STAFF PAPER

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Project	Post-implementation review of IFRS 8		
Paper topic	Review of academic literature to December 2012		
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Purpose

1. The purpose of this paper is to present the findings of academic research and other reports about the impact of the application of IFRS 8 *Operating Segments*. This literature review provides evidence relevant to the post-implementation review of IFRS 8. This paper updates Staff Paper 12B of June 2012 "Review of academic literature to May 2012—preliminary findings".

Questions for the IASB

2. In this paper we will ask the IASB two questions:

   (a) Do they have any questions at this stage on the external research findings to date?

   (b) Would they like any further areas to be researched at this time?

Structure of the paper

3. The paper is organised as follows:

   (a) Introduction.

   (b) Statement of the questions about IFRS 8 for which the IASB is seeking information.

(c) Research findings relevant to the questions posed by the IASB about IFRS 8.

  (i) Effect of identifying segments based on the management perspective.

  (ii) Effect of the use of non-IFRS measurement bases in IFRS 8.

  (iii) Effect of reporting those line items identified by the chief operating decision maker (CODM).

  (iv) Effect of the disclosure requirements of IFRS 8 on how constituents do their jobs.

  (v) Experience of constituents in implementing IFRS 8.

(d) Impact of application of IFRS 8.

(e) Staff summary and conclusions.

(f) Questions for the IASB.

(g) Appendix 1 IFRS 8 *Operating Segments* Basis for Conclusions.

Introduction

4. This paper forms part of the post-implementation review of IFRS 8. The paper lists the questions about IFRS 8 for which the IASB is seeking information, as stated in June 2012 Staff Paper 12B. It then presents findings from academic studies and reports that are relevant to answering these questions. Further details of the studies and reports are included in January 2013 Staff Paper 6C "Appendices: Summary of relevant literature to December 2012". This paper updated the June 2012 Staff Paper 12C "Appendices: Summary of relevant literature to May 2012". It complements January 2013 Staff Paper 6A "Comment letter analysis and summary of outreach conducted".

Statement of the questions about IFRS 8 for which the IASB is seeking information

5. The staff memorandum (Pitman, IASB Agenda ref 8, 19-21 March 2012) identified the following as the improvements to financial reporting that the IASB expected to result from applying IFRS 8. The Standard was expected to:

   (a) Enable investors to see the business through management's eyes. This means that investors can predict future cash flows more reliably.

   (b) Result in consistency between management commentaries and the financial statements, increasing investors' understanding of communications from the entity's management.

   (c) Highlight the risks that management think are important by using management measures.

   (d) Result in low incremental costs and substantial time savings by using management reporting. This will also mean that more interim reporting will be available.

6. The initial review work performed has also identified the following contentious issues that had arisen when the Standard was being developed. Concerns were raised by those who thought that IFRS 8 would not represent an improvement to financial reporting:

   (a) Segment analyses would be inconsistent between entities because internal management structures vary between entities.

   (b) Geographical analyses would not be available for key line items.

   (c) Use of non-IFRS measures would mean that investors could not understand the amounts reported.

   (d) The number of reconciliations required between segment totals and the IFRS financial statements would reduce the understandability and perceived reliability of the reported amounts.

   (e) Key information would be omitted if it is not regularly reported to the chief operating decision maker.

7. See also the IFRS 8 Basis for Conclusions (Appendix 1).

8. These benefits and controversial topics were investigated by issuing a Request for Information (RFI) in July 2012. The questions raised in the RFI were designed to gather evidence about the effect of the key decisions taken by the IASB in finalising IFRS 8. These decisions, and the questions included in the RFI, are:

   (a) Q1 A request for information about the respondent.

   (b) Q2 What is your experience of the effect of the IASB's decision to identify and report segments using the management perspective?

   (c) Q3 How has the use of non-IFRS measures affected the reporting of operating segments?

   (d) Q4 How has the requirement to use internally-reported line items affected financial reporting?

   (e) Q5 How have the disclosures required by IFRS 8 affected you in your role?

   (f) Q6 How were you affected by the implementation of IFRS 8?

Research relevant to the IASB's questions about impact of IFRS 8

9. This literature review presents findings from academic research and other reports that are relevant to assessing the impact of the application of IFRS 8 by reference to the questions posed in the RFI.

10. Two types of academic studies are included. Studies that are *published* (or accepted for publication) include data and conclusions that will not change. In contrast, the *working papers* are work in process and may be revised and developed further. Their data and conclusions may change. We also include *other reports* on IFRS 8 effects provided by a number of entities. The data and conclusions in these reports will not change.

11. The January 2012 Staff Paper 6C provides a list of the academic studies in Appendix A and a summary of their findings in Appendix B. The other reports are listed and summarised in Appendix C.

12. The academic research reviewed consists primarily of studies of listed companies' financial statements before and after the application of IFRS 8. In the June Staff

Paper 12B we reported three published or forthcoming studies; namely Crawford *et al*. (2012), Nichols *et al*. (2012) and Pisano and Landriana (2012). The other academic studies are working papers.

13. The new research included in this paper adds to the research presented in June 2012. One additional paper has been published (Mardini *et al*., 2012) and one working paper has been accepted for publication (Kang and Gray, 2012).

14. Several new working papers have been included in this paper. The new studies complement the previously reported research (Staff Paper 12B and 12C, June 2012). The findings of the new research confirm and extend previous findings and provide new evidence about some of the questions of interest to the IASB. The new studies include the following:

    (i) interviews with French listed companies, exploring why many companies made no change to segment reporting when IFRS 8 was applied (Zelinschi *et al*., 2012);

    (ii) exploring the application of IFRS 8 by medium-sized listed companies from Germany, France, the UK and Italy. The findings highlight some differences in comparison with large listed companies and between companies based on industry sector and country of domicile (Demerens *et al*., 2012);

    (iii) investigating geographical segment disclosures of European listed companies and their effects on properties of analyst forecasts and market liquidity;

    (iv) reviewing data of UK companies showing loss of information about segment profit and loss (Aleksanyan and Danbolt, 2012); and

    (v) investigating of whether Singaporean listed companies allocate capital more efficiently under IFRS 8.

15. Most studies are based on data extracted from the published financial statements. The studies contain useful descriptive statistics about the effect of the change from IAS 14 to IFRS 8 (eg changes in the number of reported segments and items disclosed). Some studies attempt to look deeper into issues, by linking changes in segment reporting with capital market consequences (eg information asymmetry; value relevance; and changes in analyst forecast accuracy and dispersion). Most

studies are based on a single country, with a large range of variation in the number of companies included in each study. There is only one cross-country published study with a substantial sample size (Nichols *et al*., 2012). New studies by Leung and Verriest (2012) and Demerins *et al*. (2012) include a cross-country sample and add to the evidence of Nichols *et al*. (2012). The published study by Crawford *et al*. (2012) has a substantial qualitative element (ie interviews with UK preparers, auditors and users). It is complemented by Zelinschi *et al*.'s (2012) interviews of managers from French listed companies.

16. The other reports referred to in this paper come from a variety of sources and provide both quantitative and qualitative analyses. They include views from regulators (ESMA, FRRP) and analyst societies (CFA Institute, SFAF).[1] Although the views of regulators and users are potentially of great interest, it is it limited in some dimensions. For example, the extent of the problem is not quantified (eg FRRP) or the number of analysts holding a particular view is not stated (eg ESMA).

17. The working papers included in this literature review have been completed in a relatively short time. Consequently, they often include small samples (because of lack of data availability) and have not yet received formal or informal peer review. Their findings and conclusions may change as the studies go through the peer review process. In our summary of the research that accompanies this paper (see Staff Paper 6C), we do not critically review the studies and generally avoid highlighting limitations in the design of the study or in its execution. Our objective is to include as many studies as possible that contain data that may be useful for answering the questions of interest to the IASB in relation to the application of IFRS 8.

Key findings from the research

18. The academic research and other reports indicate the following:

    (a) The early application of IFRS 8 does not appear to be common.

[1] ESMA is the European Securities and Market Authority; FRRP is the UK Financial Reporting Review Panel; SFAF is La Société Française des Analystes Financiers.

(b) There is evidence from several countries that a large number of companies have not changed the number of reported segments under IFRS 8. However, we do not know whether these same entities have changed the composition of their segments.

(c) On average, the number of reported segments has not decreased under IFRS 8. When a company changes the number of segments, an increase in the number of segments is more likely than a decrease.

(d) On average, the number of items disclosed by segment has not declined. However, some key items are no longer disclosed by many companies (notably segment liabilities and capital expenditure). There is evidence, on the basis of companies' industry sector and country of domicile, of some variation in segment items reported.

(e) There is mixed evidence about whether IFRS 8's entity-wide disclosures are providing transparency about geographical operations. Although many entities provide geographical disclosures, some companies use broad country groupings and do not disclose items by individual country.

(f) Many companies include one or more non-IFRS measures of profit in their segment note with reconciliation to IFRS earnings. However, regulators have questioned the adequacy of the reconciliations in some cases (ESMA, 2012).

(g) The number of single-segment entities has decreased.

(h) At this time, there is no academic evidence that application of IFRS 8 has reduced information asymmetry or the cost of capital. Evidence of improvements in analysts' information environments is generally absent. Studies have generally not considered the impact of IFRS 8 on preparers' costs, and nor have they explored the Standard's effect on the comparability of segment disclosure between entities and over time or the usefulness for investors of segment disclosure that is based on the management approach.

Effect of identifying segments based on the management perspective (RFI Q2)

19. Identifying segments based on the management perspective was expected to enable investors to view the business through management's eyes.

20. Several studies investigate the effect of identifying segments based on the management perspective. They consider whether the number of reported segments and items of segment disclosure have changed after application of IFRS 8.

The management approach

21. Crawford *et al*. (2012, p. 35 in their report)[2] describe broad support for the management approach from a series of interviews with UK preparers, auditors and users.[3] Eleven of 20 interviewees thought the management approach supplied more useful information (than the IAS 14 approach). Preparers welcomed the freedom of the management approach but many users were suspicious of management motives and of the potential of the approach to enable preparers to avoid disclosing negative information.

22. CFA UK (2012) reports about half of analysts surveyed (n = 45, 53 per cent) agree that IFRS 8 has enabled them to better understand companies. One analyst commented that the numbers make sense to management but are often 'impossible' to forecast for an analyst. Another stated that the management perspective was interesting, but it does not necessarily align with what analysts want to know.

23. ESMA (2011) presents views that suggest, that for some people, the change to the management approach is not beneficial. ESMA (2011, p. 22) reports views from analysts,[4] noting that the geographical splits made by companies do not represent the real way in which businesses are managed, giving rise to questions about the usefulness and relevance of segment information. In addition, some analysts hold

[2] Page references are to source documents, ie the academic studies or other reports.

[3] Users were from these sectors or entities: asset management, an NGO/charity, corporate finance, a private investor and an investment trust.

[4] ESMA (2012) refers to 'analysts' without providing any more details of the type of analyst or their industry sector.

the opinion that management is not really providing a 'view through the eyes of management'. They consider that there are significant differences between what is communicated to management and what is communicated to the shareholders.

24. Many studies indicate little change in segment reporting when IFRS 8 is adopted. Zelinschi *et al*. (2012) explore why this may be so. They interview 40 persons, representing 33 companies that are members of *Association des Professionnels et Directeurs de Comptabilité et de Gestion* (APDC). The authors summarise frequently-cited reasons for companies' lack of change when applying IFRS 8 as follows:

> Frequently-cited reasons relate either to tensions arising from disclosure of information (23 firms), or technical specificities (13 firms), leading them to use uniform organisation and communication, regardless of the Standard concerned. Secondary reasons: 8 firms justified their choice by saying they already applied SFAS 131, and 7 said they had made no changes in response to pressure from financial analysts.

Number of reported segments

25. Many studies present data about the number of segments and the content of segment disclosure under IFRS 8. Studies consistently show that many companies did not change the number of reported segments. Both the European sample of Nichols *et al*. (2012, n = 335) and the UK sample of Crawford *et al*. (2012, n = 150) show that 62 per cent of companies did not change the number of reported operating segments. For an Australian sample of 1,617 entities, Bugeja *et al*. (2012) find that 79 per cent made no change in the number of operating segments.

26. When companies do change the number of reported segments, an increase in the number of segments is more likely than a decrease. Nichols *et al*. (2012) report that 27 per cent of European companies increased the number of segments disclosed. Similarly, Bugeja *et al*. (2012) find that 17 per cent of Australian companies increased the number of operating segments.

27. Comparable results are observed in other countries. For an Italian sample, Pisano and Landriana (2012, n = 124) report that 75 per cent of companies made no change and 14 per cent increased the number of segments. Lucchese and Di Carlo (2012, n = 64) confirm these results for Italian companies, including financial companies. Weissenberger and Franzen (2012a, n = 82) report that 81 per cent of German companies made no change in the number of reported segments, while 16 per cent increased the number of segments. Heem and Valenza (2012, n = 37) find that 78 per cent of French companies made no change, but they observe that 16 per cent report fewer segments. Mardini *et al*. (2012, n = 109) find that 61 per cent of sample companies from Jordan made no change and 26 per cent increased the number of segments.

28. Vorst (2012, n = 25) focuses on early applying companies from eight EU countries and reports a similar pattern. He finds that 11 companies (44 per cent) made no change in number of reported segments and another 11 companies (44 per cent) increased the number of reported segments.

29. The results of research about the number of segments from a range of studies (listed alphabetically) is shown below:

Author	**Sample size**	**Geographical region**	**Decrease per cent**	**No change per cent**	**Increase per cent**
Bugeja *et al*. (2012)	N = 1,617	Australia	4	79	17
Crawford *et al*. (2012)	N = 150	UK	15	62	23
Heem and Valenza (2012)	N = 37	France	16	78	6
Mardini *et al*. (2012)	N = 109	Jordan	21	61	18
Nichols *et al*. (2012)	N = 335	12 EU countries, Norway and Switzerland.	11	62	27
Pisano and Landriana (2012)	N = 124	Italy	11	75	14
Weissenberger and Franzen (2012a)	N = 82	Germany	3	81	16
Wilkins and Khoo (2012)	N = 1,272	Singapore	0	78	22

30. ESMA (2011) reports on a review of consolidated accounts for 2009 and 2010 of 118 listed entities from nine European countries. They observe that 74 per cent of entities report the same number of segments under IAS 14 and IFRS 8, 19 per cent increased the number and 6 per cent decrease the number (for reasons other than disposal of activities).[5]

31. KPMG (2010, p. 18) reviews accounts of 81 companies from 17 European countries, Israel and Hong Kong. They report an increase in the average number of reported segments from 4.6 to 5.2.

32. ESMA's (2011, p. 21) comments from analysts (from CRUF and SFAS)[6] suggest that some companies change segments from year to year, casting doubt on the 'relevance and reliability' of segment disclosure.

Type of segment

33. When IFRS 8 was issued many were concerned that using the management perspective would result in a loss of geographical information.

34. Many studies report that companies are more likely to disclose operating segments based on deliverables rather than on geographical segments or a mix of segments. However, this lack of geographical segmentation is supplemented by entity-wide disclosure. For European companies, Nichols *et al*. (2012, n = 335) report that entity-wide disclosures include geographical segment information for 77 per cent of their sample companies. The authors thus conclude IFRS 8 does not lead to a loss of geographical segment information.

35. Similarly, Leung and Verriest (2012, n = 844) report the average number of geographical segments increases significantly from 4.61 to 5.05. The 'fineness' of geographical segments also increases significantly (2.37 to 2.51), where fineness measures the extent of disaggregation of segments. However, the average number of items reported declines significantly, from 3.81 to 3.04. The number of companies reporting segment profit information declines significantly

[5] The total of 99 per cent is due to rounding error.

[6] CRUF is Corporate Reporting User Forum; SFAS is La Société Française des Analystes Financiers.

(from 281 to 229) and the average number of profit measures declines from 0.49 to 0.42.

36. KPMG (2010) reports that under IFRS 8 geographical disaggregation was predominant in certain industry sectors (eg food and drink, consumer goods, communication and media). (Previous practice under IAS 14 was not discussed.)

37. Dermerens *et al*. (2012, n = 179) also investigate reporting by industry sectors. They find that 78 per cent of the energy and materials sector companies use line of business compared to 50 per cent in the health care sector. Geographical disclosures are provided by 50 per cent of companies in the health care sector and 18 per cent of companies in the consumer goods and services sector. The number of segments and the number of items are not significantly different between sectors, except for the health care sector, in which companies are more likely to report more segments and more line items per segment in geographical segment reports.

38. Weissenberger and Franzen (2012a, n = 82) report entity-wide disclosure of geographical segments for 79 per cent of German companies, with a further 12 per cent providing a mix of product and service and geographical segment disclosures. They also find that the number of geographical segments (in entity-wide disclosures) under IFRS 8 is significantly higher than the number of secondary segments under IAS 14.

39. However Weissenberger and Franzen (2012a) express concern about the quality of geographical disclosures under IFRS 8. They report that many companies continue to use broad geographical categories of supranational regions or continents (42 per cent under IFRS 8 and 49 per cent under IAS 14). They also question compliance with IFRS 8 by 29 companies that appear to have material foreign sales (average 54 per cent) but do not make revenue disclosures for individual countries. In addition, they note that the number of line items disclosed in each geographical segment has decreased significantly.

Consistency with other narrative disclosure

40. An expected benefit of the management perspective was that the reported operating segments would agree directly with the management commentary.

41. Crawford *et al*. (2012) report that some UK companies' discussion of business structure in narrative reports may not be consistent with IFRS 8 segment disclosures. They state:

> The mean number of segments in the segmental notes post IFRS 8 is four by products and services and four by geography, but on average the rest of the annual report refers to seven segments by products and services and 34 countries.

42. Crawford *et al*.'s (2012) UK result contrasts with that of Nichols *et al*. (2012), who find that 96 per cent of European companies' segment information is consistent with "other sections" (that is, narrative reports including a management report, financial review or MD&A) of the annual reports. Nichols *et al*. (2012) also point to a high level of comparability of disclosure of segment information and discussion of segments elsewhere in the annual report under IAS 14.

43. Backhuis and Camfferman (2012) conclude that segment reporting was largely consistent with discussion in the Directors' Report for 50 large European companies. They find significant differences for only two companies. Commenting on French companies, SFAF (2012) present the view that segment information is generally consistent with the discussion of sectors in management commentary reports and presentations. The report highlights only one exception from the sample of 53 companies. However, SFAS (2012) also note that some companies do not use their measures of segment earnings in their presentations to investors.

44. Deloitte (2012, n = 100) report that about 85 per cent of UK companies provided an analysis in their narrative reporting that was consistent with their IFRS 8 disclosures. Only one company with inconsistent disclosure provided an explanation for the mismatch.

Is the CODM identified?

45. Nichols *et al*. (2012, n = 335) find that 36 per cent of European companies disclose the identity of the CODM (eg Board of Directors, senior management group, senior individual executive). Only 3 per cent of companies specify the

Board of Directors as the CODM. Results appear to differ by country, because Crawford *et al*. (2012, n = 150) reveal that in the UK the majority of companies (69 per cent) disclose the name of the CODM while in Australia 82 per cent of companies disclose the CODM's identity (Kang and Gray, 2012, n = 189).

46. ESMA (2011) reports that 41 per cent of issuers who provide the identity of the CODM named the Board of Directors, even though the Board may include non-executive directors. ESMA (2011) concludes there may be some confusion among users about the definition of CODM in IFRS 8.

47. KPMG (2010) observes that one-third of their sample companies provide the identity of the CODM. Within this group, 75 per cent indicated that the CODM was a group of executive directors or a similar governing body.

48. A majority of the UK stakeholders interviewed by Crawford *et al*. (2012) thought it useful to see the information that was produced internally for the CODM. However, only six (out of 20) respondents (mainly auditors and users, not preparers) thought that the identity of the CODM should be provided.

Early application of IFRS 8

49. An expected benefit of using the management perspective was that application of IFRS 8 would be easier for preparers, resulting in:

    (a) low costs of initial application and lower ongoing costs;

    (b) greater interim disclosure of segments; and

    (c) a greater number of entities applying IFRS 8 early.

50. A few studies consider early application of IFRS 8. Nichols *et al*. (2012) find that among 335 European companies, only 32 were early appliers of IFRS 8. Deremens *et al*. (2012, n = 197) also study European companies. They observe that only 14 (7 per cent) were early adopters of IFRS. In Australia, Kang and Gray (2012, n = 189) report that only 7 per cent of companies chose to apply the Standard before it was mandatory.

51. Vorst (2012) reported on 25 EU companies that early applied the standard. Eleven (44 per cent) did not change their number of segments while a further 11 increased the number of segments. Twelve companies (24 per cent) did not

change the number of line items and a further 12 companies decreased the number of items.

52. The UK's FRRP reviewed 2009 interim accounts and 2008 annual accounts of early appliers. They identify several concerns about segment reporting, although they do not disclose the magnitude of the problem (ie how many companies were observed to have defective reporting). They comment on four issues:

(a) Only one segment is reported but the company's operations appear to be diverse.

(b) The segments in the narrative report are different to those in the segment notes in the financial statements.

(c) Titles of directors and management imply an operating structure that is not reflected in the operating segments.

(d) The narrative report focuses on non-IFRS measures but the segment disclosures are based on IFRS amounts.

Single-segment entities

Some studies investigate whether fewer companies reported a single sector under IFRS 8. Nichols *et al*. (2012, n = 335) observe that 23 European firms reported a single segment under IAS 14 compared with 20 companies under IFRS 8. Leung and Verriest (2012, n = 844) also report fewer single segment companies (43 compared to 48) in their European sample. On the basis of Australian data, He *et al*. (2012, n = 173) find the number of single-segment companies decreased by 7 per cent while Bugeja *et al*. (2012, n = 1,617) report a 12 per cent decrease.

Aggregation of segments and usefulness of reported segments

53. In general, academic studies do not investigate aggregation of operating segments into reportable segments. Backhuis and Camfferman (2012, n = 50) review whether non-financial companies from FTSE Eurotop 100 explain how segments are identified. They report that only 69 per cent of companies discuss the factors and that the discussion provided is superficial.

54. ESMA (2011, p. 11) find that aggregation of segments was explicitly mentioned by only 29 per cent of issuers. Regulators are "sceptical whether the segment information reported by the majority of users reflects the detailed internal management information used in the business to make operating decisions". KPMG (2010) also points to a lack of disclosure about how segments have been aggregated.

55. Crawford *et al*. (2012, p. 36) asked UK interviewees whether "operating segments were a more useful way of disaggregating results of an organisation than the primary and secondary segments approach mandated under IAS 14R". Preparers supported the change while the majority of users and auditors expressed concerns about the variation permitted and the lack of comparability that may emerge.

56. CFA UK (2012) stated only about a third of analysts (n = 42, 33 per cent) considered disaggregation of operating segments to be sufficient. One analyst considered that disaggregation was generally sufficient but questioned statements by some companies that they have 'only one category of business'. Another pointed to management's need to guard commercially sensitive information, thus leading to insufficient disaggregation.

57. ESMA (2011, p. 21) reports other views of analysts on aggregation of segments. They consider that companies minimise the number of reportable segments in the notes and therefore avoid providing meaningful information. The concept of 'similar economic characteristics' is not always properly applied and in some cases it is not clear whether there are any similarities at all.

58. SFAF (2012) notes that many companies have unallocated amounts in their segments notes, which reduces the comparability of information. Ten companies in the sample of 53 French entities have unallocated amounts that represent more than 10 per cent of earnings. The report concludes that analysts' concerns about loss of comparability of information (expressed during the ED phase prior to IFRS 8) were justified.

Effect of the use of non-IFRS measurement bases (RFI Q3)

59. When IFRS 8 was issued, some investors were concerned that the measurement of some key information would not be easy to understand and, in particular, that alternative non-IFRS profit measures might be confusing.

Measures of profit

60. Nichols *et al*. (2012, n = 335) conclude that IFRS 8 leads to more information about segment profitability for their European sample. They find that companies report significantly more measures of segment profitability under IFRS 8. For example, the proportion of companies reporting two profitability measures increased from 14 per cent to 19 per cent and the proportion reporting three measures increased from 4 per cent to 6 per cent. In addition, companies reporting one measure declined from 82 per cent to 75 per cent.

61. In contrast, Aleksanyan and Danbolt (2012, n= 127) state both IAS 14 and IFRS 8 provide less segment profitability information than the previous UK standard, SSAP 25. They find that profit margins could be calculated for 90 per cent of reported segments under SSAP 25, 60 per cent of segments under IAS 14 and 54 per cent under IFRS 8. For geographical segments, investors could infer segment profitability for 85 per cent of segments under SSAP 25 but only 25 per cent of segments under IFRS 8.

62. Nichols *et al*. (2012, n = 335) find that 83 per cent of European companies use a non-GAAP measure of profitability in their segment report. Comparison of the measures used when reporting according to IAS 14, then according to IFRS 8, are as follows:

    (a) operating profit (no change, reported by 57 per cent of companies under both Standards);

    (b) EBIT (from 19 per cent to 23 per cent);

    (c) EBT (from 20 per cent to 56 per cent); and

    (d) EBITDA (from 8 per cent to 16 per cent).

63. Interestingly, Crawford *et al*.'s (2012, n = 150) results for UK companies contrast with Nichols *et al*.'s (2012) results for European companies. Only a minority of UK companies include non-IFRS measures in their segment disclosure. Crawford *et al*. (2012, p. 40) states:

> Most of these preparers indicated that their companies had used non-IFRS measures when reporting on profitability, a find that is not reflected in the analysis of 150 sets of annual reports.

64. Crawford *et al*. (2010) reported that preparers in particular commented on the usefulness of non-IFRS measures, although users were more sceptical. Users also commented on the lack of non-IFRS measures reported by companies in their segment notes, although the use of such measures might reasonably be expected when the management approach is used.

65. KPMG (2010) finds a high level of consistency in the profit and loss measurement used by companies in the same sector. For example, 80 per cent of companies in the communication and media sector used EBITDA or adjusted EBITDA, while 80 per cent of insurance sector companies use operating profit or adjusted operating profit.

66. ESMA's (2011) review is consistent with Nichols *et al*.'s (2012) study. ESMA (2011) reports that 93 per cent of issuers use IFRS as the basis for preparation of segment information. In addition, 47 per cent provide non-GAAP measures such as EBIT and EBITDA. They noted that, for 71 per cent of the sample, information about non-recurring and reconciling items was disclosed in accordance with IFRS 8. However, information about how profit and loss, assets and liabilities are allocated to reporting segments, and reconciliation between segment information and financial statement amounts, was "often not disclosed properly" (p. 3).

67. The comments from analysts presented by ESMA (2011) suggest that the use of non-GAAP measures and adjusted figures means that more precision in the reconciliations between IFRS 8 figures and financial statement is required. Some analysts consider that the present levels of reconciliation (on a total reportable segment basis) are inadequate.

68. Some analysts surveyed by CFA UK (2012) find reconciliation information (n = 39, 64 per cent) and non-IFRS profit definitions (59 per cent) useful. In addition, many do not consider that non-IFRS information has made segment figures more difficult to understand (n = 41, 37 per cent). However, as in other commentary from analysts, some respondents point to their need for more detail (more line items than are currently provided and more geographical information) and more consistency between companies and over time. Around 50 per cent of respondents (n = 38, 50 per cent) consider that important line items are omitted.

69. SFAF (2012) point to the use of a range of non-IFRS earnings measures. Around 40 per cent of their CAC40 and NEXT20 sample present a non-GAAP earnings measure (without an IFRS earnings measure). Twenty-four companies (45 per cent) do not reconcile their non-GAAP measure to IFRS earnings.

70. Company Reporting (2011) notes that companies show a "healthy variety" in the way in which segments are distinguished and in the number of segments reported, which is consistent with, in their view, the "permissive nature of IFRS 8 and the variety of internal reporting structures". They believe that management has "excessively broad" scope to adjust figures, hindering comparability from investors' and analysts' perspectives and that greater explanation of the reason for choosing a published measure would be helpful (p. 4)

71. Crawford *et al*.'s (2012) 20 UK interviewees highlight different views about the comparability of IFRS 8 information. One user saw IFRS 8 as a failure because of the loss of comparability. On the other hand, a preparer defended the management approach, because it allows the company to explain the results with reference to the way in which the business is managed (p. 51).

Effect of reporting line items identified by CODM (RFI Q 4)

72. When IFRS 8 was issued, some investors were concerned that key segment information would not be reported unless it was regularly reviewed by the CODM.

Number of reported line items in segment disclosure

73. Many studies indicate that companies provide fewer line items in segment reports under IFRS 8 than were reported in accordance with IAS 14. Crawford *et al*. (2012, n = 150) observe a significant decline in the number of line items reported for operating segments by UK companies. Although both He *et al*. (2012, n = 173 Australian companies) and Weissenberger and Franzen (2012a, n = 71 German companies) report fewer line items under IFRS 8 in their studies, the change is not statistically significant.

74. IAS 14 provided a list of specific line items of disclosure for primary and secondary segments. IFRS 8 provided a different list of items, along with the requirement that the items are to be disclosed if they are reviewed by the CODM. Consequently, studies find that disclosure of line items has changed under IFRS 8. For example, He at al. (2012, n = 173) report an increase in the number of Australian companies disclosing intersegment revenue, interest expense, interest revenue, income tax and income, while the number disclosing liabilities, capital expenditure and assets by segment decreased.

75. Nichols *et al*. (2012, n = 335) find little change in the number of European companies reporting segment revenue and assets under IAS14 and IFRS 8. However, the number reporting capital additions and liabilities by segment declined significantly (47 per cent to 13 per cent and 87 per cent to 71 per cent, respectively). More companies disclose segment revenue to external customers (from 87 per cent to 91 per cent).

76. Similarly, Crawford *et al*. (2012, n = 150) report that fewer UK companies disclose amounts for all of the line items that were required under IAS14, including capital expenditure (from 83 per cent to 77 per cent), liabilities (from 84 per cent to 60 per cent), and total carrying amount of assets (from 87 per cent to 83 per cent). Bugeja *et al*. (2012, n = 1,617) and Weissenberger and Franzen (2012a, n = 71) also point to fewer line item disclosures under IFRS 8 for these items for Australian and German companies respectively.

77. Crawford *et al*. (2012, n = 150) report that more UK companies disclose items for interest revenue (13 per cent compared to 10 per cent), interest expense (12 per cent compared to 9 per cent), income tax expense (8 per cent compared to 2 per

cent)and minority interests (5 per cent compared to 1 per cent)under IFRS 8 compared to IAS 14.

78. Demerens *et al*. (2012, n = 197) report some differences between countries in items of disclosure. UK companies provide more segment information about assets and liabilities and the value of investments. German companies tend to have a higher rate of disclosure than companies from other countries, except for segment assets and liabilities. French companies often have lower than average disclosure rates, particularly for segment capital expenditure, information about main customers and depreciation expense.

79. Comments from analysts reported by EMSA (2011) state that analysts expected to find more information about operating cash flow, operating assets ratios, working capital and debt by segment, because analysts think this information is essential for the CODM in allocating resources and assessing performance of operating segments.

Are the disclosures required by IFRS 8 adequate? (RFI Q5)

Entity-wide disclosures

80. Nichols *et al*. (2012, n = 335) report companies provided the following entity-wide disclosures under IFRS 8: Geographical: 77 per cent of companies; Product/service: 17 per cent of companies; Major customers: 6 per cent of companies. There is a significant decline in broad groupings for geographical segment (under IAS14) (from 17 per cent to 10 per cent of companies) and an increase in country-specific disclosure (from 13 per cent to 18 per cent) and in the mix of countries and regions disclosure (from 25 per cent to 29 per cent).

81. For mid-sized companies from Germany France, the UK and Italy, Demerans *et al*. (2012) find little disclosure of entity-wide information or additional geographical information. Most companies provide key reconciliations (revenue and earnings) but reconciliations of assets and liabilities are more uncommon.

82. Crawford *et al*. (2012) report that some UK interviewees did not understand the meaning of ‘entity-wide disclosures’. Many respondents, particularly users, saw them as a ‘replacement’ for the secondary segments of IAS 14 and appeared to

understand entity-wide disclosures as being geographical information rather than the information required by paragraphs 31-33 of IFRS 8.

83. ESMA (2011) observes that 58 per cent of issuers provided information about revenue and non-current assets by geographical area. However, they report that the notes to the financial statements rarely present information for individual foreign countries and there is no 'common understanding' of how the materiality concept should be applied in this context (p. 3, 17).

Required reconciliations

84. Crawford *et al*. (2012, n =355) report that the number of UK companies providing a reconciliation of segment revenue and entity revenue is the same (85 per cent—85 per cent). The number of companies reconciling segment and entity operating profit is lower (78 per cent to 68 per cent). Segment assets reconcile to entity assets for 79 per cent of companies (84 per cent under IAS 14) and segment liabilities reconcile to entity liabilities for 52 per cent of companies (72 per cent under IAS 14). Under IFRS 8 fewer companies reconcile segment data to IFRS data based on *profit after tax* than under IAS 14 (57 per cent to 45 per cent). More companies reconcile segment data to *profit before tax* (13 to 29 per cent), which reflects greater use of profit before tax as an earnings measure in segment reporting.

85. Blase *et al*. (2012) report that, for 101 German listed companies (in the DAX, MDAX and SDAX), the quality of reconciliations was poor. Only around 50 per cent of companies fully complied with IFRS 8 requirements. Similarly, SFAF (2012) find that around 45 per cent of French companies (based on a sample of 53 listed entities included in CAC40 and NEXT20) did not provide sufficient information to allow readers to reconcile the entity's segment measures with IFRS measures.

Impact of application of IFRS 8

86. Has the application IFRS 8, particularly the management approach, been beneficial? A few studies attempt to provide data relevant to this question.[7]

87. Leung and Verriest (2012, n = 844) show 'fineness' of geographical segments under IFRS 8 is associated with higher quality financial reporting (proxied by discretionary accruals), higher forecast accuracy and having a 'Big 4' auditor. Properties of analyst forecasts (accuracy and dispersion) and bid-ask spread are not significantly different under IFRS 8 (compared to IAS 14). This finding also applies to companies that improved their segment reporting under IFRS 8 (by increasing the number of segments, number of items, reporting of profit and geographical 'fineness').

88. In relation to properties of analyst forecasts, He *et al*. (2012) study 173 Australian companies.

    (a) They test the association of analyst forecast accuracy and dispersion and explanatory variables (size, volatility and forecast horizon) and find that analyst accuracy is greater but dispersion is not significantly different in the immediate pre- and post-IFRS 8 period.

    (b) Additional tests of levels of information uncertainty and of analyst consensus show that these are not significantly different in the pre- and post-IFRS period.

89. Considering value relevance of segment information, Kajuter and Nienhaus (2012) study up to 110 German companies. They report:

    (a) Adding segment earnings (but not segment assets) to a model including book value of equity and book value of assets improves the explanatory power of the model. The authors conclude that information users find measures of segment earnings (based on EBIT) to be useful.

    (b) Comparing IAS 14 and IFRS 8 data from the year prior to IFRS application with IFRS 8 data (because companies restate the prior year data when they apply IFRS 8) shows that value relevance is greater for

[7] Explanations of what is meant by tests of association, value relevance and information asymmetry are provided in Appendix A of January 2013 Staff Paper 6C.

IFRS 8 data because it is more strongly associated with share price than the IAS 14 data.

90. Investigating information asymmetry, Weissenberger and Franzen (2012b) compare 55 German companies who applied IFRS 8 early in 2007 and 2008 with 135 mandatory 2009 appliers. They find no significant difference in change in bid-ask spreads between the two groups and conclude that IFRS 8 did not reduce information asymmetry for German companies.

91. Wilkins and Khoo (2012, n = 1272) find Singaporean companies changing their segments are efficient in their internal capital allocations under both FRS 14 and FRS 108. In contrast, companies that did not make a change did not demonstrate capital allocation efficiency under either Standard.

Staff summary and conclusions

92. The academic research and other reports are clear on the following points:

(a) The number of reported segments has not decreased. When there is a change, an increase in number of segments is more likely than a decrease.

(b) There is strong evidence that a large number of companies have not changed the number of reported segments under IFRS 8. We do not know whether these same entities have changed the composition of their segments.

(c) Segment reporting (ie number of segments) may not have changed for many entities because the reporting structure adopted under IAS 14 was used for internal decision making. Thus no change was required when companies applied IFRS 8.

(d) The number of single-segment entities has decreased, suggesting more information is now available for these companies.

(e) There has been a decline in the number of items disclosed by segment, most prominently in relation to segment liabilities and capital expenditure. Consequently, it is possible that key information is no longer disclosed because it is not reported to the CODM.

(f) There is concern about material amounts not being allocated to segments, thus reducing the quality of segment information.

(g) Evidence from interviews suggests there is confusion among preparers, auditors and users about the concept of 'entity-wide disclosure'. Many think it refers only to geographical information.

(h) There is mixed evidence about whether IFRS 8 entity-wide disclosures are promoting transparency about geographical operations. Although many entities provide geographical disclosures, some companies use broad country groupings and do not disclose items by country, leading to a lack of transparency.

(i) There is limited evidence of early adoption of IFRS 8 and of changes in numbers of segments and items of disclosure among entities making early application of the Standard.

(j) There is evidence of some variation in segment line items reported, based on companies' industry sector and country of domicile.

(k) Many companies include one or more non-IFRS measures of profit in their segment note. One major study suggests this measure is likely to be included in the income statement and, if it is not included, reconciliations are likely to be provided.

(l) ESMA (2012) comments on the prevalence of non-GAAP measures such as EBIT and EBITDA and accompanying reconciliations. However, ESMA (2012) notes that in some cases, disclosure about how elements are allocated to segments, and reconciliation between segment and financial statement amounts, are not provided. Consequently, there is evidence of inadequate reconciliations in some cases, raising concerns about the reliability and understandability of information.

93. There are several questions that are not well covered in the academic research, including:

(a) We do not know whether IFRS 8 enables investors to see through management's eyes. Some preparers claim that is does, but users seem more sceptical (Crawford *et al*., 2012). We did not find any IFRS 8

research that has addressed the question of whether the Standard permits investors to better predict future cash flows.

(b) Although there is evidence of consistency between segment notes and management commentary (Nichols *et al*. (2012), we do not know whether this consistency has increased investors' understanding of managements' communications.

(c) Evidence that some companies do not use their measures of segment earnings in their presentations to investors (SFAF, 2012) is not consistent with the segment measures improving management communication.

(d) We do not know whether the use of management measures in segment reporting under IFRS 8 has highlighted the risks that management thinks are important.

(e) We do not know whether IFRS 8 reduces the time or cost incurred in segment reporting. There is evidence of no change in the *number* of segments under IFRS for a large number of companies. An unanswered question is whether this result implies that segment reporting is carried out in much the same way under IFRS 8 and IAS 14.

94. Some of the reasons why the questions of interest to the IASB are not adequately covered include the following:

(a) IFRS 8 is mandatory for 2009 financial year-ends. In some countries, only two years' post-application data are available. For example, studies of IFRS 8's role in improving prediction of future cash flow can be carried out as more data becomes available.

(b) Most studies use the archival empirical method. There are many questions of interest that cannot be answered using this method because of its focus on publicly available financial statement and capital market data.

(c) Fewer researchers are willing and able to carry out projects with a qualitative element (eg surveys, interviews, experiments and case studies). These techniques could shed light on the question of whether

consistency between segment information in the notes, and the management commentary, improves communication between management and investors. These methods would also be useful to explore the extent to which IFRS GAAP information is used in internal management reporting. (The reporting of IFRS GAAP information in segment notes under IFRS 8 implies that IFRS information is used in the internal decision-making process.)

(d) However, even if researchers use qualitative approaches, some of the data is sensitive and may not be revealed by companies.

Questions for the IASB

Questions
1 Does the IASB have any questions on the external research findings to date? 2. Would the IASB like any further areas to be researched at this time?

Appendix: IFRS 8 *Operating Segments* Extract from Basis for Conclusions

The extracts below lists the benefits of application of FAS 131 and application of the management approach as stated in the Basis of Conclusions.

Benefits of application of FAS 131: Academic research findings

BC6 Most of the academic research findings on segment reporting indicated that application of SFAS 131 resulted in more useful information than its predecessor, SFAS 14. According to the research, the management approach of SFAS 131:

(a) increased the number of reported segments and provided more information;

(b) enabled users to see an entity through the eyes of management;

(c) enabled an entity to provide timely segment information for external interim reporting with relatively low incremental cost;

(d) enhanced consistency with the management discussion and analysis or other annual report disclosures; and

(e) provided various measures of segment performance.

Benefits of application of the management approach

BC9 In the Basis for Conclusions on ED 8, the Board noted that the primary benefits of applying the management approach in SFAS 131 are that:

(a) entities will report segments that correspond to internal management reports;

(b) entities will report segment information that will be more consistent with other parts of their annual reports;

(c) some entities will report more segments; and

(d) entities will report more segment information in interim financial reports.

In addition, the Board noted that the proposed IFRS would reduce the cost of providing disaggregated information for many entities because it uses segment information that is generated for management's use.