

EFRAG SECRETARIAT PAPER FOR PUBLIC MEETING

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WHAT DO WE REALLY KNOW ABOUT GOODWILL AND IMPAIRMENT?

EFRAG

A QUANTITATIVE STUDY

OCTOBER 2016

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The European Financial Reporting Advisory Group (EFRAG) issued this Quantitative Study.

The Quantitative Study is available on the EFRAG website. A limited number of copies of the Quantitative Study will also be made available in printed form, and can be obtained from EFRAG.

The paper invites comment on its proposals via the 'Questions to Constituents'. Such comments should be submitted through EFRAG's website [here \[INSERT HYPERLINK\]](#) or by post to:

EFRAG
35 Square de Meeûs
B-1000 Brussels
Belgium

so as to arrive no later than 31 December 2016. All comments received will be placed on the public record unless confidentiality is requested.

Our Proactive Work in Europe

This paper is part of the EFRAG's proactive work. EFRAG aims to influence future standard-setting developments by engaging with European constituents and providing timely and effective input to early phases of the IASB's work. EFRAG carried out this proactive work in partnership with National Standard Setters in Europe to ensure resources are used efficiently and to promote stronger coordination at the European level. Four strategic aims underpin proactive work:

- engaging with European constituents to ensure we understand their issues and how financial reporting affects them;
- influencing the development of global financial reporting standards;
- providing thought leadership in developing the principles and practices that underpin financial reporting; and
- promoting solutions that improve the quality of information, are practical, and enhance transparency and accountability.

More detailed information about our proactive work and current projects is available on the EFRAG website.

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Executive Summary

Objective and structure of the quantitative study

- ES1 The accounting treatment of goodwill has been the subject of discussions for decades. The IASB is currently debating whether and what changes are needed to the accounting for goodwill and impairment tests in the context of the post-implementation review of IFRS 3 *Business Combinations*.
- ES2 In 2014, a Research Group of EFRAG, Organismo Italiano di Contabilità (OIC) and Accounting Standards Board of Japan (ASBJ) issued a Discussion Paper on accounting and disclosure requirements on goodwill to contribute to the debate. Following the replies from constituents and publication of a feedback statement, EFRAG concluded that it would be helpful to collect data on the amount and trend of goodwill and impairment.
- ES3 This study presents a quantitative analysis of a sample of 328 European companies from 2005 to 2014. Its objective is to facilitate the debate related to the accounting for goodwill by providing evidence on how goodwill and goodwill impairment have evolved over time.
- ES4 The purpose of the study is not to draw conclusions from the data presented and EFRAG does not take a position on the accounting treatment of goodwill. EFRAG acknowledges that this type of quantitative study has a number of limitations. However, the study includes suggestions to relate the main findings to the debate around goodwill. The study should be understood in this context.
- ES5 **Chapter 1** provides some background information about EFRAG's proactive project *Goodwill impairment and amortisation*, summarises the feedback received so far and explains in more detail the scope, objective and structure of the study.
- ES6 **Chapter 2** illustrates the data on amounts, trends, concentration of goodwill and impairments reported by a sample of 328 European companies. Chapter 2 also explains the constraints and limitations of this study.
- ES7 **Chapter 3** compares the sample of 328 European companies to samples of companies in the US, Australia and Japan. The companies in the Japanese sample apply Japanese GAAP, which requires goodwill to be amortised. This part of the study was carried out in collaboration with the ASBJ.

Goodwill and impairment requirements under IFRS

- ES8 IFRS 3 sets out the requirements to account for business combinations transactions where an acquirer obtains control of one or more businesses. Business combinations are accounted for using the 'acquisition method', which generally requires assets acquired and liabilities assumed to be measured at their fair values at the acquisition date. Goodwill is recognised as the difference between the consideration transferred and the acquirer's share of identifiable net assets acquired.
- ES9 Goodwill is not subject to annual amortisation, but is carried at its original amount less any accumulated impairment losses calculated under IAS 36 *Impairment of Assets*. Goodwill

should be tested for impairment at least annually. Under IAS 36, goodwill is allocated to cash-generating units (CGUs) and the recoverable amount of a CGU is calculated as the higher of value in use and fair value less costs to sell.

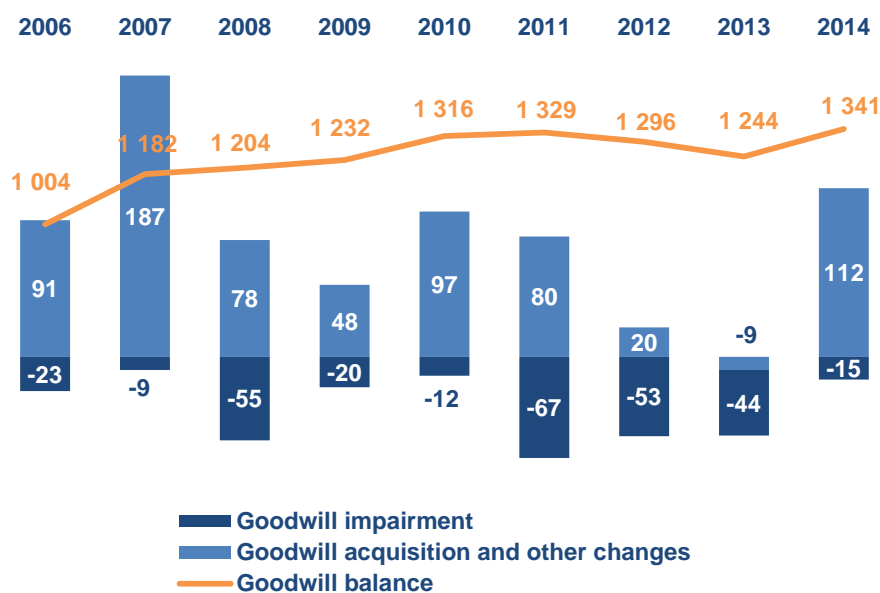
ES10 Value in use and fair value are distinct in the sense that value in use is based on the entity's perspective and fair value is based on the market participants' perspective. This study includes a number of references to market capitalisations. Market capitalisations are fair value measures; value in use may differ from market capitalisations.

Highlights of the European data

ES11 Chapter 2 of this study presents the quantitative analysis for a sample of 328 European companies. The highlights of this part of the study are as follows:

- a) **Evolution of goodwill:** From 2005 to 2014 the total amount of goodwill recognised increased from 935 billion euros to 1 341 billion euros, with an increase of 43%¹.

Changes in goodwill from 2006 to 2014 (in billion euros)



- b) **Concentration of goodwill:** A small number of companies account for a large share of the carrying amount of goodwill. The level of concentration has been decreasing slightly over time;
- c) **Goodwill to total assets:** The ratio has remained fairly stable over the years at approximately 3.7%. The ratio is significantly higher when entities in Financials industry are excluded from the total. The ratio excluding Financials decreased gradually from 19.5% in 2009 to 16.6% in 2014;

¹ In the graph, 'goodwill acquisition and other changes' include acquisitions, disposals and foreign currency translation effects.

- d) **Goodwill to net assets (or equity):** The ratio has been decreasing since 2008, but it was still significant in 2014 (29%);
- e) **Impairment losses:** The amount of impairment losses recognised was at the highest level in 2008 and 2011, years when the performance of the financial markets was negative. On average, impairment losses represented 2.7% of the opening balance of goodwill. Although in 2012 the financial markets were already showing signs of recovery, the level of impairments in 2012 were similar to 2008;
- f) **Concentration of goodwill impairments:** Impairment losses are significantly concentrated in a small number of companies, particularly in the Telecommunications and Financials industries;
- g) **Breakdown by industry:** Absolute and relative levels of goodwill and impairment losses vary significantly across industries. The carrying amount of goodwill increased for most industries but decreased for Telecommunication Services. The ratios goodwill over total assets and goodwill over net assets also vary across industries, with Telecommunication Services and Consumer Staples being the leaders. The industries with the bigger impairments are Telecommunication Services, Financials and Materials.

Highlights of the international comparison

ES12 Chapter 3 compares the sample of 328 European companies to samples of companies in the US, Australia and Japan (as indicated above, companies included in the Japanese sample amortise goodwill annually). The main highlights of this part of the study are as follows:

- a) **Evolution of goodwill:** From 2005 to 2014, the total amount of goodwill increased across all indices. US and Europe had larger total and average per company amounts of goodwill than Japan and Australia;
- b) **Concentration of goodwill** was a common feature of all indices;
- c) **Goodwill as a percentage of net assets:** US and Europe showed higher ratios of goodwill to net assets than Australia and Japan;
- d) **Goodwill as a percentage of market capitalisation:** The ratio goodwill to market capitalisation showed more volatility during the period in all indices, due to the volatility in the market capitalisation;
- d) **Market capitalisation vs net assets:** For US and Europe, market capitalisation was significantly higher than the carrying amount of equity. The difference for Japan was much lower;
- e) **Goodwill impairment losses** were high in 2008 for Europe and US, and again in 2011 and 2012 mainly for Europe and Australia. For US and Europe, impairment losses ranged from 1%-5% of the opening balance of goodwill for the period. The ratio for Japan, including goodwill amortisation, was between 10% and 14%. A relatively small number of companies recorded impairment losses. The percentage was higher for Europe than the other indices; and

- f) **Industry analysis:** Telecommunication Services, Consumer Staples and Healthcare industries reported higher ratios of goodwill to net assets. Industrials in US and Europe also showed higher figures. Australia ranked higher in some industries, particularly Information Technology industry. Consumer Staples and Healthcare industries in Japan showed relatively higher figures compared to other industries.

QUESTIONS TO CONSTITUENTS

EFRAG invites comments on all matters in this quantitative study, particularly in relation to the questions set out below. Comments are more helpful if they:

- a) address the question as stated;
- b) indicate the specific paragraph reference, to which the comments relate; and/or
- c) describe any alternative approaches EFRAG should consider.

All comments should be received by **31 December 2016**. Suggestions will be duly considered by EFRAG in its discussion about future IASB proposals on the accounting for goodwill.

Question 1 – Has this study helped you?

In recent years, there have been calls that standard setting should be more evidence based. Contrary to other EFRAG past proactive publications, this quantitative study does not include proposals or positions in relation to accounting requirements. Its main objective is to assist readers to reach an evidence-based conclusion on the issues.

Do you consider this type of quantitative study helpful to reach more evidence-based conclusions on accounting issues? If not, are there other types of evidence that you would consider more helpful?

Question 2 – How could this study be improved?

In developing the quantitative study, EFRAG made decisions about the sample size, the type of analysis (for instance, in relation to the ratios used) and the level of detail.

**Which aspects of the study did you find the most useful or the least useful and why?
Are there additional analysis that you would consider useful, and why?**

Chapter 1: Why are we publishing this quantitative study?

What have EFRAG and the IASB been doing on goodwill and impairment?

- 1.1 In March 2004, IFRS 3 *Business Combinations* changed the accounting requirements for goodwill and introduced an impairment-only model with no annual amortisation. This standard replaced the previous amortisation-based model required by IAS 22 *Business Combinations*.
- 1.2 In January 2008, the IASB issued a revised version of IFRS 3. Although some potentially significant differences remained, the publication of IFRS 3 led to a higher degree of convergence between IFRS and US GAAP in the accounting for business combinations.
- 1.3 In 2012, EFRAG and the OIC initiated a project aiming to provide early input and an in-depth analysis to the IASB Post-Implementation Review (the 'PIR') on IFRS 3. The OIC and EFRAG conducted a [public consultation](#) in July 2012. The results of the survey indicated that information on goodwill was used in different ways and that there were diverging views on how to measure goodwill after initial recognition.
- 1.4 EFRAG, the OIC and the ASBJ formed a Research Group to carry out the research on this area. The research outcome was published in July 2014 in a form of the [Discussion Paper \(DP\)](#). Following the replies from constituents and the publication of a feedback statement, in January 2015 the EFRAG board agreed that work should be continued on the project, in particular on identifying potential improvements to the impairment model.
- 1.5 In June 2015, the IASB published its report and feedback statement on its PIR of IFRS 3. The report identified that many respondents thought that the impairment test was complex, time-consuming and expensive and involved significant judgements. In addition, investors identified shortcomings in the information provided to them (e.g. timing of impairments).
- 1.6 To address these concerns, the IASB added a research project to its agenda that considers how to address the following three areas of focus:
 - a) whether changes should be made to the existing impairment test for goodwill and other non-current, non-financial assets;
 - b) subsequent accounting for goodwill (including the relative merits of an impairment-only approach and an amortisation and impairment approach); and
 - c) the extent to which other intangible assets should be separated from goodwill.
- 1.7 In the context of this process, EFRAG decided that it would be helpful to collect quantitative data on goodwill and impairment. As the ASBJ was conducting a similar analysis for companies outside Europe, EFRAG and the ASBJ decided to develop their quantitative analysis together.

The impairment-only model for goodwill

- 1.8 There has been a long debate about the strengths and weaknesses of an impairment-only model and whether the amortisation of goodwill should be reintroduced. The debate encompasses both conceptual arguments about the relevance of information and implementation issues. Many academic studies have investigated different aspects of goodwill accounting. While some single country studies support the relevance of impairment losses, there is no conclusive evidence of whether the impairment-only model provides timely and reliable results, or more decision-useful information.
- 1.9 Most respondents to the DP published in 2014 agreed with its main conclusion that the impairment-only model for acquired goodwill did not provide the most appropriate solution for subsequent measurement of goodwill. In contrast, a minority of respondents, mostly users, were supportive of the current impairment-only approach. These respondents explained that the amortisation model was fairly meaningless and would not be beneficial to users of financial statements.
- 1.10 As summarised in the EFRAG feedback statement published in 2015, those in favour of the reintroduction of amortisation of goodwill argue that:
- a) Goodwill amortisation allows matching of the consumption of goodwill with the benefits of the transaction;
 - b) Amortisation limits the recognition of internally generated goodwill;
 - c) There are significant uncertainties and judgements inherent in the impairment-only model and amortisation can provide sufficient verifiability and reliability of financial information;
 - d) Impairment is not usually recognised on a timely basis and thus does not provide predictive information to markets;
 - e) Amortisation is a more operational approach and improves the cost-benefit balance for reporting entities; and
 - f) Amortisation limits the size of goodwill in relation to total assets.
- 1.11 However, those against the reintroduction of amortisation of goodwill argue that:
- a) Impairment losses, even when late, provide confirmatory information;
 - b) An impairment-only approach is more conducive to the assessment of stewardship and of the ability of the management to add value through their acquisitions;
 - c) Annual amortisation is conceptually flawed since nearly all acquisitions are based on the intention to continue the acquired activities for an indefinite period;
 - d) A reliable assessment of the useful life of goodwill would also involve significant judgment; and
 - e) Users would ignore amortisation and use earnings figures that exclude it (although they may also exclude impairment losses).

- 1.12 Many respondents considered that the impairment-only approach was a challenge in practice and that there was room to improve the guidance in IAS 36. These respondents identified a number of difficulties related to the current approach and provided some suggestions on what should be improved.

Objective and structure of the quantitative study

- 1.13 The objective of this quantitative study is to facilitate the debate related to the accounting for goodwill by providing evidence on how goodwill and goodwill impairments have been evolving over time. In particular, the study presents data on:
- a) The evolution over time (2005-2014) of the amount of goodwill and goodwill impairments;
 - b) The evolution of the relative weight of goodwill when compared to other elements of the financial statements, such as total assets and equity;
 - c) The degree of concentration of goodwill, and concentration and frequency of impairment losses;
 - d) The evolution of goodwill and impairment losses when compared to market capitalisation;
 - e) A breakdown of the overall data by industry; and
 - f) The relationship between the nature of the consideration paid and the proportion of the consideration allocated to goodwill for sixty recent acquisitions from various industries.
- 1.14 The study is not meant to draw conclusions from the data presented and does not include recommendations on the accounting treatment of goodwill. Some have suggested that other intangible assets with indefinite useful lives acquired in business combinations present the same issues as goodwill. The study does not address them, as separate data could not be obtained. Nor does the study address negative goodwill, as the feedback did not show significant concern over it.

Limitations inherent to this type of study

- 1.15 There are inherent limitations to this type of quantitative study. In particular:
- a) The sample is not statistically representative of all European listed entities;
 - b) The study is based on a relative short time frame of past data which may not be a reliable indicator of future developments;
 - c) The study is based on the data included in the commercial database, which have not been systematically verified with the financial statements; and
 - d) The level of concentration means that averages may have a limited relevance. To overcome this limitation, the study includes measures of relative standing such as percentile ranking and classes.

- 1.16 Finally, EFRAG does not consider that a quantitative study can provide undisputed evidence to decide what the accounting treatment should be, or whether the current requirements have achieved their objectives. EFRAG considers that quantitative data are helpful background information to assist standard-setters and other interested parties to reach more evidence-based conclusions.

Chapter 2: European data

Definition of the sample

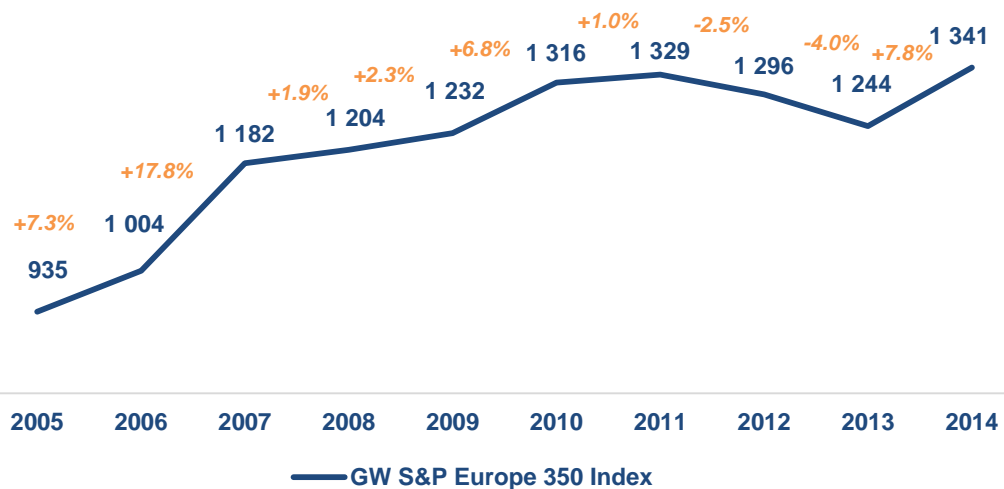
- 2.1 EFRAG used two data aggregators to collect direct financial information on European listed companies, the S&P Capital IQ database and FactSet. The study focused on S&P Europe 350 Index companies, for the period between 2005 and 2014. The index includes 350 leading blue-chip companies from 16 European countries.
- 2.2 EFRAG performed the analysis using the population of companies that constituted the S&P Europe 350 index as of March 2016. EFRAG made some adjustments to the data, such as removing some companies for which data were missing in some years or a subgroup was already included at the parent company level. The final sample includes 328 companies (“the sample”), with a market capitalisation of approximately 6 trillion euros.
- 2.3 Accounting data were translated into euros using the historical exchange rate by the commercial database. The industry classification used in our presentation is based on the Global Industry Classification Standard (GICS).

Goodwill

Evolution of goodwill

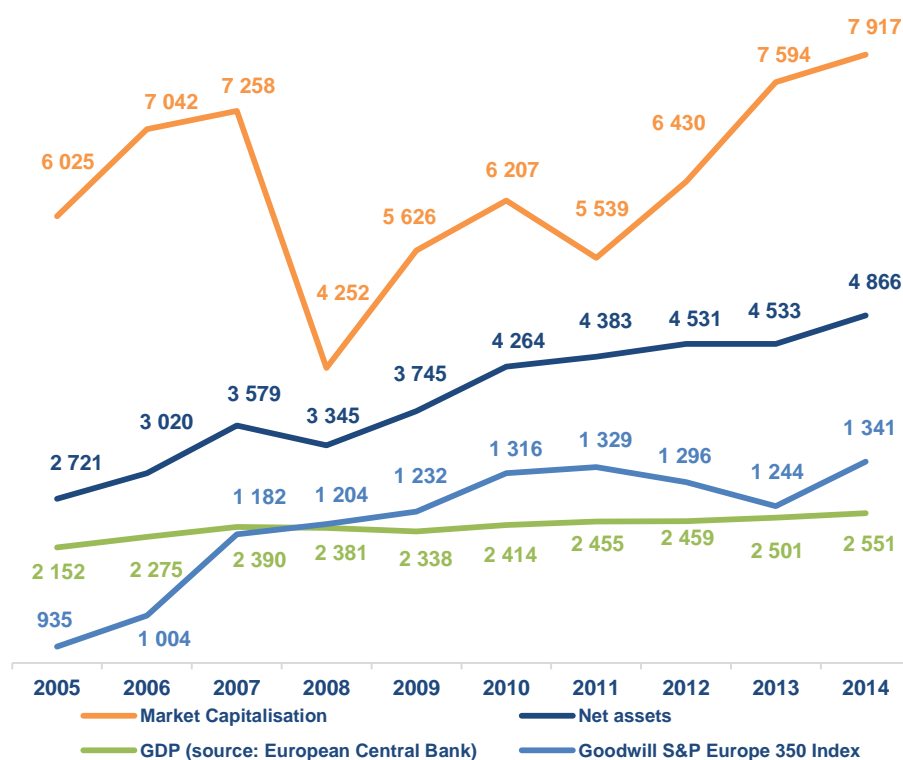
- 2.4 From 2005 to 2014 the total amount of goodwill increased from 935 billion euros to 1 341 billion euros. The rate of growth has not been constant, and in some years there was a net decrease.
- 2.5 The graph below illustrates the evolution of goodwill from 2005 to 2014. The changes in goodwill include new acquisitions, disposals, impairment losses and foreign currency translation effects.

Evolution of goodwill from 2005 to 2014 (in billion euros)



- 2.6 From 2005 to 2011, the total amount of goodwill progressively increased by 43%. From 2012 to 2013 there was a decrease of 4% due to the combined effect of significant amounts of impairments and a decrease in additions to goodwill.
- 2.7 In 2014 the total amount of goodwill reached its highest level, amounting to 1 341 billion euros. This increase was related to significant additions of goodwill combined with lower amounts of impairments (35 companies account for 80% of the additions).
- 2.8 The following chart compares the trend of goodwill to the trend in market capitalisation, net assets and Gross Domestic Product (GDP). The market capitalisation fluctuated widely from 2005 to 2014, with sharp decreases in 2008 (41%) and 2011 (11%). While goodwill also fluctuated from 2005 to 2014, it showed a different trend and a lower level of volatility. In particular, decreases on the total amount of goodwill only occurred in 2012 and 2013, when financial markets were already showing signs of recovery.
- 2.9 From 2005 to 2014 the GDP at market prices of Euro area 19 (fixed composition) increased 19%. From 2005 to 2007, it gradually increased by 11% in total. In 2008 and 2009, it decreased approximately 2% but subsequently the GDP recovered 27% until 2014.

Evolution of Goodwill, Market Capitalisation and Net Assets and GDP (in billion euros, GDP in million euros)

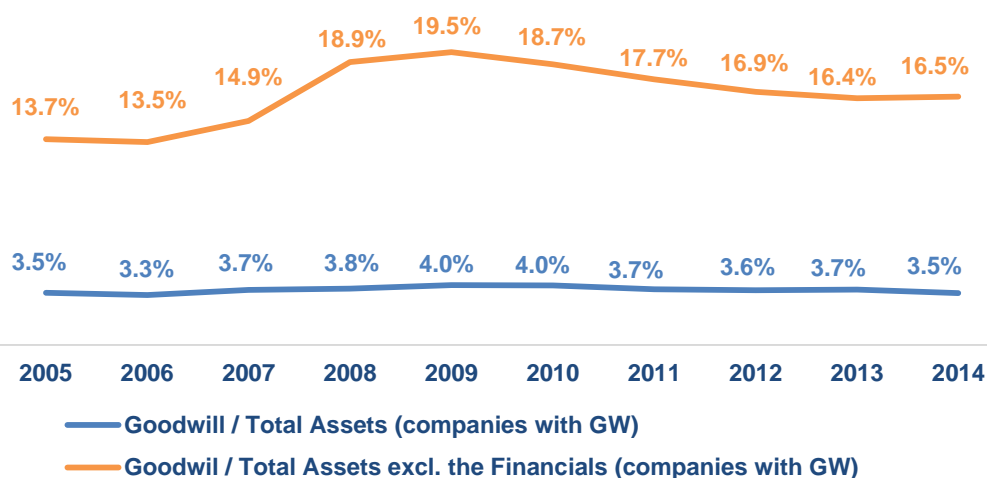


- 2.10 Goodwill represents the biggest portion of intangible assets, being on average 62% of the total. The rest of the study focuses on goodwill alone.

Trend of goodwill as a percentage of total assets

- 2.11 The chart below shows that the ratio of goodwill to total assets is relatively stable since 2005 for the companies with goodwill in the sample and averaged 3.7%.
- 2.12 Entities in the Financial industry have typically very large balance sheets and their ratio averages only 0.9%. If Financials are excluded, the ratio becomes significantly higher and fluctuates between 13.5% and 19.5%. The adjusted ratio started to decrease in 2009 and it stabilised at 16.6% in 2014. Although the total amount of goodwill has been increasing over the years, its relative weight has been slightly decreasing from 2009 to 2013.

Goodwill over total assets (companies with goodwill)



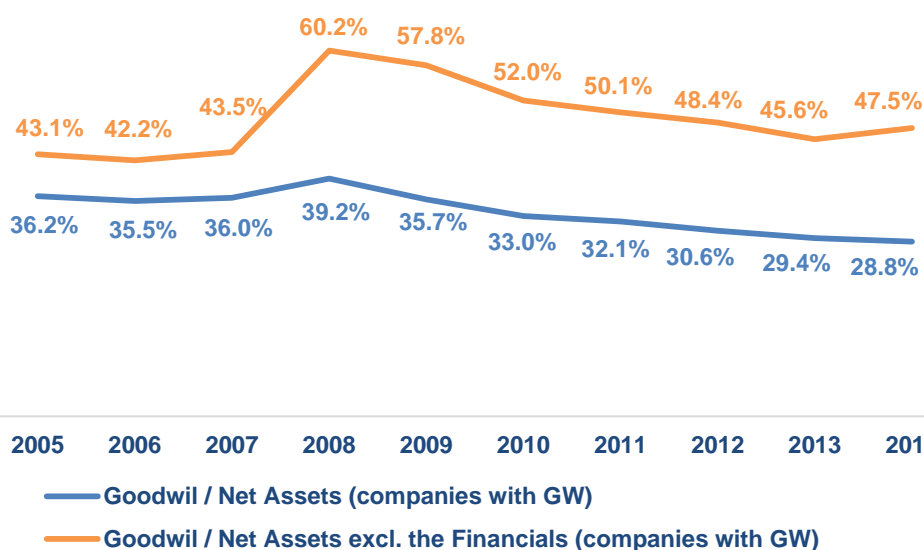
- 2.13 A significant number of companies have a ratio of goodwill to total assets of less than 5%. When entities in the Financials industry are excluded, most of the other companies have a ratio higher than 10%. The following table presents the distribution of the ratio for the companies that presented goodwill in each year.

	Number of companies									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Less than 5%	127	119	104	106	103	110	102	103	105	112
Between 5% and 10%	35	34	38	35	31	32	37	35	38	36
Between 10% and 20%	59	66	59	57	60	56	62	65	63	63
More than 20%	74	79	88	93	96	99	98	92	94	95
Total	295	298	289	291	290	297	299	295	300	306

Trend of goodwill as a percentage of net assets

- 2.14 From 2005 to 2014 the ratio of goodwill to net assets, or the book value of equity, averaged 34% for companies with goodwill (see table in paragraph 2.19 below). The ratio has been decreasing since 2008 and reached its lowest point in 2014 with 29%.
- 2.15 The ratio excluding entities in the Financials industry is significantly higher and fluctuates between 42% and 60%. This adjusted ratio has also been decreasing since 2008 and it stabilised at 48% in 2014.

Goodwill over net assets (companies with goodwill)



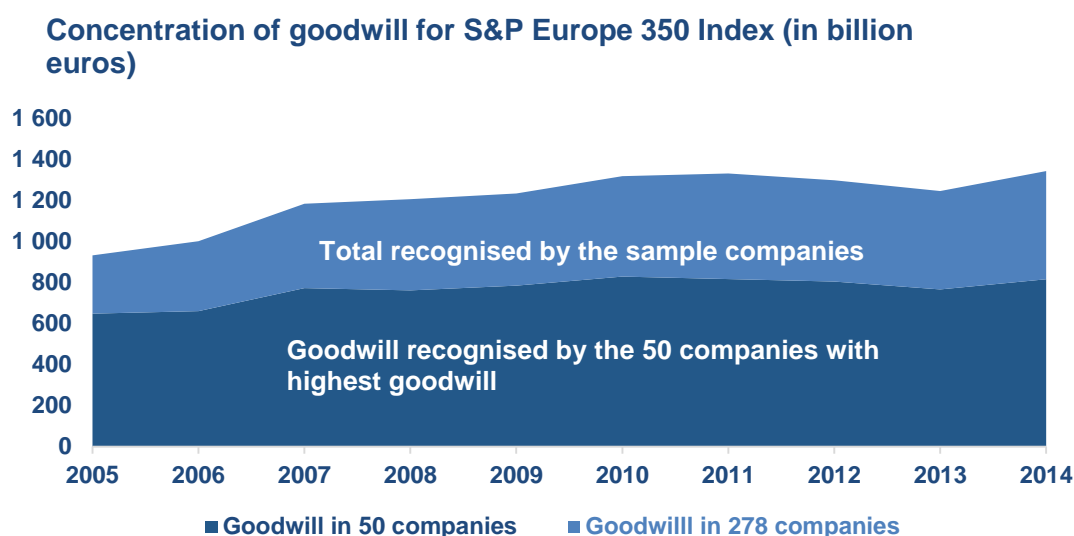
- 2.16 The following table presents the distribution of the ratio for the companies that presented goodwill in each year. Most of the companies are below 30%, but a significant share exceeds 80%.

	Number of companies									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Negative ratio (negative net assets)	1	3	4	4	3	3	3	4	5	3
Between 0% and 30%	148	143	138	124	129	139	139	138	142	144
Between 30% and 50%	45	47	36	47	48	55	53	48	53	52
Between 50% and 80%	39	44	48	40	38	41	43	50	47	46
Greater than 80%	62	61	63	76	72	59	61	55	53	61
Total	295	298	289	291	290	297	299	295	300	306

2.17 EFRAG does not have data on the ratio between goodwill and total consideration paid in the period. *The European Goodwill Impairment Study* by Houlihan Lokey reports that goodwill recognised between 2007 and 2011 by companies within the STOXX Europe 600 index represented 45% of the total consideration. In its review of 2012 IFRS financial statements, ESMA found that for a sample of 56 entities, goodwill had been recognised in 85% of the acquisitions and represented 54% of the total consideration.

Level of concentration of goodwill

2.18 Over the whole period, goodwill remained highly concentrated in a small number of companies. The 50 companies with the highest amount of goodwill (Top 50) account for, on average, 64% of the total goodwill. The same companies represent 38% of the market capitalisation and 42% of the net assets in the sample.



2.19 The share of the top 50 decreased from 69% in 2005 to 61% in 2014. This is partially due to an increase of the percentage of companies in the sample that report goodwill, as shown in the table below.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Companies in the sample	328	328	328	328	328	328	328	328	328	328
Companies reporting goodwill	295	298	289	291	290	297	299	295	300	306
In %	90%	91%	88%	89%	88%	91%	91%	90%	91%	93%
Concentration in Top 50 companies	69%	66%	65%	63%	64%	63%	61%	62%	62%	61%
Companies accounting for 50% of total goodwill	24	28	29	31	31	32	34	35	35	36

% of market cap represented by these companies	22%	25%	26%	29%	29%	29%	28%	28%	28%	29%
% of net assets represented by these companies	27%	30%	31%	33%	34%	35%	32%	31%	29%	28%

How could the data be used in the debate?

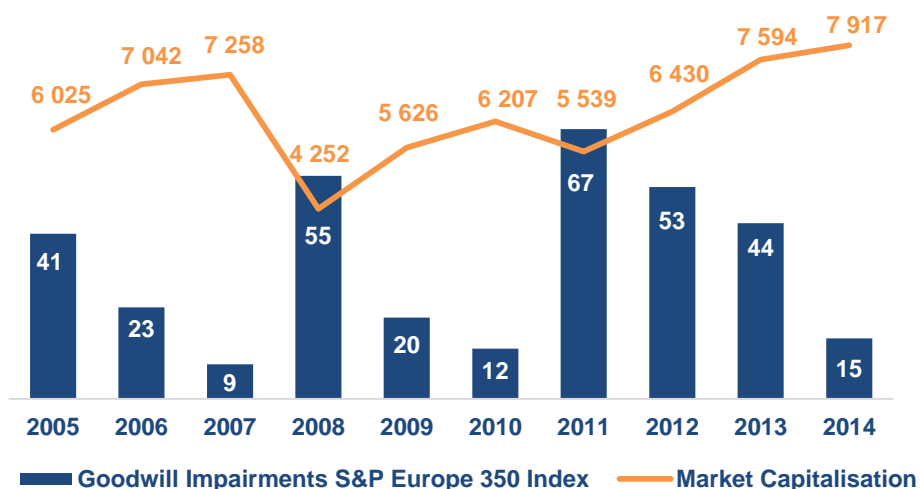
- 2.20 The data about the absolute and relative amount of goodwill could help in assessing if the impairment-only model has contributed to an excessive growth of the balance of recognised goodwill.
- 2.21 The data on the trend of the balance – in a period characterised by two financial crises - could help in assessing if the impairment-model is working as expected.
- 2.22 The information about consideration allocated to goodwill could help in assessing if the purchase price allocation requirements are meeting their expected objectives.
- 2.23 The data on the concentration of goodwill may help in assessing the pervasiveness of goodwill. If goodwill is pervasive, this may support the call for a simplification of the requirements.

Goodwill impairment losses

Evolution of goodwill impairment losses

- 2.24 The amount of goodwill impairment losses per year for the companies within the sample has fluctuated over the years, with the highest amounts of total impairment recognised in 2008 (55 billion euros) and 2011 (67 billion euros), years in which the market capitalisation of these companies fell significantly.
- 2.25 The graph below shows that goodwill impairment losses generally tend to be higher when financial markets are negative and lower when they are positive. In addition, after the 2011 peak, impairment losses have been gradually decreasing and in 2014 almost reached the low levels of 2007. However, the level of impairments in 2012 were still high even though the financial markets were already showing signs of recovery.

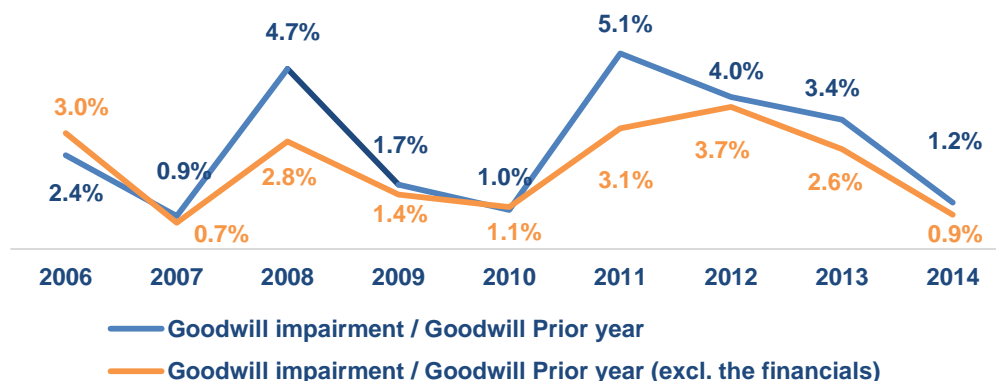
Evolution of goodwill impairments compared to market capitalisation of all companies (in billion euros)



Intensity of goodwill impairment

- 2.26 As noted above, impairment losses peaked in 2008 and 2011, years in which the market capitalisation fell significantly. The intensity of impairments can be measured by the ratio of impairment over the opening balance of goodwill.
- 2.27 The following chart illustrates the trend of the ratio. This ratio ranged from approximately 1% (in 2007, 2010 and 2014) to approximately 4.9% (in 2008 and 2011). On average, entities in the sample recognised an annual impairment of 2.7% of the opening goodwill. When entities in the Financials industry are excluded, the average ratio is 12%.

Impairment over prior year goodwill (% of the goodwill impaired each year)



- 2.28 Over the period, companies recognised on average impairments equal to 2.7% of their total goodwill (opening balance). The average takes into account two significant declines in the market capitalisation (2008 – 2011) and are affected by a limited number of impairment events, as shown by the data on the concentration of impairments.

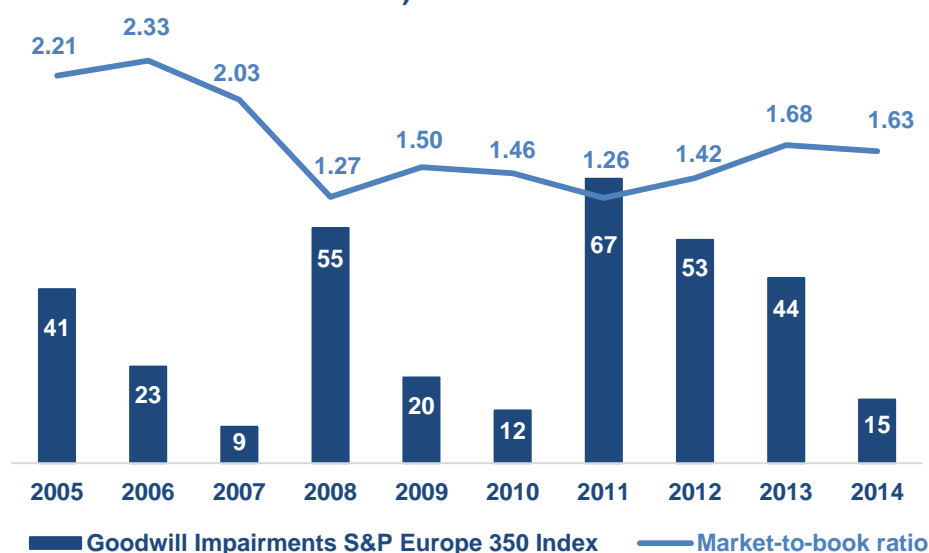
2.29 The distribution of the ratio shows that in each year the majority of companies reporting goodwill did not recognise any impairment. Some companies recognised cumulative losses equal to more than 80% of their goodwill.

Ratio impairment / prior year goodwill	2006	2007	2008	2009	2010	2011	2012	2013	2014
No impairment	222	230	191	207	220	220	212	206	216
Between 0% and 3%	56	46	51	43	49	39	46	53	48
Between 3% and 5%	5	4	11	4	7	6	5	9	7
Between 5% and 10%	4	8	11	14	6	6	6	13	11
Between 10% and 80%	3	6	21	20	4	25	24	12	14
Greater than 80%	5	4	4	3	4	1	6	2	4
Total	295	298	289	291	290	297	299	295	300

2.30 It may be indicative to compare the ratio of market capitalisation to net assets. IAS 36 lists a negative difference between market capitalisation and the carrying amount of equity as an indicator of impairment. When an entity is a single CGU reporting goodwill, this situation results in an impairment loss unless the value in use proves to be higher.

2.31 The chart below illustrates the trend of the market-to-book ratio. The ratio was at its lowest levels in 2008 and 2011, despite the significant impairment losses that were recorded in those 2 years, and subsequently recovered mainly due to gains in the stock market.

Market-to-book ratio and goodwill impairments (goodwill impairments are in billion euros)



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Number of companies with market-to-book ratio < 1	22	20	35	114	80	76	112	90	64	66

2.32 Other studies made this comparison. The 2012 study from Houlihan Lokey noted that in 2011 more than a third of the companies in the Euro STOXX 600 had a ratio below 1, and most of the industries had lower ratios than in 2007. In its review of the 2011 annual IFRS financial statements, ESMA noted that 43% of a sample of 235 European listed entities showed a ratio below 1, but only half of those recognised impairment losses in that year.

Timing of impairments

2.33 As already noted in paragraph 2.26 above, higher goodwill impairments tend to occur when financial markets are negative and vice-versa.

2.34 In addition, EFRAG has analysed whether companies tend to recognise impairment losses only when they have negative pre-impairment net results (i.e. before considering impairments of goodwill). The following table shows that the vast majority of the companies reporting impairment had a positive pre-tax result before impairment.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Number of companies reporting goodwill impairment	78	73	68	98	84	70	77	87	89	84
Number of companies with a negative result before impairment	5	1	3	17	14	3	10	12	10	8
In %	6%	1%	4%	17%	17%	4%	13%	14%	11%	10%

2.35 When considering companies that had impairment losses from 2005 to 2014, only 10% of these companies (on average) had negative results before making goodwill impairments. Therefore, this shows that impairment losses are not only recognised by loss-making companies.

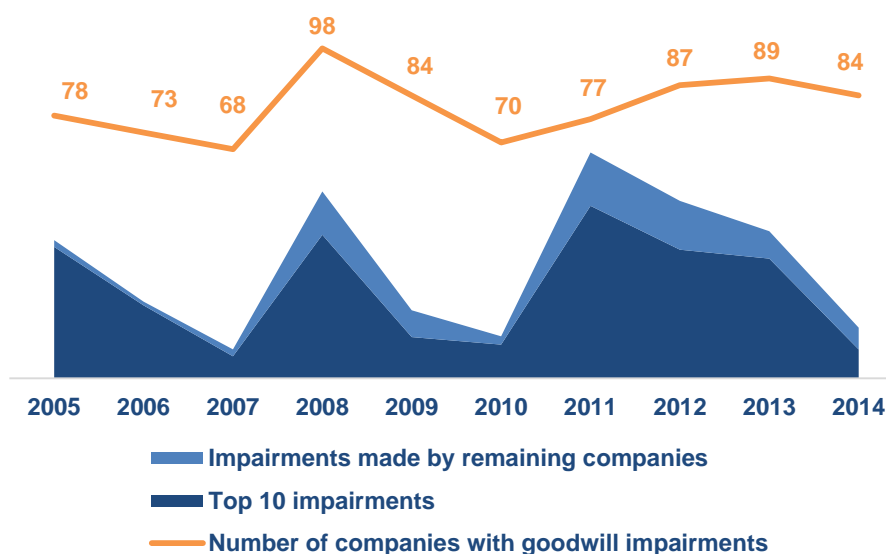
2.36 However, it should be noted that impairment losses need to be determined at the CGU level, and that the CGU may not be bigger than a reporting segment. It is possible that some entities that were reporting a net profit were experiencing losses in the CGU to which the goodwill was allocated.

Level of concentration of impairments

2.37 Impairment losses are highly concentrated in a small number of companies. On average, 27% of companies in the sample reported impairments and those impairments are highly concentrated in a limited number of companies (top 10). Even so, this concentration decreased significantly in 2014.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Companies with goodwill	295	298	289	291	290	297	299	295	300	306
Companies that reported goodwill impairments	78	73	68	98	84	70	77	87	89	84
% of companies with goodwill impairment	26%	24%	24%	34%	29%	24%	26%	30%	30%	28%
% of goodwill impairment recognised by top 10	95%	95%	76%	77%	61%	80%	76%	72%	81%	57%

Concentration of goodwill impairments (in billion euros)



- 2.38 In addition to this concentration, EFRAG has also observed that some companies have continuously recognised impairments in this 10-year period. For example, during this period, 50 companies have presented at least 6 years of goodwill impairment losses. Furthermore, these companies recognised, on average, 70% of the total impairment amounts recognised by the companies included in our sample each year.
- 2.39 By contrast, 72 companies of our sample did not recognise any goodwill impairment losses in the 10-year period under observation.
- 2.40 Other studies reported similar findings in relation to the concentration of impairment. The 2012 Houlihan Lokey study noted that more than 70% of total goodwill impairments in 2011 were booked by just two industries, banks continued to grapple with ongoing regulatory and macroeconomic uncertainties and telecoms witnessed increasingly challenging trading conditions.

2.41 In its review of 2011 financial statements, ESMA noted that a limited number of companies accounted for significant impairment losses. 5% of the companies in the sample of 235 listed entities reviewed accounted for almost 75% of the goodwill impairment and were mostly in financial services and telecommunications.

How could the data be used in the debate?

- 2.42 The ratio between impairment losses and amount of goodwill could help in assessing the adequacy of impairment.
- 2.43 The evolution of impairment losses and the data on impairment recognition and pre-impairment losses could help in assessing the timeliness of impairment.
- 2.44 The comparison between the market capitalisation and the carrying amount of equity could help in understanding how the market perceives impairment losses.
- 2.45 The data on the concentration and distribution of impairment losses could help in assessing how effectively impairment requirements are applied.

Trends in 2015

- 2.46 This study was developed in the early months of 2016, before the 2015 financial statements were available in the commercial database. For reference, the following are the key figures for the sample of 328 European companies in 2015:
- a) 307 companies reported goodwill. Goodwill amounted 1 397 billion euros, with an increase by 56 billion euros, or 4.2%. This net increase includes 33 billion euros of impairment and 89 billion euros of acquisitions and other changes of goodwill;
 - b) The ratio of goodwill to total assets amounted to 3.6% and the ratio of goodwill to net assets amounted to 29.1%, both presenting a slight increase since 2014;
 - c) 93 out of the 307 companies which reported goodwill recognised impairment losses. The total amount of goodwill impairments reported in 2015 by the companies within the sample amounted to 33 billion euros, equal to 2.5% of prior year goodwill.

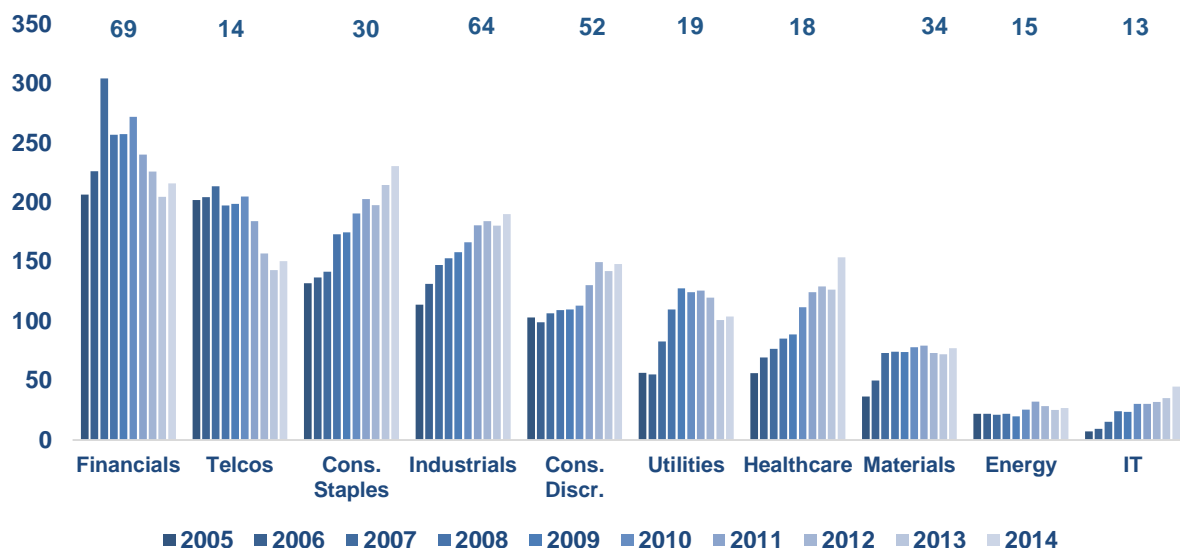
Industry analysis

2.47 In the following paragraphs, the study breaks down some of the analysis of the sample at the industry level.

Evolution of goodwill by industry

2.48 The following chart shows the evolution of the total amount of goodwill by industry, as well as the number of companies analysed in each industry.

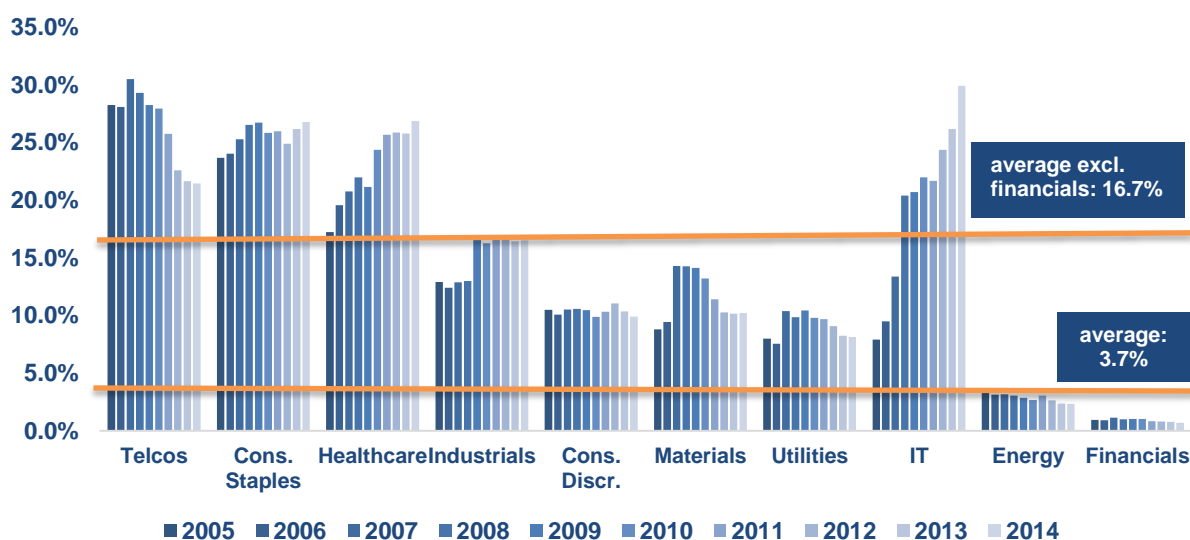
Evolution of total goodwill by industry (in billion euros)



Goodwill over total assets by industry

2.49 The ratio of goodwill over total assets ranges from 0.9% to 26.4% (average: 3.7%). Consumer Staples, Telecommunication Services and Healthcare report the highest ratios, while Financials, Energy, and Utilities report the lowest.

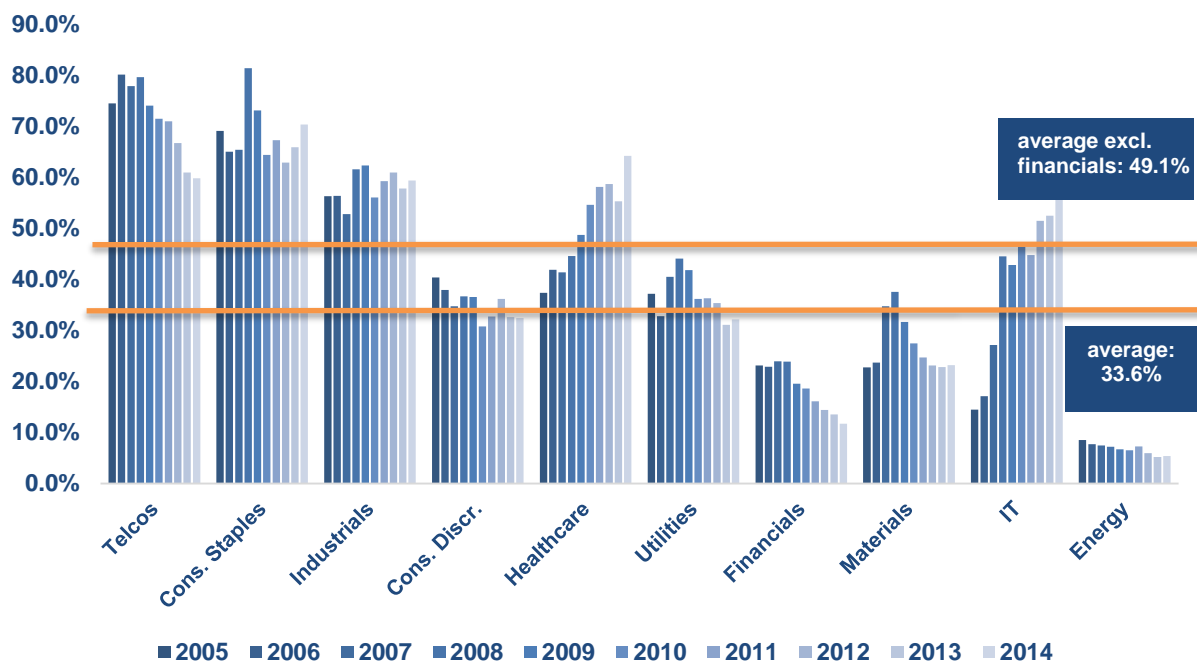
Goodwill over total assets by industry (companies with goodwill)



Goodwill over net assets by industry

2.50 The ratio of goodwill over net assets also varies significantly, with a range from 6.8% to 71.6% (average: 33.6%). The three industries with the highest ratios are Telecommunication Services, Consumer Staples and Industrials, while those with the lowest ratios are Energy, Financials and Materials.

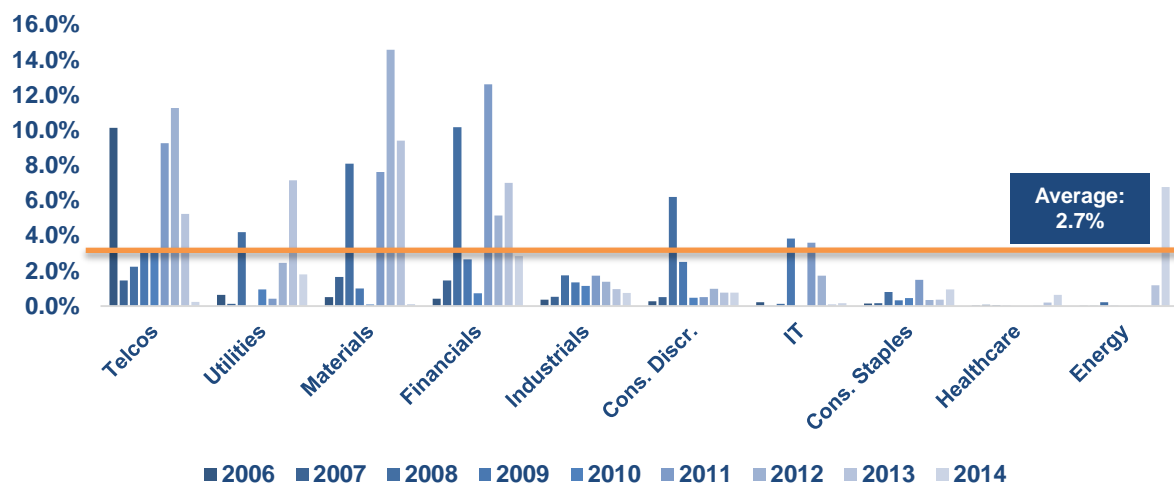
Goodwill over net assets by industry (companies with goodwill)



Goodwill impairment intensity by industry

2.51 The ratio of impairment losses ranges from 0.1% to 5.1% (average: 2.7%). Telecommunication Services, Materials and Financials report the highest ratios, and Healthcare, Consumer Staples and Energy report the lowest.

Goodwill impairment over goodwill of prior year by industry (% of goodwill impaired each year)



2.52 As mentioned above, there is a high concentration of goodwill impairment charges in a few companies of our sample. In 2008, 50% of the total impairment losses were recognised by two entities in Financials and one in Telecommunication Services; in 2011,

the same percentage was recognised by two entities in Financials, two in Telecommunication Services and one in Materials.

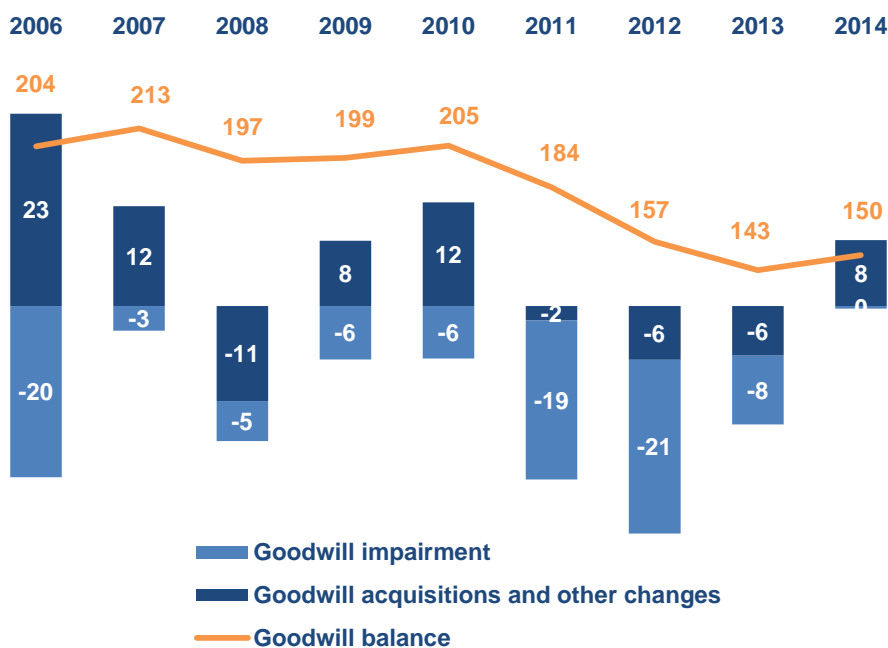
Industry focus

- 2.53 Given the diversity of ratios across the industries, an analysis at this level is likely to provide more information than economy-wide averages. The following paragraphs present a high-level analysis of three Industries, Telecommunication Services, Healthcare and Information Technology, selected on the basis of their specific features:
- a) Telecommunication Services industry has the highest amount of goodwill in absolute and relative terms (14 companies);
 - b) Healthcare industry has experienced a significant growth of goodwill and low impairment intensity (18 companies); and
 - c) Information Technology industry has a high ratio of goodwill over total assets and a relatively low impairment intensity (13 companies).
- 2.54 However, EFRAG acknowledges that a detailed, year-by-year analysis of each industry, would be required to fully investigate the relation between the accounting data and the economic trends.

Telecommunication Services

- 2.55 The following graph illustrates the changes in goodwill for the industry. The overall balance decreased by 26% between 2005 and 2014, mostly due to impairment losses recognised in the period. Goodwill acquisitions and other changes are negatively impacted by foreign exchange, in particular due to 25% drop in the UK pound between 2007 and 2010.

Telecommunication Services - Goodwill evolution from 2006 to 2014 (in billion euros)



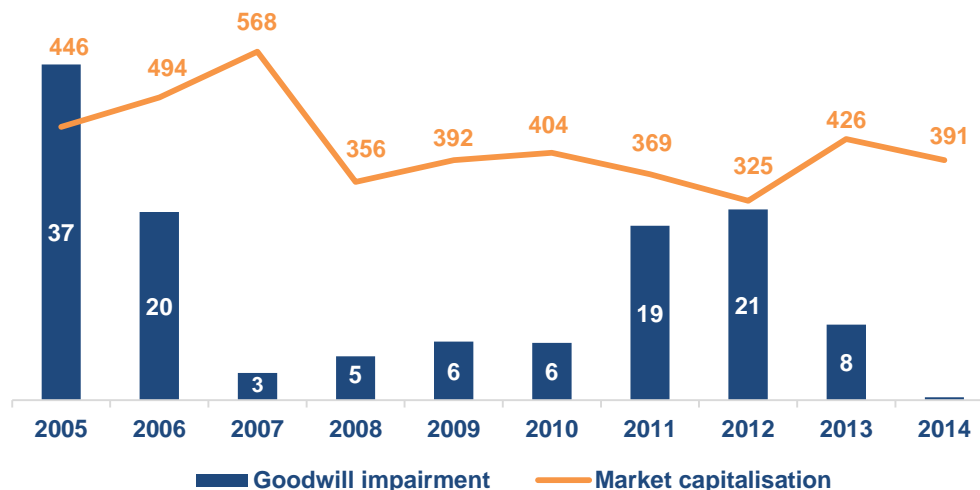
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Goodwill in billion euros	202	204	213	197	199	205	184	157	143	150

- 2.56 The sample includes 14 companies, and on average, 13 of them report goodwill. The ratio of goodwill to total assets averaged 26% over the period, and goodwill to net assets averaged 72%. Both decreased over the period, from 28% to 21%, and 74% to 60%, respectively.
- 2.57 On average over the period, 9 companies (68%) had goodwill greater than 50% of their net assets and 3 companies (22%) had goodwill greater than 100% of their net assets; for one of these, goodwill also exceeded the market capitalisation.
- 2.58 Goodwill impairment losses per year have significantly fluctuated, with the highest losses recognised in years 2005, 2012, 2006 and 2011. On average over the period, losses amounted to 5% of the opening goodwill.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Companies with goodwill impairment	7	8	7	8	6	6	7	8	6	4
Goodwill impairment amount in billions euros	37	20	3	5	6	6	19	21	8	0

2.59 The next chart compare goodwill impairment to market capitalisation of the companies in the industry.

Telecommunication Services - Evolution of goodwill impairment and market capitalisation (in billion euros)



2.60 The market capitalisation of the industry fluctuated significantly from 2005 to 2014. Specifically, in 2008, the market capitalisation of the companies in the sample experienced a dramatic decrease (partially due to the drop in the UK pound) but 11 of 13 companies recognised an impairment loss of 2% or less of the opening goodwill. It is however interesting to note that some of the companies whose market capitalisation dropped between 30% and 45% reported operating profits, earnings before tax and cash flows from operating activities in line or slightly better than in 2007.

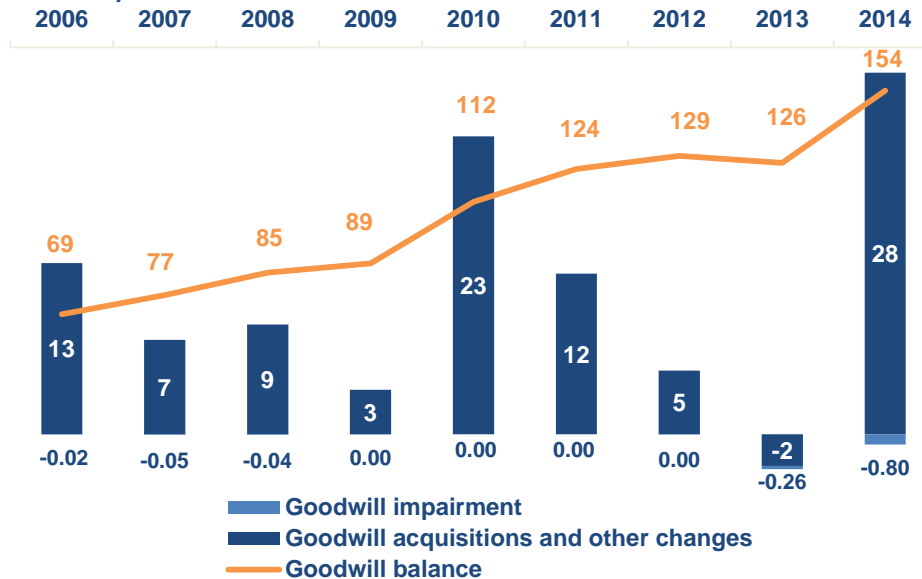
2.61 In 2011 and 2012, 4 of the 5 companies with the highest goodwill balance reported a total 36 billion euros of impairment losses, which amounted to approximately 25% of their goodwill at the end of 2010. The other company in the top 5 recognised losses equal to 1.4% of its goodwill at the end of 2010. However, its total goodwill still decreased of approximately 5.2 billion euros between 2012 and 2013 due to foreign exchange and hyperinflation adjustments and reclassification to operations to be disposed of.

2.62 The European telecommunication services sector experienced a 4-year period of consecutive decline of aggregated revenues between 2009 and 2012, due to general market conditions, the impact of regulations that cut roaming and termination rates and fierce competition among rival groups.

Healthcare

2.63 Goodwill increased by 173% between 2005 and 2014, mostly due to new acquisitions. For a number of individual combinations, the acquirers recognised goodwill in excess of 5 billion euros.

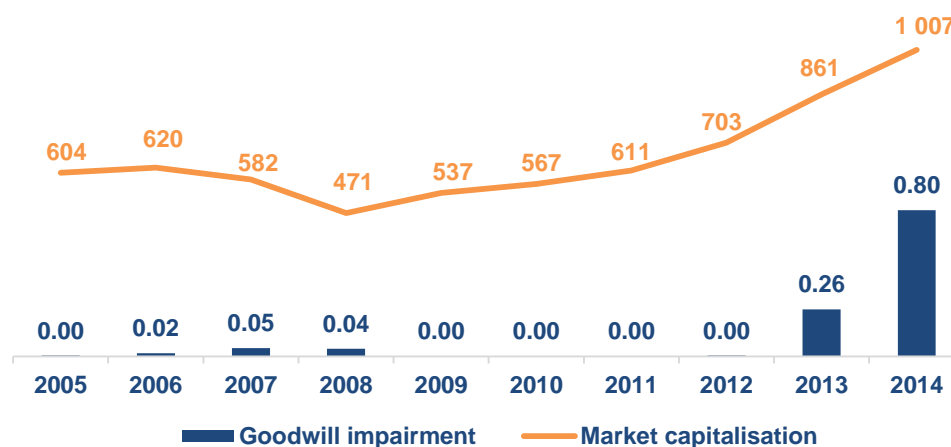
Healthcare - Goodwill evolution from 2006 to 2014 (in billion euros)



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Goodwill in billion euros	56	69	77	85	89	112	124	129	126	154

2.64 Almost all out of the 18 companies report goodwill at the end of each year. In 2014, goodwill is relatively concentrated: the companies with the six largest carrying amounts represent 76% of the total goodwill balance. The ratio of goodwill to **total assets** averaged 23% over the period, and goodwill to **net assets** averaged 50%. Both increased over the period, from 17% to 27%, and 37% to 64%, respectively.

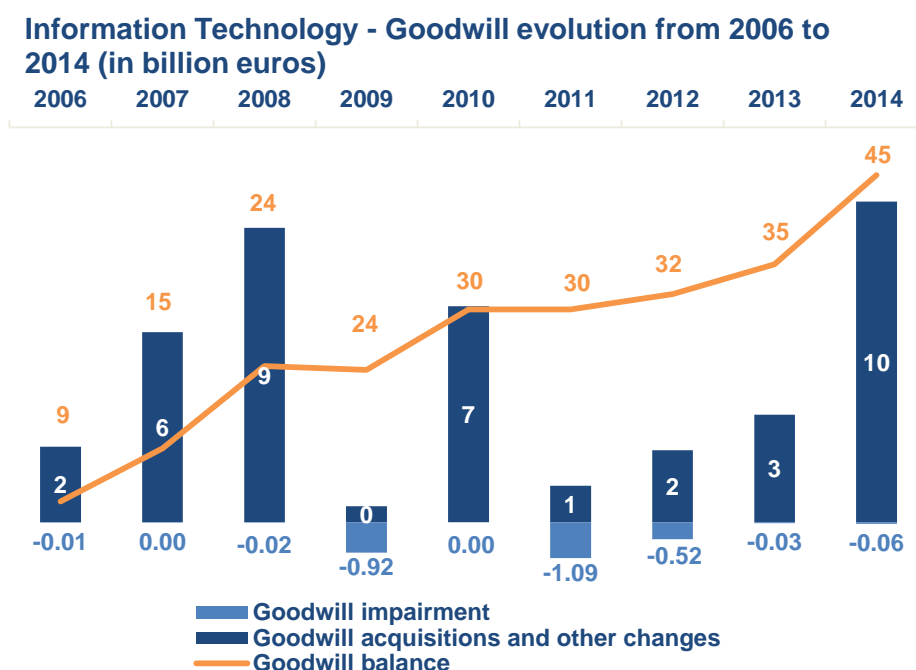
Healthcare - Evolution of goodwill and market capitalisation of all companies (in billion euros)



- 2.65 Impairment losses are infrequent. Over the period, the entities in the sample recognised only 1.2 billion euros of impairment, 87% of which was recognised by two companies. 15 out of the 17 companies reporting goodwill at the end of each year do not appear to report any impairment loss between 2005 and 2014, and only three recognised impairment losses in two years. However, it should be noted that 16 companies in the sample never reported a net loss over the period, and the other two reported a loss only in one year.
- 2.66 The main impairment loss was recorded in a year when the entity reporting the loss experienced a 10% increase in market capitalisation. The entity justified the loss as the effect of the reassessment of a product in late-stage development and cuts in US laboratory test reimbursement.
- 2.67 The market capitalisation of the Healthcare sample had a sharp drop in 2008, in a year in which the net profit of the companies also decreased by 25%, and returned to substantially the 2007 level in 2011.
- 2.68 It is interesting to note that the average market-to-book ratio over the period under observation is 3.27, which is very high compared to other industries. The European Healthcare sector has outperformed the broader markets, supported by its comparative “safe haven” status in times of deep economic uncertainty. Although the companies in the sample have differing exposures and business models, generally the sector is characterised by a focus on growth from advancing new drug pipelines.

Information Technology

- 2.69 The following graph illustrates the changes in goodwill for the industry. The overall balance significantly increased by 530% between 2005 and 2014, mostly due to new acquisitions and a low level of impairments. One company accounts for almost 60% of the total increase of goodwill in the period, with multiple acquisitions.

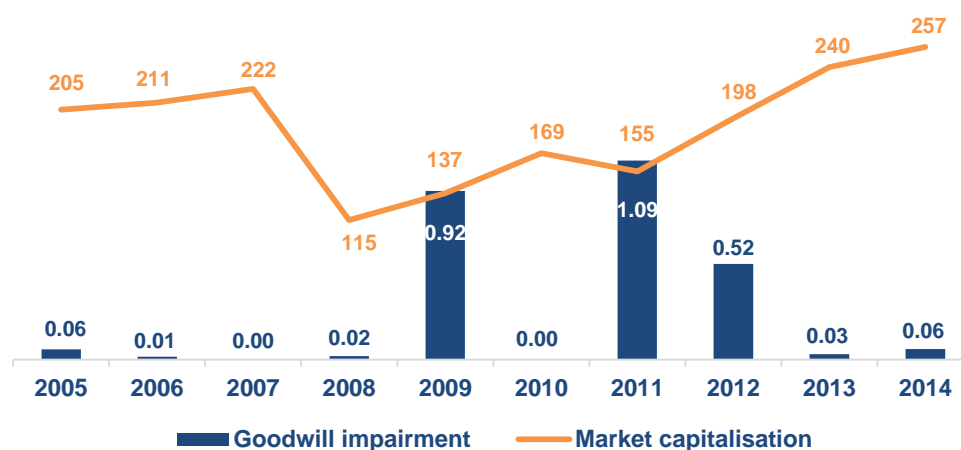


	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Goodwill in billion euros	7	9	15	24	24	30	30	32	35	45

2.70 On average 12 out of the 13 companies report goodwill at the end of each year. The ratio of goodwill to total assets averaged 20% over the period, and goodwill to net assets averaged 40%. Both increased over the period, from 8% to 30%, and 15% to 60%, respectively. However, the distribution is quite wide, with four companies having a goodwill to equity ratio close to or exceeding 100%; and seven companies a ratio of less than 50%.

2.71 Goodwill impairment intensity is relatively low and goodwill impairments are highly concentrated. Specifically, in 2009 and 2011, one company accounted for almost all the annual impairment loss of the industry. The low impairments for Information Technology industry may be because this sector has a very positive outlook, backed by the digitalisation of businesses and consumers' daily lives. It interesting to note that, the average market-to-book ratio over the period under observation is 3

Information Technology - Evolution of goodwill and market capitalisation of all companies (in billion euros)



2.72 All companies in the industry lost a significant part of their market capitalisation in 2008, ranging from 20% to 88% in value; only one company out of 12 reporting goodwill recognised an impairment loss in 2008. The company that accounted for almost 60% of the drop in the market capitalisation did not record any loss, but its goodwill to total assets ratio at the end of 2007 was 1%.

2.73 The same company experienced a drop in its market capitalisation in 2012 equal to 22%, while the other entities in the industry sample had a 78% increase. The entity did not recognise an impairment loss; however, in 2013 it sold part of its operations and reclassified 33% of its total goodwill as part of a disposal group.

Goodwill and nature of consideration

- 2.74 Some academic studies have assumed that there is a correlation between certain characteristics of an acquisition and the magnitude of impairment losses recognised subsequently. One characteristic that is presumed to be indicative of a potential overpayment is that a significant portion of the consideration is paid in equity instruments, and not in cash.
- 2.75 As an indirect way to test the hypothesis, a sample of sixty recent acquisitions from a variety of industries was selected to consider if there is an association between the share of consideration paid in cash and the portion of consideration allocated to goodwill. The results of this limited sample do not seem to show an association.
- 2.76 In 50 cases, consideration only included cash. The proportion of the consideration recognised as goodwill is illustrated in the next table:

Percentage of goodwill over total consideration	Number of companies
<0%	5
0% - 25%	7
26% - 50%	15
51% - 75%	11
76% - 100%	9
>100%	3
Total	50

- 2.77 In the other 10 cases, consideration was paid partly or wholly in the acquirer's equity instruments. The following table illustrates the percentage paid in shares and the proportion between goodwill and total consideration.

Portion of consideration paid in shares	Portion of consideration allocated to goodwill
Between 0% and 49% (3 cases)	Between 33% and 69%
Between 50% and 99% (3 cases)	Between 28% and 60%
100% (4 cases)	Between 0% and 32%

How could the data be used in the debate?

- 2.78 The industry analysis could help in assessing if impairment losses are consistent with the economic trends in the industry.
- 2.79 The analysis of goodwill and nature of consideration could help to assess the risk of overpayment when companies pay for a business combination with their own shares. If this was the case, it could be appropriate to change how this type of consideration is measured.

Chapter 3: International comparison

Introduction

3.1 In this part of the study, the data for the European sample are compared to three other geographical areas: the US, Australia and Japan. This part of the study was jointly developed with the ASBJ.

Definition of the sample

3.2 We analysed data of 4 indices* comprising more than 1,000 companies from 2005 to 2014.

Index	Number of companies analysed
S&P	443
Europe	328
Nikkei	164
ASX	134
Total	1 069

3.3 The analysis started with the population of companies that constituted these indices as of March 2016.

3.4 The entities included in the Japanese sample apply Japanese GAAP, which require annual amortisation of the goodwill.

3.5 In this section, all amounts presented have been translated into US Dollars (USD), using the following exchange rates:

- a) 1 EUR = 1.20980 USD;
- b) 1 JPY = 0.00835 USD; and
- c) 1 AUD = 0.81720 USD.

* Names (and abbreviations) of indices that represented the regions covered are as follows:

- S&P 500 index ('S&P') of the U.S.;
- S&P Europe 350 index ('Europe') of Europe;
- Nikkei 225 index ('Nikkei') of Japan (only those companies that applied Japanese GAAP throughout 2005-2014); and
- S&P ASX 200 index ('ASX') of Australia

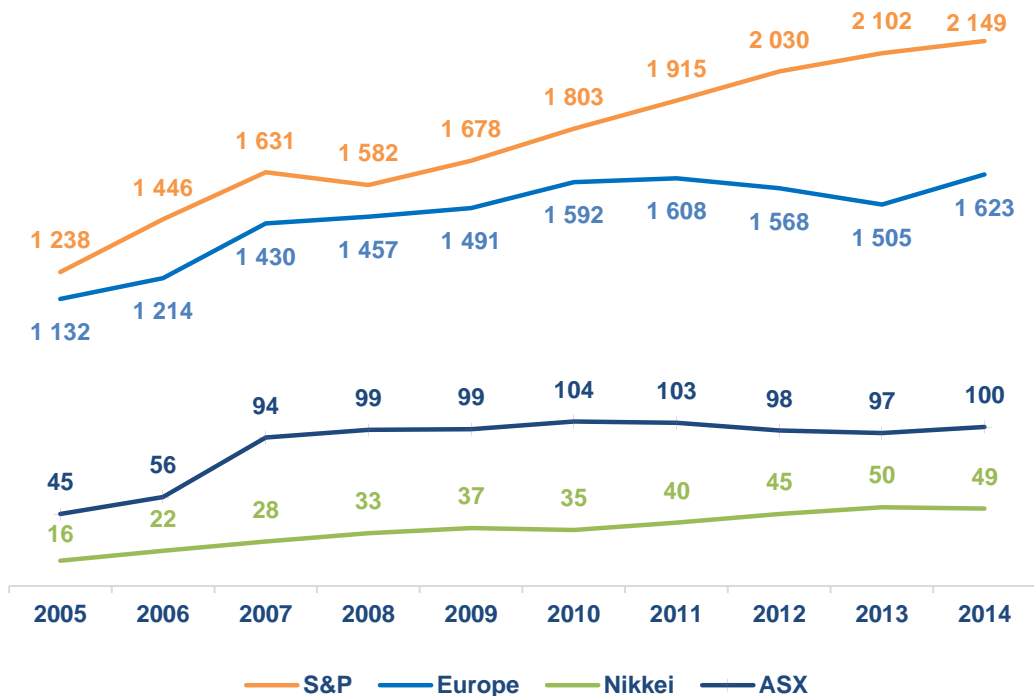
Data for Nasdaq 100 index of the U.S., Hang Seng 50 index of Hong Kong and KOSPI 100 index of Korea were also collected and analysed. They were not included in this paper because they provided similar results to one or more of the indices listed above.

Goodwill

Evolution of goodwill

- 3.6 The graph below illustrates the evolution of goodwill from 2005 to 2014. From 2005 to 2014 the total amount of goodwill increased across all indices. The rate of growth has not been constant, and in some years there was a net decrease.
- 3.7 S&P and Europe had larger total amounts of goodwill than Nikkei and ASX. The biggest increase was noted in S&P, where goodwill increased by 74% during the period.

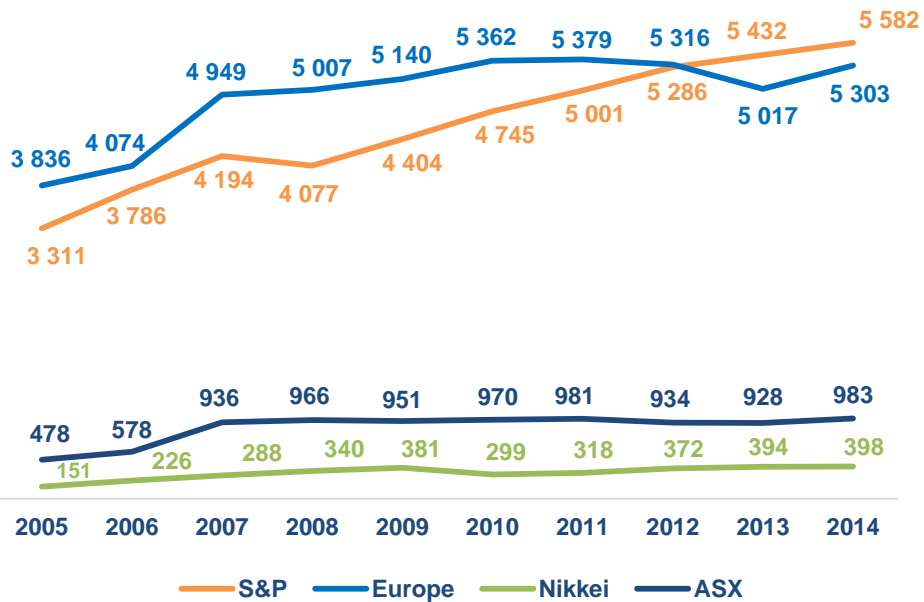
Evolution of total goodwill from 2005 to 2014 (in USD billions)



Evolution of average goodwill per company

- 3.8 The graph below illustrates the evolution of average goodwill per company from 2005 to 2014. From 2008 to 2014, average goodwill per company for S&P increased constantly. In Europe, the average goodwill per company increased until 2011, then decreased in 2012-2013 and increased again in 2014. For both S&P and Europe, goodwill reached its highest level in 2014.

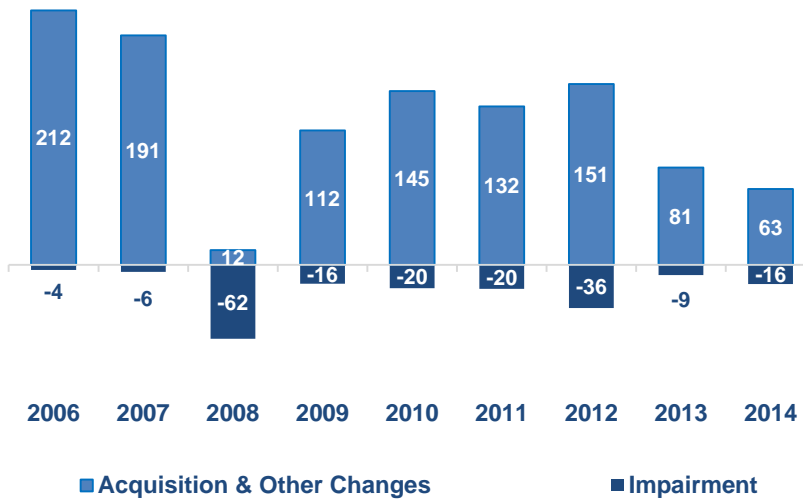
Average goodwill per company
(companies with goodwill - in USD millions)



Goodwill changes

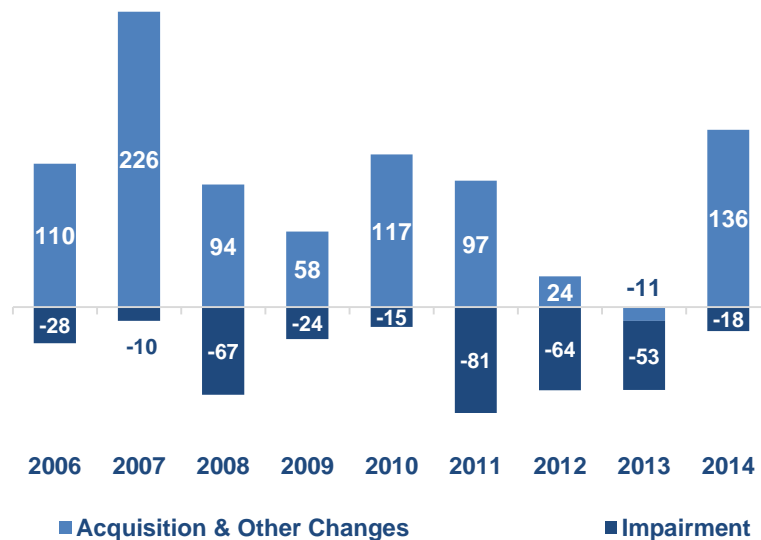
- 3.9 The following graph breaks down the changes in goodwill into acquisitions and other changes and goodwill impairment losses. Acquisitions and other changes include new acquisitions, disposals, and foreign currency translation effects.
- 3.10 As illustrated in the following graph, S&P recorded smaller amounts of goodwill impairment compared to acquisitions & other changes, resulting in continuous increases in the goodwill amount.

Goodwill changes S&P (USD billion)



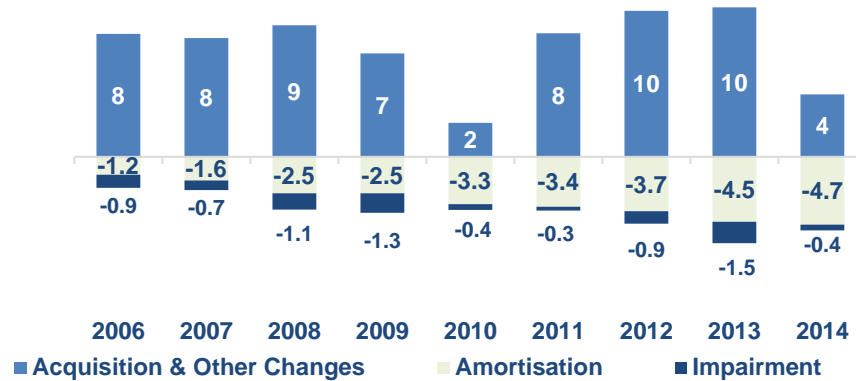
3.11 In 2012-2013, the decline of goodwill in Europe was due to less net acquisitions and high impairment charges. The increase in 2014 was due to significant new additions of goodwill and lower impairments.

Goodwill changes Europe (USD billion)



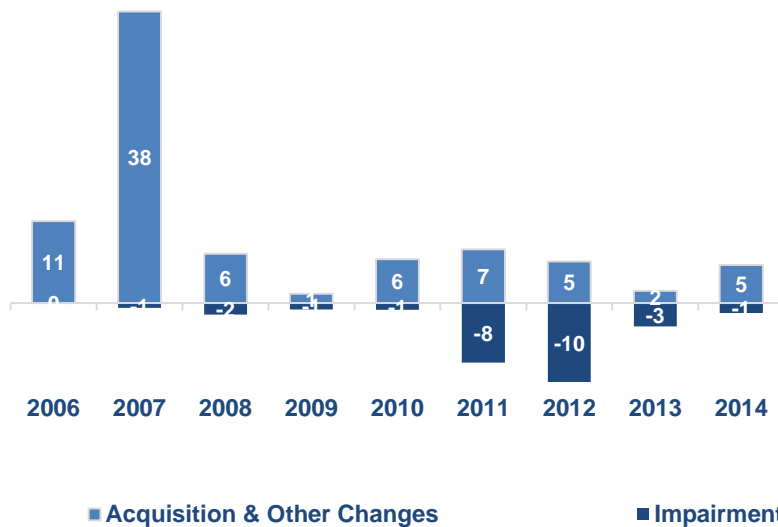
3.12 Nikkei recorded smaller amounts of goodwill impairment compared to acquisitions & other changes. It also recorded relatively stable amounts of amortisation, resulting in modest changes in the goodwill amount.

Goodwill changes Nikkei (USD billion)



3.13 ASX recorded a relatively large amount of impairment in 2011 and 2012, resulting in decreases in the goodwill amount.

Goodwill changes ASX (USD billion)

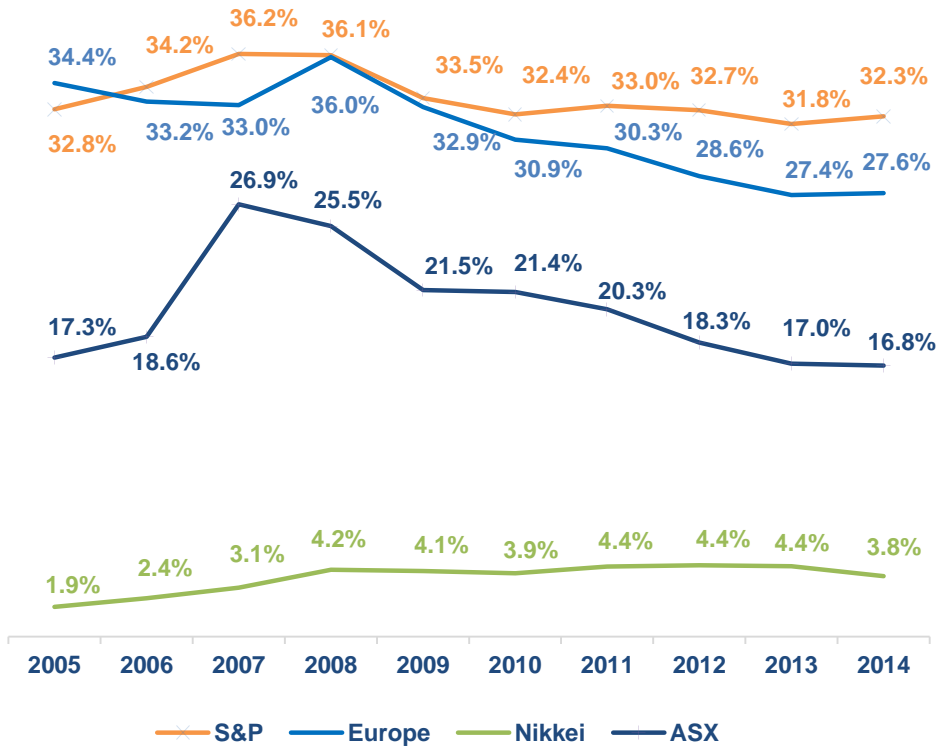


Trend in goodwill as a percentage of net assets

3.14 From 2005 to 2014 the ratio of goodwill to net assets, or the book value of equity, was higher for S&P (33%) and Europe (31%) than for Nikkei (4%) and ASX (20%). Figures of Nikkei were low and relatively stable during the period.

3.15 Europe and ASX decreased gradually during the period (Europe since 2008) due to the relatively higher increase in net assets.

Goodwill / net assets (all companies)

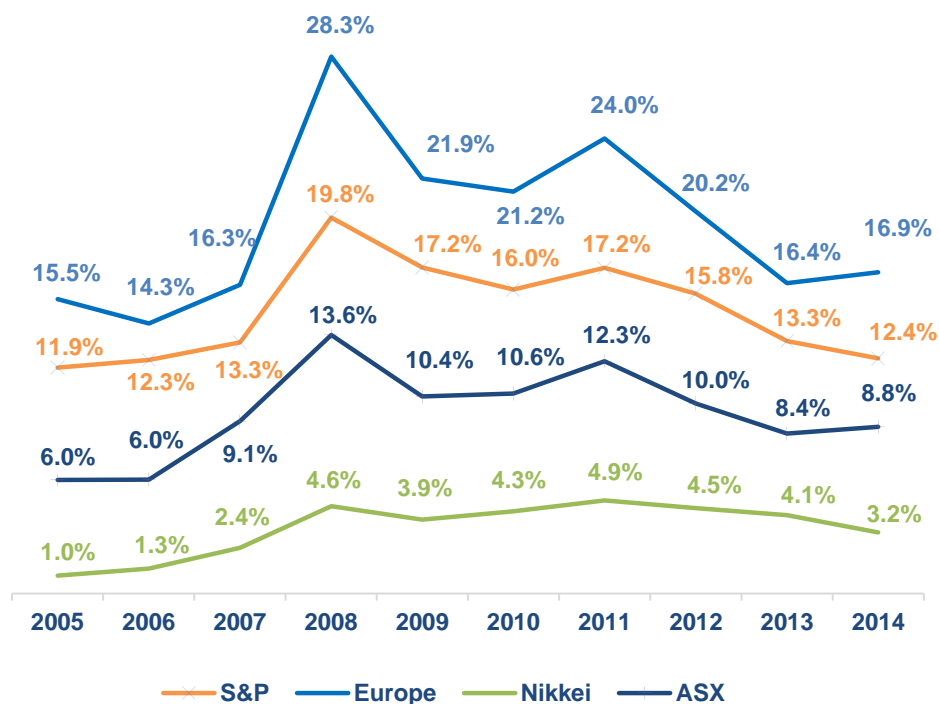


Trend in goodwill as a percentage of market capitalisation

3.16 As illustrated in the following chart, the ratio of goodwill to market capitalisation, showed more volatility during the period, which is mainly attributed to the volatility in the market capitalisation.

- 3.17 S&P and Europe showed higher figures but less outstanding compared to goodwill to net assets.

Goodwill / market capitalisation (all companies)



Level of concentration of goodwill in 2014

Companies that accounted for 50% of total goodwill in 2014 (subpopulation)

- 3.18 The following table illustrates the number and percentage of companies that accounted for 50% of the total goodwill in 2014. In addition, it illustrates the share of market capitalisation of these companies. Less than or equal to 11% of the population in all indices accounted for 50% of the total goodwill.

Index	number of companies that account for 50% of the total goodwill	% of companies that account for 50% of the total goodwill	% of market capitalisation of these companies
S&P	36	8.1%	31.9%
Europe	36	11.0%	28.8%
Nikkei	9	5.5%	21.2%
ASX	10	7.5%	47.1%

Number of companies that recognised goodwill exceeding 50% and 100% of their net assets or market capitalisation in 2014

- 3.19 The following table illustrates the number of companies that recognised goodwill which exceeds 50% and 100% of their net assets and the number of companies that recognised goodwill which exceeds 50% and 100% of their market capitalisation.
- 3.20 For example, 64 companies in S&P and 36 companies in Europe recognised goodwill exceeding 100% of their net assets. We can also observe that a few companies recognised goodwill exceeding 100% of their market capitalisation.

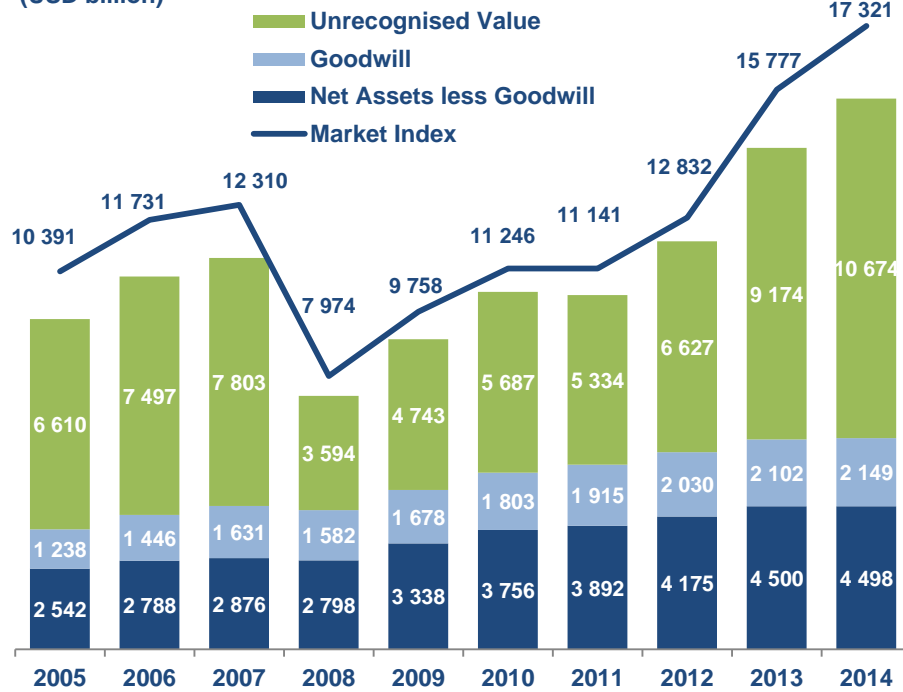
Index	# of companies analysed	vs. Net assets		vs. Market capitalisation	
		50% +	100% +	50% +	100% +
S&P	443	155	64	13	1
Europe	328	107	36	25	3
Nikkei	164	0	0	0	0
ASX	134	27	9	10	1

Market capitalisation vs net assets

- 3.21 The following graph compares the market capitalisation and net assets. The difference represents the value that the market assigns to the companies but that is not recognised in the financial statements.
- 3.22 For S&P and Europe, historically the difference is a large portion of market capitalisation and is mostly driven by market fluctuations rather than changes in recognised goodwill. Nikkei has less unrecognised value since 2007.

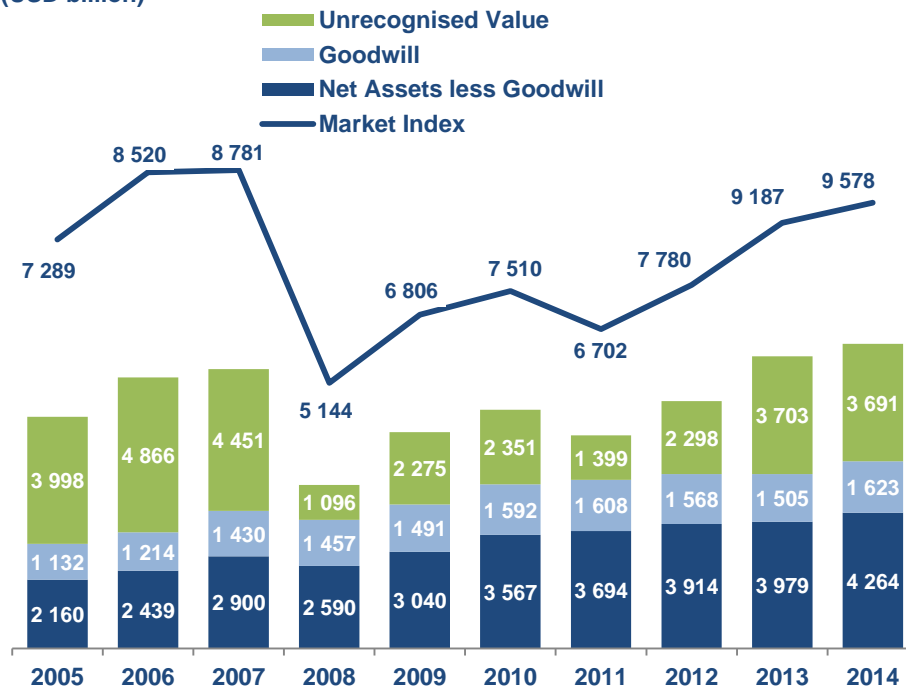
Unrecognised value, goodwill, net assets less goodwill
(USD billion)

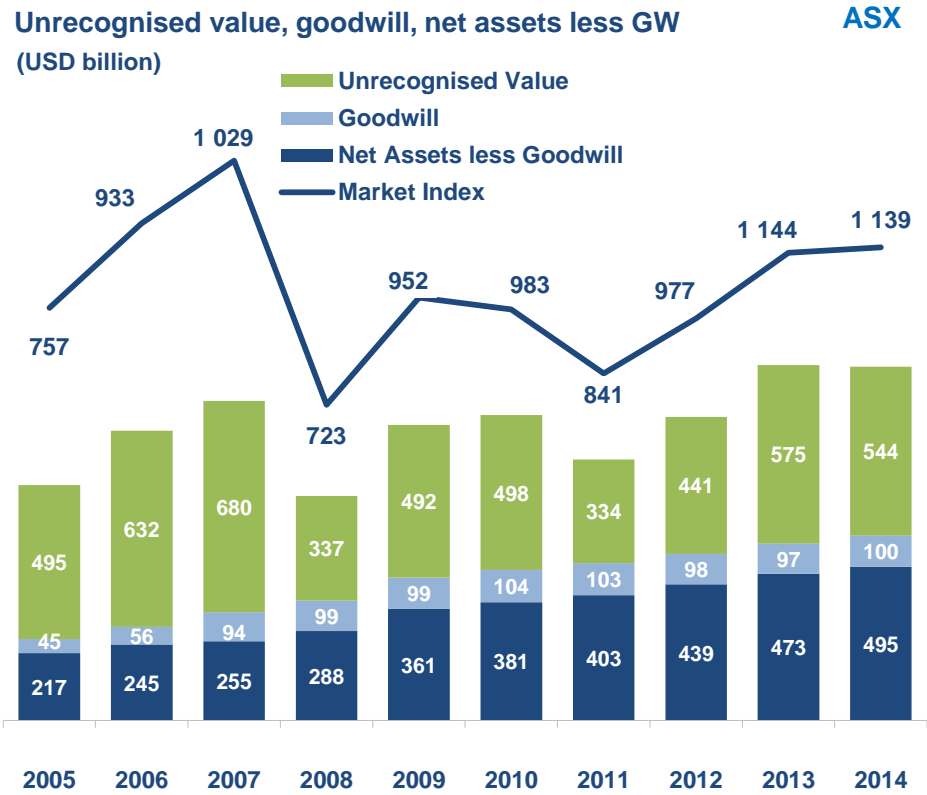
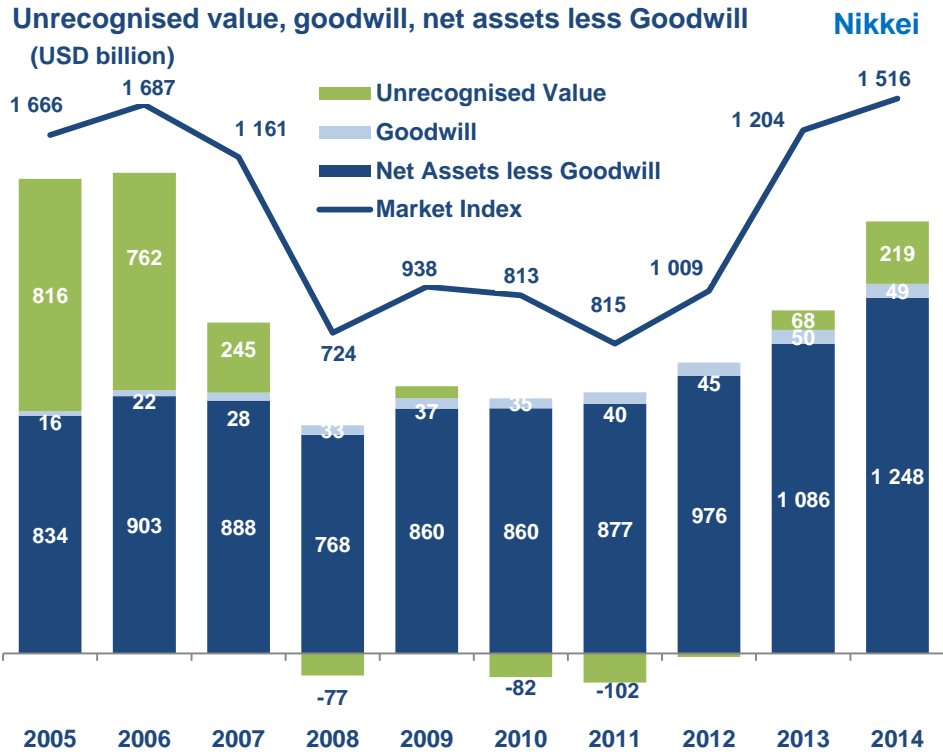
S&P



Unrecognised value, goodwill, net assets less goodwill
(USD billion)

Europe



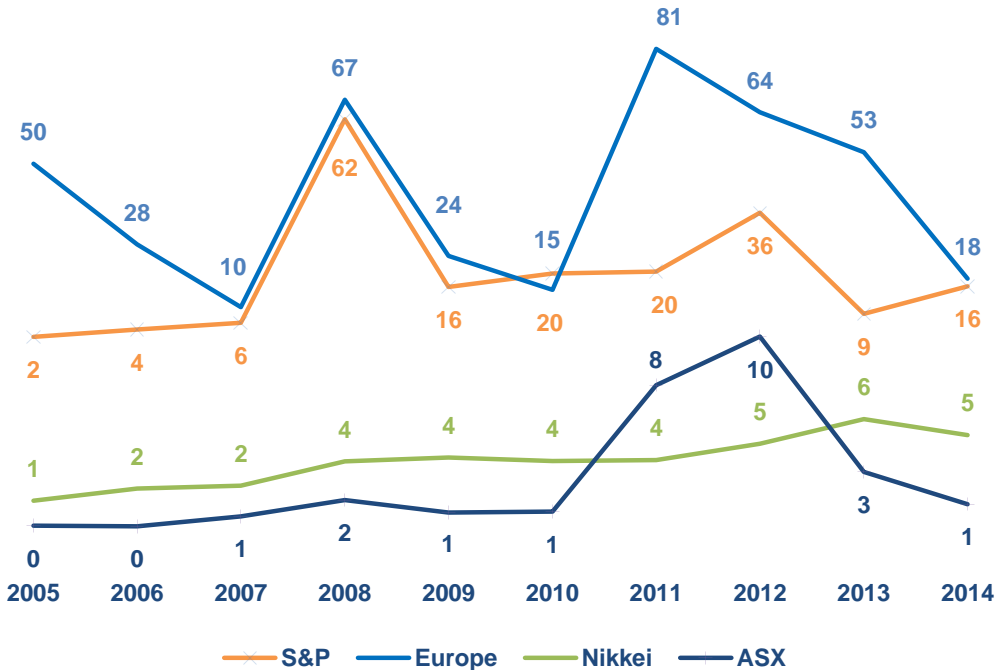


Goodwill impairment losses

Evolution of goodwill impairment losses

3.23 Goodwill impairment losses were high in 2008 for Europe and S&P, and again in 2011 and 2012 mainly for Europe and ASX.

Evolution of goodwill impairment (& amortisation for Nikkei) from 2005 to 2014 (in USD billions)



3.24 As illustrated in the following table, a relatively small number of companies recorded goodwill impairment. The percentage of companies that recorded goodwill impairment were higher for Europe than for other indices.

Number of companies with goodwill impairment (& amortisation, if applicable)

Index	Number of companies analysed	2006	2007	2008	2009	2010	2011	2012	2013	2014
S&P	443	10	15	47	41	30	28	45	29	28
Europe	328	73	68	98	84	70	77	87	89	84
Nikkei	164	67	71	75	75	121	128	128	129	130
ASX	134	8	12	22	16	21	22	17	18	18

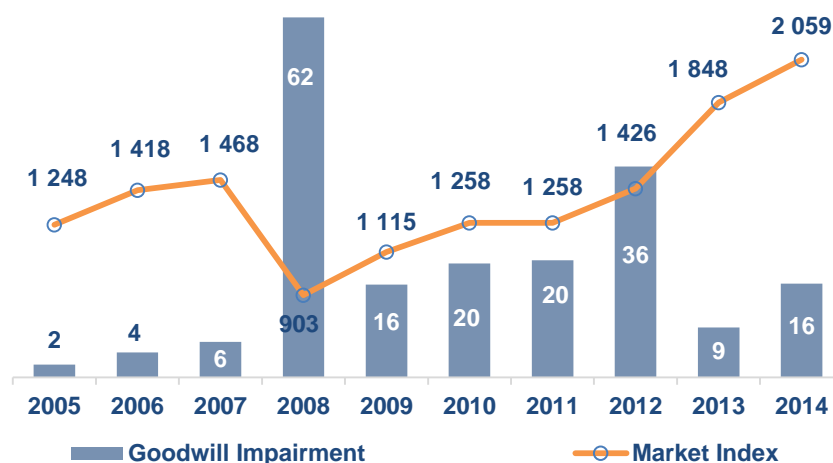
**Number of companies with goodwill impairment (& amortisation, if applicable) /
Number of companies with opening goodwill**

Index	Number of companies analysed	2006	2007	2008	2009	2010	2011	2012	2013	2014
S&P	443	2.7%	3.9%	12.1%	10.6%	7.9%	7.4%	11.7%	7.6%	7.2%
Europe	328	24.7%	22.8%	33.9%	28.9%	24.1%	25.9%	29.1%	30.2%	28.0%
Nikkei	164	63.8%	72.4%	77.3%	76.5%	126.0%	108.5%	101.6%	105.7%	103.2%
ASX	134	8.4%	12.4%	22.0%	15.7%	20.2%	20.6%	16.2%	17.1%	17.3%

3.25 The following graphs compare the evolution of goodwill impairment to the evolution of the market index.

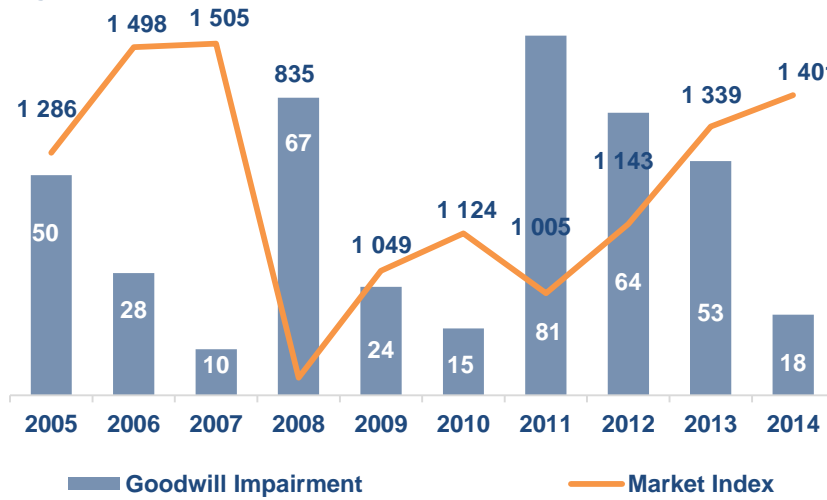
3.26 The graphs show that goodwill impairment generally increased when the stock market index showed a downward trend, with the exception of 2012 for S&P, ASX and Nikkei when the market capitalisation increased but impairment was higher than the prior year.

Evolution of goodwill impairment compared to the market index - S&P
(goodwill impairment in billion euros and market index in market points)



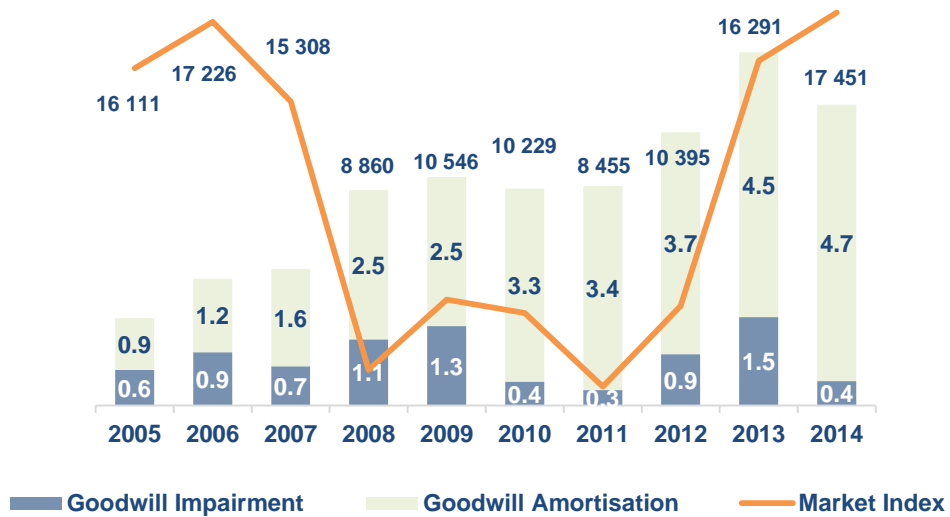
Evolution of goodwill impairment compared to the market index - Europe

(goodwill impairment in billion euros and market index in market points)



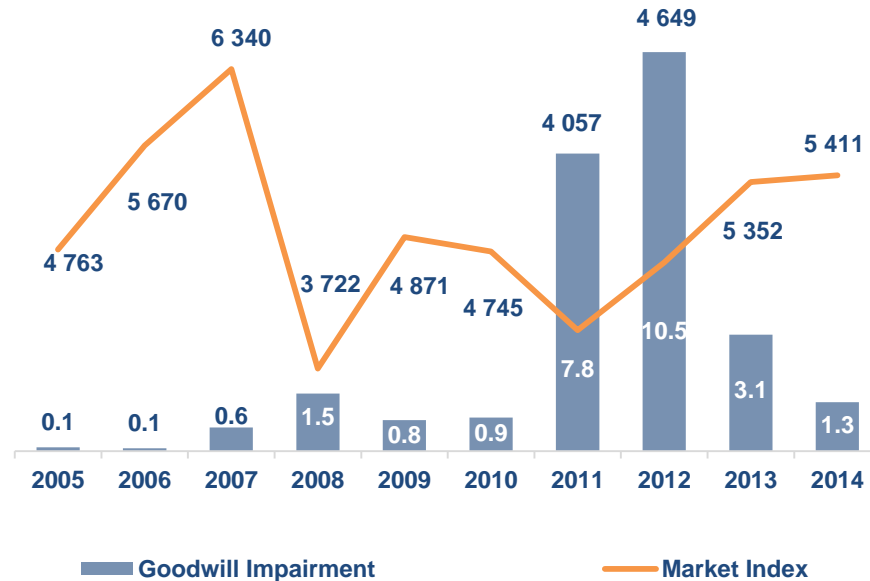
Evolution of goodwill impairment and amortisation compared to the market index - Nikkei

(goodwill impairment and amortisation in billion euros and market index in JPY)



Evolution of goodwill impairment compared to the market index - ASX

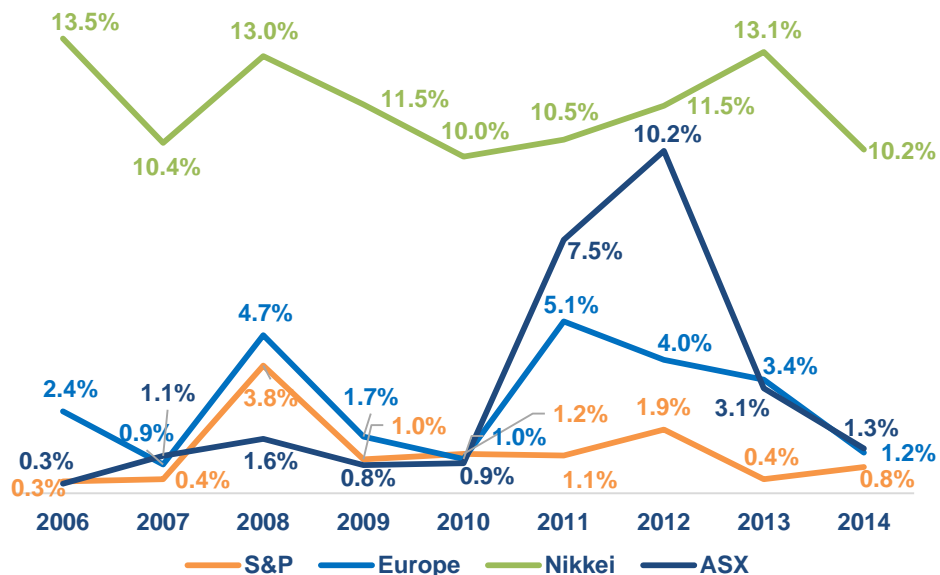
(goodwill impairment in billion euros and market index in market points)



Intensity of goodwill impairment

3.27 For S&P and Europe, the ratio of goodwill impairment to the opening goodwill amount ranged from 1%-5%. The ratio was higher for Nikkei (around 10%-14%) when including goodwill amortisation.

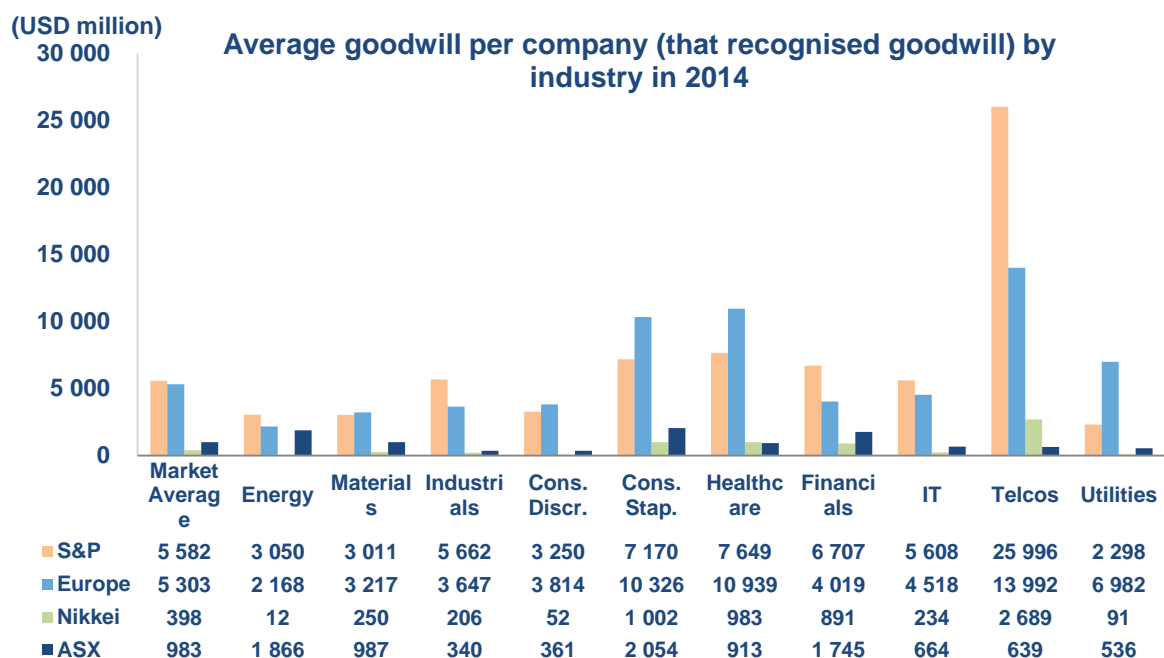
Goodwill impairment (& amortisation) / opening goodwill



Industry analysis

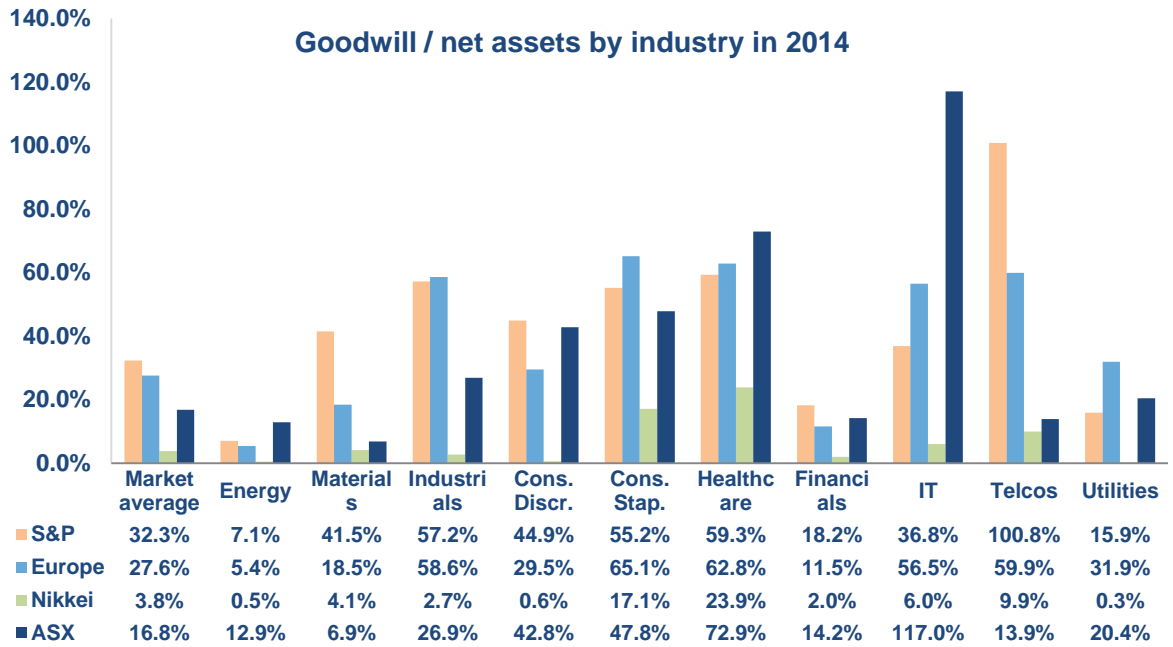
Average goodwill per company by industry in 2014

- 3.28 The graph below breaks down the average goodwill per company in 2014 by industry. The Telecommunications Services industry in S&P and Europe had higher amounts of goodwill per company. Consumer Staples and Healthcare in S&P and Europe showed larger amounts. Unlike other indices, Utilities in Europe recognised a larger amount of goodwill per company.



Goodwill as a percentage of net assets by industry in 2014

- 3.29 The graph below shows the ratio of goodwill to net assets in 2014 by industry. Similar to average goodwill per company, the Telecommunication Services, Consumer Staples and Healthcare industries indicated higher figures. The Industrials industry in S&P and Europe also showed higher figures. ASX ranked higher in some industries, particularly the Information Technology industry. Consumer staples and health care industries in Nikkei showed relatively higher figures compared to other industries.



Appendix 1 – Some evidence from academic research

- 1 The objective of the present study is mostly to present objective data on the evolution of goodwill and impairment losses over the period, without drawing a conclusion on what the accounting treatment of goodwill should be. However, it may be helpful to include some reference to the evidence from academic research.
- 2 Due to space constraints, this appendix is not intended to provide a comprehensive picture of the academic literature available on the topic.
- 3 In recent years, a number of academic literature reviews have been published on goodwill accounting in entities reporting under IFRS or US GAAP. Among other topics, these reviews have focused on studies that researched:
 - a) Whether recognition of goodwill is value relevant;
 - b) Whether the impairment-only model has increased or decreased relevance compared to the prior accounting;
 - c) Whether impairment losses are recognised on a timely basis; and
 - d) The determinants of goodwill impairment.
- 4 Other research topics that have been investigated, but not covered in this Appendix, are whether certain acquisition characteristics are associated with impairment intensity, whether goodwill is correlated with future performance and cash flows and the degree of compliance with disclosure requirements.
- 5 There are a few studies that consider the European Union as a whole. Most studies concern one single country, frequently US or Australia. Although the accounting for goodwill under US GAAP is similar to IFRS, one literature review notes that transposing results from US research into IFRS or Europe is questionable due to the fact that the former concentrates on an environment with homogeneous regulatory settings.
- 6 Sahut et al (2011) examine a sample of companies from 10 EU countries and conclude that goodwill is positively correlated with stock prices (and negatively correlated with impairment), but its value relevance has decreased post-IFRS adoption. Aharony et al (2010) examine a sample of companies from 14 EU companies and find an increased relevance, and the same conclusion is reached by Oliveira et al (2010) in a Portuguese study. Hamberg and Beisland (2014) confirm the value relevance of goodwill for Sweden but do not note a significant change post-IFRS adoption.
- 7 While most studies find a positive correlation between goodwill and stock prices, there is mixed evidence on whether the adoption of IFRS 3 has increased the relevance of goodwill. Moreover, in some cases national GAAP allowed direct write-off against equity; therefore, even an increase in value relevance post-IFRS adoption does not necessarily indicate that the impairment-only model provides more relevant information than an impairment and amortisation model.

- 8 Studies investigate the timeliness of impairment losses either by looking at short-term stock market reaction to impairment or longer-term association. The assumption is that managers have generally better information than outsiders, so if they recognise impairment on a timely basis, this is new information to the market and investors should react. However, if impairment losses are deferred, it is assumed that markets would have already priced them in and there will be little effect.
- 9 Some US studies found evidence that impairment losses lag deteriorating operating performance and stock returns, which suggest some delay in recognition. Amiraslani et al (2013) analyse a sample of 4 474 listed companies across Europe from 2010 to 2011 and conclude that when companies experience bad news (decreases in economic value), a significant proportion of economic losses are reflected in current period earnings: approximately 31% of losses in economic value are recognised in current period earnings, with 17.8% attributable to goodwill impairment charges. Moreover, they suggest that the correlation between stock returns and goodwill impairment is stronger for those countries where the enforcement is stronger and the market is more developed.
- 10 Different studies attempted to assess if goodwill impairments are associated with economic factors (such as low profitability) while others investigated if they are associated with managerial incentives (such as the tenure or change in the CEO).
- 11 A number of European studies conclude that goodwill impairment losses are negatively associated with profitability or other performance measures.
- 12 Less clear is the evidence about how managerial incentives impact impairment recognition. Based on US literature, there are indications that factors such as income smoothing, high unexpected losses (so-called 'big bath behaviour'), CEO changes and management compensation are associated with impairment losses. European studies are less conclusive, with some indicating a weak correlation only and some finding no evidence of association.
- 13 Some studies note that it may be difficult to differentiate between economic factors and managerial incentives. For instance, when an entity reports a significant impairment under a new CEO, this may point to managerial opportunism; but the change in CEO is often triggered by poor economic performance, which may explain the impairment.

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Acknowledgments

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