no expected growth. In these cases, our analysis utilises the growth rates for the third, final phase.

high growth expectations or high inflation rates. Such rates would appear questionable if employed as eternal growth rates for CGUs located in the Eurocurrency area or in other regions with modest long-term growth prospects and low inflation rates. We do not detect any systematic relationship between industry or country of domicile and the growth rates applied in the estimation of terminal values.

As with the planning horizon, given the heterogeneity of companies' reporting formats, it is difficult to compare the disclosed growth rates over time. As before, we attempt to find out whether the reported growth rates have changed since the crisis began by matching the disclosures of those companies that have reported the relevant information in both our current and in the 2007 study. Overall, reported growth rates appear to have decreased – a finding that is consistent with the darkened economic outlook following the economic crisis. In particular, in 2009 a relative majority of companies refer to (maximum) growth rates between 1% and 2%. In 2007, a relative majority used rates between 2% and 3%. Furthermore, even though overall growth rates seem to have gone down, we also find that a relatively higher number of companies report high maximum growth rates (i.e. rates of 5% or higher) in 2009 compared to 2007. However, as mentioned earlier, these rates usually pertain to companies disclosing different rates for different CGUs, and the increased number of high maximum growth rates could be a consequence of more companies using differentiated disclosure formats.

Value in use concept: the discount rate

The rate applied to discount the expected future cash flows to their present value is a key parameter for valuation models. The lower (higher) the rate, the higher (lower) the present value of a given cash flow stream. Even small changes in the discount rate can have substantial effects on the estimated recoverable amount of a CGU. This holds particularly true if a CGU's cash flows are expected to increase significantly over long planning horizons.

In the standard discounted cash flow valuation model, expected cash flows are discounted with a rate that reflects the risk of the project or the business.⁶³ Therefore, the appropriate discount rate is the opportunity cost of financing the project or, in the words of IAS 36, para. 56, a rate of return “investors would require if they were to choose an investment that would generate cash flows of amounts, timing and risk profile equivalent to those that the entity expects to derive from the [CGU]”.⁶⁴ It is important to note that the level of risk associated with different CGUs within a given company may differ. Thus, using the same discount rate to value all CGUs of a company can typically introduce bias if the CGUs are active in markets with different risks.⁶⁵

In the standard discounted cash flow valuation model, expected cash flows are discounted with a rate that reflects the risk of the project or the business.

Finally, to measure the contribution of an asset or a CGU to the value of a company from the viewpoint of its shareholders, taxes must be considered. If taxes are deducted from the CGU's expected pre-tax cash flows, they should also be incorporated into the discount rate.⁶⁶ Ideally, the valuation should consider all tax consequences on both a corporate and investor level. However, since the individual tax conditions of investors are often not known when conducting the appraisal, standard valuation models normally only incorporate corporate taxes.

⁶³ In principle, it is also possible to adjust the expected cash flows of a project, a CGU or a company with respect to risk level. In such cases, where so-called security equivalents are used in the numerator of the discounted cash flow formula, the appropriate discount rate to be used in the denominator is a risk-free rate of return. Both approaches are allowed under IAS 36, i.e. the traditional approach where the risk of the expected future cash flows is reflected in the discount rate, and the alternative approach where the uncertainty enters into the determination of the expected cash flows themselves. For details, see IAS 36, para. 32 and Appendix A.

⁶⁴ For more detail also see IAS 36, Appendix A, para. A15 to A21.

⁶⁵ Conceptually, a company's cost of capital can be interpreted as a weighted average of the costs of capital of all its projects or CGUs.

⁶⁶ The discount rate reflects the investors' opportunity cost for financing the project, that is, the rate of return on an alternative investment. To prevent bias in the valuation, taxes due on returns from the alternative investment are taken into account.

In contrast to these considerations, IAS 36, for the purpose of impairment testing of CGUs (and other assets), prescribes a valuation on a pre-tax basis (that is, before corporate and personal taxes). According to IAS 36, para. 50 (b), income tax receipts or payments must not be included in the estimation of future cash flows, and IAS 36, para. 55, explicitly requires companies to use a pre-tax discount rate.⁶⁷ In the Basis for Conclusions, the IASB explains that discounting pre-tax cash flows at a pre-tax discount rate should give the same result as discounting post-tax cash flows at a post-tax discount rate, “as long as the pre-tax discount rate is the post-tax discount rate adjusted to reflect the specific amount and timing of the future tax cash flows”.⁶⁸ Although true in principle, this may lead to serious practical problems since observable returns in capital markets are always impacted by taxes.⁶⁹

As previously explained, 252 companies, or 90.6% of the 278 sample companies that employ value in use, disclose the discount rates applied in their valuations. Similar to disclosures associated with planning horizons and growth rates, companies report a wide range of discount rates, with differences arising both between companies and within companies for different CGUs. Figure 30 summarises the disclosed discount rates.

Given the heterogeneous format of disclosure assumptions are needed to aggregate the data. When companies report more than one discount rate or ranges of rates our analysis is based on the lowest rate disclosed. Furthermore, some companies present details on both pre-tax and post-tax discount rates used in the valuation of CGUs. The differences between pre-tax and post-tax discount rates are often considerable. For instance, one company explains that the pre-tax rate is 11%, while the post-tax rate is 8.5%; another company reports a range between 10.2% and 13% for pre-tax discount rates and a range between 7.5% and 11.3% for post-tax rates. In such cases, in accordance with IAS 36, our analysis is based on the disclosed pre-tax discount rates. Most companies, however, do not explicitly state whether the discount rates or ranges of rates reported are pre-tax (or post-tax).

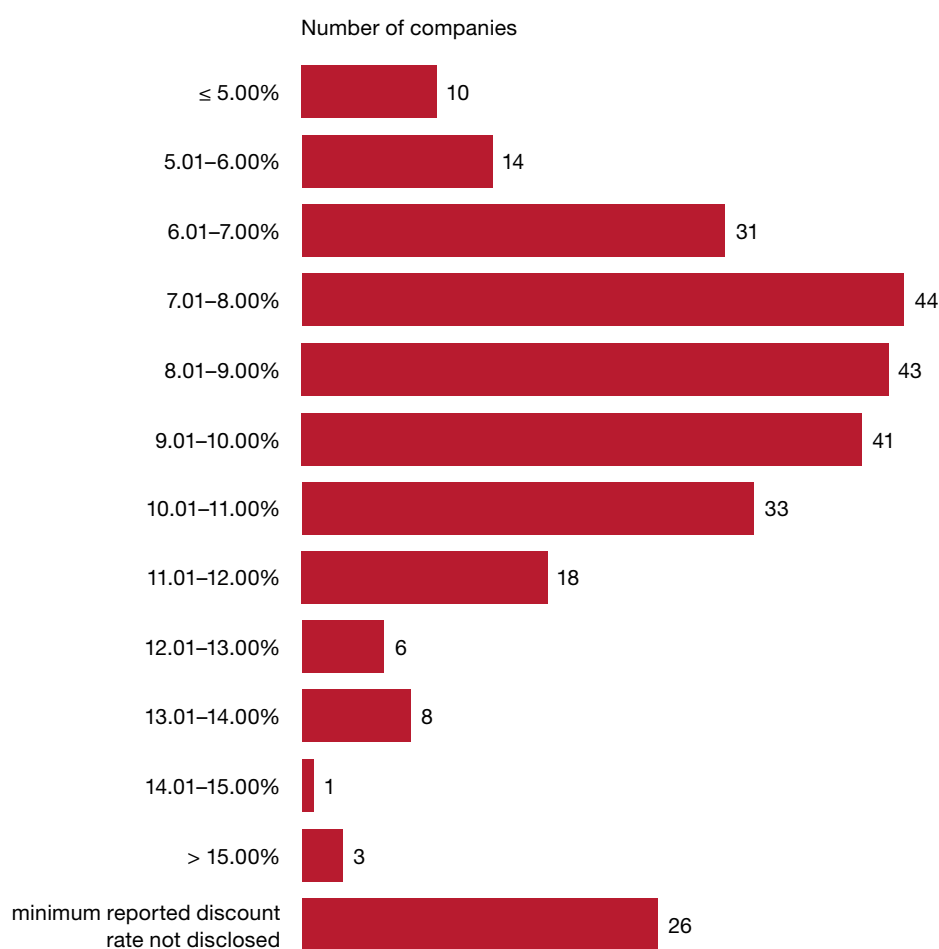
A wide span of discount rates is used by our sample companies, ranging from 2.65% to 19.5%.

As illustrated in Figure 30, a wide span of discount rates is used by our sample companies, ranging from 2.65% to 19.5%, the former for a Spanish insurance company, the latter for a Dutch industrials company. Large numbers of companies employ rates between 6% and 11%. Discount rates do not appear to be associated with industry or country of domicile in any obvious systematic way. This may be due to the idiosyncratic firm-specific or indeed CGU-specific nature of the discount rates.

⁶⁷ Furthermore, para. A20 of Appendix A to IAS 36 requires that the discount rate be adjusted to reflect a pre-tax rate “if the basis used to estimate the discount rate is post-tax”.

⁶⁸ See IAS 36, BCZ85.

⁶⁹ See Breitenstein, U./Hänni, C., Impairment-Tests und der Pre-Tax-Diskontsatz nach IAS 36, Der Schweizer Treuhänder, 9/2005: pp. 650-657, Lienau, A./Zülch, H. (2006): Die Ermittlung des value in use nach IFRS, in: KoR, 5/2006, pp. 326-327.

Fig. 30 Application of value in use concept: Minimum reported discount rates in 2009

Another possible explanation for the absence of any apparent country or industry pattern might be the heterogeneous formats of the disclosures provided. First, some companies report a single discount rate that applies to all CGUs containing goodwill. Others report ranges of values for different business units or geographical segments. Second, as noted above, some companies distinguish pre- and post-tax rates, while the majority do not indicate whether the rates reported are pre-tax or post-tax. Hence, we – and other outside addressees of financial statements – cannot ascertain whether the disclosed rates are in fact pre-tax rates as required by IAS 36. Moreover, given that “textbook valuation models” require the application of post-tax rates, and given the wide span of discount rates reported by our sample companies, we believe it is likely that some of the companies are actually reporting post-tax discount rates. Third, some discount rates may be related to specific variants of the discounted cash flow method (e.g. risk-free rates or real interest rates that have been corrected for the expected rate of inflation).

For the above reasons, the simple aggregation of (minimum) discount rates as depicted in Figure 30 must be interpreted with caution. Obviously, outside analysts are confronted with very similar problems when comparing different companies’ disclosures and when trying to assess the rigour and validity of companies’ goodwill impairment tests. Given these difficulties, some more guidance on how impairment tests should be applied and in which format the respective information should be disclosed in the footnotes would be helpful to produce the transparency the IASB wants to achieve in this area of accounting.

The above-mentioned methodological problems pertain not only to aggregations and comparisons of disclosed discount rates across sample companies at one point in time, but also to comparisons over time. Acknowledging this limitation, we again match the disclosures of companies that report the discount rate applied in both the current and in the 2007 study. Numerous companies point out that the financial crisis has impacted financing conditions and thus their cost of capital. However, as one would expect, companies appear to have been affected differently by the crisis. In the banking sector we find some indication that the reported minimum discount rates have increased from 2007 to 2009 on average. Utilities and retail and consumer goods companies also report higher minimum discount rates in 2009 on average. Other companies may have benefitted from reduced financing costs as a result of lower risk-free rates. This holds true for companies in the telecommunications and the pharmaceuticals sectors, in particular, which, on average, report markedly lower discount rates.

Sensitivity analysis of impairment test results

Companies' goodwill impairment tests are based on estimates of the recoverable amounts of CGUs to which the goodwill resulting from acquisitions has been allocated. Estimation of recoverable amounts, i.e. fair value less costs to sell or value in use, requires forward-looking information and, thus, the application of professional judgement by company management.

Furthermore, the estimates for recoverable amounts of CGUs are likely to be sensitive to the assumptions used in the application of the two respective concepts. For instance, if a company determines a CGU's fair value less costs to sell based on stock-market multiples, the selection of the stock-listed peer group companies is crucial. A second parameter that is likely to have a significant impact on the resulting estimate is the exact point in time at which the stock-market multiple is calculated. With respect to the estimation of the value in use of a CGU, obviously management's expectations of future cash flows, especially the assumed long-term growth rate, as well as the discount rate, are key parameters that will strongly influence the result.

In order to allow addressees of financial statements to assess the reliability of companies' valuations under certain conditions, IAS 36 requires companies to disclose detailed information concerning the sensitivity of their goodwill impairment tests to key assumptions, and to possible changes in these assumptions. More precisely, IAS 36, para. 134 (f), states that a company should disclose the following information, if "a reasonably possible change in a key assumption on which management has based its determination of the unit's ... recoverable amount would cause the unit's ... carrying amount to exceed its recoverable amount:

- the amount by which the unit's (group of units') recoverable amount exceeds its carrying amount;
- the value assigned to the key assumption;
- the amount by which the value assigned to the key assumption must change, after incorporating any consequential effects of that change on the other variables used to measure recoverable amount, in order for the unit's (group of units') recoverable amount to be equal to its carrying amount."

Only a minority of companies disclose information regarding sensitivity analyses for the impairment testing.

Our analysis reveals that only a minority of companies disclose information regarding sensitivity analyses for the impairment testing in accordance with IAS 36, para. 134 (f). Only 18 companies (5.6% of the total 322 sample companies) disclose all required details of sensitivity tests, including the amounts by which key assumption values have to change for the CGU's recoverable amount to equal its carrying amount. In addition, 15 companies indicate that this disclosure requirement is not applicable to them, mostly however, without giving any further explanation.

A comparison of these results with the corresponding results in our 2007 and 2005 studies reveals that the number of companies disclosing sensitivity test information has not markedly increased over time. In our 2005 study only ten companies (3.2% of the respective sample) reported this type of information; in 2007 16 companies disclosed the information (5.2%).

Thus, the number of companies reporting information on the sensitivity of goodwill to key assumptions, the great majority of companies in 2009 still do not disclose this type of information, even though it might have been of particular interest to analysts, investors and other financial statement addressees in the crisis-year 2009.

As we already observed in our earlier studies, one reason why only a minority of companies provide sensitivity information is likely to be the conditional nature of this particular disclosure requirement. The information is only required for CGUs to which a significant amount of goodwill in relation to the company's total goodwill position is allocated, and second and most importantly, the information is only required if it is "reasonably possible" that a change in the key assumptions of the valuations would cause the CGU's carrying amount to exceed its recoverable amount and thus cause an impairment charge. In our 2005 study, we had argued that key assumption changes of this nature would often be "reasonably possible", and the extremely volatile behaviour of financial and non-financial markets over the recent past strongly underlines this reasoning. We believe transparency could be improved if companies were unconditionally required to disclose sensitivity analyses of goodwill impairment tests, or if they were at least required to give a rationale if they omit this disclosure.

We believe transparency could be improved if companies were unconditionally required to disclose sensitivity analyses of goodwill impairment tests, or if they were at least required to give a rationale if they omit this disclosure.

E Summary and conclusions

Objective of study

The objective of our study is to ascertain how leading European listed companies applied IFRS accounting and disclosure requirements with regard to M&A transactions, goodwill and (goodwill) impairment testing in their 2009 financial statements. The respective IFRSs – the standards for business combinations (IFRS 3) and impairment testing (IAS 36) – are complex and demanding for preparers of financial statements, and they continue to be controversial.

This study follows up on two earlier studies with a similar scope that were based on year-2007 and year-2005 financial statements. We revisit the same areas of accounting and disclosure in companies' 2009 financial statements and analyse how practices have developed over the course of the first five years of mandatory IFRS application by these companies.

In the current study, we analyse companies' disclosures regarding to M&A transactions, goodwill and (goodwill) impairment testing for a year that was shaped by a severe financial and economic crisis. The turmoil in the financial markets and the impact this turmoil has had on the level of demand and, in particular, on expected future growth have implications for the valuation in companies' balance sheets. In particular, company management must assess whether the carrying amounts of goodwill resulting from acquisitions undertaken in earlier periods, when market outlooks were more optimistic and valuations were much higher, are still "recoverable" – or, if they are not, whether goodwill impairment losses have to be recognised. Thus, it is one of the objectives of this study to analyse whether and, if so, how major European companies have reacted to the crisis in the area of M&A accounting and (goodwill) impairment testing.

Methodology and sample

We have analysed information provided in the notes to companies' financial statements regarding M&A transactions undertaken in 2009, companies' total balances of goodwill and other intangible assets, impairments of goodwill and other assets recorded in 2009, and goodwill impairment tests. Based on this data, we analyse how companies apply and interpret the disclosure rules of IFRS 3 and IAS 36 and evaluate how meaningful the resulting disclosures are. Furthermore, we compare our results with the findings from our earlier 2007 and 2005 studies in order to assess whether reporting practices have changed over time and whether the financial and economic crisis has had an impact on reporting, in particular with regard to goodwill impairment.

Our sample is comprised of the companies that constitute the premier segments of the twelve most significant European stock market segments. After eliminating companies with financial year endings later than 31 March 2010, companies for which English-language financial statements (according to IFRS) were not available and companies that did not report any goodwill in their year-2009 financial statements, we arrived at a final sample of 322 companies. These companies are drawn from all industries, including banking and insurance. For the financial year 2009, the average sample company has total assets of €101.0 bn, revenue of €16.1 bn and net income of €0.9 bn. For banks and insurance companies total assets are typically much higher than for companies from other industries. If banks and other financial institutions are excluded from the computation, average total assets for the remaining companies amounts to €25.4 bn.

M&A activity in 2009

Of our sample of 322 companies, 204 (63.4%) report acquisitions that have taken place during 2009. In total, the companies completed at least 593 transactions; 250 of these are reported individually in the consolidated statements of the acquirers. The other acquisitions are reported in aggregate, as allowed by IFRS for individually immaterial transactions.

Companies in the pharmaceutical and in the services industry engaged in the most intensive takeover activity in 2009, as measured by the average number of acquisitions undertaken per company. From a country perspective, the companies engaging in the most acquisitions are headquartered in Ireland, Sweden and Netherlands.

Most of the reported acquisitions are relatively small. For a majority, acquisition costs represent less than 1% of post-acquisition total assets. However, in 22 of the 250 individually reported transactions the cost of the business combination exceeds 5% of companies' (post-acquisition) total assets.

In comparison to our earlier studies the total number of acquisitions reported in 2009 was lower than in 2007 and in 2005, and the transaction volumes were also markedly lower. The average cost for the individually reported transactions is €644.8 m in 2009, compared to €942.6 m in 2007 and €560.7 m in 2005.

Disclosure on 2009 acquisitions

IFRS requires companies to provide extensive information on the cost of acquisitions and on the allocation of this cost to the assets acquired and the liabilities assumed, that is, on the purchase price allocation (PPA). In our first report, in 2005, we had pointed out that many companies had not fully disclosed the required information. In our 2007 report, we could report that disclosure practices had improved markedly, even though we remarked that there was still room for improvement. Our current analysis reveals that companies in 2009 were again more reluctant to provide all required M&A-related disclosures. Even though this information is mandatory according to IFRS 3, companies fail to report the cost of acquisition in almost 20% of all cases (of individually reported acquisitions and sets of acquisitions reported in aggregate); information regarding the assets acquired and liabilities assumed (purchase price allocation) is missing in more than a third of all cases.

The great majority of acquisitions undertaken by our sample companies in 2009 led to the recognition of goodwill. In almost half of all cases the amounts assigned to goodwill represent 50% or more of the total cost of the acquisitions. The relative importance of goodwill varies by industry, with acquisitions in the entertainment & media industry leading to the highest ratio of goodwill to total cost of the acquisition. Finally in most industries, this ratio is markedly lower in 2009 than in 2007. One of the reasons for this could be that market prices of target companies were lower on average than in 2007.

Voluntary application of IFRS 3 (revised 2008) and of full goodwill method

In January 2008 the IASB published a revised version of IFRS 3 (as well as an amended version of IAS 27 and amendments of other, related standards). The most prominent change brought about by the revision of IFRS 3 is that in cases where acquiring companies take over less than 100% of the target companies' equity, they have the choice between two methods regarding the measurement of the minority interests. One method is effectively the same as under the 2004-version of IFRS 3 where non-controlling interests are measured based on their share in the fair value of the targets' net assets (partial goodwill method). Alternatively, they can opt for the full goodwill method where non-controlling interests are measured based on their share in the fair value of the target company, including goodwill.

The new versions of the standards will become mandatory only for accounting periods beginning on or after 1 July 2009, that is, effectively for companies' year-2010 financial statements. However, following the EU's endorsement in July 2009 our sample companies could decide to voluntarily adopt the revised version of IFRS 3 and amendments to related IFRSs for their 2009 financial statements.

Within our sample of 322 companies we were able to identify 24 companies that indicated in their accounting policy footnotes that they had voluntarily adopted IFRS 3 (revised 2008) early on for their 2009 financial statements. However, only six of these companies had acquisitions with less than 100% ownership of the targets' equity, and only two of those clearly reported that they applied the full goodwill method.

Total goodwill balances

In the second part of our empirical analysis we examine companies' total goodwill positions, i.e. the sum of the goodwill on companies' balance sheets that results from 2009 acquisitions as well as from acquisitions undertaken in earlier periods.

The average total intangibles balance for our sample companies is €5.5 bn. The average goodwill balance is €3.6 bn, indicating that goodwill is the most important component of companies' total intangible assets.

The telecommunications industry by far has the largest average balance for total intangible assets (€18.5 bn) with a large portion again being attributable to goodwill (€12.2 bn). Telecommunications companies held the same position in our 2007 and 2005 studies. The intangible asset balances of companies in this sector still grew substantially over the past years, despite some very large goodwill write-offs. Another industry with a large average intangible position is the pharmaceutical industry. In this sector total intangible assets are €10.6 bn on average with average goodwill amounting to €5.7 bn. The intangible balances of pharmaceuticals companies have almost doubled since our first study in 2005.

Goodwill balances represent approximately 43.8% of total shareholders' equity on average and thus remain almost unchanged if compared to our sample from 2007 (47.2%; in 2005 the corresponding sample companies reported 42.8%). The industry with by far the highest ratios is entertainment & media where the average is higher than 100%. This is followed by the telecommunications, services and retail & consumer goods industries, all of which have average ratios of goodwill to equity that are higher than 50%.

Impairment losses for goodwill and other assets in 2009

Of the 322 European blue-chip companies comprising our sample, 244 companies (75.8%) report impairment losses in 2009 for goodwill or other intangible and tangible assets that are within the scope of IAS 36. As one would expect given the economic crisis, this ratio is much higher than the corresponding ratios in our earlier studies, which were 49.7% in 2007 and 52.2% in 2005.

In our current study, 144 companies report impairments of both tangible and intangible assets (including goodwill), 33 companies reported only impairments of tangible assets and 67 only impairments of goodwill and other intangible assets. The average impairment loss on tangible assets was €96.0 m. However, there is a large variance and impairment charges on tangible assets can be substantial in some industries (for instance, the average is €371.7 m for basic materials companies and €185.3 m for utilities companies).

The average goodwill impairment charge is €179.2 m. Again variance is high and five companies with goodwill impairment losses exceeding one billion Euros account

for more than 40% of the total impairment losses in our sample. The total amount of goodwill impairment losses reported by our sample companies in 2009 is €23.1 bn.

From an industry perspective, the sector with the highest proportion of companies reporting goodwill impairment losses in 2009 is entertainment & media where 61.5% of the sample companies report goodwill write-downs. The average goodwill impairment loss in this industry is €198.4 m. The sector with the second-highest incidence of goodwill impairment losses is the banking industry where just over half of our sample companies reported an impairment loss (average loss is €274.2 m). As in our past studies, the industry with the largest goodwill impairment losses is the telecommunications industry, with an average loss of €734.7 m.

The economic crisis and goodwill impairment in 2009

In 2009, the business environment in Europe and worldwide was shaped by the worst financial and economic crisis for many decades. Even though the economy began to stabilise in the second half of the year, total year 2009 GDP in the EU declined by 4.2%. Furthermore, there was much uncertainty about the future economic developments, and throughout 2009 long-term growth forecasts remained on a much lower level in comparison to where they were before the outbreak of the crisis. As a consequence, one would expect that many companies had to revise their business plans by lowering expected future sales revenues, and consequently, future profits and cash flows. This, one would further expect, might lead to impairments of goodwill positions resulting from acquisitions undertaken in previous years, when markets looked more promising and valuations were higher.

Against this background it comes as somewhat of a surprise that less than half of our sample companies (129 or 40.1%) recognised goodwill impairment charges in 2009, while the majority did not. Even though the frequency of goodwill impairment charges and the amounts written off are larger, on average, in most industries in 2009 than in 2007 or 2005, we note that our sample companies in 2009 wrote off only 2% of the total goodwill in their balance sheets. Even in the banking sector, companies in 2009 only wrote off only 2.5% of total goodwill before impairment. Furthermore, the leading European companies that make up our sample actually added twice as much goodwill to their balance sheets through new acquisitions in 2009 than they wrote off. We also note that the amount of goodwill derecognised through disposals and through reclassifications into “non-current assets held for sale” is almost the same as the sum of all goodwill impairment losses.

Important to note in this context is that the impairment test according to IAS 36 does not have the purpose to provide an ex-post evaluation of the economic or financial validity of acquisitions undertaken by companies. Instead the purpose of the IAS 36 impairment test is “only” to assess whether the carrying amounts of the goodwill and other assets are still “recoverable”. Thus, even though it is very likely the fair values less costs to sell and the values in use of goodwill positions declined substantially in 2008 and 2009, impairments are not required as long as these values still exceeded the respective carrying amounts.

Still, the fact that overall companies’ goodwill balances remain almost unaffected by the most severe crisis for decades raises questions about the impairment-only approach prescribed by IFRS. It is a consequence of this approach that goodwill from acquisitions gets mixed up with original goodwill generated internally by companies. Presumably, in many companies the internally created goodwill has provided a cushion to the impairment testing of the acquired goodwill. Finally, it is possible that at least in some cases companies’ management, in the face of the severe crisis, used their discretion conducting goodwill impairment tests to prevent impairment losses to protect earnings, equity positions and other key financial ratios so as not to endanger the companies’ position in the capital markets.

Goodwill impairment testing

In the final section of our empirical analysis we focus on companies' goodwill impairment testing practices. The objective is to find out how companies allocate goodwill to CGUs, at what time during the year they conduct goodwill impairment tests, which concepts they use in order to determine the recoverable amounts of CGUs (fair value less costs to sell or value in use), and how they estimate the respective values. Furthermore, we were also interested to find out whether companies responded to the financial and economic crisis and conducted "trigger-based" goodwill impairment tests or had otherwise adjusted their impairment testing procedures.

More than 80% of our sample companies voluntarily disclose the total number of CGUs containing goodwill and the number of CGUs containing significant goodwill. For most companies, goodwill is concentrated in a small number of CGUs. Most companies allocate goodwill to CGUs along product lines, and most allocate it on the highest hierarchical level allowed by IFRS, i.e. the level of operating segments according to IFRS 8 "Operating Segments". In comparison to our two earlier studies in 2007 and 2005, the number of companies that voluntarily provide information on their CGU structure has increased. Furthermore, it appears that the way companies define CGUs for the purpose of allocating goodwill may become more similar over time.

According to IAS 36, CGUs to which goodwill has been allocated must be tested for impairment at least annually, and whenever there is an indication for impairment. Although IAS 36 gives companies flexibility with regard to the date for the recurring annual goodwill impairment test, most sample companies perform this test at, or shortly before, the financial year-end balance sheet date. Despite the severe financial and economic crisis, which in our opinion for many companies must have indicated possible goodwill impairments, only few companies (about 5% of all sample companies) indicated in their disclosures that they performed additional "trigger-based" goodwill impairment tests. However, one should note that IAS 36 does not require companies to report whether they have conducted additional, "trigger-based" goodwill impairment tests.

Of our 322 sample companies, 303 (94.1%) disclose the concept used to measure the recoverable amount of CGUs containing goodwill. Most companies utilise the value in use concept either exclusively (76.7%) or in conjunction with fair value less costs to sell (9.7%). Over time, the proportion of companies that use the value in use method to determine the recoverable amounts of goodwill-containing CGUs has increased from just over 80% in 2005 to 86.3% in 2009.

Our analysis shows first that the great majority of our sample companies provide the required disclosure items with respect to the fair value less costs to sell and the value in use estimations for CGUs containing goodwill. Second, the number of companies that provide the required information has increased in comparison to 2007 and 2005. Third however, there are still a number of companies that fail to provide some or indeed all of the prescribed disclosures.

For companies employing the value in use concept to determine the recoverable amount of CGUs containing goodwill, the detailed cash flow planning horizon varies, not only between companies, but also within companies for different CGUs. However, over time there seems to be a tendency for most companies to opt for a horizon of five years. There is also high variance with regard to the growth rates underlying the calculations of terminal values and to discount rates applied in the valuations. For example, a wide span of discount rates is used, ranging from under 3% to about 20%, with most companies employing rates between 6% and 11%.

Only 18 companies disclose all required information regarding sensitivity analyses of their goodwill impairment tests, e.g. information about the amounts by which key assumptions need to change for a CGU's recoverable amount to equal its carrying amount. The number of companies that provide this type of disclosure did not significantly change compared to 2007 and 2005. IAS 36 requires disclosures on sensitivity tests only for CGUs to which a significant amount of goodwill is allocated and only if it is "reasonably possible" that a key assumption change would cause the CGU's carrying amount to exceed its recoverable amount, thus causing an impairment loss. Given the extreme volatility in financial and non-financial markets over the recent past, we are surprised that so many companies concluded at the end of their financial year 2009 that it was not "reasonably possible" that changes in key assumptions of their impairment tests could lead to impairment. In times of pronounced uncertainty and especially for companies with high goodwill balances, information on the sensitivity of the goodwill impairment tests to key parameters could be of great interest to financial analysts, investors and other financial statement users. Therefore, we believe transparency could be improved if companies were unconditionally required to disclose sensitivity analyses of goodwill impairment tests, or if they were at least required to give a rationale if they omit this disclosure.

Finally, as we already pointed out in our earlier reports in 2007 and 2005, even when companies formally fulfil IFRS disclosure requirements regarding goodwill impairment tests, the information provided is sometimes not really useful to users. Disclosures are often sparse or vague. For example, many companies fail to state whether the discount rates or ranges of rates reported are pre-tax or post-tax, which means that the data cannot be clearly interpreted. Even when disclosures are precise, it is often difficult or even impossible to compare the information between companies because reporting formats are heterogeneous (e.g. some companies disclose key parameters per CGU, others provide only summary ranges of planning periods, growth rates and discount rates). Thus, one can only hope that companies will continue to improve their reporting in this field and that "best practices" will develop over time, so as to bring about disclosures that are truly decision-useful to investors, analysts and other financial statement users.

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