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Project	Goodwill and Impairment		
Paper topic	Academic evidence		
CONTACT(S)	Ana Simpson	asimpson@ifrs.org	+44 (0)20 7246 6410

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Purpose and structure of this paper

1. This literature review summarises the evidence from academic papers on topics relevant to the questions in the Discussion Paper *Business Combinations—Disclosures, Goodwill and Impairment*. This literature review is based on:
 - (a) an academic literature review that provides an overview of academic papers on empirical goodwill research published in the last 20 years;¹
 - (b) additional published and working papers, which were located via Google Scholar, Social Science Research Network (SSRN) and other databases of academic studies;²
 - (c) papers sent from academics who participated in the staff's academic outreach workshop with the European Accounting Association (EAA), the Australian Accounting Standards Board (AASB), and the Advisory Panel of the Canadian Accounting Standards Board that provide additional evidence not included in the sources described in paragraphs 1(a) and 1(b); and

¹ This academic literature review by Amel-Zadeh, Glaum and Sellhorn (2020) was used in an academic workshop organised by the staff and the European Accounting Association to summarise the academic research on goodwill and impairment and obtain feedback from academics on additional academic evidence relevant to the proposals in the Discussion Paper.

² Even though the results of working papers may change prior to publication, working papers were included in this review for the purpose of outlining the scope of goodwill and impairment related topics that researchers have addressed.

- (d) academic papers referenced in comment letter feedback that was summarised in Agenda Papers 18C–18D to the April 2021 meeting and Agenda Papers 18B–18E to the May 2021 meeting of the International Accounting Standards Board (the Board).
2. This literature review is structured as follows:
- (a) Section 1—Improving disclosures about business combinations (paragraphs 4–28);
 - (b) Section 2—Accounting for goodwill (paragraphs 29–101);
 - (c) Section 3—Other topics (paragraphs 102–111):
 - (i) presenting total equity excluding goodwill; and
 - (ii) accounting for intangible assets.
 - (d) Question for the Board; and
 - (e) Appendix A—list of academic papers.
3. Each section includes a summary of the academic evidence followed by a detailed review of academic papers that are representative of the evidence included in the section summary.

Section 1—Improving disclosures about business combinations

Overview

4. The academic evidence discussed below relates to:
- (a) the role of business combination disclosures in resolving conflicts of interest between shareholders and corporate management (paragraphs 5–11);
 - (b) disclosures of expected synergies (paragraphs 12–19):
 - (i) usefulness for valuation;
 - (ii) credibility;
 - (iii) determinants; and
 - (c) entities’ compliance with business combination disclosure requirements and determinants of disclosure (paragraphs 20–28).

The role of business combination disclosures in resolving conflicts of interest between shareholders and corporate management

Summary

5. A large number of academic papers provide evidence that conflicts of interest exist between shareholders and corporate management arising from the separation of ownership and control. The academic literature agrees that providing information about an entity's performance after a business combination is useful for informing users of financial statements (users) whether management is generating or destroying shareholders' wealth.

Detailed review of academic papers

6. Conflicts of interest between the executive management of an entity and its shareholders, also known as agency costs, may arise when managers choose to invest excess cash in financing growth instead of distributing the cash to shareholders (Jensen, 1986).³ Distributing excess cash to shareholders reduces the manager's power, while financing growth increases the manager's power and, if executive compensation is related to an entity's growth, increases the manager's compensation.
7. In a comment letter, a group of academic respondents argued that management was not being held accountable for the performance of business combinations, based on:
 - (a) evidence by Amel-Zadeh and Meeks (2020) who showed, using a sample of 4,450 US business combinations in the period 2002–2017 each with a deal value exceeding \$100 million, that acquirers' share price performance was worse than that of their non-acquiring peers over the 12–24 months following the acquisition.
 - (b) evidence by Harford and Li (2007) who found that in three quarters of business combinations where the shareholders of the acquiring entity were worse off after the acquisition, the chief executive officers (CEOs) were better off. Harford and Li (2007) documented that after the business combination a CEO's pay and overall wealth became insensitive to negative share price

³ Excess cash is 'cash flow in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital' (Jensen, 1986).

performance but a CEO's wealth increased proportionately with positive share price performance.⁴

8. In a comment letter, a different group of academics argued that information about the post-acquisition performance of business combinations was critical for users and could enhance corporate governance. They referred to an analytical study by Hietala, Kaplan and Robinson (2003) that developed a framework for determining what information could be extracted from share prices around the time of the business combinations. The researchers showed that, based on the share prices of the bidder and the target at the time of announcing the business combination, it was difficult to extract information about potential synergies arising from the combination and to infer bidder overpayment. This was only theoretically possible in two types of cases (when a sole bidder mounted an unsuccessful takeover attempt and when the acquisition contest included only two bidders) but the researchers argued that even in these two cases it was practically difficult for users to extract this information about business combinations. The researchers used their framework to show that, in their view, Viacom, the winner of the takeover battle with Sumner Redstone for Paramount, overpaid by more than \$2 billion in a \$9.2 billion acquisition in 1994. The comment letter respondents argued that, if required to disclose information about the post-acquisition performance of business combinations, management could be encouraged to better negotiate the price of the target company.
9. Evidence on the relationship between overpayment and overstatement of the purchase price allocated to goodwill with the level of disclosures after a business combination was provided by Shalev (2009) who examined the determinants and consequences of disclosure levels in business combinations. Using a sample of 1,019 business combinations by S&P 500 entities from 46 industries that took place in the period 2001–2004, Shalev showed that the amount of disclosure about business combinations decreased with increased abnormal levels of the purchase price allocated to goodwill.⁵ The author's interpretation of this result was that overpayment and overstatement of

⁴ Harford and Li also documented that entities with stronger corporate governance retained the sensitivity of CEO's compensation to poor post-acquisition performance.

⁵ Abnormal levels of the purchase price allocated to goodwill were defined as the part of the goodwill-to-purchase price ratio that is not explained by the median analyst long-term growth forecast for the acquirer, the acquirer's line of business and the target's line of business. To measure the disclosure level in business combinations, the researcher constructed a numerical disclosure score—the ratio of the number of items disclosed about the business combination to the maximum number of items relevant to this business combination.

goodwill in the purchase price allocation was viewed as bad news by users and could lead acquirers to withhold information from users. The researcher also documented that acquirers' future performance, measured by the change in return on assets and by abnormal share price returns, was associated with higher abnormal levels of disclosure on business combinations. In the researcher's view, managerial disclosure decisions were influenced by the effect disclosure was expected to have on share prices.

10. Durocher and Georgiou (2020) provided evidence, based on interviews with 22 buy-side and sell-side analysts, analysis of 15 analyst comment letters to the Board and the European Financial Reporting Advisory Group (EFRAG) consultations related to the Post-implementation Review of IFRS 3 *Business Combinations*, and observations of two meetings of the Board's Capital Markets Advisory Committee, that users are interested in being able to track the post-acquisition performance of business combinations relative to expectations in order to, among other things, hold management to account. Other reasons cited by users for tracking the post-acquisition performance were to be able to assess the contribution of the acquired business to profits and cash flows of the combined business and to be able to distinguish the acquirer's organic growth from acquired growth. In the researchers' view, users had divergent views relative to those of standard-setters because standard-setters required disclosures of technical information related to the business combination (for example, description of the business acquired and the nature of assets purchased and liabilities assumed in paragraphs B64 to B66 of IFRS 3) whereas users were interested in information to help them assess the impact of the business combination.
11. Academic respondents also referred to evidence on the effect of entities' commitment to higher levels of disclosure on lowering the cost of capital component that arises from information asymmetries between the entity and its potential shareholders.⁶ Using a sample of 102 German entities that switched from a lower disclosure regime (German generally accepted accounting practice (GAAP)) to a higher disclosure regime (International Accounting Standards (IAS) or US GAAP) in 1998, Leuz and Verrecchia (2000) documented that the entities' commitment to higher levels of

⁶ Information asymmetry results in reduced levels of liquidity. To overcome the reluctance of investors to hold its illiquid shares, the entity must issue capital at a discount.

disclosure was associated with lower cost of capital, proxied by lower bid-ask spreads and higher share turnover.

Disclosures about expected synergies—valuation implications, credibility and determinants

Summary

12. The academic evidence shows that disclosures about expected synergies are value relevant—they are positively associated with the bidder's and target's share price changes at the time of the acquisition announcement. There is evidence that credible disclosures of expected synergies are valued by investors and analysts. On the determinants of disclosures of expected synergies, the academic evidence shows that entities are more likely to disclose synergy estimates when the synergy information is relatively precise and when they need to inform the bidding entity's shareholders. Entities are less likely to disclose synergy estimates when the synergy information is uncertain and there are litigation concerns. There is no evidence that the disclosures of synergy estimates are related to concerns about commercial sensitivity or used to influence takeover premiums.

Detailed review of academic papers

13. Based on a sample of 41 bank business combinations announced in the period 1985–1996, each with a deal value in excess of \$400 million, Houston, James and Ryngaert (2001) examined the sources of gains arising from the business combinations. Using management projections, the researchers estimated the present value of the expected earnings from cost savings and revenue increases arising from the business combination and examined their association with the change in the market value of the combined entity. The researchers found that management's projected gains explained around 60% of the variation in the combined entity's share price returns. The projected cost savings were positively associated with the combined entity's share price returns while the projected revenue increases were negatively associated with these share price returns.⁷ In the authors' view, cost savings projections were viewed as credible by the market. Examining analysts' reports, Houston et al found

⁷ A positive (negative) association between two variables means that higher levels of one variable are associated with higher (lower) levels of the other variable—in this case higher projected cost savings were associated with higher share price returns.

that analysts also viewed cost savings but not revenue projections as credible. To validate the credibility of the cost savings projections, the researchers documented that management's cost savings estimates were correlated with the changes in the combined banks' post-acquisition operating performance.

14. Using a sample of 1990 business combinations by US public entities in the period 1995–2008, Dutordoir, Roosenmoom and Vasconcelos (2010) documented that 345 (17%) of the transaction announcements included a synergy estimate. Analysing the determinants of the synergy disclosures, the researchers found that:
 - (a) entities were more likely to disclose synergy estimates for:
 - (i) equity-financed deals—to inform bidding entity's shareholders; and
 - (ii) deals for which more precise information related to synergies was available (for example in same-industry deals and in deals with low asymmetry of information about the target value);
 - (b) entities were less likely to disclose synergy estimates:
 - (i) if the information related to synergies was uncertain (for example in cross-border deals); and
 - (ii) there was higher risk of shareholder litigation;
 - (c) there was no evidence that:
 - (i) bidders refrained from synergy disclosures to avoid sharing commercially sensitive information with competitors; and
 - (ii) bidding entity managers used synergy disclosures as a strategic tool to influence takeover premiums or to deter competition for the target.
15. Based on these findings, the researchers concluded that synergy disclosures resulted from a trade-off between the bidder's willingness to improve the market perception of their deal and the bidder's reluctance to disclose imprecise information.
16. Bernile and Baugess (2011) analysed news stories and press-releases for 3,935 business combinations undertaken by US listed entities announced in the period 1990–2005. Their findings showed that:
 - (a) disclosures of synergy estimates were explained by:

- (i) proxies for the existence of synergies; and
 - (ii) the benefit of communicating them to market participants;
 - (b) disclosures of synergy estimates were positively associated with share price returns at the time of announcing the business combination;
 - (c) post-acquisition operating performance had a weak positive association with the projected synergies—to the portion of those synergies that was predictable based on observable deal characteristics; and
 - (d) long-term post-acquisition share price returns were positively associated with the projected synergies, conditional on the ability of entities to realise the projected synergies.
17. In the researchers' view, their evidence supports the idea that market participants reward the availability of synergies at the time of the business combination in proportion to the implied gains, but later use them as economically relevant yardsticks to judge the success of the business combination.
18. In a comment letter, an academic respondent supported the proposal to require disclosures about expected synergies, timing, estimated range of amounts of the synergies and the expected cost or range of costs to achieve these synergies. He argued that disclosures about synergies may not always be perceived as credible unless they were accompanied by verifiable, auditable managers' forecasts of the impact of the business combination on familiar metrics defined in existing standards, such as earnings of the business combination. Without such verifiable forecasts for which managers could be held to account, discussion of synergies by managers could be perceived as 'cheap talk'. In support of his argument, the respondent referenced Amel-Zadeh and Meeks (2019).
19. Amel-Zadeh and Meeks (2019) studied a sample of 1,133 business combination announcements during the period 1990–2017. They found that pro forma earnings forecasts by bidding entities during business combinations were associated with a higher likelihood of deal completion, expedited deal closing, and with a lower acquisition premium—but only in share-financed business combinations. Analysts also responded to these pro forma earnings forecasts by revising their forecasts for the bidder upward. However, the benefits of forecast disclosure only applied to bidders with a strong forecasting reputation prior to the business combination. Explaining

why not all bidders provided forecasts, the researchers documented that entities with a weak forecasting reputation and those that underperformed post-acquisition were associated with a higher likelihood of litigation after the business combination and CEO turnover. In the researchers' view, pro forma earnings forecasts affect investors' and analysts' perception of the business combination at the time of its announcement. The benefits of disclosing these forecasts depend on their credibility, which the researchers attribute to the bidders' prior forecasting reputation.

Entities' compliance with business combination disclosure requirements and determinants of compliance

Summary

20. The academic papers in this section focus on disclosures related to business combinations and not on the additional type of disclosures referred to in the Discussion Paper. They were included in this literature review because their findings may be relevant to the proposals in the Discussion Paper.
21. In summary, the academic evidence shows that entities do not fully comply with the disclosures about business combinations required by accounting standards (US GAAP and IFRS Standards). The degree of compliance varies with entity characteristics, managerial incentives and strength of enforcement.⁸

Detailed review of academic papers

22. Shalev (2009) provided descriptive evidence on the disclosure levels for a sample of 1,019 business combinations by S&P 500 entities from 46 industries in the period 2001–2004. Some of the descriptive statistics documented by the researcher are summarised below:

⁸ There is no universal definition of enforcement in the academic literature—researchers have used a variety of enforcement proxies to capture differences in countries' legal systems and institutions (for example code law versus common law—La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1998), public enforcement (for example resourcing of security market regulators—La Porta, Lopez-de-Silanes, Shleifer and Vishny, 2006), private enforcement (for example shareholder rights—Djankov, La Porta, Lopez-de-Silanes, Shleifer and Vishny, 2008), the environment in which auditors perform their role (Brown, Preiato and Tarca, 2014) and the activities of national enforcement bodies in relation to promoting compliance with accounting standards (Christensen, Hail and Leuz, 2013; Brown et al, 2014; Brown, Preiato and Tarca, 2015).

Category	%
Entities that disclosed the primary reason for the business combination	72.5
Of those, entities that disclosed the primary reason for the business combination in the notes ⁹	67.5
Entities that disclosed the components of the purchase price that resulted in recognition of goodwill	13.4
Median portion of the purchase price that was allocated to goodwill	60.0
Entities that disclose the purchase price allocation	33.7

23. In the author’s view, the percentage of entities that disclosed the components of the purchase price resulting in recognition of goodwill (13.4%) was low relative to the high proportion of the purchase price that was allocated to goodwill (median 60.0%). Overall, the descriptive statistics revealed varying levels of disclosure on business combinations across entities and between disclosure items.

24. Mazzi, Andre, Dionysiou and Tsalavoutas (2017) examined compliance levels with IFRS 3 and IAS 36 *Impairment of Assets* goodwill-related disclosures and the cost of equity. Using a sample of 214 European entities (831 observations) in the period 2008–2011, they found a (median) compliance level of 83% and significant differences in compliance levels across entities and over time. Examining entities’ disclosures in the notes to the financial statements, the researchers concluded that non-compliance was associated with entities’ unwillingness to disclose commercially sensitive information and information that revealed managers’ judgements and expectations.¹⁰ The researchers also documented that higher levels of compliance were associated with lower cost of equity.

25. Glaum, Schmidt, Street and Vogel (2013) used a sample of 357 IFRS reporting entities from 17 European countries to analyse compliance with disclosures required by IFRS 3 and IAS 36 in the entities’ 2005 financial statements. The researchers documented that the average disclosure compliance level was 73%; twelve entities provided all required disclosures; and two entities provided only 12% of the required

⁹ Entities were required to disclose the reason for the acquisition in the notes by paragraph 52 of Statement of Financial Accounting Standards (SFAS) No. 141 *Business Combinations*. Disclosures were also made in the Management Discussion and Analysis section (MD&A) but their quality varied widely across entities.

¹⁰ For example, the researchers identified a large proportion of entities (almost 30% of entities to which these disclosures applied) that recognised a material impairment loss on goodwill but did not disclose it by segment. Based on preparers’ views that entities are reluctant to disclose this type of information if they consider it proprietary, the researchers concluded that non-compliance is positively associated with commercially sensitive information.

disclosures. The researchers documented that compliance levels were positively associated with the following company-level factors:

- (a) the recognised goodwill amount;
- (b) the entity's prior experience using IFRS Standards;
- (c) having a Big-4 auditor;
- (d) the existence of an audit committee in the entity's governance structure;
- (e) the issuance of equity shares or bonds in the reporting period or in the subsequent period;
- (f) a moderate level of entity's shares held by strategic investors such as families, foundations and institutional investors; and

negatively associated with:

- (g) financial services industry membership;

The researchers also documented that compliance levels were positively associated with the following country-level factors:

- (h) the strength of the enforcement system;
- (i) the size of the country's stock market; and
- (j) the strength of national traditions (degree of openness or resistance to change), in combination with company-level factors.

26. The researchers established that country-level factors moderated the influence of some company-level determinants of compliance. In the researchers' view, accounting traditions and other country-specific factors continued to play a role in financial reporting.
27. Based on a sample of 310 business combinations by 93 Italian companies in the period 2006–2008, Florio, Lionzo and Corbella (2018) examined the degree to which business combinations disclosures were affected by the characteristics of these business combinations. To measure the level of disclosure, the researchers constructed a ratio of the number of items disclosed and the maximum number of items relevant to

the business combination and weighted it by a measure of disclosure quality.¹¹ They documented:

- (a) higher disclosure levels for business combinations with a higher ratio of purchase price to total acquirer assets. In the authors’ view, this was attributed to management’s desire to justify the significant investment made and the returns expected from a large business combination.
- (b) lower disclosure levels for business combinations:
 - (i) with extremely large amounts of goodwill (goodwill amounts in the top 25% of the sample distribution). The researchers interpreted this finding as entities’ incentive to mitigate external scrutiny on the business combination and on entities’ future accounting choices.
 - (ii) with a higher ratio of goodwill recognised to total consideration paid. In the researchers view, by disclosing less about the business combination, management tried to minimise the risk of an overpayment being revealed and left more room for exercising discretion in recognising impairment losses on goodwill in the future.

28. In a literature review that examined compliance with disclosure requirements in IFRS Standards, Tsalavoutas, Tsoligkas and Evans (2020) summarised papers on business combinations that focused on disclosure practices of entities in different countries. Their summary of the academic evidence showed that:

- (a) there were differences in compliance between countries:

Country	Compliance level (%)	Academic study
Malaysia	77% (80%) mean (median)	Abdullah, Evans, Fraser and Tsalavoutas (2015)
Greece	70% (78%) mean (median)	Tsalavoutas (2011); Tsalavoutas and Dionysiou (2014)
Kuwait	30%	Dawd (2018)

¹¹ The measure of disclosure quality took into account whether the items were discretionary or non-discretionary and in the case of discretionary items, whether qualitative items were complete and informative.

Brazil	12%	Santos, Ponte and Mapurunga (2014)
Large international sample ¹²	81% (84%) mean (median)	Tsalavoutas, Andre and Dionysiou (2014)

- (b) cross listings, common law country location, leverage, profitability and having a Big 4 auditor were positively associated with compliance levels; and
- (c) based on the evidence from one study, compliance levels were positively associated with share prices (Souza and Borba, 2017).

Section 2—Accounting for goodwill

Overview

29. This section provides evidence on the following topics:
- (a) decision usefulness of goodwill from business combinations—before and after the introduction of the impairment-only model (paragraphs 31–38):
 - (i) to users; and
 - (ii) for debt contracting;
 - (b) economic life of goodwill (paragraphs 39–44);
 - (c) management discretion in purchase price allocations (paragraphs 45–49);
 - (d) decision usefulness of impairment losses on goodwill and amortisation of goodwill and the predictive ability of impairment losses on goodwill (paragraphs 50–69);
 - (e) management discretion in recognising impairment losses on goodwill (paragraphs 70–78);
 - (f) disclosures related to goodwill and impairment losses on goodwill (paragraphs 79–86);
 - (g) alternative methods for the subsequent accounting for goodwill (paragraphs 87–92);

¹² The sample included Australia, Austria, Belgium, Brazil, China, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Malaysia, Netherlands, New Zealand, Norway, Portugal, South Africa, Spain, Sweden, Switzerland and the UK.

- (h) annual impairment test (paragraphs 93–96); and
 - (i) other (paragraphs 97–101).
30. The summaries of the academic evidence in this section that relate to paragraphs 29(a), (c), (d), (e) and (f) are based on conclusions from Amel-Zadeh, Glaum and Sellhorn’s (2020) review of the academic literature. Their goodwill literature review is based on 74 empirical papers published in leading academic journals in the period January 2000 to July 2020. They concluded that goodwill amounts, on average, were associated with the economics of the combined entity but were also shaped by managerial incentives and institutional context.

Decision usefulness of goodwill from business combinations—before and after the introduction of the impairment-only model

Summary

31. The conclusion from Amel-Zadeh et al’s literature review on the decision usefulness of goodwill is that the value relevance of goodwill—its association with share prices and returns—and the predictive ability of goodwill for future cash flows increased after the introduction of the impairment-only model relative to when entities reported using previous approaches. Academics note that comparing the quality of financial reporting using the impairment-only model and the amortisation model is difficult due to variation in reporting practices for goodwill across jurisdictions before the introduction of the impairment-only model. The evidence on the usefulness of goodwill for debt contracting is mixed.

Detailed review of academic papers

32. Aharony, Barniv and Falk (2010) examined the value relevance of goodwill (and research and development (R&D) expenditures and asset revaluations) for 2,298 entities from 14 European countries (UK, Ireland, Netherlands, Belgium, France, Italy, Spain, Portugal, Denmark, Finland, Norway, Sweden, Austria and Germany) in the year before and the year of IFRS adoption. The researchers used information prepared using the impairment-only model in IFRS Standards in the first year of IFRS adoption and information prepared using an amortisation model or an indefinite useful life model in local GAAPs in the year before IFRS adoption. They documented higher value relevance of goodwill in the year of IFRS adoption. In the pre-adoption year,

the value relevance of goodwill was higher in countries with higher overall comparability between local GAAP and IFRS requirements.¹³ In the year of IFRS adoption, the value-relevance of goodwill (and the other two accounting items examined) increased compared to the prior period and the increase was higher in countries with greater differences between local GAAP and IFRS requirements. In the researchers' view, the adoption of IFRS Standards (impairment-only model) increased the value relevance of goodwill (and R&D expenditures and asset revaluations) for users in the countries examined.

33. Amel-Zadeh, Faasse, Li and Meeks (2020a) also documented an increase in the value relevance of goodwill after IFRS adoption, by comparing entities listed on the UK main market which adopted the IFRS impairment-only model in 2005 with entities listed on the alternative market which continued reporting using an amortisation model in UK GAAP until 2007.
34. Based on a sample of 4,953 US listed entities (14,202 observations) in the period 1995–2006, Lee (2011) examined the effect of Statement of Financial Accounting Standards No. 142 (SFAS 142) *Goodwill and Other Intangible Assets* on the ability of goodwill to predict future cash flows. He documented an improvement in the predictive ability of goodwill for cash flows and did not find evidence of reporting discretion being used opportunistically in goodwill reporting. In the author's view, the elimination of amortisation was associated with improved representational faithfulness of goodwill reporting.
35. Based on a sample of 695 Australian entities in the period 1993–2007 (3,328 observations), Chalmers, Clinch, Godfrey and Wei (2012) documented that the positive association between capitalised intangibles (including goodwill) and analyst forecast accuracy (previously documented by Matolcsy and Wyatt, 2005) became stronger after IFRS adoption. Chalmers et al also documented that the increase in the usefulness of the capitalised intangibles for analysts was attributed to goodwill and not to other intangibles. In the authors' view, the impairment-only model conveyed more useful information than the amortisation model.

¹³ The researchers measured comparability based on the differences between entities' IFRS reported data (net income and book value of equity) and comparative transitional data for the year before IFRS adoption.

36. Kimbro and Xu (2016) studied the relationship between goodwill and future returns by examining how the information content of goodwill before and after SFAS 142 affected entities' idiosyncratic return volatility—volatility that cannot be explained by market returns. Their results showed that, during the pre-SFAS 142 period when goodwill was amortised, entities' idiosyncratic return volatility was high and entities with higher return volatility had lower future returns (a counterintuitive result referred to as anomaly in the literature). In contrast, the researchers found that entities' idiosyncratic return volatility decreased after applying SFAS 142 and that the impairment-only model was informative and corrected the above anomaly. The authors concluded that the recognition of goodwill as an asset with indefinite useful life resulted in value-relevant information about entity growth options and future earnings and contributed to more efficient market pricing of risk.
37. Despite the large number of studies on the decision usefulness of goodwill, Boennen and Glaum (2015) concluded in their literature review that the evidence did not provide sufficient grounds to conclude whether goodwill information became more useful for decision-making following the introduction of the impairment-only model. They argued that direct comparisons of before and after the introduction of the impairment-only model were problematic because in the period before the introduction of the impairment-only model entities applying US GAAP could apply the pooling-of-interests method and in many European countries, entities could write-off goodwill to reserves.
38. On the use of goodwill information in debt contracting, Frankel, Seethamraju and Zach (2008) investigated how the magnitude of recognised goodwill related to whether a lending agreement included both tangible and intangible assets in a net-worth covenant or only tangible assets. They found, for a sample of 1,662 entities (4,096 lending agreements) in the period 1992–2003, that the inclusion of tangible assets in covenants was negatively associated with the amount of goodwill of the borrower. In the authors' view, the level of goodwill was informative and provided an efficient way of limiting agency costs arising from the conflicting incentives of borrowers and lenders. Frankel et al, however, also documented a trend that the use of tangible assets in covenants increased after the adoption of SFAS 142, which they concluded meant that SFAS 142 reduced the contracting usefulness of goodwill.

Economic life of goodwill

Summary

39. Based on arguments from the macroeconomic, management and accounting literature, some researchers argue that goodwill is a wasting asset with an economic life of three to 20 years.

Detailed review of academic papers

40. In a comment letter, a group of academics commented on the question of whether goodwill is a wasting asset or a non-wasting asset (referred to in paragraph 3.61 and paragraph 3.81 of the Discussion Paper). They commented that recognising goodwill in a business combination means that the acquirer expects a return from the acquired business that exceeds the expected return on the identifiable net assets. In their view, part of the difference results from the acquirer perceiving a competitive advantage relative to a competitor purchasing the same identifiable net assets. The academics used arguments from the economics, management and accounting literature to discuss the conditions for such competitive advantage to arise and the period over which it can persist:
- (a) economics literature—in the absence of effective barriers to entry, the competitive advantage resulting from a business combination has a limited economic life (Bertrand, 1883; Chamberlin, 1933; Cournot, 1838; Kreps, 1990; Hotelling, 1929; Tirole, (1988) and Stackelberg, 1934).
 - (b) management literature:
 - (i) an entity’s ability to sustain the competitive advantage resulting from a business combination depends on intangible assets and workforce skills (Coyne, 1986; Barney, 1991; Teece, Pisano and Shuen, 1997; Hall, 1993; Coff, 1997). In the respondents’ view, goodwill provides economic benefits for as long as the entity is able to sustain its competitive advantage and generate abnormal profits.
 - (ii) the durability of this competitive advantage depends on:
 - 1. whether the combined entity can retain the workforce skills after the business combination (Fiol, 2001; Pfeffer, 1994).

2. the market power realised by the combined entity (Barney, Wright and Ketchen, 2001; Harrison, Hitt, Hoskisson Douane Ireland, 2001). For example, business combinations between entities that have complementary resources are most likely to produce competitive advantages that can be sustained over a reasonable period of time if the business combinations give rise to a valuable, unique and inimitable synergy.
3. on the dynamics of the market (Eisenhardt and Martin, 2000). In the respondents' view, this implies that the economic life of goodwill is market-dependent.

The academics concluded that the evidence that competitive advantage can be sustained only in specific circumstances was grounds for questioning claims that goodwill is a non-wasting asset. In addition, the academics commented that the factors that determined the durability of an entity's competitive advantage, could inform of the type of disclosures management should provide at the acquisition date and in subsequent periods.

- (c) accounting literature—based on empirical evidence summarised in the table below, entities' abnormal profits last for an average period of three to 20 years:

Academic study	Period of abnormal profits reversion to zero
Stober (1996)	5 years
Bauman (1999)	3 years
Myers (1999)	3 years
Dechow, Hutton and Sloan (1999)	6 to 9 years
McCrae and Nilsson (2001)	7 years
Callen and Morel (2001)	6 years
Ota (2002)	7 to 12 years
Bradshaw (2004)	10 years
Cheng (2005)	8 years
Choi, O'Hanlon and Pope (2006)	6 years
Giner and Iñiguez (2006)	7 to 20 years

41. Although industry and entity-specific factors may increase the period over which entities earn abnormal profits, the evidence suggests that abnormal profits cannot be earned indefinitely. In the respondents' view, this academic evidence indicates that goodwill is a wasting asset.
42. In a comment letter, a respondent referred to Bugeja and Gallery (2006) in support of the view that goodwill is a wasting asset. Using a sample of 475 Australian entity observations in the period 1995–2001 when goodwill was amortised and impaired, Bugeja and Gallery examined the value relevance of components of goodwill that had been recognised in different periods. They showed that goodwill recognised in the current year and up to two years previously was associated with the entity's market value but components of goodwill recognised more than two years before the current year had no such association with share price. In the authors' view, goodwill does not provide economic benefits beyond two years after the business combination.
43. On the economic life of goodwill, a comment letter respondent referred to the study by Pinnuck and Ghandor (2020) that examined the level of recognition of intangible assets, goodwill and impairment losses in financial reports in the period 2005–2020, for a sample of Australian, New Zealand and international entities. The researchers found that, based on the frequency and magnitude of impairment, the effective period of writing down goodwill to a zero value was 15 years.
44. A comment letter respondent argued that the impairment-only model did not reflect the economic life of goodwill. In support of this argument, the respondent referred to Patloch-Kofler and Roider (2020) who calculated the effective economic life of goodwill for a sample of entities listed on STOXX Europe 600 using the impairment-only model in the period 2010–2018. The researchers documented that the effective economic life of goodwill was 38 years in 2010 and increased to 103 years in 2018, a 271% increase over the 10-year period.

Management discretion in purchase price allocations

Summary

45. The conclusion from Amel-Zadeh et al's literature review is that managers use their discretion strategically in allocating a portion of the purchase price to goodwill. The academic literature shows that management's decisions to allocate smaller or larger

portions of the purchase price to goodwill are informative but they are also influenced by contracting and compensation incentives, such as desire to maximise post-acquisition earnings or bonuses.

Detailed review of academic papers

46. Shalev, Zhang and Zhang (2013) examined whether chief executive officers (CEOs) allocated larger portions of the purchase price to goodwill and indefinite life intangibles when their compensation packages relied more on earnings-based cash bonuses. Using a sample of 320 US business combinations in the period 2008–2010 with deal values exceeding \$10 million, they documented that a one-standard deviation increase in bonus intensity (the relative importance of bonus in CEO pay) resulted in seven percent of the deal value being allocated to goodwill and other indefinite life intangibles. The researchers also documented that when the acquirer's CEO bonus plan included performance measures that were not affected or affected less by the overstatement of goodwill, such as cash flows, sales, or earnings growth, the overstatement of goodwill related to bonus plans diminished.
47. Paugam, Astolfi and Ramond (2015) examined whether purchase price allocations are informative to users for a sample of 308 US business combinations in the period 2002–2011. They showed that abnormal goodwill was negatively associated with share price returns when the purchase price allocation was disclosed. The researchers also documented that abnormal goodwill was positively associated with the frequency and magnitude of future impairments and deterioration of future performance. The researchers' view was that the purchase price allocation provides useful information for valuation.
48. Studying a sample of entities applying SFAS 142 in the period 2001–2007, Zhang and Zhang (2017) found that CEOs allocated higher proportions of the purchase price to goodwill when:
 - (a) they had more discretion in assessing goodwill impairments (when the acquirer had higher market-to-book ratio, a proxy for internally generated

goodwill that could be used to shield goodwill from impairment, and larger amounts of less verifiable assets);¹⁴ and

(b) they were older and hence more likely to have short-term contracts.

49. In the researchers' view, purchase price allocation allowed managers to communicate private information but to the extent that management had incentives to focus on short-term outcomes, managers used their discretion to overstate goodwill relative to other intangible assets.

Decision usefulness of impairment losses on goodwill and amortisation of goodwill and the predictive ability of impairment losses on goodwill

Summary

50. Amel-Zadeh et al's summary of the academic evidence on this topic shows that the market reaction to announcements of impairment losses on goodwill constitutes a small part of the overall market reaction. Entities experience negative share price returns up to 12 quarters before the impairment loss announcement which implies that impairment losses may not be timely. However, announcements of impairment losses on goodwill are associated with negative stock market reaction, indicating that the announcement helps to resolve uncertainty and thus provides new useful information to users.
51. There is also evidence that the information content of impairment losses on goodwill, measured by short-term announcement returns, depends on the verifiability of the impairment loss and varies across environments with different degrees of investor protection. The evidence on whether the decision usefulness of impairment losses on goodwill has changed as a result of the introduction of the impairment-only model is mixed. A number of academic papers compare the informativeness of the amortisation and impairment-only models and provide inconclusive results.
52. There is mixed evidence on the predictive ability of goodwill impairments. The academic literature agrees that impairment losses on goodwill are related to future

¹⁴ During the development of the Discussion Paper the Board identified that headroom from internally generated goodwill could shield goodwill from impairment. The Board explored a 'headroom approach' impairment test that attempted to remove the effect of this shielding. See paragraphs 87–92 of this paper for academic evidence on a variant of this approach, the 'pre-acquisition headroom' approach.

entity performance but the evidence is inconclusive on whether goodwill impairments predict improvements or deterioration of future entity performance—some studies find a positive association with future cash flows while other studies find a negative association with future cash flows.

Detailed review of academic papers

Information content of impairment losses on goodwill before and after the introduction of the impairment-only model

53. A number of academic papers provide evidence that users anticipate the announcement of impairment losses on goodwill. For example, using a sample of US entities with recognised goodwill in a period before SFAS 142 adoption 1996–2000 (9,049 observations) and after SFAS 142 adoption 2004–2011 (19,290 observations), Li and Sloan (2017) documented a rise in the entities’ book-to-market ratios from 12 quarters before an impairment loss announcement. In the researchers’ view, the increase in book-to-market was consistent with negative returns preceding an impairment announcement, implying that share prices partially anticipated the announcement. Li and Sloan (2017) also showed that the increase in book-to-market ratios leading up to impairment announcements in the pre-SFAS period (1996–2000) was higher than in the post-SFAS period and that the average book-to-market ratio was lower in the pre-SFAS 142 period than in the post-SFAS 142 period. In the researchers’ view, this evidence indicated that impairment losses on goodwill were larger and less timely in the post-SFAS 142 period.
54. Li, Shroff, Venkataraman and Zhang (2011) and Bens, Heltzer and Segal (2011) compared market reactions to announcements of an impairment loss on goodwill before and after the introduction of SFAS 142. Li et al showed that both investors and analysts revised their expectations downward on the announcement of an impairment loss and that goodwill impairment is a leading indicator of a decline in future performance. Bens et al also documented a negative market reaction to unexpected impairment losses on goodwill. Neither study found a significant change in the size or direction of market reaction to large impairment losses on goodwill after the introduction of SFAS 142, suggesting that the introduction of the impairment-only model neither increased nor decreased the information content of impairment losses on goodwill.

Usefulness of amortisation expenses versus impairment losses on goodwill¹⁵

55. Knauer and Wöhrmann (2016) examined the information content of impairment losses on goodwill for a sample of 546 impairment announcements by entities applying IAS 36 and SFAS 142 in the period 2005–2009. The researchers found a negative market reaction to announcements of unexpected goodwill impairments, consistent with impairments providing useful information to users. They also investigated whether the stock market reaction to the impairment announcements depended on the verifiability of these impairments. They found that the market reaction was more negative for entities located in jurisdictions with lower level of legal protection that allowed higher level of management discretion. The market reaction was less negative when entities provided a verifiable reason for the impairment decision. In the researchers' view, users took into account that the impairment loss on goodwill might be higher than the announced impairment when management could apply its discretion opportunistically (for example in jurisdictions with low legal protection or in the absence of a verifiable reason for the impairment). There was no evidence of differences in the market reaction to IAS 36 and SFAS 142 impairment announcements.
56. In a comment letter, a respondent referred to the paper by Bradbury (2009) to argue that the accumulated evidence showed that goodwill amortisation was not useful for users and was not supported by preparers. Bradbury (2009) summarised 37 academic papers over the period 1975–2008 on the accounting treatment of intangible assets in Australia. The respondent's view was supported by:
- (a) reference to a survey of the Securities Institute of Australia (1995) showing that 86 percent of analysts adjusted income for goodwill amortisation expenses if the entity used the amortisation method for the subsequent accounting for goodwill;
 - (b) no consistent evidence of an association between reported goodwill amortisation expenses and share prices; and
 - (c) positive association between the balance of goodwill and the entity's market value up to two years ahead.

¹⁵ The evidence in this section does not repeat the evidence from academic papers included in the academic literature review for the Post-implementation Review IFRS 3 *Business Combinations*.

57. In a comment letter, a group of academics argued that there is no conclusive evidence that the impairment test is not effective in recognising losses in a timely manner since evidence suggests the market reacts significantly to impairment losses. For example, they referred to Abughazaleh, Alhares and Haddad (2012) who showed that, on adopting the impairment-only model in IFRS Standards in 2005 and 2006, a sample of the largest 500 UK listed entities exhibited a negative association between reported impairment losses on goodwill and market value. In the authors' view, this indicated that impairment losses were perceived by investors to reliably measure a decline in the value of goodwill which was incorporated in their entity valuation assessments.
58. Li, Amel-Zadeh and Meeks (2010) examined the association of impairment losses on goodwill with market value and the stock market reaction to goodwill impairment announcements for entities applying Financial Reporting Standard (FRS) 11 *Impairment of Fixed Assets and Goodwill* in the UK in the period 1997–2002. FRS 11 allowed an annual impairment review as an alternative to capitalisation and subsequent systematic amortisation of goodwill. Their results showed that impairment losses on goodwill were negatively associated with market value and there was a negative market reaction to goodwill impairment announcements. They did not find evidence that amortisation was value relevant.
59. Mazzi, Liberatore, and Tsalavoutas (2016) surveyed 48 Italian CFOs and documented that the CFOs viewed the impairment test as informative but also subject to discretion. Using a sample of 150 European entities in the period 2001–2009 (pre- and post-adoption of IFRS Standards), Hulzen, Georgakopoulos and Sotiropoulos (2011) examined the value relevance (association with share prices) and the timeliness (association with share price returns of varying length relative to the reporting date) of impairment losses and amortisation expenses. They showed that impairment losses on goodwill were less value relevant than amortisation, but that impairment losses were reflected in share prices quicker than amortisation.
60. In a comment letter, a respondent referred to the evidence by Gu and Lev (2011) to argue that amortisation of goodwill is not an effective way of holding management accountable for a business combination. Gu and Lev (2011) examined the reasons for the recognition of impairment losses and showed that the buyer's overpayment for the target's shares at the business combination date was the cause of many impairment losses on goodwill. In the respondent's view, amortisation of goodwill allowed

management to spread that overpayment in profit or loss over a long period, and unless a sudden decrease in the prospects of the acquired business leading to an impairment loss occurred, management would not be accountable for the excess payment. The respondent claimed that impairment testing helped highlight an ineffective investment strategy.

61. In a comment letter, an academic respondent provided arguments in favour of reintroducing amortisation of goodwill on the basis of the following academic evidence:
- (a) flaws of the impairment-only model—the respondent referred to Ramanna and Watts (2012)'s discussion of the difficulty of disentangling the cash flows attributable to internally generated intangibles from those generated by purchased goodwill.¹⁶
 - (b) the amortisation and impairment model provides value relevant information—the respondent referred to Amel-Zadeh et al (2020a) who documented:
 - (i) based on a sample of 414 UK entities applying UK GAAP in the period 1998–2004, that both impairment losses on goodwill and amortisation expenses were negatively associated with share prices and returns; and
 - (ii) based on an extended sample including the 2005–2011 period, that impairment losses on goodwill did not increase their value relevance after the adoption of IFRS Standards.
62. Beatty, Cheng and Zach (2019), using a sample of 14,959 US entities' private debt contracts with net worth covenants in the period 2000–2013, showed that the exclusion of impairment losses on goodwill from earnings before interest and tax (EBITDA) definitions used in income-statement based covenants of lending agreements increased sharply after the adoption of SFAS 142 in 2002 to 25.7%, doubling the frequency of 13.4% in 2001, the year before SFAS 142 adoption. Their analysis indicated that the frequency of excluding non-recurring items such as impairment losses on goodwill from lending agreements increased over time and was inversely related to the item's predictive ability for entities' future performance. In their literature review, Amel-Zadeh et al concluded that Beatty et al's findings were

¹⁶ Ramanna and Watts (2012) is discussed in paragraph 72.

consistent with Frankel et al's evidence that SFAS 142 reduced the contracting usefulness of goodwill (see paragraph 38).

63. Sun and Zhang (2017) examined the impact of impairment losses on goodwill on bond credit ratings of US entities in the period 2002–2014 (1,013 observations). They documented a negative relationship between the amount of impairment losses on goodwill scaled by total assets and bond credit ratings, suggesting that entities with larger impairment losses on goodwill received lower credit ratings. In the researchers' view, bond rating agencies use information about goodwill impairments when assessing entities' creditworthiness.
64. Schatt, Doukakis, Bessieux-Ollier and Walliser (2016) performed a review of empirical papers about the usefulness of information from impairment losses on goodwill with a focus on European entities. They concluded that impairment losses on goodwill were relevant when:
 - (a) there was strong information asymmetry between managers and users;
 - (b) managers disclosed in the notes their assumptions about future cash flows; and
 - (c) managers did not manage earnings and provided reliable information to users;
 - (d) and impairment losses on goodwill were less useful to users when:
 - (e) users were able to revise their expectations based on public information; or
 - (f) users viewed the accounting numbers and the additional information in the notes about the impairment test as unreliable.

Predictive value of impairment losses on goodwill

65. On the predictive value of impairment losses on goodwill, Bostwick, Krieger and Lambert (2015) found, using a large sample of US entities applying SFAS 142 in the period 2001–2009, that including impairment losses on goodwill in cash flow prediction models improved one year ahead cash flow prediction. In the authors' view, the findings highlight the importance of impairment information for improving the accuracy of cash flow forecasting for analysts, investors, creditors, and others interested in future cash flows.
66. There is evidence of a positive association between impairment losses on goodwill and measures of future performance. For example, Lee (2011) found that goodwill

impairments by US entities applying SFAS 142 were positively associated with cash flows one year ahead, whereas goodwill-related charges such as amortisation expenses were not significantly related to future cash flows before SFAS 142. Cready, Lopes and Sisneros (2012) also found that impairment losses on goodwill by US entities in the period 2002–2009 were weakly associated with increases in earnings and cash flows in subsequent years.

67. Other studies documented a negative association between the magnitude of impairment losses on goodwill and measures of future entity performance suggesting that impairment losses on goodwill are indicators of deterioration in future performance. Jarva (2009) found that impairment losses on goodwill by US entities were negatively associated with operating cash flows up to two periods ahead. Li and Sloan (2017) documented a negative association between impairment losses on goodwill and future share price returns after SFAS 142 adoption.
68. Using a sample of Australian entities, Chalmers, Godfrey and Webster (2011) compared the association between goodwill amortisation and entities' investment opportunities before the adoption of IFRS Standards with the association between impairments and entities' investment opportunities after adoption. They found that impairment losses on goodwill were negatively associated with entities' investment opportunities when entities applied IFRS Standards while goodwill amortisation or impairment losses on goodwill were not associated with investment opportunities when entities applied Australian GAAP. In the authors' view, the impairment-only model better reflects the underlying economic value of goodwill than an amortisation model.

Other

69. Durocher and Georgiou (2020) examined how financial statement users used information related to goodwill.¹⁷ They used framing theory to analyse how users understood goodwill accounting information compared to standard setters.¹⁸ The

¹⁷ As mentioned in paragraph 10, Durocher and Georgiou sample was based on interviews with 22 buy-side and sell-side analysts, analysis of 15 analyst comment letters to the Board and EFRAG consultations related to the Post-implementation Review of IFRS 3, and observations of two meetings of the Board's Capital Markets Advisory Committee.

¹⁸ Framing theory suggests that how something is presented to the audience (called "the frame") influences the choices people make about how to process that information.

researchers identified a number of users' views that differed from those of standard-setters. On the information content of goodwill, the researchers concluded that users:

- (a) found goodwill information useful for stewardship purposes only;
- (b) viewed goodwill of limited predictive value;
- (c) did not find amortisation nor impairment useful;
- (d) viewed the impairment test to be useful for auditing purposes only; and
- (e) found goodwill recognition criteria of limited usefulness—did not see benefits of reducing goodwill balances or increasing the range of separately identifiable intangible assets.

Management discretion in recognising impairment losses on goodwill

Summary

- 70. Amel-Zadeh et al's summary of the academic evidence on the determinants of impairment losses on goodwill concludes that they are related to underlying economic fundamentals but also vary with managerial incentives. The relationship between impairment decisions and economic fundamentals is stronger in the presence of strong enforcement and sophisticated users. In addition, there is evidence that impairments are, to some degree, related to business combination characteristics. There is also evidence that entities avoiding impairment losses on goodwill are more likely to have a decline in future performance.
- 71. The managerial discretion applied to impairment decisions is moderated by governance and external monitoring mechanisms such as auditors, audit committees, monitoring by financial analysts, oversight and enforcement. Consequently, the market reacts less negatively to impairment losses on goodwill where investor protection is stronger and information asymmetries are lower.

Detailed review of academic papers

- 72. Some studies provided evidence that impairment losses on goodwill are driven by opportunistic reasons. For example, Ramanna and Watts (2012) tested managers' implementation of the SFAS 142 impairment test in a sample of 124 US entities with market indications of goodwill impairment in the period 2003–2006. They examined

whether not recognising impairment losses on goodwill in the sample was associated with (a) proxies for managers' private information on positive future cash flows (share repurchases and insider trading); and (b) proxies for managers' agency-based incentives (related to debt contracting, managers' accounting-based compensation, accounting-based stock exchange delisting requirements, reputation concerns and valuation motives). The authors did not find evidence that not recognising an impairment loss on goodwill was related to (a) but found evidence that it was related to (b).

73. In a comment letter, a group of academics referred to Wheeler (2020) who provided evidence that entities with stronger incentives and opportunities to delay reporting impairments delayed impairment losses on goodwill more. Specifically, using a sample of US entities in the period 2003–2017 that recognised goodwill from an acquisition and wrote it off completely before acquiring new goodwill, Wheeler (2020) showed that entities with more segments, more concentrated segments, more unverifiable net assets, reputation incentives, financial reporting incentives, and exchange listing incentives, delayed impairment losses on goodwill more.
74. In several comment letters, respondents argued that the timing of the recognition of impairment losses may be opportunistic. In support of their view, they referred to evidence that shows that the timing of impairment losses on goodwill is associated with incentives to manage earnings. The respondents referred to evidence of:
- (a) 'big bath' earnings management and income smoothing:¹⁹
 - (i) Using a sample of Fortune 100 entities with recognised impairment losses on goodwill in the period 2001–2002, Jordan and Clark (2004) documented that entities recognising an impairment loss on goodwill in the year of SFAS 142 adoption had lower return on assets, lower return on sales and higher incidence of negative earnings than entities that did not recognise an impairment loss on goodwill in that year. They documented no differences in the return on assets, return on sales and the incidence of negative earnings between the two

¹⁹ 'Big bath' earnings management is a term used in the accounting literature to describe management's strategy to reduce earnings by deferring revenues or accelerating write-offs when target earnings (specified in compensation contracts) are unlikely to be met. The strategy increases the probability of meeting future target earnings (Healy, 1985).

groups of entities in the year before SFAS 142 adoption. The researchers argued that SFAS 142 provided an incentive for entities to take a ‘big bath’ by allowing entities to report impairment losses on goodwill in the year of adoption as cumulative effects from changing an accounting principle and not as operating expenses. In the researchers’ view, the evidence of differences in profitability between entities with and without impairment losses in the adoption year and of no such differences in the year before adoption indicated ‘big bath’ earnings management.

- (ii) Based on a sample of 120 US entities with recognised impairment losses on goodwill in the period 2001–2002, Sevin and Schroeder (2005) showed that ‘big bath’ earnings management was observed only in a sub-sample of small entities.²⁰ They documented that a larger proportion of small entities reported negative earnings in the year of SFAS 142 adoption, compared to the year before SFAS 142 adoption, but that there was no difference between the year-to-year proportions of large firms reporting negative earnings. In the researchers’ view, these findings indicated that small entities were more likely to engage in ‘big bath’ earnings management.
 - (iii) Some papers documented that entities were more likely to recognise impairment losses on goodwill when they had incentives for income smoothing (for example, Riedl, 2004; Malijebtou and Jilani, 2017). In the researchers’ view, managers prefer to report smaller earnings surprises and therefore, are likely to recognise impairment losses on goodwill in periods in which earnings before impairment losses are higher than expected.
- (b) association between the incidence of impairment losses on goodwill and CEO changes and CEO tenure:
- (i) A number of papers, also included in Amel-Zadeh et al’s literature review, provided evidence that entities are more likely to recognise impairment losses on goodwill in the year of a CEO change; entities with CEOs with longer tenure were less likely to recognise impairment losses (for example, Beatty and

²⁰ The authors defined entities with total assets of less/more than \$450 million as small/large.

Weber, 2006; Masters-Stout, Costigan and Lovata, 2008 and Hilton and O'Brien, 2009). In the researchers' view, CEOs in the last year of their tenure and CEOs with longer tenure were more likely to have been involved in the business combinations giving rise to the recognised goodwill and were therefore less likely to recognise impairment losses to avoid reputation costs.

- (ii) Based on a sample of 105 French listed entities in the period 2006–2012, Malijebtou and Jilani (2017) documented that entities were more likely to recognise an impairment loss on goodwill in a year of a CEO change. The researchers also documented an increased incidence of impairment losses in the financial crisis years, consistent with the evidence on 'big bath' earnings management discussed in paragraph 74(a).
- (iii) Using a sample of Italian listed entities in the period 2008–2010 (188 observations), Korošec, Jerman and Tominc (2016) documented that entities were more likely to recognise an impairment loss on goodwill in a year of a CEO change and less likely to recognise an impairment loss on goodwill if their CEO compensation was earnings-based, proxied by the award of a cash bonus.

75. Han and Tang (2020) investigated the consequences of avoiding impairment losses on goodwill in a sample of Chinese A-share listed entities in the period 2016–2017. The researchers identified entities that should have recognised an impairment loss on goodwill but did not by matching them with entities that recorded an impairment loss and had similar characteristics.²¹ They found that entities avoiding impairment losses on goodwill were more likely to experience a decline in future performance and were at an increased risk of a future share price crash (measured by negative skewness of returns and excessive volatility).
76. However, there is also evidence that, despite being linked to managerial incentives, impairment losses on goodwill are also associated with changes in the entity's economic performance. For example, AbuGhazaleh, Al-Hares and Roberts (2011) used a sample drawn from the largest 500 UK entities that applied IFRS 3 in the period 2005–2006 (528 observations of which 109 entities had recognised an

²¹ The researchers used a matching procedure to ensure that the 'suspect' entities that did not recognise an impairment loss were similar to those that recognised an impairment loss in terms of observation year, industry, market-to-book ratio and sales growth.

impairment loss on goodwill and 419 did not). AbuGhazaleh et al found that the magnitude of impairment losses on goodwill was associated with managers' incentives to exercise their discretion. They documented that entities were more likely to recognise higher impairment losses on goodwill in the presence of CEO changes and income smoothing and 'big bath' reporting incentives. However, the researchers concluded that entities were also more likely to recognise higher impairment losses on goodwill in the presence of strong governance mechanisms. In the authors' view this meant that, when recognising an impairment loss on goodwill, managers were also responding to changes in economic circumstances and declines in the value of the entity.

77. Glaum, Landsman and Wyrwa (2018) examined the determinants of decisions to recognise an impairment loss on goodwill by a large sample of entities using IFRS Standards from 21 countries. They documented that such impairment decisions were associated with economic performance, but also related to proxies for managerial and entity-level incentives. In addition, the researchers showed that while impairment losses on goodwill were timely for entities in countries with higher enforcement, they were less responsive to declines in the economic value of goodwill for entities in countries with lower enforcement. The researchers also showed that managerial incentives, such as CEO reputation concerns, influenced the impairment decisions even in countries with higher enforcement, such as the US. Glaum et al also found that, in the context of impairment losses on goodwill, private monitoring through institutional users was a substitute for public enforcement when a country's enforcement regime was relatively weak.
78. Avallone, Gabbionetta, Ramassa and Sorentino (2015) examined whether the motivations for impairment losses on goodwill varied across countries with different accounting systems. They found that entities located in countries with an Anglo-Saxon accounting system were more likely to report impairment losses on goodwill than entities located in countries with a continental European accounting system.

Disclosures related to goodwill and impairment losses on goodwill*Summary*

79. The review of the academic evidence on disclosures related to goodwill and impairment losses on goodwill showed that entities' compliance with such disclosures was initially low but has been increasing over time. The evidence also shows that these disclosures are useful to users (associated with share prices and returns) and are informative to analysts (associated with higher analyst forecast accuracy and lower forecast dispersion). There is some evidence that higher quality disclosures are associated with reduced uncertainty and lower cost of capital.

Detailed review of academic papers

80. In an academic literature review, Tsalavoutas, Tsofigkas and Evans (2020) examined compliance with disclosure requirements in IFRS Standards. Their review of academic papers on goodwill and goodwill impairment, focusing on disclosure practices of entities from European countries, Australia and Malaysia, revealed that:
- (a) compliance was generally low but improved over time (2005 onwards);
 - (b) areas of non-compliance were related to commercially sensitive information;
 - (c) there were differences in compliance levels across jurisdictions;
 - (d) compliance was positively related to entity size, having a Big 4 auditor and strong governance; and
 - (e) disclosures were associated with higher value relevance of goodwill (Baboukardos and Rimmel, 2014) and lower cost of capital (Mazzi et al, 2017).
81. Tsalavoutas et al commented on a limitation of papers examining compliance with disclosure requirements. They noted that the commonly used disclosure indices—extensive lists of items which may be disclosed by entities—involve subjective judgement of whether disclosure requirements were not complied with or were not applicable to a specific entity. They documented that few papers examining disclosure compliance referred to a materiality threshold in their research design. Tsalavoutas et al concluded that this could introduce bias by counting not applicable disclosure items as non-compliance.

82. Using a sample of 373 entities from 16 European jurisdictions in the year 2010–2011, Tsavaloutas, Andre and Dionysiou (2018) examined whether the degree of compliance with the disclosure requirements of IAS 36 and IAS 38 *Intangible Assets* was value relevant and affected analysts’ forecasts. Their results indicated a mean (median) compliance level of about 84% (86%). The researchers documented variation in levels of compliance among entities and between IAS 36 and IAS 38 related disclosures. Their analysis showed that non-compliance was related to commercially sensitive information and information that revealed managers’ judgements and expectations. Disclosure levels were positively associated with market values and forecast accuracy and negatively associated with analyst disagreement (dispersion of analyst forecasts). These results were mainly attributed to disclosures related to IAS 36.
83. Analysing disclosures of information related to impairment tests of cash-generating units containing goodwill by entities included in the SBF 250 index of Euronext Paris in the period 2006–2009, Paugam and Ramond (2015) documented a negative association between disclosures and entities’ implied cost of capital.²² The researchers found that forward looking entity-specific impairment related disclosures were negatively associated with the cost of capital whereas descriptive disclosures exhibited no association with the cost of capital. Additionally, they documented that entities which avoided impairments when low performance indicators suggested that impairments were likely exhibited no association between disclosures and the cost of capital. In the authors’ view, these entities’ disclosures were perceived as less accurate by users. The researchers also found that prospective impairment related disclosures were negatively related to analysts’ forecast errors.
84. In comment letters, respondents referred to some examples of country-specific evidence on goodwill and impairment disclosures:
- (a) In Brazil entities disclose little information about goodwill and impairments. Such disclosures have been increasing with entities’ experience in applying IFRS Standards (Gomes, De Paulo Santiago, Santos and Nascimento, 2017; Da Silva Barbosa, Consoni, Scherer and Clemente, 2014; Souza, Borba and Zandonai, 2011).

²² Implied cost of capital is inferred from a valuation model using share prices and cash flow forecasts.

- (b) Examining the disclosures of 141 entities from France, Germany, Spain and Italy, in 2010 financial statements, Devalle and Rizzato (2012) documented low compliance with goodwill disclosures (27%) and variation across the four jurisdictions.
- (c) Using a sample of 287 Australian listed entities in the period 2005–2010, Guthrie and Pang (2013) found that compliance with the AASB 136 *Impairment of Assets* goodwill disclosure requirements generally improved over the period studied; however, there was still non-compliance in all reporting periods.
85. Andreicovici, Jeny and Lui (2019) examined whether more transparent disclosure about impairment tests of cash-generating units containing goodwill conveyed useful information to sell-side analysts about the parameters used in the impairment testing process. Using a sample of European entities in the period 2006–2014, they showed that the level of disclosure transparency, measured by a disclosure index based on disclosure items related to impairment, was negatively associated with both disagreement among analysts, a proxy for information uncertainty, and disagreement between analysts and managers, a proxy for information asymmetry.
86. Using a sample of 447 deals each with a purchase price in excess of \$100 million completed between 2002 and 2011 in the US, Jeny, Paugam and Astolfi (2019) documented that disclosures about newly acquired goodwill were associated with downward revisions of analysts' earnings forecasts. In the researchers' view, these disclosures revealed useful information to analysts about the extent of overpayment.

Alternative methods of subsequent accounting for goodwill

Summary

87. A few academics suggested the Board reconsider the 'pre-acquisition headroom approach', discussed during the development of the Discussion Paper, based on evidence that the 'pre-acquisition headroom approach' was most aligned with their estimate of the economic decline of goodwill.

Detailed review of academic papers

88. Linsmeier and Wheeler (2020) evaluated alternative methods of subsequent accounting for goodwill, using a sample of US GAAP reporting entities. Based on a sample of 4,140 entities (12,980 observations) in the period 1990–2002 before the adoption of SFAS 142 and 2,989 entities (5,287 observations) in the period 2003–2017 after the adoption of SFAS 142, they estimated the rates and patterns of decline in the value of goodwill based on:
- (a) the amortisation and impairment model before the adoption of SFAS 142 in 2002;
 - (b) the impairment-only model after adoption of SFAS 142 in 2002;
 - (c) an alternative amortisation and impairment approach by estimating amortisation periods using:
 - (i) the pattern and period of mean reversion of abnormal earnings to proxy for the period over which benefits will be realised from combining the acquirer and acquiree’s assets;
 - (ii) the expected payback period of an acquisition that some banks voluntarily disclose;²³
 - (d) the pre-acquisition headroom approach (see also Agenda Paper 18B to this meeting) by estimating:
 - (i) headroom at the time of acquisition as the difference between the market value and book value of the acquiring entity’s net assets in the year before the acquisition;
 - (ii) headroom in subsequent periods as the difference between the market value and book value of the entity’s net assets excluding goodwill; and
 - (iii) impairments of acquired goodwill equal to any decrease in headroom subsequent to the acquisition.
89. The researchers found evidence:
- (a) comparing approach (a) and approach (b), that:
 - (i) more entities wrote off smaller portions of goodwill in the pre-2002 period and more entities wrote off larger portions of

²³ These approaches are mentioned in [Agenda Paper 18A](#) to the Board’s October 2015 meeting.

goodwill in the post-2002 period. In the authors' view, this finding indicated that the impairment test did not capture steadily declining goodwill.

- (ii) decreases in the value of goodwill were recorded more quickly in the pre-2002 period than decreases in the value of goodwill in the post-2002 period. In the authors' view, this finding indicated that the impairment-only method allowed delays in impairment.
- (b) comparing approach (a) and approach (c), that:
- (i) there was significant variation between industries in the rate of mean reversion of abnormal earnings;
 - (ii) amortisation based on mean reversion of abnormal earnings resulted in faster amortisation of goodwill than reported values in the pre-2002 amortisation-and-impairment model (for entities with single acquisitions);
 - (iii) the pattern and period of goodwill amortisation was slower than the pattern and period of straight-line amortisation over the payback period (for entities in finance, real estate and insurance); and
- (c) comparing approach (b) and approach (d), that the estimated pre-acquisition headroom approach resulted in higher rate of goodwill impairment than impairment recorded by entities applying the impairment-only model.
90. Linsmeier and Wheeler (2020) did not provide evidence on which method was most closely aligned with the economic goodwill decline. Wheeler (2020) examined this question, using a sample of US entities in the period 2003–2017 that recorded goodwill from an acquisition and wrote it off completely before acquiring new goodwill. She estimated the association between share prices and goodwill balances obtained from:
- (a) straight-line amortisation and impairment model with an amortisation period of a maximum of:
 - (i) eight years;²⁴
 - (ii) twenty years; and

²⁴ This choice of period is based on a finding by Linsmeier and Wheeler (2020) that entities in the pre-SFAS 142 *Goodwill and Other Intangible Assets* period wrote down goodwill over an average period of eight years.

- (iii) forty years.
 - (b) impairment-only model;
 - (c) amortisation and impairment approach based on mean reversion of abnormal earnings; and
 - (d) pre-acquisition headroom approach.
91. Wheeler (2020) found that:
- (a) Amortisation and impairment (over forty/twenty years, as implemented under previous GAAP/IFRS) better explained equity prices relative to the current impairment-only model.
 - (b) Amortising over a shorter period resulted in more relevant information.
 - (c) The pre-acquisition headroom approach had the strongest association with share prices.
92. In the researcher's view, these results indicated that users valued goodwill as non-wasting, but that impairments were delayed unless the pre-acquisition headroom approach was used. The researcher concluded that the 'pre-acquisition headroom approach' was most aligned with the estimate of the economic decline of goodwill.

Annual impairment test

Summary

93. Two academic papers provided US based evidence that permitting the use of qualitative indicators instead of an annual impairment test did not result in less frequent impairment losses on goodwill. The choice of the qualitative assessment method was associated with a cost-benefit trade-off. Entities that chose the qualitative assessment test were not viewed less favourably by market participants. There is also evidence that the existing annual impairment test provides timely information.

Detailed review of academic papers

94. Using a sample of 2,639 US entities that had a choice of using a qualitative assessment of indicators that goodwill might be impaired (referred to as 'Step 0') versus performing an annual quantitative impairment test in the period 2009–2015, Black, Krupa and Minutti-Meza (2020) provided evidence supporting the indicator

approach.²⁵ They compared entities that disclosed the use of the qualitative assessment options with those that did not and documented that:

- (a) entities taking the qualitative assessment option were smaller and had lower book-to-market ratio and faced higher expected costs of conducting quantitative tests (higher percentage of intangible assets and more reporting units). In the researchers' view, the choice of a qualitative test was consistent with a cost benefit trade-off.
- (b) there was no difference in the incidence of impairment losses on goodwill between entities that used qualitative indicators and those that did not. The researchers documented an increased incidence of impairment loss recognition for entities exercising the qualitative assessment option relative to those that did not. In the researchers' view, this evidence indicated that the qualitative analysis made it more difficult for managers to manipulate the inputs of the two-step quantitative test to avoid impairment losses.
- (c) there was no evidence that investors responded differently to earnings news from entities opting for the qualitative assessment. In the researchers' view, the assessment did not worsen users' perception of earnings quality.

95. Adame (2019) provided further evidence on the use of the qualitative impairment test. Using a sample of 462 S&P 500 US entities in the period 2011–2017, she examined the use of qualitative versus quantitative impairment tests and their implications for future impairment losses and goodwill valuation. Adame documented that:

- (a) Entities were more likely to opt for a qualitative assessment when they were smaller, had fewer reporting units, fewer geographic segments, and the risk of a goodwill impairment was lower (for example no recent acquisition activity, no sustained decrease in share price).
- (b) Entities relying on qualitative assessments were less likely to recognise large impairment losses on goodwill in subsequent years.
- (c) The association between goodwill and market value was higher for entities that relied on a qualitative assessment versus those that opted for a quantitative

²⁵ FASB's pronouncement Accounting Standards Update (ASU) No. 2011–08 gives entities the option of starting the goodwill impairment test by performing the qualitative assessment at the reporting-unit level (FASB 2011).

test. In the researcher's view, investors viewed an entity's choice of goodwill impairment testing method as reflective of management's private information. Overall, the researchers concluded that managers did not use their discretion opportunistically.

96. In a comment letter, a respondent said that the existing annual quantitative impairment test provides timely information. They referred to Karampinis and Hevas (2014) who examined the association of tangible and intangible impairments with future cash flows, using an international sample of entities from 21 jurisdictions applying IFRS Standards. The researchers found that the asymmetric impairment tests for tangible (impairment tests to be performed only when relevant indicators exist) and intangible assets (impairment test to be performed annually) enhanced the timeliness of impairment losses on goodwill but decreased their reliability in forecasting future cash flows relative to tangible asset impairment tests.

Other

Summary

97. Academic evidence shows that goodwill is comprised of three distinct components—expected synergies, going concern value and overpayment—and each of these components is differently associated with the risk of a future impairment loss on goodwill. There is also some evidence that entities more actively involved in business combinations are more likely to adopt IFRS Standards, thus choosing to switch from an amortisation model to the impairment-only model.

Detailed review of academic papers

98. Linsmeier, Wangerin and Wheeler (2020) investigated the components of acquired goodwill by performing a factor analysis on target, acquirer, and acquisition characteristics and found that goodwill consisted of at least three distinct components:
- (a) expected synergies from combining the assets of the target and acquirer;
 - (b) the going concern value of the target firm; and
 - (c) overpayment.
99. The researchers documented that:

- (a) acquired goodwill was positively associated with the synergy value, going concern value, and residual components;
 - (b) going concern value and expected synergies were associated with a lower risk of future impairment losses on goodwill;
 - (c) synergies reduced the risk of impairment losses on goodwill more than the going concern value component; and
 - (d) overpayment was associated with a greater risk of future impairment losses on goodwill.
100. Using a sample of 164 Japanese listed entities in 2017, Kashiwazaki, Sato and Takeda (2019) examined whether entities that were more actively involved in business combinations were also more likely to adopt IFRS Standards.²⁶ The researchers documented that:
- (a) Entities that were more actively involved in business combinations and had higher goodwill-to-assets ratio were more likely to adopt IFRS Standards.
 - (b) Entities that adopted IFRS Standards were subsequently involved in more M&A transactions than entities that used Japanese GAAP.
 - (c) While entities that adopted IFRS Standards had higher goodwill-to-assets ratio than entities using Japanese GAAP both before and after the adoption, there was no evidence that IFRS adopters increased their goodwill-to-assets ratio after the adoption of IFRS Standards.
101. The researchers attributed their findings to the impairment-only model in IFRS Standards being more favourable for entities that are actively involved in business combinations than an amortisation model.

²⁶ Japanese listed entities are allowed to adopt IFRS Standards voluntarily. Japanese GAAP requires entities to amortise goodwill over a maximum period of 20 years.

Section 3—Other Issues

Overview

102. The academic evidence discussed below relates to:
- (a) users' reaction to information presented in the financial statements versus information disclosed in the notes to the financial statements (paragraphs 103–107); and
 - (b) value relevance of acquired identifiable intangible assets and their predictive ability for post-acquisition performance (paragraphs 108–111).

Users' reaction to information presented in the financial statements versus information disclosed in the notes to the financial statements

Summary

103. The academic evidence that is relevant to the proposal to presenting total equity excluding goodwill on the balance sheet is based on research that examined whether users place different weight to items that are presented in the primary financial statements and items that are disclosed in the notes. The evidence is mixed—a large number of studies show that users place more weight on items presented in the primary financial statements. One study shows that when disclosures are salient, non-discretionary and sufficient for users to construct reliable 'as if' recognised amounts, users do not differentiate between disclosed and presented information. Another study shows, in the context of goodwill, that there is no difference in the association of disclosed and recognised amounts with market value.

Detailed review of academic papers

104. A large body of academic research, experimental and archival, concluded that when information was presented in the financial statements, it was reflected in individuals' judgements and decisions to a greater degree than when information was disclosed in the notes (Sami and Schwartz, 1992; Harper Jr, Mister, and Strawser, 1991; Hirst and Hopkins, 1998; Wilkins and Zimmer, 1983; Barth, Clinch and Shibano, 2003, Clor-Proell and Maines, 2014; Müller, Riedl and Sellhorn, 2015; Davis-Friday, Liu and Mittelstaed, 2004; Ahmed, Kilic and Lobo, 2006).

105. Bratten, Choudhary and Schipper (2013) provided evidence that disclosed items were not processed differently from items presented in the financial statements when the disclosures were salient, not based on management estimates, and allowed users to impute ‘as-if’ recognised amounts by using simple techniques. For a sample of 709 US entities with both capital and operating leases in the period 1980–2008, Bratten et al found that ‘as-if’ recognised amounts for leases were generally reliable and that both recognised lease obligations and disclosed lease obligations were associated with proxies for costs of debt and equity. For a sub-sample of entities for which ‘as-if’ recognised lease liabilities were less reliable, the researchers documented differences in the associations of recognised and disclosed lease obligations with their proxies for cost of debt and equity. In the researchers’ view, recognised and disclosed amounts are not treated differently by capital market participants as long as the disclosed amounts are reliable and the disclosed information is readily identifiable and easily processed.
106. Al Jifri and Citron (2009) examined the value relevance of disclosed and recognised goodwill amounts in a sample of 243 UK entities applying FRS 10 *Goodwill and Intangible Assets* in 2002. The researchers utilised the transitional arrangements of FRS 10 which allowed entities to continue disclosing old pre-FRS 10 goodwill in the notes when new post-FRS 10 goodwill was capitalised. The entities’ 2002 annual reports, therefore, had both goodwill that was presented in the financial statements and goodwill that was disclosed in the notes. The authors found that both recognised and disclosed goodwill were associated with share prices. In their view, the markets incorporated goodwill information efficiently irrespective of where it appeared in the annual report.
107. In a comment letter, academics from a group of universities argued that presenting total equity excluding goodwill on the statement of financial position would reduce the risk of providing misleading information. They referred to Wu and Lai (2020) that evaluated the association between intangible intensity and share price crash risk for US listed entities in the period 1983–2017. Wu and Lai (2020)’s results showed that intangible-intensive entities were associated with high crash risk and goodwill contributed to this risk the most through increasing information asymmetry between the entity and stock market participants.

Value relevance of recognised identifiable intangible assets and their predictive ability for post-acquisition performance*Summary*

108. Academic evidence relevant to the proposal to leave unchanged the requirement for separate recognition of identifiable intangible assets in business combinations is based on academic papers that examine the usefulness of intangible assets. This evidence shows that recognised intangible assets are value relevant and associated with analyst forecast properties (for example Matolcsy and Wyatt, 2006). Fewer academic papers have examined recognised identifiable intangible assets arising in business combinations. These papers show that recognised identifiable intangible assets are useful to investors and analysts. The evidence on the association of these intangibles with post-acquisition performance is inconclusive.

Detailed review of academic papers

109. Ritter and Wells (2006) analysed a sample of the largest entities listed on the Australian stock exchange in the period 1979–1997. They documented that identifiable intangible assets were positively associated with share prices and future income.
110. Jeny, Paugam and Astolfi (2019) examined the relevance for analysts of disclosures about intangible assets identified in business combinations. Using a sample of 447 deals each with a purchase price in excess of \$100 million completed between 2002 and 2011 in the US, they documented that intangible-related disclosures, in aggregate, were positively associated with analyst forecast revisions. When they decomposed intangible-related disclosures into components, the researchers documented that disclosures about separately identified intangible assets and information about their amortisation were incrementally useful to analysts.
111. Based on a sample of 367 Australian acquisitions in the period 1988–2008, Su and Wells (2015) examined whether identifiable intangible assets acquired and recognised in business combinations were associated with post-acquisition performance and whether this association changed on transition to IFRS Standards. They found no evidence of such association, neither before nor after the transition to IFRS Standards. Su and Wells (2018) provided evidence of an association between the recognition of

identifiable intangible assets and higher acquisition premiums before the adoption of IFRS Standards but no evidence of such association after the transition reporting.

Question for the Board

Does the Board have any comments or questions on the academic evidence discussed in this paper?

Appendix A—List of academic papers

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