

## STAFF PAPER

December 2014

## IASB Meeting

<b>Project</b>	<b>Post-implementation review IFRS 3 <i>Business Combinations</i></b>		
<b>Paper topic</b>	Discussion of constituent feedback and academic research		
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This paper has been prepared by the staff of the IFRS Foundation for discussion at a public meeting of the IASB and does not represent the views of the IASB or any individual member of the IASB. Comments on the application of IFRSs do not purport to set out acceptable or unacceptable application of IFRSs. Technical decisions are made in public and reported in IASB *Update*.

**Introduction and purpose of this paper**

1. In September 2014 Paper 12F ‘Post-implementation review *IFRS 3 Business Combinations: Summary of comments received*’ presented information received in response to the IASB’s Request for Information *Post-implementation Review: IFRS 3 Business Combinations* (the ‘RFI’).<sup>1</sup> A companion paper in September 2014, 12G ‘Academic literature review’ presented evidence from academic research relevant to the questions in the RFI. This paper presents both the constituent feedback and the academic evidence and explains the areas where they are in agreement and where they differ.
2. The focus of this paper is on questions 4 and 5 (ie separate recognition of intangible assets from goodwill and non amortisation of goodwill) of the RFI because, as explained in paper 12G, the academic evidence is most relevant to these questions.
3. The next sections of the paper highlight one question (or a part of the question) and then present a selection of relevant comments from feedback reported in paper 12F and the academic evidence from paper 12G that is relevant to the feedback comments.

<sup>1</sup> The RFI was published for public comment in January 2014 and the comment period ended on 30 May 2014. The IASB received 93 comment letters in response to the RFI. In addition, the IASB and staff took part in 30 outreach activities in order to gather feedback on the issues included in the RFI.

***RFI Question 4 Separate recognition of intangible assets from goodwill and the accounting for negative goodwill***

*RFI Question 4a Do you find the separate recognition of intangible assets useful? If so, why? How does it contribute to your understanding and analysis of the acquired business? Do you think changes are needed and, if so, what are they and why?*

4. Some users<sup>2</sup> do not support the current practice of identifying additional intangible assets (brands, customer relations) beyond goodwill, because the valuation of these assets is highly subjective. They think that these intangible assets should be recognised only if there is a market for them.
5. Some users<sup>3</sup> think that:
  - (a) the separate recognition of intangible assets is of limited (if any) utility to investors.
  - (b) investors give little credence to the valuations placed on acquired intangible assets, such as customer lists and brands.
  - (c) the subsequent accounting treatment of intangible assets acquired in business combinations is an unhelpful element of IFRS based accounting that investors face today. They think that it causes confusion, limits comparability and potentially distorts the efficient operation of capital markets, because the amortisation of acquired intangibles (‘PPA amortisation’) conveys no useful information about the economics of a business and it is normally added back by preparers and investors to derive an underlying earnings number. However, it is not always easy for investors to differentiate between PPA amortisation and the amortisation of other internally generated assets such as capitalised software. Some users think that the latter is more akin to

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<sup>2</sup> See, for example, SFAS’s comment letter.

<sup>3</sup> See, for example, Enderson Global Investors’s comment letter.

depreciation and should not be added back to derive an underlying earnings number.

6. Some users<sup>4</sup> think that estimating fair values for intangible assets acquired in business combinations is a costly exercise for preparers and its advantage can be questioned. In their experience as analysts they rarely look at the values accounted for. An exception would be for those intangible assets for which a reliable measure of fair value can be attained.
7. However, other users think that the separate recognition of intangible assets from goodwill is useful, because
  - (a) it provides an insight on why a company purchased another company and provides information on the future cash flows arising from the acquired business.
  - (b) it helps in understanding the components of the acquired business, including its primary assets (ie the value-drivers).
  - (c) it permits comparison between judgements made by different managements (for example, one entity may amortise customer lists over 10 years, whereas another entity may decide to amortise a similar customer lists over 20 years). They think that information provided by intangible assets is more useful than information provided by goodwill.
  - (d) all intangible assets wear out and the amortisation reflects the need for future investment to replace them, in addition to the expensed ‘maintenance’ costs of marketing and research.
8. Academic research shows the following:
  - (a) Sahut et al. (2011) found that both goodwill and other intangible assets were positively associated with share price in four European countries.<sup>5</sup> Oliviera et al. (2010) reported an increase in the value relevance of goodwill, other intangible assets and research and development under

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<sup>4</sup> See, for example, EFFAS’s comment letter.

<sup>5</sup> France, Sweden, Italy and the UK during 2002-2007.

IFRS in Portugal. This evidence suggests that amounts recorded for separately identified intangible assets are useful for investors.

- (b) Sahut et al. (2011) found that in the IFRS period (compared to the national GAAP period) the value relevance of goodwill decreased and the value relevance of other intangibles increased. This evidence provides support for separating identifiable intangible assets from goodwill. One reason for the change could be the requirements of the prior GAAP of the countries in the study (France, Sweden, Italy and the UK). Unlike IFRS 3, national GAAPs generally did not require identifiable intangible assets to be recognised separately from goodwill. Therefore under IFRS 3 it is more likely, other things equal, that the amount of identifiable assets is larger and the amount of goodwill is smaller.
- (c) The evidence from Sahut et al. (2011) and Oliviera et al. (2010) does not support the views expressed in items 5(a) and 5(b) above that separately identifying intangible assets is not useful.
- (d) However, Sahut et al. (2011:282) reported some country differences that may be relevant to understanding the views of PIR respondents. The authors interpreted their results as follows:
  - (i) in the UK and France, capitalised goodwill is value relevant. The value relevance of other intangible assets is lower under IFRS;
  - (ii) in Sweden, other identifiable assets are considered relevant under IFRS and prior GAAP;
  - (iii) Italian investors consider goodwill has more information content than other identifiable intangibles; and
  - (iv) Finnish investors see value in goodwill under IFRS but do not see value in other identifiable intangible assets.
- (e) Chalmers et al. (2008) reported that research prior to 2005 has generally found that capitalisation of intangibles provides information about the existence and value of intangible assets (which is reflected in share prices). Considering the post-2005 period in Australia, Chalmers et al.

(2008) found that other intangible assets (patents, licences and research and development) were not more value relevant under IFRS (Chalmers et al. 2008). This result is country specific and reflects the requirements of Australian GAAP prior to the adoption of IFRS. The authors concluded the balance sheet gained information content in relation to goodwill under the impairment-only approach but lost information content in relation to identifiable intangible assets.

- (f) Chalmers et al.'s (2008) findings may be explained as follows. Under Australian GAAP firms had more discretion in relation to the recognition and measurement of intangible assets. For example, internally generated intangibles such as brand names could be recognised and subsequent revaluation (eg a directors' valuation) was permitted. These options are not available under IAS 38. Chalmers et al. (2008) reported that patents, licences, research and development and software were more value relevant under Australian GAAP than IFRS. Their evidence suggests that the prior Australian approach provided useful information about identifiable intangible assets, which was not present when intangibles were measured under the more restrictive requirements of IAS 38.
- (g) Another Australian study investigated if goodwill and identifiable intangible assets measured on acquisition were associated with future performance (Su and Wells, 2014). The authors found goodwill was associated with future performance but reported no such association for identifiable intangible assets. This evidence could be taken as giving support those who argue against separate recognition of identifiable intangible assets.
- (h) Some studies based on US companies provide similar evidence about goodwill under the impairment-only approach. Ahmed and Guler (2007) found goodwill was positively associated with share prices and more value relevant under SFAS 142 than the prior US GAAP. Lee (2011) reported a stronger association between goodwill and future performance SFAS 142 than previous GAAP. The author concluded that SFAS 142 (goodwill with impairment only) is better able to

represent the underlying value of assets than the previous amortisation method.

9. In summary, the PIR feedback indicates there are mixed views about the separate recognition of identifiable intangible assets. Some users consider the practice is costly and subjective and of little value. However, academic research indicates that goodwill and identifiable intangible assets are value relevant and, in some studies, identifiable intangible assets are more relevant under IFRS than prior national GAAP. Thus the research provides some support for the IFRS 3 approach.
10. Nevertheless, the extent of benefits varies between countries. Some prior national GAAP practices differed between countries, which may in part explain the variation in responses from PIR respondents. In addition there may be differences in enforcement of accounting standards between countries that affect implementation of IFRS. The extent to which implementation differences between countries affect observed outcomes (eg the incidence and amount of recognition of goodwill and identifiable assets; fair value measurement of intangible assets) is largely unaddressed in the academic literature.

*RIF Question 4b What are the main implementation, auditing or enforcement challenges in the separate recognition of intangible assets from goodwill? What do you think are the main causes of those challenges?*

11. Many participants<sup>6</sup> think that some intangible assets, such as internally generated brands and customer lists, are difficult to distinguish from the business as a whole and could require subjective and arbitrary allocation of future cash flows among these intangible assets and other assets.
12. The main causes of the challenges in recognising and measuring intangible assets described by participants are:
  - (a) many intangible assets are not frequently traded on a stand-alone basis and therefore very often there is no active market for them;

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<sup>6</sup> See, for example, ASC's comment letter.

- (b) many intangible assets are unique and therefore not easy to identify and assess their value;
- (c) valuation methods are complex and subjective;
- (d) values may be attributed to the wrong asset due to confusion on the source of profit generation;
- (e) the measurement is more complex/subjective when the intangible assets are not based on legally enforceable rights;
- (f) the lack of any thresholds in terms of control or measurement reliability means that some respondents assert that this requires a search for intangible assets to recognise separately at a very granular level—these respondents also say that the measurement of these intangibles are also highly judgemental;
- (g) the acquirer already owns the intangible assets (for example, customer relationships when there is an overlap in the customer base of the acquirer and the acquiree);
- (h) the acquirer does not intend to use the intangible assets (for example, a brand acquired and held for defensive reasons); and
- (i) the useful life of some intangible assets is subjective.

13. The academic research provides some insights about the use of judgements and estimates in measurement of goodwill and identifiable intangible assets. Studies suggest the discretion in the standards may be used in ways considered beneficial for managers or linked to managerial incentives. For example:

- (a) AbuGhazaleh et al. (2012) found evidence of income smoothing and ‘big bath’ behaviour for UK companies under IFRS 3.<sup>7</sup>
- (b) Detzen and Zülch (2012) reported that recognition of goodwill and identifiable intangible assets was associated with managerial cash bonuses for companies in the Stoxx Europe 600 index.

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<sup>7</sup> ‘Big bath’ behaviour refers to the practice of recording a relatively higher level of expenses at a particular time.

- (c) In a US study, Shalev et al. (2011) found that allocation of purchase price to goodwill was higher when managerial compensation included larger cash bonuses. They concluded that non-amortisation of goodwill provides an incentive for managers to record higher amounts for goodwill thus avoiding amortisation and impairment on definite life intangible assets.

***Non-amortisation of goodwill and indefinite-life intangible assets***

***RFI Question 5a How useful have you found the information obtained from annually assessing goodwill and intangible assets with indefinite useful lives for impairment, and why?***

14. Some users support IFRS 3 requirements. They consider non-amortisation of goodwill is useful for:
- (a) providing information about price paid for an acquisition and Return on Invested capital (ie RoI).
  - (b) assessing stewardship (overpayment for acquisition; whether the acquisition was successful).
  - (c) showing if the acquirer expects future economic benefits from the business combination.
  - (d) They consider the amortisation of goodwill to be only an arbitrary allocation exercise (ie it does not provide useful information). Consequently, they would disregard the amortisation of goodwill in their analysis.
  - (e) Some users consider the impairment test is useful because:
    - (i) it is a clearing event; impairment shows management has moved on from a bad decision.
    - (ii) it has confirmative value.
15. Some users think that the information provided by the impairment test of goodwill is useful, because it has confirmative value. However, they admit that impairment losses are often recognised too late (ie they do not have predictive value).
16. In relation to the non-amortisation of goodwill, the academic research shows:



- (a) goodwill impairment expense was negatively associated with share prices in UK and cross-country studies (AbuGhazaleh et al. 2012; Laghi et al. 2013). This result indicates the impairment expense represents useful information, consistent with the view that impairment expense has confirmative value. These studies did not examine the predictive value of impairment for future earnings. However, AbuGhazaleh et al. (2012) concluded that the IFRS 3 approach allows managers to convey private information and their expectations regarding (future) firm performance.
  - (b) Goodwill impairment expense was associated with share price under IFRS while amortisation expense under UK GAAP was not (Amel-Zadeh et al. 2013). This evidence is consistent with the argument that goodwill amortisation does not provide useful information for analysts and is disregarded, see item 14(d).
  - (c) Some cross-country and national studies reported that the value relevance of goodwill was greater under IFRS than previous GAAP (Aharony et al. 2010; Chalmers et al. 2008; Oliviera et al. 2010). This is consistent with the IFRS 3 approach (goodwill impairment) being more useful than previous GAAP (goodwill amortisation and impairment).
  - (d) Chalmers et al. (2012) provided support for the IFRS 3 approach because they showed that goodwill in the IFRS period is more useful for investors based on an analysis of analyst forecast accuracy. In another Australian study Chalmers et al. (2011) concluded that IFRS 3 information better captures economic investments opportunities.
17. Wersborg et al. (2014:14-15) analysed the IFRS 3 PIR comment letters. They stated that only four out of 48 non-European respondents were of the view that the current model does not lead to higher usefulness compared to amortisation. Fourteen non-European respondents were supportive of the impairment-only approach. They reported six supportive and two negative letters from UK writers. This is consistent with the research reported in items 16(a)-(c) above. In contrast, some writers from Austria, Germany and Switzerland showed strong disagreement with the impairment-only approach. Two respondents were in

support and twelve out of 17 respondents were opposed, in contrast with the academic evidence, for example by Laghi et al. (2013) reported in item 16(a).

18. Some studies based on US companies provide similar evidence indicating the impairment-only approach provides useful information. Jarva (2009) found that impairment was negatively associated with future cash flows. Li et al. (2011) reported a negative association with future sales growth and growth in operating income. They concluded that impairment is more informative about future operating incomes under SFAS 142. This evidence provides support for the goodwill impairment approach in the US.
19. One study providing contrary evidence was Li and Sloan (2012). They found the predictive power of impairment for future earnings did not improve under SFAS 142. This study supports the idea that impairment has confirmatory value but not predictive power.
20. Wersborg et al. (2014:15-16) (who analysed PIR comment letters) reported that 40 per cent of respondents expressed concerns about the current impairment testing provisions and that only 18 per cent assessed the impairment test as rigorous and operational. UK writers were those most likely hold this view (six in support; three against). Some writers from Austria, Germany and Switzerland voiced strong opposition (eleven respondents not convinced; two with clear support).
21. Other users supported the amortisation of goodwill and indefinite-lived intangible assets, because they think that:
  - (a) assumptions used in the impairment test are too optimistic and difficult to analyse.
  - (b) impairment losses are recognised when the investors have already reached a view that the company over paid for the acquisition and, therefore, the market ignores the impairment test results (ie the impairment loss is already included in the share price).
  - (c) estimating the useful life of goodwill is possible and is no more difficult than estimating the useful life of other intangible assets.
  - (d) goodwill has been paid for and so, sooner or later, it should have an impact on profit or loss.

- (e) goodwill represents future profits, thus should be allocated over time.
- (f) amortising goodwill reflects that the acquirer need to ‘maintain’ the profitability of the acquired company. The amortisation reflects the costs incurred by acquirer to maintain such profitability.
- (g) amortising goodwill would decrease volatility in profit or loss when compared to an impairment model.
- (h) amortising goodwill would improve comparability between companies that grow organically (ie without acquisitions) and companies that grow through acquisitions, because the non-amortisation of goodwill discriminates companies that grow organically.
- (i) goodwill acquired in a business combination is supported and replaced by internally generated goodwill over time.
- (j) amortising goodwill would reduce pressure on the identification of intangible assets, because both goodwill and intangible assets would be amortised.

22. A report<sup>8</sup> published by KPMG in April 2014:

- (a) the high number of judgements and assumptions make the goodwill impairment testing a complex and time-consuming exercise;
- (b) it is not clear that the benefits of mandatory annual impairment testing outweigh the related costs;
- (c) the value relevance of impairment testing is in confirming instead of predicting value, and that goodwill impairment charges do not act as a major signalling event for the market.

23. Relevant academic studies include the following findings.

- (a) A study of UK firms concluded IFRS 3 allows managers to convey private information about cash flows (AbuGhazaleh et al. 2011). The authors found that goodwill impairments were associated with firms’

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<sup>8</sup> *Who cares about goodwill impairment?* Available at <http://www.kpmg.com/CN/en/IssuesAndInsights/ArticlesPublications/Documents/Who-cares-about-goodwill-impairment-O-201404.pdf>

governance mechanisms. Therefore managers are using the discretion in IFRS to efficiently convey their private information and future expectations about underlying performance. This conclusion is contrary to the views of some, for example, item 22(b) and (c) above.

- (b) Current year stock returns are associated with next year's impairment expense for UK companies (Amel-Zadeh et al. 2013). This is consistent with the argument that the market recognises the impairment before the company and impairment expense is confirmatory rather than predictive of value (item 22(c)).
- (c) Considering IFRS users (including in the US) Glaum et al. (2014) found that the amount and incidence of impairment was higher for companies with lower market returns and lower profitability. Siggelkow and Zülch (2013) presented similar evidence (goodwill impairment was higher for poorly performing companies) for German companies. These results are consistent with impairment reflecting economic fundamentals (ie the IFRS 3 approach is effective).
- (d) However, Glaum et al. (2014) reported that the association between impairment and economic performance was weaker during 2008-2011 in some countries classified as having strong enforcement of accounting standards.<sup>9</sup> The authors explored the association between impairment and current year performance, arguing that if impairment recognition is timely, then it will be associated with current period rather than prior period returns. They found this expected associated in the period 2005-2007. In the subsequent period 2008-2011 impairment was associated with both current and prior period returns, indicating some lag in the recognition of impairment during the financial crisis.<sup>10</sup>
- (e) In US studies, Chen et al. (2008) reported that impairment recognition lags behind economic losses. Li and Sloan (2011) found that

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<sup>9</sup> Enforcement was measured based on the indices of Brown, Preiato and Tarca (2014).

<sup>10</sup> Glaum et al. (2014) also found that impairment was not timely in countries characterised as having low enforcement in either the early (2005-2007) or later (2008-2011) period, pointing to the effect of country differences in enforcement on implementation of IFRS.

impairment was less timely under SFAS 142 than SFAS 121. This result is consistent with views that impairment is a lagging indicator and more likely to have confirmatory value than predictive power for share prices.

24. The academic research provides some evidence regarding judgements and estimates in impairment testing.
- (a) Glaum et al. (2014) found income smoothing in a sample of IFRS reporting firms from 21 countries. They reported that companies with unusually high income used impairment to smooth income. The authors also stated that recognition of impairment was less likely where managers had longer tenure. New managers were more likely to record impairment and recognise impairment, consistent with ‘big bath’ accounting.
  - (b) Hamberg et al. (2011) reported that impairment was less likely when tenure was longer for a sample of Swedish companies, possibly because the managers were part of the original acquisition decision. Glaum et al. (2014) reported similar evidence for an international sample of IFRS firms. They found CEOs were less likely to record impairment for acquisitions for they which they were responsible.
  - (c) Beatty and Weber (2006) and Ramana and Watts (2012) studied impairment recognition by US firms. They found impairment was associated with CEO compensation and tenure. Companies were less likely to write off goodwill when the CEO’s remuneration includes a cash bonus.
  - (d) A US study, Darrough et al. (2013) reported that impairment was associated with lower future managerial remuneration indicating that amounts recognised by managers have economic consequences for managers’ wealth generation. The authors found that goodwill impairment was associated with lower subsequent CEO compensation (cash, option and total compensation).
  - (e) However, exploring impairment and managerial incentives for German firms, Siggelkow and Zülch (2013) did not find evidence that goodwill

impairment was significantly associated with earnings based compensation, firm leverage, change of management or ‘big bath’ accounting. Glaum et al. (2014) reported an association between managers’ compensation and impairment recognition only for the US IFRS firms, not for the other IFRS firms in their international sample. Thus the academic evidence about the effect of managerial bonuses on impairment judgements is stronger in US studies than in IFRS studies, possibly reflecting differences in the institutional environments where IFRS and US GAAP are used.

25. In summary, the academic evidence points to some managers using their discretion in recognising impairment in ways that are potentially favourable to themselves. Nevertheless, some studies conclude that impairment reflects economic fundamentals because it is associated with share price. Taken together the evidence can be interpreted for IFRS firms as indicating that although there is some evidence of managerial discretion regarding amount and timing of impairment recognition, other evidence suggests that the IFRS impairment model is operating effectively.

## Disclosure and compliance

26. Many users think that information required by IAS 36 *Impairment of Assets* is useful. Useful disclosures include discount rates used, long-term growth rates, profit and capital expenditure assumptions and sensitivities. However, some users think that the disclosed information is boilerplate and insufficient for them to assess whether or not the main inputs/assumptions are reasonable.
27. Several academic studies considered the level of compliance and quality of disclosure under IFRS 3 and IAS 36.
- (a) Glaum et al. (2012) reported ‘substantial non-compliance’ with the disclosure requirements of IFRS 3 and IAS 36 for European companies. Higher compliance was associated with firm factors (equity issuance, more dispersed ownership structure), industry membership (non-financial firms) and the strength of national enforcement systems.

Compliance was higher for firms with Big 4 auditors and audit committees.

- (b) Amirsalani et al. (2012) also concluded that disclosure compliance varied between countries and industries for a cross-country EU sample. They considered disclosure quality was 'reasonably high'. It was better for goodwill than for other intangible assets.
- (c) Amirsalani et al. (2012) reported that disclosure about assumptions and factors associated with estimation uncertainty was adequate for EU companies. They considered there was adequate disclosure of assumptions and relevant factors.
- (d) However, the authors also noted the use of boilerplate language. They concluded there was more compliance with disclosure requirements involving less managerial effort and lower compliance with items that required higher effort. Furthermore, they did not observe a change in disclosures when they were expected, namely in the period post 2008.
- (e) For UK companies, Camodeca et al. (2013) reported that disclosure increased post 2008. Guthrie and Pang (2013) studied Australian companies and reported that the number of companies allocating goodwill to CGUs improved over the study period (from 61 per cent to 80 per cent).
- (f) Some studies noted a lack of expected disclosure. Camodeca et al. (2013) stated that disclosure of some key assumptions used in impairment tests was omitted. In a similar vein, Carlin and Finch (2010) reported a lack of disclosure by some Australian companies. For example, they found that ten per cent of companies failed to disclose the discount rates used for impairment.

28. In summary, the PIR respondents presented a range of views about the impairment-only approach to goodwill. Some views were conceptual in nature while others were concerned with practical difficulties associated with the impairment test. The academic studies were clear that goodwill measured under IFRS 3 is value relevant. In addition, studies concluded impairment recognition provides useful information. Further, studies comparing the amortisation and

impairment regime and the impairment-only regime often concluded the latter is more useful. Studies of disclosure and compliance indicate a high degree of compliance with IFRS 3 and IAS 36 requirements although they do identify some differences between countries (eg related to enforcement and use of a Big 4 auditor) and areas where compliance and disclosure could be improved.

*RFI Question 5c What are the main implementation, auditing or enforcement challenges in testing goodwill or intangible assets with indefinite useful lives for impairment, and why?*

29. Many participants think that the impairment test is complex, time-consuming and expensive and involves significant judgements. The main challenges identified are the following:

- (a) determining the cash flows from the cash generating unit to which the goodwill has been allocated, the discount factor to be applied and the terminal value (growth rate) of the cash flows can be very judgemental. Cash flows projections must be prepared specifically for the purpose of impairment testing, as management projections are not based on an ‘as is’ status, but also include management best estimates of future cash flows derived from new investments and products.
- (b) the allocation of goodwill to cash generating units (CGUs) for impairment testing. Goodwill is allocated to the CGUs that are expected to benefit from the synergies of the combination, which can be judgemental and difficult to apply in practice. After the initial allocation, the carrying value of the goodwill is tested for impairment as part of the respective GCU, which might be merged or restructured in subsequent years to a degree that they have little or no similarities to the originally acquired business. Furthermore, the impairment test is performed based on the most recent approved budgets, which over time can be substantially different from the business plans at the acquisition date.
- (c) it is not clear what represents ‘the lowest level within the entity at which the goodwill is monitored for internal management purposes’, as set out in paragraph 80 of IAS 36.



- (d) practical difficulties related to the testing of a CGU for impairment when part of the recoverable amount is attributable to non-controlling interest (NCI). If an entity is measuring NCI at its proportionate share of net assets, this needs to be reflected in the impairment calculation. This becomes more complicated when there have been transactions with NCI holders after the business acquisition date, or if there is a group of CGUs to which goodwill is attributed that is partly measured at fair value and partly on a proportionate basis.
- (e) the requirement to use a pre-tax discount rate when equity returns are always post-tax (meaning there are not observable market inputs for a pre-tax cost of equity). Practically, this means that the test is usually conducted on a post-tax basis with an additional iteration performed simply to derive a pre-tax discount rate.
- (f) separating forecast capital expenditures between maintenance capital expenditures and expansionary capital expenditures; particularly, how this separation impacts subsequent cash flows, not just the exclusion of expansionary capital expenditures itself.

30. Relevant academic evidence includes the following.

- (a) Johnsen and Plenborg (2013) reported the views of financial report preparers and users in Germany. They concluded that IFRS 3 and IAS 36 disclosures were highly demanded by users, most costly to prepare and least satisfactory (along with IFRS 7).
- (b) Pajunen and Saastamoinen (2013) presented the views of Finnish auditors about IFRS 3 and IAS 36. They found auditors' views were in two streams: one view was that managers behaved opportunistically in goodwill write-off decisions to avoid timely write-offs and that management compensation affects impairment decisions. The other more favourable view was accepting of valuations based on future cash flows involving management estimates. Big 4 auditors were more favourably disposed to IFRS 3 goodwill accounting than non-Big 4 auditors.

- (c) Petersen and Plenborg (2010) investigated compliance with IAS 36 for companies listed on the Copenhagen Stock Exchange. They found some inconsistencies in application relating to defining cash generating units and estimating recoverable amounts.
- (d) Some EU cross-country studies reported higher compliance with disclosure requirements by companies with Big 4 auditors (Amiraslani et al. 2013; Glaum et al. 2012). Glaum et al. (2014) observed this relationship for US IFRS firms but not for non-US IFRS firms.
- (e) Glaum et al. (2014) and Amiraslani et al. (2013) concluded that companies in countries with weaker enforcement were less timely in recognising impairment.
- (f) Kvaal (2007) noted complexity relating to the use of pre-tax discount rates in measuring an asset's recoverable amount under IAS 36. He recommended the use of company-specific after tax cash flows for value in use calculations, with deferred taxes considered in the impairment review.
- (g) In their review of the IFRS and US literature, Wersborg et al. (2014:33) conclude that 'there is no compelling evidence regarding an abuse of managerial discretion in the course of identification of CGUs and of the allocation of goodwill to manipulate the results of an impairment test.

31. In summary, PIR respondents provided a range of views about the implementation of IFRS 3. The academic studies provide further information that is relevant to understanding these concerns. Studies show that country and audit firm differences affect the application of IFRS. Many of the comments received from PIR respondents related directly to the impairment testing methodology required by IAS 36. The requirements of IAS 36 might therefore affect respondents' views about the impairment-only approach of IFRS 3.

32. Paper 12B provides an overall assessment of the findings of the PIR, including the matters described in this paper, and a consideration of possible next steps.

**Questions to the IASB**

1. Does the IASB have any questions on the comparison and analysis of the results of the academic literature review and the feedback received from the RFI?

## Table Summary of literature

### Panel A – Value relevance

<i>Value relevance</i>	<i>Country</i>	<i>Years</i>	<i>Goodwill</i>	<i>Value relevance</i>	<i>Country</i>
AbuGhazaleh et al. (2012)	UK (n = 528)	2005-2006		Negative association with share price	
Amel-Zadeh et al. (2013)	UK (n = 507)	1997-2011		Negative association with share price; negative association with market returns	
Aharony et al. (2010)	14 EU countries (n = 2,298)	2004-2005	More value relevant under IFRS		
Chalmers et al. (2008)	Australia (n = 599)	2005-2006	More value relevant under IFRS		More value relevant under IFRS (capitalised software)
Chalmers et al. (2012)	Australia (n = 3,328 firms years)	1993-2007	More useful for analysts under IFRS		
Laghi et al. (2013)	France, Germany, Italy, Portugal, Spain, UK (n = 835)	2008-2011	Positive association with share price	Negative association with share price	
Oliviera et al. (2010)	Portugal (n = 354 firm-years)	1998-2008	More value relevant under IFRS		More value relevant under IFRS (incl. capitalised R&D)

<i>Value relevance</i>	<i>Country</i>	<i>Years</i>	<i>Goodwill</i>	<i>Value relevance</i>	<i>Country</i>
Sahut et al. (2011)	France, Sweden, Italy, UK (n = 1,855)	2002-2007	Positive association with share price. Value relevance decreased (relative to other intangible assets) in the IFRS period.		Positive association with share price. Value relevance increased (relative to goodwill) in the IFRS period.
Su and Wells (2014)	Australia (n = 367-309)	1998-2008	Positively associated with future performance		Not associated with future performance
Ahmed and Guler (2007)	US	1999-2004	Positive association with share price. More value relevant under SFAS 142.		
Lee (2011)	US	1996-2006	Stronger positive association with future performance under SFAS 142.		
Jarva (2009)	US (n=327 firm-years)	2002-2006		Negative association with future cash flows	

<i>Value relevance</i>	<i>Country</i>	<i>Years</i>	<i>Goodwill</i>	<i>Value relevance</i>	<i>Country</i>
Li et al. (2011)	US	1995-2005		Negative association with future sales growth and growth in operating income. After SFAS 142 impairment is more informative about future operating income.	
Li and Sloan (2012)	US (n=1,072 impairment observations)	1996-2011		Predictive power of impairment for future earnings has not improved under SFAS 142.	

**Panel B - Implementation and incentives**

<b><i>Implementation and incentives</i></b>	<b><i>Country</i></b>	<b><i>Years</i></b>	<b><i>Income smoothing, big bath using impairment recognition</i></b>	<b><i>Compensation tenure</i></b>	<b><i>Timeliness of impairment recognition</i></b>
AbuGhazaleh et al. (2012)	UK (n = 507)	2005-2006	Evidence of income smoothing and big bath		
Amiraslani et al. (2013)	EU, Norway, Switzerland (n = 4,474)	2006-2011			More timely in countries with strong enforcement
Detzen and Zülch (2012)	Germany (n = 805 firm-years)	2004-2010	Evidence of income smoothing		
Glaum et al. (2014)	21 countries including US IFRS firms (n = 25,046 and n = 5427 firms-years for non-financial and financial firms)	2005-2011	Evidence of income smoothing	Longer tenure, impairment less likely	More timely in countries with strong enforcement
Hamberg et al. (2011)	Sweden (n = 232-254 firms)	2001-2007		Longer tenure, impairment less likely	
Chalmers et al. (2011)	Australia (n = 4,991 firm-years)	1998-2008			Reflects underlying investment opportunities

<i>Implementation and incentives</i>	<i>Country</i>	<i>Years</i>	<i>Income smoothing, big bath using impairment recognition</i>	<i>Compensation tenure</i>	<i>Timeliness of impairment recognition</i>
Shalev et al. (2011)	US (184 M&A transactions)	2001-2007		Allocation of purchase price to goodwill is higher when larger bonuses in CEO packages	
Li and Sloan (2011)	US (n=1,072 impairment observations)	1996-2011			Less timely under SFAS 142 than SFAS121
Chen et al. (2008)	US (n=1,763 firms)	2000-2002			Recognition of impairment lags behind economic losses
Kim et al. (2012)	US	1995-2006			Under SFAS 142 companies with goodwill have lower asymmetrical timeliness in general (ie less likely to record accounting losses before gains)
Darrough et al. (2013)	US (n=3,572 firm-years)	2001-2009		Impairment associated with reduction in future CEO remuneration (in total; and cash and option compensation)	



<i>Implementation and incentives</i>	<i>Country</i>	<i>Years</i>	<i>Income smoothing, big bath using impairment recognition</i>	<i>Compensation tenure</i>	<i>Timeliness of impairment recognition</i>
Beatty and Weber (2006)	US (176 firms)			Impairment less likely when CEO package includes cash bonus	
Ramana and Watts (2012)	US (124 firms)	2003-2006		Impairment less likely when CEO package includes cash bonus	

**Panel C - Compliance**

<i>Compliance</i>	<i>Country</i>	<i>Years</i>	<i>Incidence</i>	<i>Disclosure</i>	<i>Enforcement</i>
Amiraslani et al. (2013)	EU, Norway, Switzerland (n = 324)	2010-2011	Boilerplate language used. Lack of change post-2008. More compliance with low-effort disclosure items	Rate of compliance around 82% for goodwill disclosure. Adequate disclosure of assumptions and relevant factors	Compliance higher for firms with Big 4 auditors
Camodeca et al. (2013)	UK (n = 85)	2007-2011	Disclosure improved post-2008	Lack of disclosure of some key assumptions used in impairment	
Carlin and Finch (2010)	Australia (n = 50)	2005-2006		Ten per cent of companies failed to disclose discount rates for impairment	
Glaum et al. (2012)	17 countries (n = 357)	2005			Compliance higher for firms with Big 4 auditors
Glaum et al. (2014)	21 countries including US IFRS firms (n = 25,046 and n = 5427 firms-years for non-financial and financial firms)	2005-2011	Companies with higher market returns and ROA less likely to impair		Delays in recognition of impairment in low enforcement countries

<i>Compliance</i>	<i>Country</i>	<i>Years</i>	<i>Incidence</i>	<i>Disclosure</i>	<i>Enforcement</i>
Guthrie and Pang (2013)	Australia (n = 287)	2005-2010	More companies allocated goodwill to CGUs over sample period (61% improved to 80%)		
Johansen and Plenborg (2013)	Denmark - Financial report preparers (n=89) and users (n=288)	Pre 2013		IFRS 3 and IAS 36 disclosures were highly demanded, most costly to prepare and least satisfying (along with IFRS 7)	Johansen and Plenborg (2013)

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