



QUANTITATIVE STUDY ON GOODWILL AND IMPAIRMENT

**Staff of the European Financial Reporting Advisory Group (EFRAG) and
Staff of the Accounting Standards Board of Japan (ASBJ)**

July 2016

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1. NUMBER OF COMPANIES ANALYSED & NUMBER OF COMPANIES THAT ACCOUNTED FOR 50% OF TOTAL GOODWILL IN 2014

- We analysed data of 4 indices comprising more than 1,000 companies (covering the U.S., Europe and Asia-Oceania) from 2007 to 2014.
- Concentration of goodwill at the top end was a common feature of all indices. For all indices, less than 11% of the population accounted for 50% of total goodwill.

Companies Analysed (Total Population)

Index	# of companies in the Total Population (a)
S&P	443
Europe	328
Nikkei	164
ASX	134
Total	1,069

Companies that Accounted for 50% of Total Goodwill in 2014 (Subpopulation)

Index	# of companies in the Subpopulation (b)	(b)/(a)	% of market capitalisation (in 2014) of the Subpopulation over that of the Total Population
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%

➤ Note 1

Names (and abbreviations) of indices that represented the regions covered in this presentation 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)
- S&P ASX 200 index ('ASX') of Australia

➤ Note 2

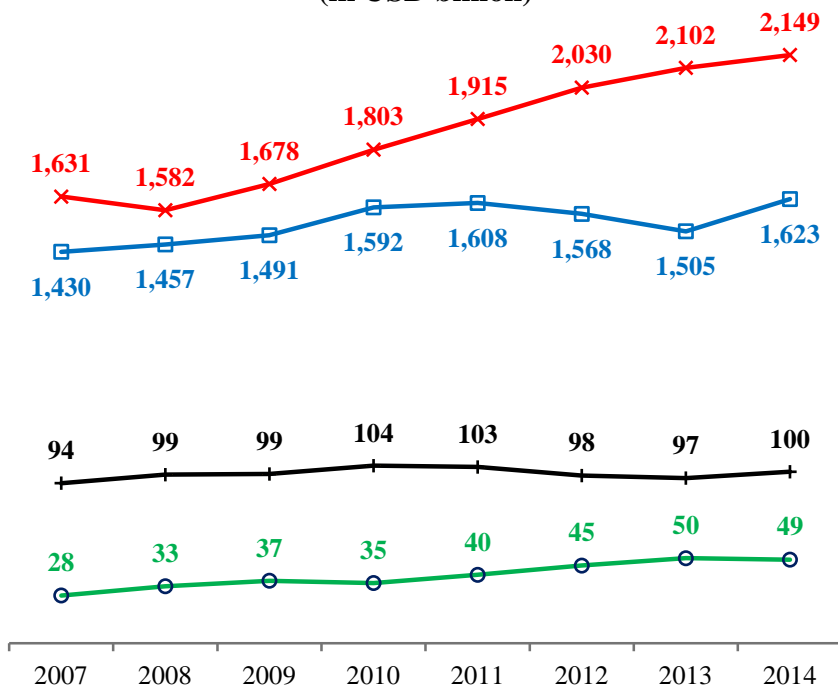
Data for Nasdaq 100 index of the U.S., Hang Seng 50 index of Hong Kong and KOSPI 100 index of Korea were also collected and analysed. They were not included in this presentation because they provided similar results to one or more of the indices listed above.

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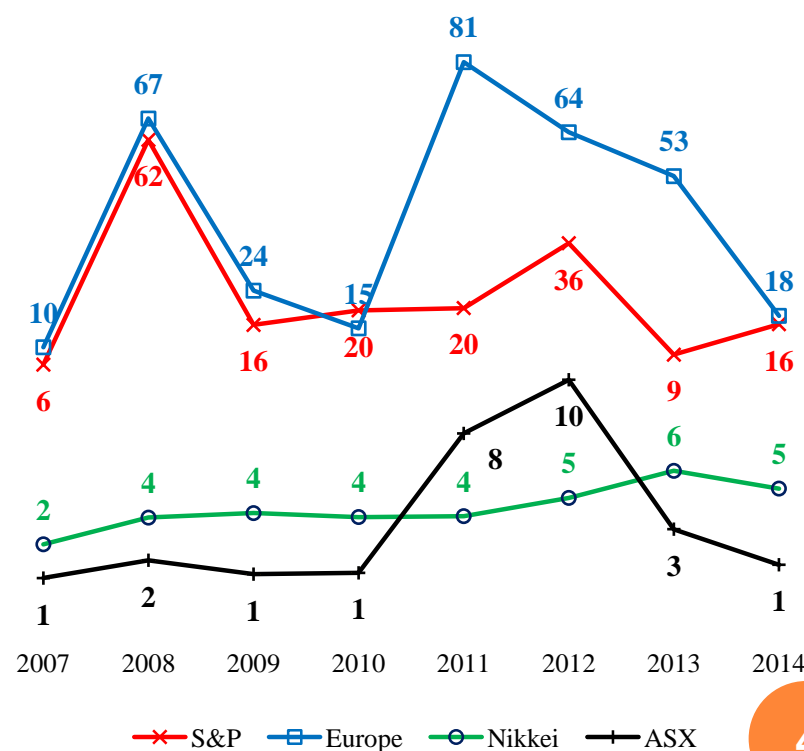
2. EVOLUTION OF GOODWILL AND GOODWILL IMPAIRMENT FROM 2007 TO 2014

- From 2007 to 2014, total goodwill increased across all indices.
- Impairment charges were high in 2008 for Europe and S&P, and again in 2011 and 2012 mainly for Europe and ASX.

Evolution of total goodwill from 2007 to 2014 (in USD billion)



Evolution of goodwill impairment (& amortisation, if applicable) from 2007 to 2014 (in USD billion)



—x— S&P —□— Europe —○— Nikkei —+— ASX

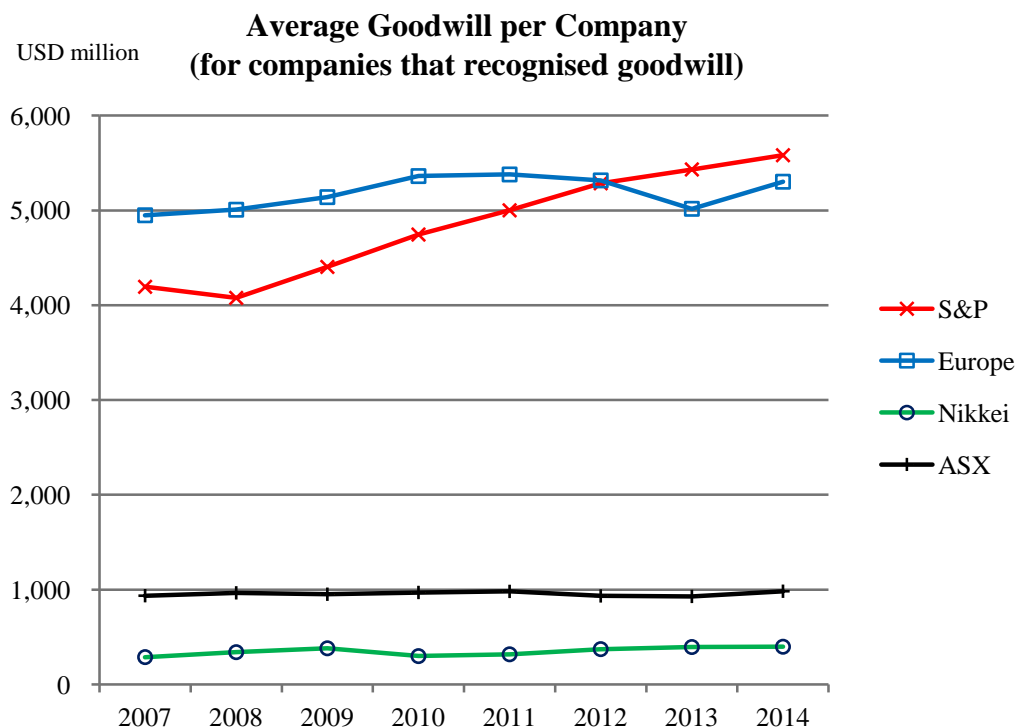
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Data source: Bloomberg (for S&P, Nikkei and ASX) and S&P Capital IQ (for Europe)

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3. TREND IN AVERAGE GOODWILL PER COMPANY & TOTAL AMOUNT OF GOODWILL IN 2014

- S&P and Europe had larger amounts of goodwill, both in average per company and in total, whereas Nikkei and ASX had smaller amounts.
- 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 and Total Goodwill in 2014
(in USD billion)

	Average goodwill per company	number of companies that recognised goodwill	Total goodwill
S&P	5.6	385	2,149
Europe	5.3	306	1,623
Nikkei	0.4	123	49
ASX	1.0	102	100

➤ **Note**

In Japan, most business combinations have been accounted for under the purchase method since 2006. Until then, the pooling-of-interests method was commonly used.

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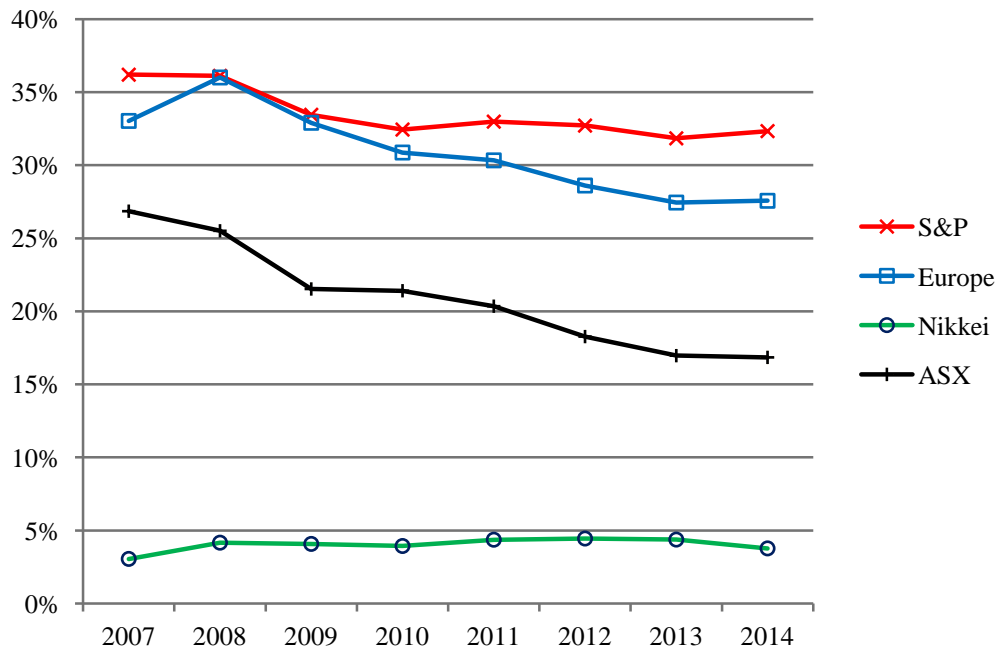
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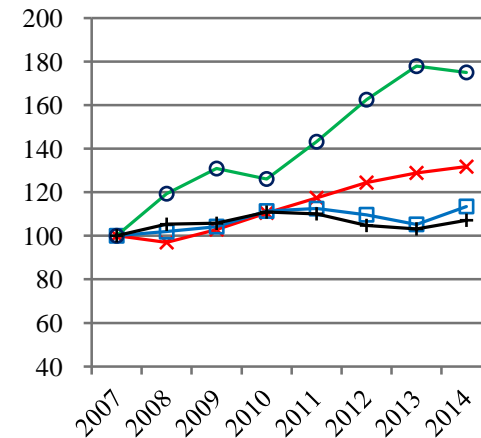
4A. TREND IN GOODWILL/NET ASSETS (BOOK VALUE OF TOTAL EQUITY)

- S&P (34% [average during 2007-2014]) and Europe (31%) showed higher ratios of goodwill to net assets.
- ASX (21%) indicated middle level figures, different from the modest figures of average goodwill per company.
- Europe and ASX decreased gradually during the period (Europe since 2008) due to the relatively higher increase in net assets.
- Figures of Nikkei were modest (4%) and steady.

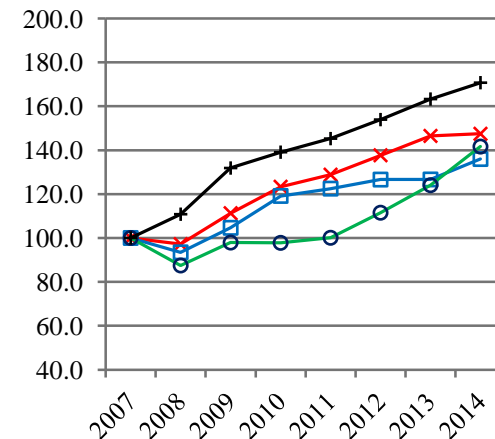
Goodwill / Net Assets



Goodwill (FY2007=100)



Net Assets (FY2007=100)



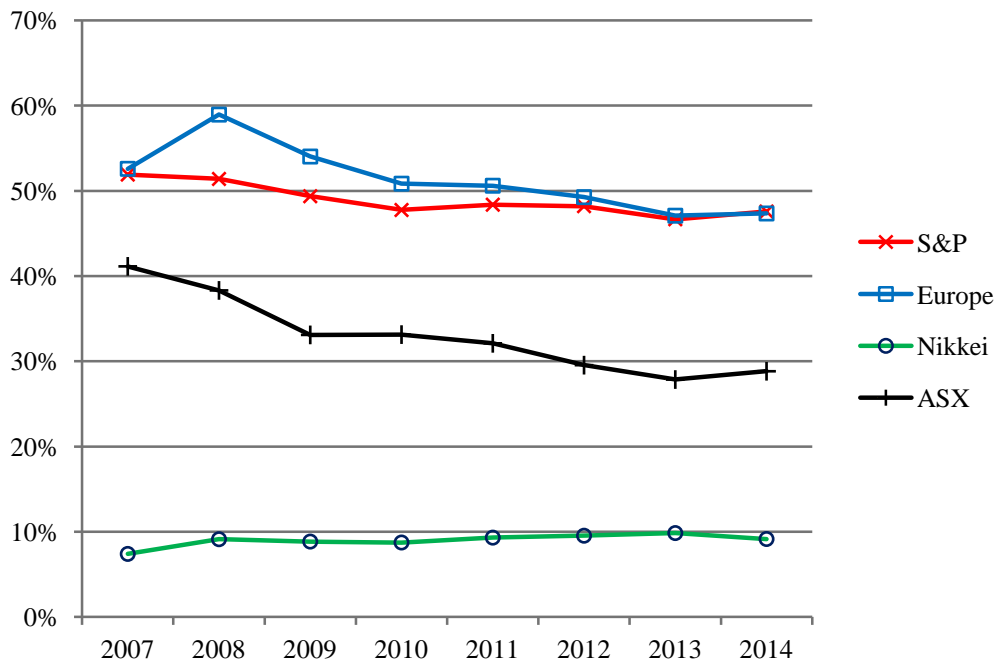
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Data source: Bloomberg (for S&P, Nikkei and ASX) and S&P Capital IQ (for Europe)

4B. TREND IN INTANGIBLES (INCLUDING GOODWILL)/NET ASSETS

- Trend in intangibles/net assets was similar to the trend in goodwill/net assets.
- Europe (51% [average during 2007-2014]) showed slightly higher figures than S&P (49%) for intangibles.
- Both intangibles and net assets increased for Nikkei, resulting in little movement.

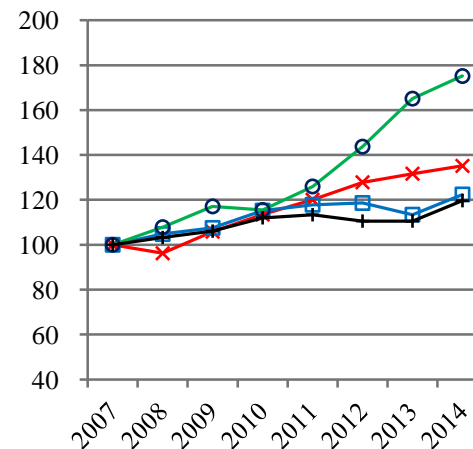
Intangibles (including Goodwill) / Net Assets



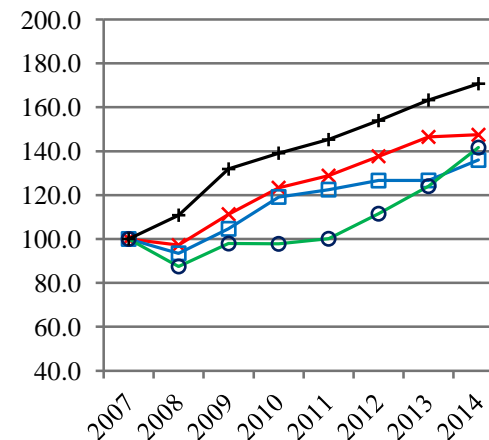
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Data source: Bloomberg (for S&P, Nikkei and ASX) and S&P Capital IQ (for Europe)

Intangibles (FY2007=100)



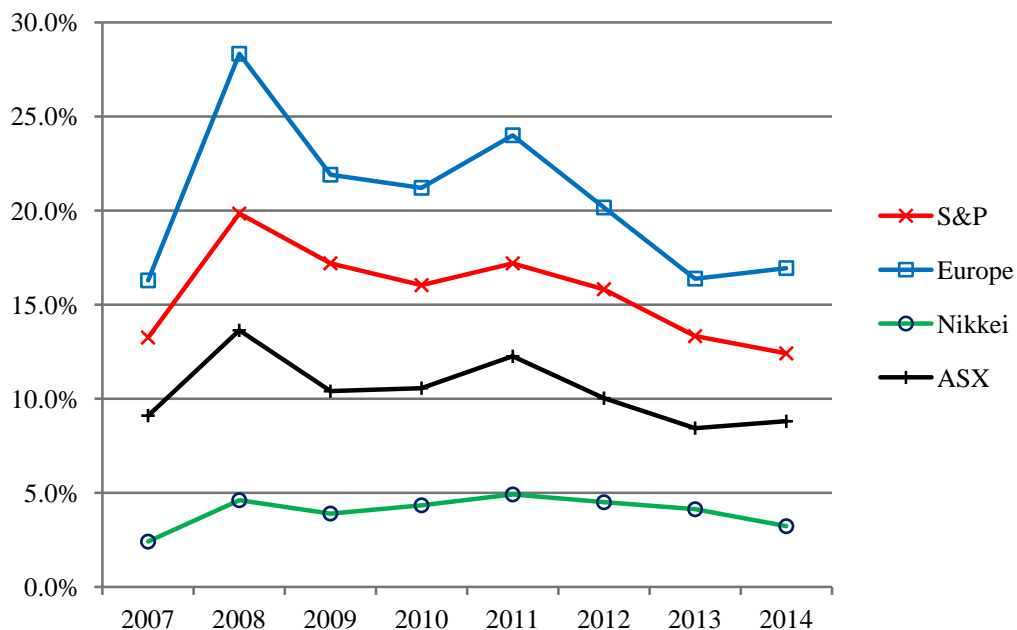
Net Assets (FY2007=100)



5A. TREND IN GOODWILL/MARKET CAPITALISATION

- Goodwill to market capitalisation showed more volatility mainly due to volatility in market capitalisation.
- S&P and Europe showed higher figures but less outstanding compared to goodwill to net assets.

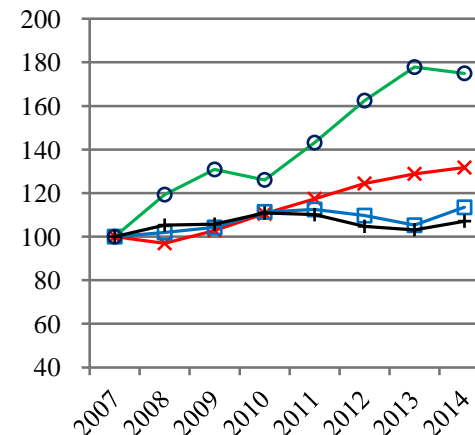
Goodwill / Market Cap.



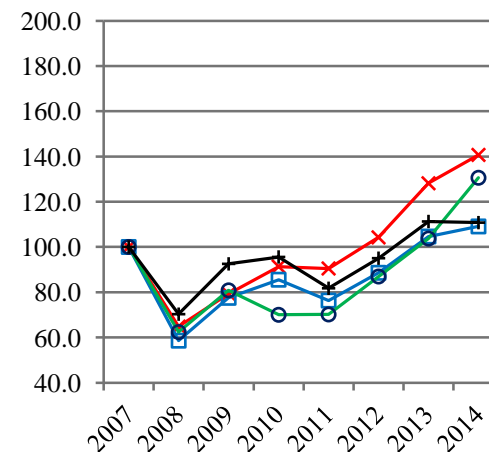
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Data source: Bloomberg (for S&P, Nikkei and ASX) and S&P Capital IQ (for Europe)

Goodwill (FY2007=100)



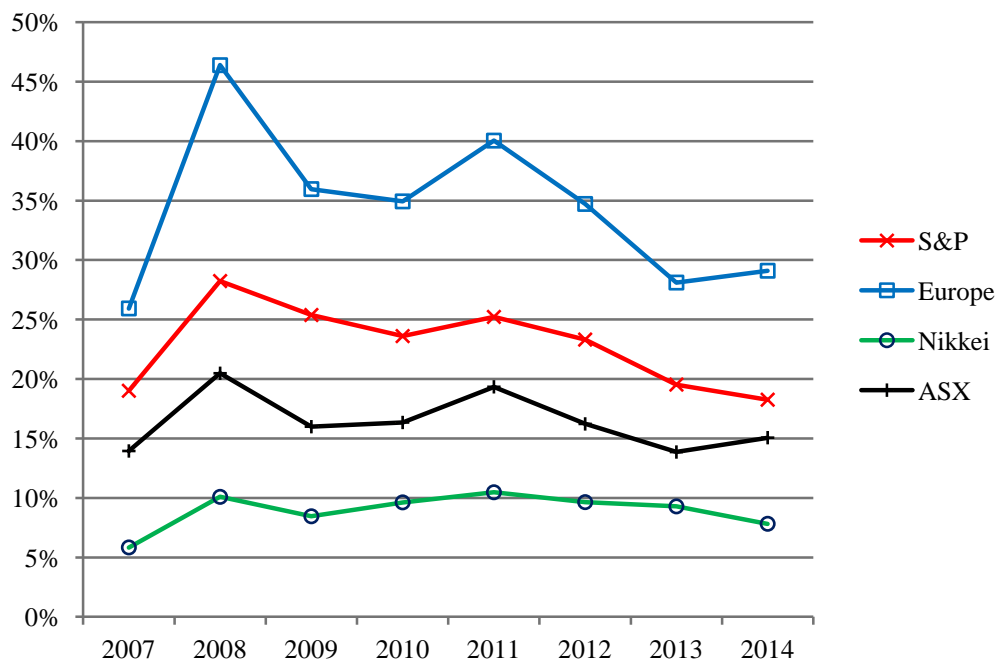
Market Cap. (FY2007=100)



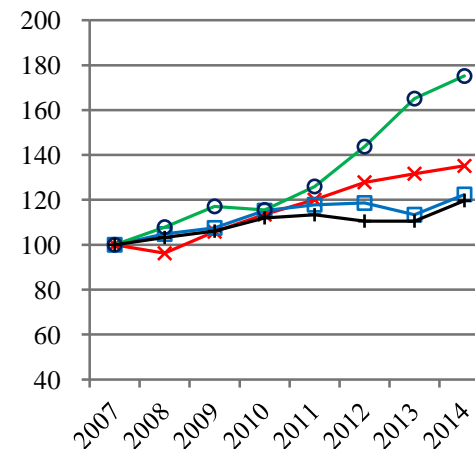
5B. TREND IN INTANGIBLES (INCLUDING GOODWILL)/MARKET CAPITALISATION

- Trend in intangibles/market capitalisation was similar to goodwill/market capitalisation.

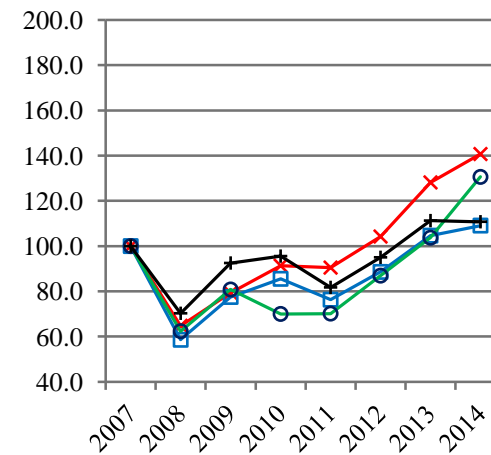
Intangibles (including Goodwill) / Market Cap.



Intangibles (FY2007=100)



Market Cap. (FY2007=100)



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6. NUMBER OF COMPANIES THAT RECOGNISED GOODWILL OR INTANGIBLES EXCEEDING 50% OF NET ASSETS IN 2014

- Quite a number of companies in S&P and Europe recognised goodwill or intangibles exceeding 100% of their net assets.
- Some companies recognised goodwill or intangibles exceeding 100% of their market capitalisation.

Goodwill (in 2014)

Index	# of companies analysed	vs. Net Assets		vs. Market capitalisation	
		50% +		50% +	
			100% +		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

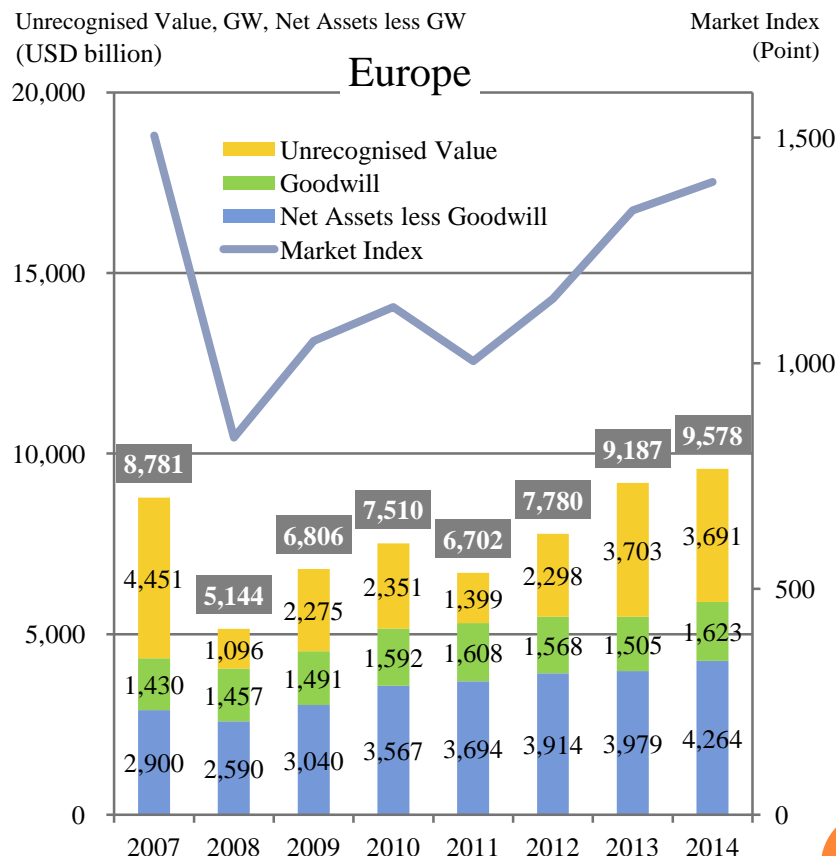
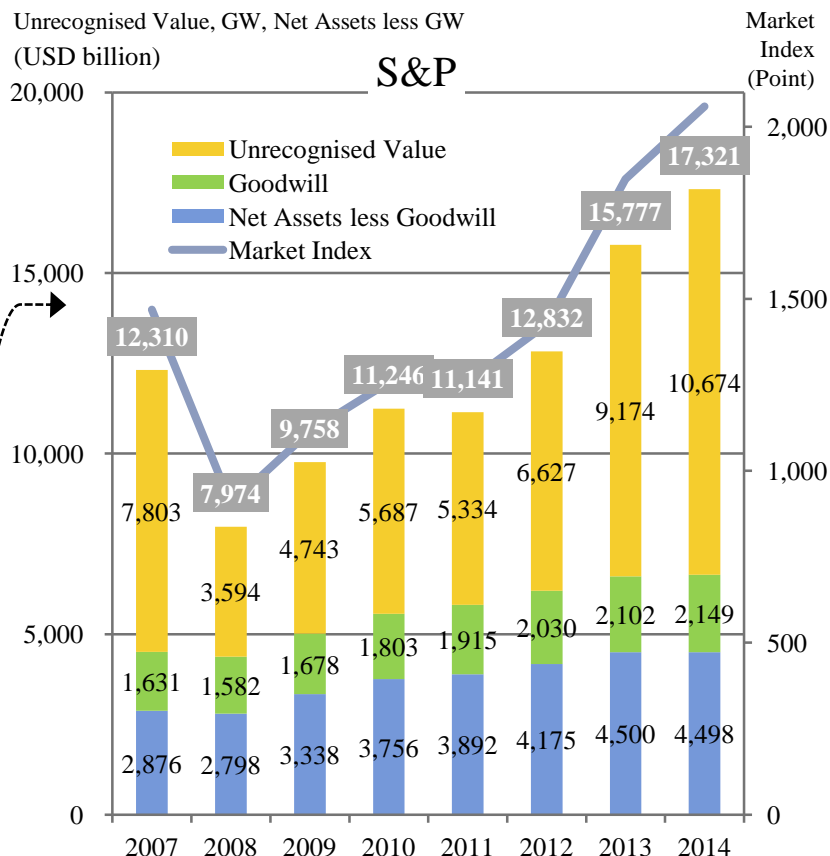
Intangibles including Goodwill (in 2014)

Index	# of companies analysed	vs. Net Assets		vs. Market capitalisation	
		50% +		50% +	
			100% +		100% +
S&P	443	199	114	42	3
Europe	328	155	82	66	14
Nikkei	164	6	0	2	0
ASX	134	52	29	27	5

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7. TREND IN BREAKDOWN OF MARKET CAPITALISATION

- For S&P and Europe, a large portion of market capitalisation (ie market value of equity) was not recognised in the statement of financial position.
- Market fluctuations affected the unrecognised value rather than goodwill.



Note: **Figures in gray boxes** represent Market Cap. (ie the sum of Unrecognised Value (yellow), Goodwill (green) and Net Assets less Goodwill (blue))

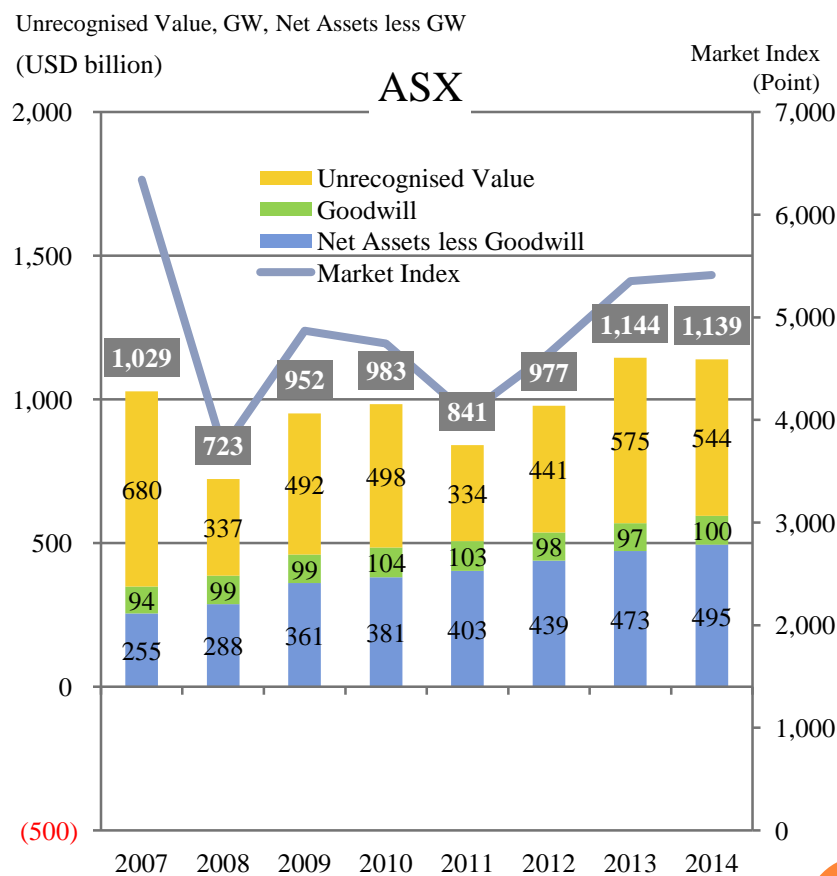
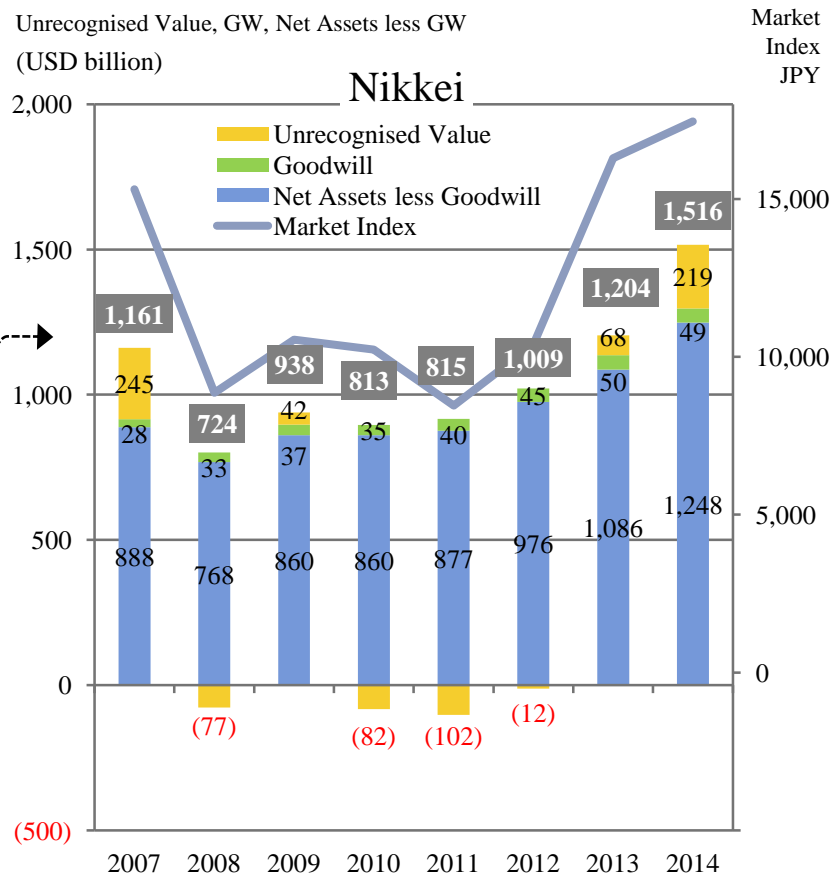
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7. TREND IN BREAKDOWN OF MARKET CAPITALISATION (CONT'D)

- Compared to S&P, Europe and ASX, Nikkei has much less unrecognised value.
- Market fluctuations affected recognised assets rather than goodwill.



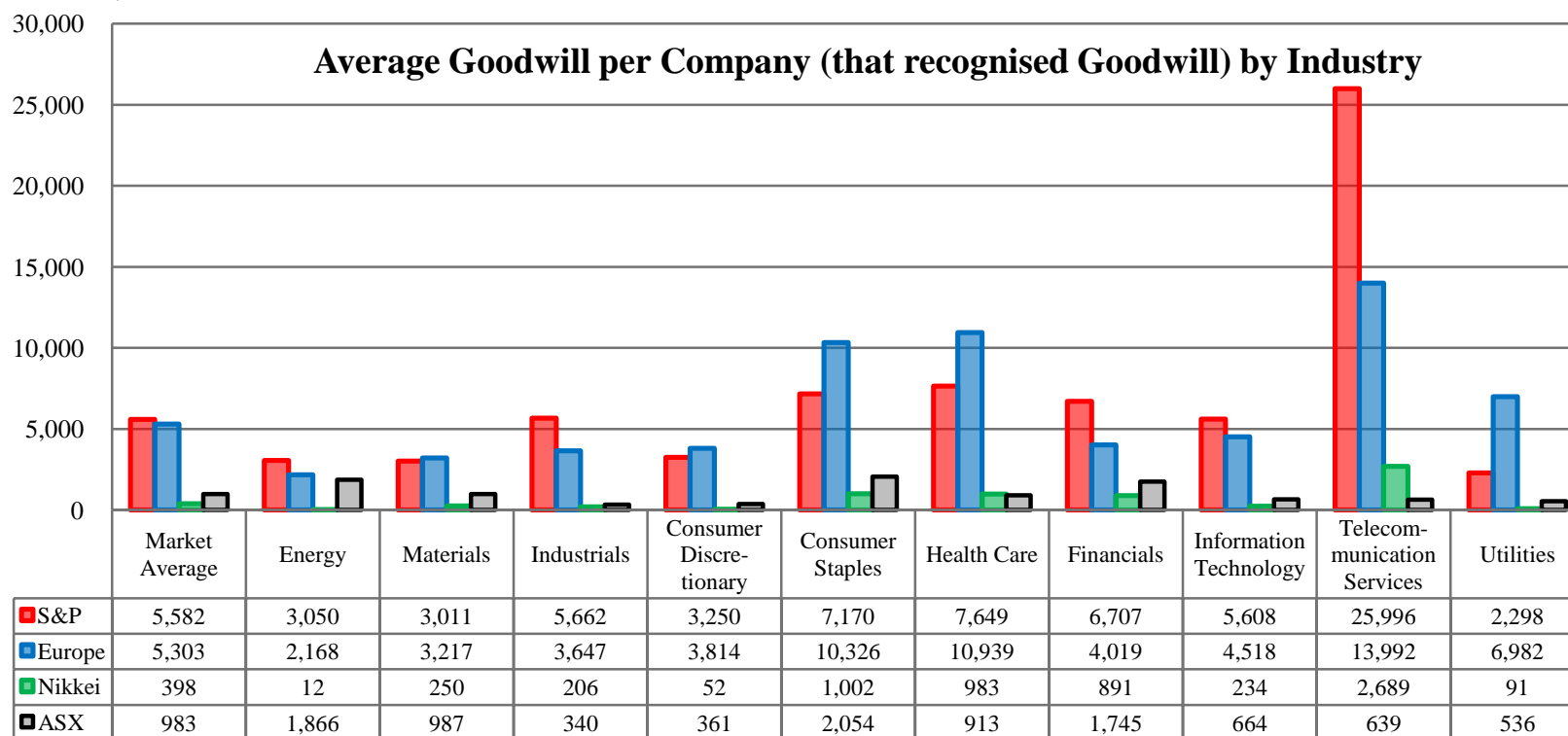
Note: **Figures in gray boxes** represent Market Cap. (ie the sum of Unrecognised Value (yellow), Goodwill (green) and Net Assets less Goodwill (blue))

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8. ANALYSIS OF AVERAGE GOODWILL PER COMPANY BY INDUSTRY IN 2014

- The telecommunications services industry in S&P and Europe had significantly larger amounts of goodwill per company.
- Consumer staples and health care in S&P and Europe showed larger amounts.
- Unlike other indices, the utilities industry in Europe recognised a larger amount of goodwill per company.

(USD million)



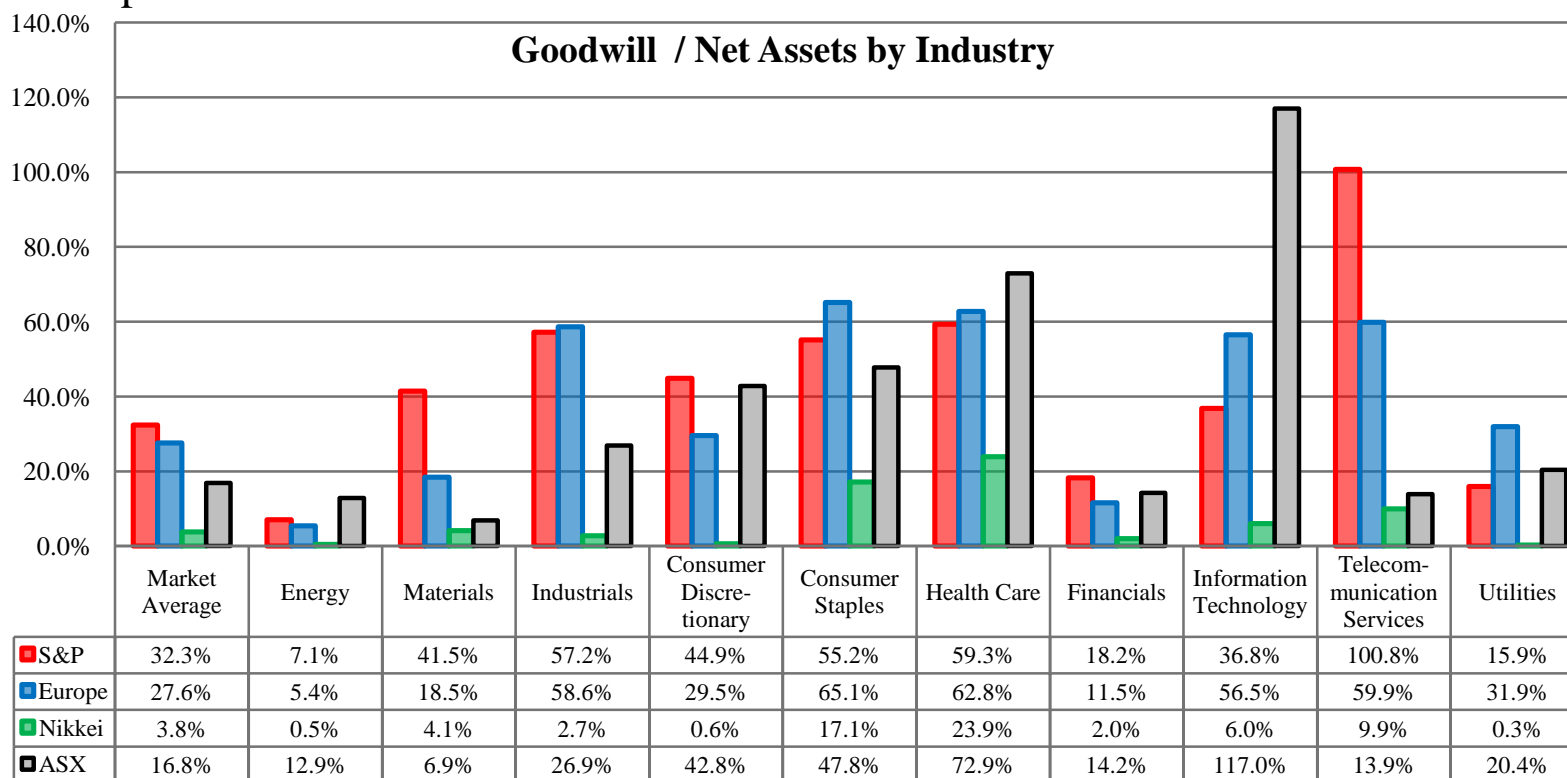
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9. ANALYSIS OF GOODWILL/NET ASSETS BY INDUSTRY IN 2014

- Similar to average goodwill per company, the telecommunication services, consumer staples and health care industries indicated higher figures. Industrials 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.



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10. TREND IN NUMBER OF COMPANIES WITH GOODWILL IMPAIRMENT (EXCLUDING AMORTISATION)

- A relatively small number of companies experienced goodwill impairment.
- Percentage of companies that experienced goodwill impairment were higher for Europe than for other indices.

of Companies with Goodwill Impairment (excluding Amortisation)

Index	# of companies analysed	2008	2009	2010	2011	2012	2013	2014
S&P	443	47	41	30	28	45	29	27
Europe	328	98	84	70	77	87	89	84
Nikkei	164	21	17	10	13	18	21	13
ASX	134	22	16	21	22	17	18	18

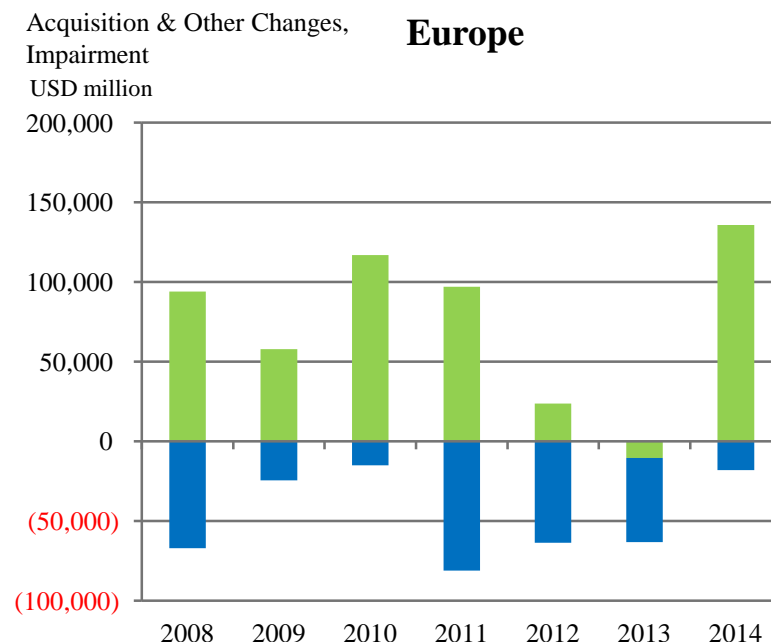
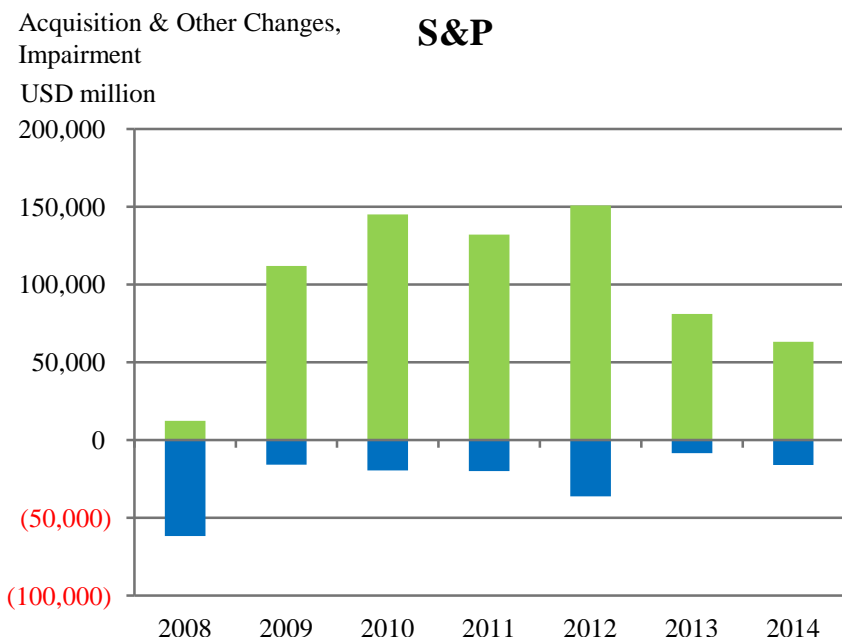
of Companies with Goodwill Impairment (excluding Amortisation) / # of Companies with Goodwill in the previous year

Index	# of companies analysed	2008	2009	2010	2011	2012	2013	2014
S&P	443	12.1%	10.6%	7.9%	7.4%	11.7%	7.6%	7.0%
Europe	328	33.9%	28.9%	24.1%	25.9%	29.1%	30.2%	28.0%
Nikkei	164	21.6%	17.3%	10.4%	11.0%	14.3%	17.2%	10.3%
ASX	134	22.0%	15.7%	20.2%	20.6%	16.2%	17.1%	17.3%

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11. TREND IN AMOUNTS OF GOODWILL IMPAIRMENT (& AMORTISATION, IF APPLICABLE) AND ACQUISITION & OTHER CHANGES

- S&P recorded smaller amounts of goodwill impairment compared to acquisitions & other changes, resulting in continuous increases in the goodwill amount.
- In 2012-2013, the decline of goodwill in Europe was due to less net acquisitions and high impairment charges. The recovery in 2014 was due to significant new additions of goodwill and lower impairments.



■ Acquisition & Other Changes ■ Impairment

■ Acquisition & Other Changes ■ Impairment

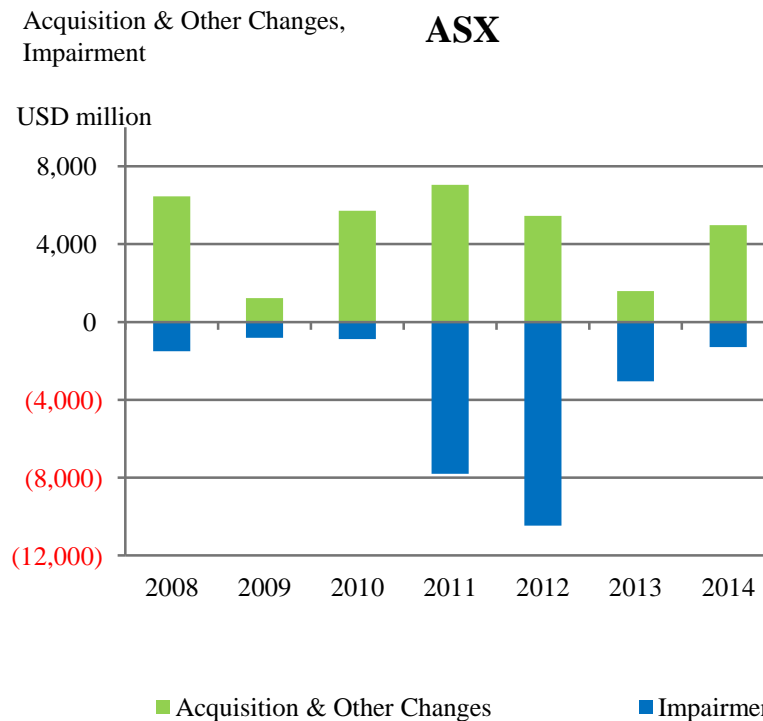
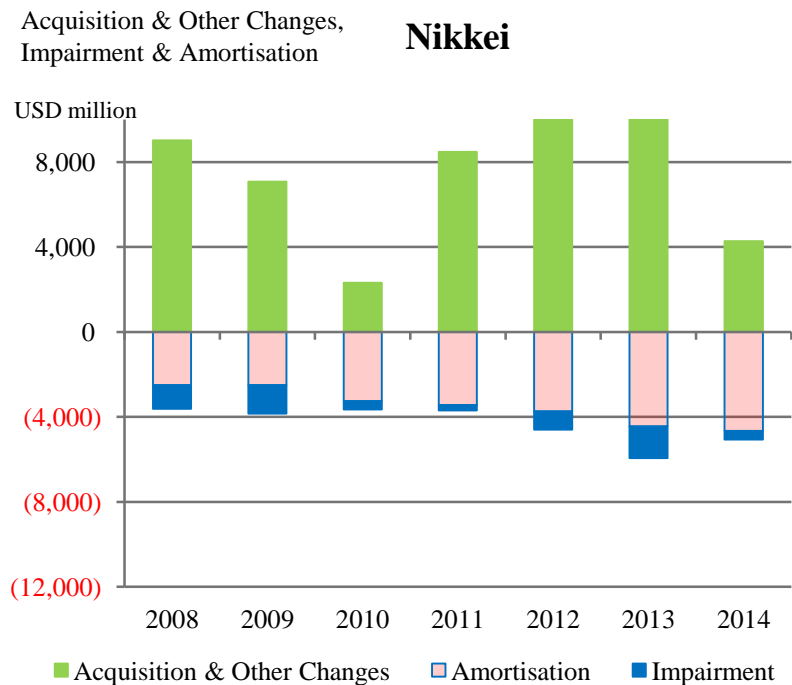
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11. TREND IN AMOUNTS OF GOODWILL IMPAIRMENT (& AMORTISATION, IF APPLICABLE) AND ACQUISITION & OTHER CHANGES (CONT'D)

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



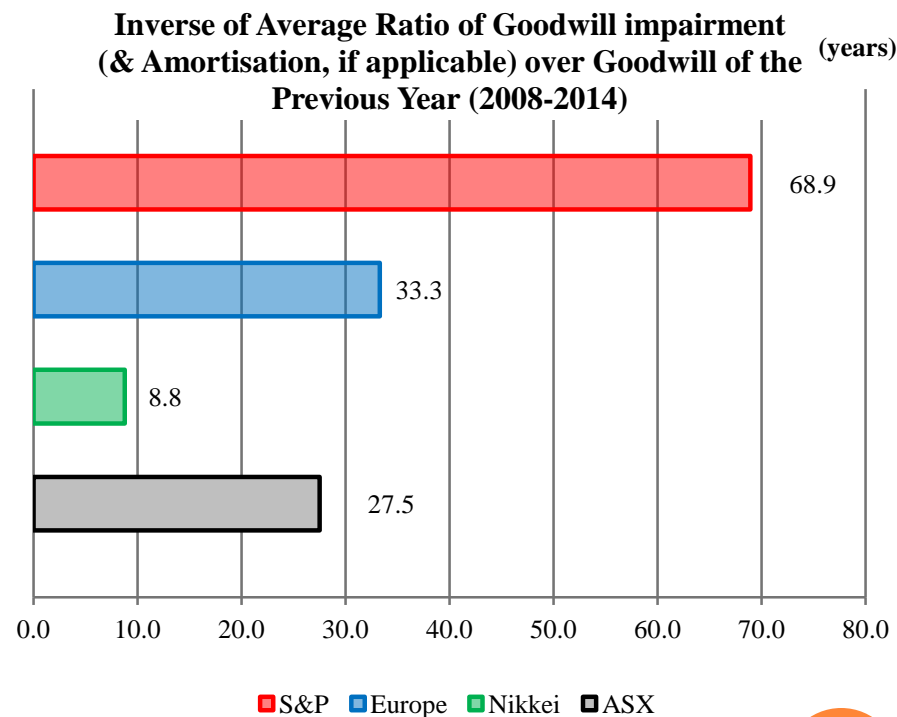
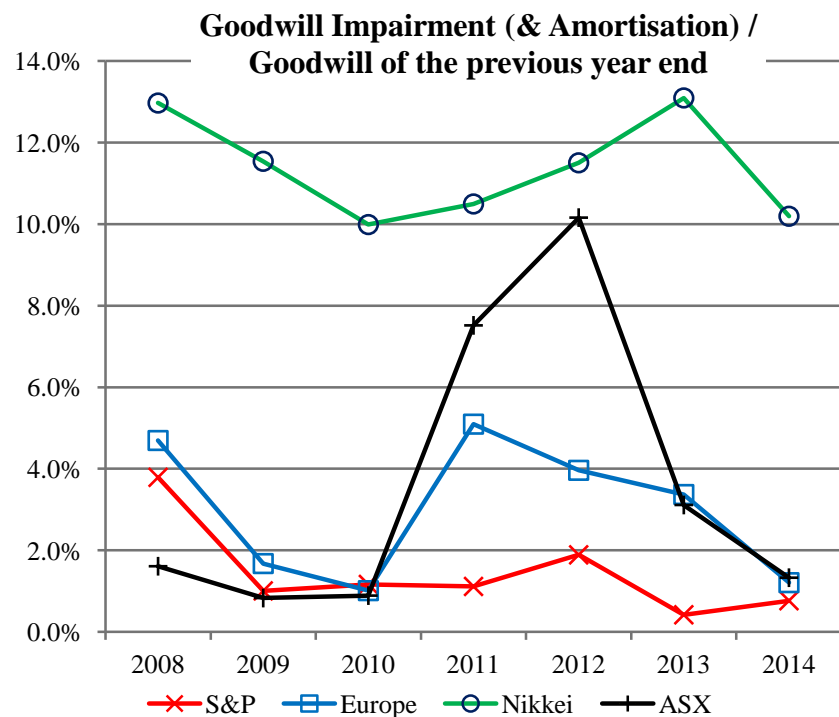
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12. IMPAIRMENT AS A PERCENTAGE OF GOODWILL

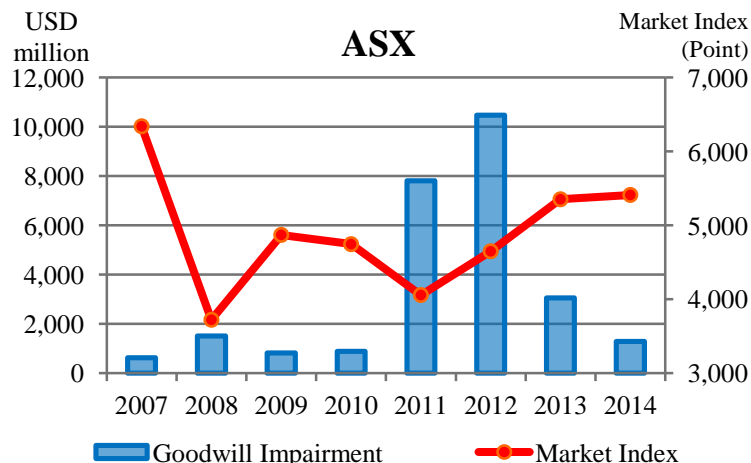
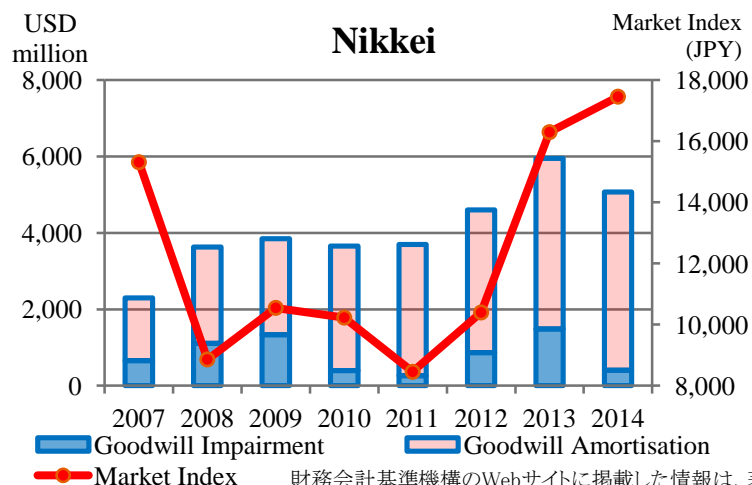
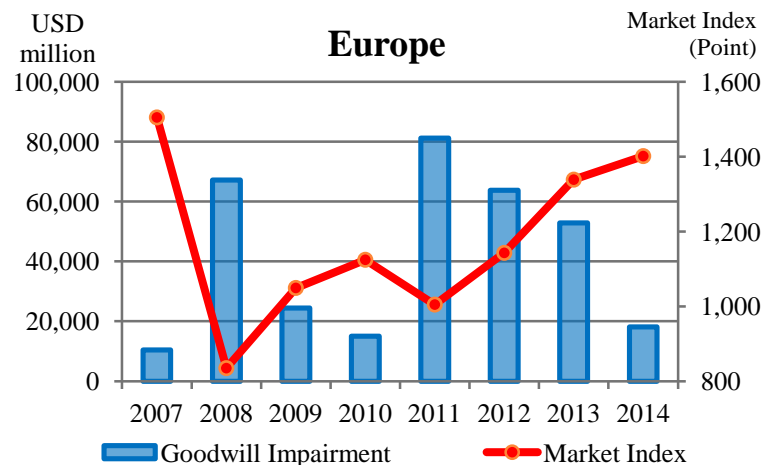
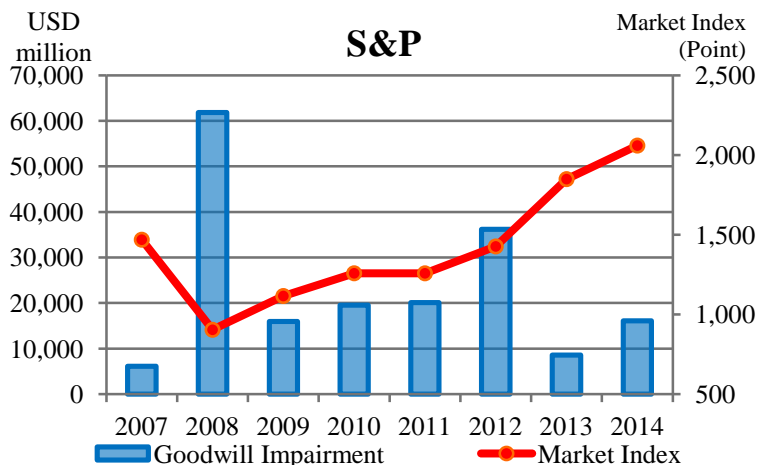
- For S&P and Europe, the ratio of goodwill impairment to the goodwill amount of the previous year-end ranged from 1%-5%. The ratio was higher for Nikkei (around 10%-13%) when including amortisation.
- The inverse ratio, calculated on average in the period, results in 9 years for Nikkei and more than 25 years for other indices



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13. TREND IN GOODWILL IMPAIRMENT (& AMORTISATION, IF APPLICABLE) COMPARED TO THE STOCK MARKET INDEX

- Goodwill impairment generally increased when the stock market index showed a downward trend.
- The stock market index did not seem to explain the 2012 increase of goodwill impairment (ie the stock market index showed an upward trend).



Data source: Bloomberg (for S&P, Nikkei and ASX) and S&P Capital IQ (for Europe)

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14. NEXT STEPS

- Further analyses by industry may include;
 - ✓ making more comparisons by industry, for all the analyses of goodwill and those of goodwill impairment, and
 - ✓ particularly for a few industries (eg telecommunications, information technology and financials), it may be interesting to make comparisons with other industries. Also, a survey of a couple of M&A cases conducted by companies in these industries may show distinct features compared to other industries.
- Further work may include breakdown of intangibles into those with definite lives and indefinite lives: Some companies hold large amounts of indefinite-life intangibles. Survey of 2014 data may unveil the size of the amounts of indefinite-life intangibles, along with goodwill, that were recognised.
- Possibly, a case study of some large M&A transactions may indicate whether there is any relationship between the type of consideration (cash or shares) and the relative size of goodwill (and indefinite-life intangibles) against consideration (and liabilities assumed).

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Thank you for your attention!

ANY QUESTIONS?



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