



ICAEW
CHARITABLE
TRUSTS



*Disclosure quality and
international comparability under IFRS:
evidence from pension discount rates, impairment
and capitalisation of development costs*

CHRISTOPHER NOBES AND CHRISTIAN STADLER

ICAEW promotes and funds, through its charitable trusts, high quality independent academic research of interest to the accountancy profession and the wider business community.

This publication was produced with the help of a grant from ICAEW's charitable trusts. These trusts support educational projects in accountancy and related subjects. All research reports and briefings published under ICAEW's charitable trusts imprint are independently refereed before publication.

For more information on ICAEW's research project funding and related publications, please contact:

Gillian Knight
Research Manager
Chartered Accountants' Hall
Moorgate Place
London
EC2R 6EA

T +44 (0)20 7920 8478
E gillian.knight@icaew.com
icaew.com/academic

ISBN 978-1-78363-814-7

© Chartered Accountants' Trustees Limited 2017

All rights reserved. If you want to reproduce or redistribute any of the material in this publication, you should first get ICAEW's permission in writing.

The views expressed in this publication are those of the authors. ICAEW does not necessarily share their views. ICAEW will not be liable for any reliance you place on information in this publication.

Table of contents

1	Introduction	3
2	The importance of disclosure quality for research into international differences in IFRS policy choices	4
2.1	Scope for differences in IFRS practices	4
2.2	Disclosure on overt choices	4
2.3	Disclosure on covert choice	5
3	Data needed for the three topics studied	6
3.1	Pension discount rates (IAS 19)	6
3.2	Impairment (IAS 36)	7
3.3	Capitalisation of development costs (IAS 38)	7
4	Sample	8
5	Results	10
5.1	Pension discount rates	10
5.2	Impairment	12
5.3	Capitalisation of development costs	15
6	Conclusions on disclosure weaknesses in IFRS reporting	17
7	References	19

EXECUTIVE SUMMARY

This briefing, funded by ICAEW's charitable trusts, is addressed to practitioners such as financial analysts, finance directors, audit partners and IFRS 'technical' departments in audit firms. It reports on the difficulties met when collecting data for an ICAEW-funded investigation into international differences in IFRS practice. In particular, it addresses the areas of pension discount rates, impairment charges and capitalisation of development costs.

Data was collected on these topic areas from 527 firms domiciled in 15 countries. There is no database containing the information needed, which is why we hand-collected. The purpose of this briefing is to reveal and discuss the many difficulties that we met.

Among other problems, we found many instances of:

- pension discount rates not distinguished by country
- discount rates disclosed as a range
- duration of the pension obligation not disclosed
- impairment charges mixed in with depreciation/amortisation
- impairment of PPE mixed in with that of other types of asset
- impairments netted against reversals
- capitalised development costs mixed with other intangible assets
- lack of disclosure of the year's research and development expense.

This is an issue of non-comparable disclosure under IFRS. The severity of the problem varies by country, but as a data problem it should be of interest to analysts. Some of the thinness in disclosures may be due to immateriality but we suspect some non-compliance with IFRS disclosure requirements, which should concern auditors, the IASB and regulators.

1 Introduction

According to the Conceptual Framework of the International Accounting Standards Board (IASB), the objective of financial reporting is to provide information that is useful to investors for decision making. The qualities of information that assist this include, among others:

- completeness in terms of what is necessary for a faithful representation of the economic phenomena; and
- comparability between entities.

In the context of International Financial Reporting Standards (IFRS), the comparability needs to be international. This briefing reports on problems which we met when collecting data from annual reports in order to conduct ICAEW-funded research into international differences in IFRS practices. We found that disclosure is often insufficient to understand and compare practices (we define 'comparable' for our purposes in Section 5). Further, IFRS disclosure quality varies by country, and we believe that this should be of interest to financial analysts.

Our limited scope does not include investigating the reasons for international differences. Nor are we studying compliance with IFRS disclosure requirements. Some of the thin disclosure may be due to a lack of materiality, but we highlight areas which may suggest some non-compliance with IFRS. This should interest finance directors and members of IFRS 'technical' departments. It should also be of concern to auditors, the IASB and regulators.

The sections below will:

- Outline the type of data needed in order to examine international differences in IFRS practice and set out the topics chosen for our study (Section 2).
- Specify the data that we wanted to collect from IFRS reports (Section 3).
- Describe our sample of firms (Section 4).
- Present and discuss our findings on the shortcomings of the data, and how this varies by country (Section 5).
- Present conclusions about lack of completeness and comparability of IFRS disclosure (Section 6).

2 The importance of disclosure quality for research into international differences in IFRS policy choice

2.1 SCOPE FOR DIFFERENCES IN IFRS PRACTICES

Even among entities apparently complying with IFRS, the incentives of preparers and enforcers remain 'primarily local' (Ball, 2006, p.15). IFRS contains several types of scope for varied practice, including:

- overt choice (specified options within a standard);
- covert choice (caused by the need for significant judgement);
- estimations; and
- gaps in the requirements.

Choice might be influenced by the same forces which drove national GAAPs to be different in the first place, such as different tax systems and different prime purposes of accounting, linked to different owners/financiers of firms. The influence can be indirect. For example, tax considerations could influence a firm's accounting policies (eg, choosing weighted average inventory costing) or estimations (eg, maximising the size of impairments or provisions) in unconsolidated statements under a national GAAP; and these might flow through to IFRS consolidated statements (Gee et al., 2010). Even if such forces are no longer relevant, firms might prefer to continue with previous practices for administrative ease or to provide continuity for users. Just as choice can vary internationally for these reasons, so can the quality of disclosure.

2.2 DISCLOSURE ON OVERT CHOICES

An IFRS option is called 'overt' here if it is specified as a choice within a standard. One example is the measurement basis for PPE or investment property (in IAS 16 and IAS 40). In such a case, a firm is required to disclose which choice it has made (cost or fair value), and so the data collection is, in principle, straightforward. For some presentation choices (eg, the liquidity order of balance sheets), the choice is implied by the lack of requirements in IAS 1, and each firm's choice is easy to observe.

Kvaal and Nobes (2010) examined the 2005/6 practices of 232 large listed firms from the five IFRS-using countries with the largest stock markets: Australia, France, Germany, Spain and the UK. The data was handpicked and based on the IFRS policy choices made by the firms on 16 overt topics. The study found very strong statistical evidence that the choices follow pre-IFRS practices and therefore that there are national patterns of IFRS practice, which undermine comparability.

Stadler and Nobes (2014), meanwhile, collected data on the same 16 topics as Kvaal and Nobes, but used 2008/9 data from 10 countries, adding China, Hong Kong, Italy, South Africa and Switzerland. They found that the very strong association of policy choice and country survives the inclusion of other variables, such as a firm's sector or size, for example.

Although the data collection on overt options is in principle easy, analysts and researchers need to be aware of one general problem: boilerplate disclosure. For example, one of the 16 topics examined by the above researchers is the option in IAS 39 to 'designate' certain financial instruments as held at fair value through profit and loss (FVTPL). While collecting their data, Stadler and Nobes (2014, p.419) suspected that many firms had merely printed standard paragraphs about policies on financial instruments, as provided by their auditors. Essentially, firms outlined all the various possible categories of financial instruments even when they did not have instruments in some of the categories. Stadler and Nobes therefore examined the detailed notes, looking for a numerical analysis of financial instruments to see if any were actually 'designated'.

In addition, and in particular with regard to financial statements translated into English, it was also sometimes unclear whether a firm was discussing instruments that were required to be classified as FVTPL (eg, because they were for trading) or those designated by choice as FVTPL.

2.3 DISCLOSURE ON COVERT CHOICE

Covert choice by preparers of financial statements exists where no choice is apparently offered by IFRS but where the degree of judgement involved allows scope for the preferences of the preparers. Covert options are not only hidden from view in the standards, but the exercise of them is also generally hidden in financial statements. For example, it is difficult for outside users of statements to assess whether, or how, a firm exercises its preferences when capitalising (or not) development costs. There is no published research on international differences in covert choice under IFRS. Research could only succeed if disclosures are adequate.

For our research, we selected three topics with the potential to have major effects on financial statements: pension discount rates, impairment (particularly reversals of impairment) and capitalisation of development costs.

3 *Data needed for the three topics studied*

3.1 PENSION DISCOUNT RATES (IAS 19)

IFRS requires the use of market yields on high quality corporate bonds as the pension discount rate (IAS 19.83-86). For US GAAP, the SEC defined 'high quality' as having an AA rating, and IFRS practice tends to follow this. A separate discount rate has to be used for each currency area.

Moreover, the pension discount rate has to reflect the time to maturity of the pension obligations. For example, while two firms may use the same AA corporate bond data, firm X might have a higher percentage of active members (as opposed to pensioners) in its plan than firm Y. Consequently, X's duration is 20 years, compared to only 15 years for Y. Since yields are generally higher for longer maturities, X is likely to use a higher discount rate.

Choice or discretion for the pension discount rate arises because:

- IFRS refers to the interest rate on high quality corporate bonds but does not specify which data relating to such bonds have to be used;
- there are different methods of estimating the yield curve which generate different yields based on the same underlying data; and
- the discount rate used might be a rounded number instead of being directly taken from the yield curve (eg, 4.4% instead of 4.43%).

We are interested in the discount rate for the domestic defined benefit pension plans. Additionally, we are interested in the duration of the domestic pension obligation in 2013/14. We do not consider data relating to other post-employment benefits, eg, medical plans.

For most firms, their largest pension obligation relates to their home country. However, a firm may only disclose an aggregated number for all worldwide pension plans of the group, or a range of rates (because it has different pension plans, which use different rates). For a meaningful international comparison, we need a single rate (weighted average if a firm has several plans with different rates) for the home country¹. This number has to be hand-collected from the notes to the financial statements because financial databases such as Worldscope² do not record this number.

For accounting periods beginning on or after 1 January 2013, the revised IAS 19 requires firms to disclose the duration of their pension obligations (IAS 19.147c). The duration is the average length/maturity of the underlying cash flows. When analysing whether pension discount rates have been chosen in an unbiased way, it is very useful to know the duration. As with the discount rate, we are interested in a single duration for the home country, and this data also has to be hand-collected.

¹ For example, assume a firm has three pension plans in three countries, but it only discloses a weighted average of the respective three discount rates. Since we do not know the weighting of each country, we cannot specify a benchmark.

² Worldscope is the most comprehensive world-wide database for accounting data.

In addition to disclosing the duration, the revised IAS 19 requires additional disclosures. This allows us to analyse whether the revision of the standard and the necessary modifications the firms had to make to their pension disclosures ultimately led to improved disclosure regarding pension discount rates.

3.2. IMPAIRMENT (IAS 36)

IFRS requires an entity to recognise an impairment loss if the recoverable amount of an asset is below its carrying amount (IAS 36.59). Except for impairments of goodwill, subsequent reversals of impairments are required where appropriate (IAS 36.110). Both impairment and its reversal involve a large amount of judgement (identifying the need for impairment/reversal and measuring it) and are therefore covert choices.

We are interested in data on impairment of property, plant and equipment (PPE). We do not consider intangible assets because many firms do not have impairments on intangible assets. Neither do we consider investment property, because there is a major international difference in the proportion of it which is measured at cost (and therefore subject to impairment) (Kvaal and Nobes, 2010). We also do not consider goodwill, because significant international variations in the amount of goodwill arise from the exercise of the first-time adoption option in IFRS 1, and because reversals of goodwill impairments are not allowed under IFRS.

We hand-collect the necessary data because Worldscope does not include data on impairment reversal. Worldscope does include data on impairments, but hand-collecting the data ensures consistency with our impairment reversal data.

This data allows an analysis of international differences in impairments (eg, impairments deflated by total assets) and impairment reversals (eg, proportion of impairments that is reversed in subsequent years).

3.3. CAPITALISATION OF DEVELOPMENT COSTS (IAS 38)

IFRS requires capitalisation of development costs when all of six criteria are met (IAS 38.57). These criteria are necessarily vague (such as the technical feasibility of the project) and therefore this area is a covert choice. In contrast, research costs are not allowed to be capitalised (IAS 38.54).

We are interested in three numbers per firm:

- (1) capitalised development costs during the year;
- (2) research and development expenses from the income statement; and
- (3) the part of research and development expenses which is related to amortisation of previously capitalised development costs.

This allows us to investigate the proportion of research and development spend that is capitalised, ie, $(1)/[(1)+(2)-(3)]$.

4 *Sample*

We examine the IFRS practices of listed firms from 15 major countries: Australia (AU), Brazil (BR), Canada (CA), China (CN), France (FR), Germany (DE), Hong Kong (HK), Italy (IT), Japan (JP), Russia (RU), South Africa (ZA), South Korea (KR), Spain (ES), Switzerland (CH) and the UK (GB). Except for Japan, the sample firms comprise the constituents of the major stock market index of the respective country, and therefore the number of firms per country varies³. For Japan, we use the reports of those firms which now choose to use IFRS. China is included by using the IFRS statements of Chinese firms listed on the Hong Kong Stock Exchange. In all cases, we choose firms using IFRS, or versions of IFRS (eg, EU-endorsed IFRS) which do not differ from IFRS for the issues which we investigate.

Table 1 shows information about the sample. Our initial sample comprises 813 firms. We then first exclude firms with foreign influence because our country samples should represent national practices. There are 36 foreign firms (eg, Telecom New Zealand in Australia), 37 subsidiaries of listed foreign firms (eg, TUI Travel in the UK is a subsidiary of the German TUI), 10 firms listed in Hong Kong's Hang Seng index that have a Chinese ultimate parent (eg, China Mobile) and 15 firms with other foreign influence (eg, BHP Billiton has a dual-listed companies structure, with listings in both Australia and the UK).

Secondly, in order to ensure independent observations, we also exclude 31 subsidiaries of listed domestic firms already included in our sample. Thirdly, 25 firms use US GAAP in every year and are therefore excluded. Finally, we exclude 132 firms for which some years are not available⁴. This is necessary because we analyse disclosure quality over time, which requires a stable set of firms. Consequently, with these exclusions applied our sample comprises 527 firms.

Table 1 also shows the industry distribution of our sample firms according to the first digit of the Industry Classification Benchmark (ICB) code. Furthermore, using 2013 data, it shows that the firms are large (with an average market capitalisation of 23 bn US dollars) while nearly all (97.8%) have a Big Four auditor.

All of our important data is hand-collected from the published financial statements of listed firms, including the information used for the sample selection. The data on industry and market capitalisation are from Worldscope (data items WC07040 and WC07210, respectively). We examine reports dated from 2005 to 2013. When we refer to a particular year, eg, 2013, this includes accounting periods ending on 31 December 2013 and all 2013/14 accounting periods such as those ending on 30 March, 30 June and 30 September 2014⁵. For all disclosure scores, we only use the financial statements of the respective year.

3 S&P/ASX-50 (Australia), IBRX-50 (Brazil), S&P/TSX-60 (Canada), Hang Seng China Enterprises Index (China), CAC-40 (France), DAX-30 & 10 largest (by market capitalisation) constituents of MDAX-50 (Germany), Hang Seng (Hong Kong), FTSE/MIB-40 (Italy), RTS-50 (Russia), FTSE/JSE Top 40 (South Africa), KOSPI-50 (South Korea), IBEX-35 (Spain), SMI (Switzerland) and FTSE-100 (United Kingdom). For most countries, the sample comprises the constituents of the major stock market index on 31 December 2005 or 31 December 2010 or both. For Canada, Russia and South Korea, the sample comprises the index constituents on 31 December 2010. The sample for Brazil comprises the index constituents on 30 June 2012.

4 Specifically, we analyse one year (2013) for Japan, three years (2011-2013) for Canada and South Korea, four years (2010-2013) for Brazil and nine years (2005-2013) for all other countries. Reasons for having fewer than the required years are: the firm has been listed after the start of the sample period or has been delisted before the end of the sample period; US GAAP or local GAAP has been used during the sample period; and for a small number of firms, no English version of the annual report is available.

5 In a few cases there are two accounting periods in a year because of a short accounting period. In such cases, we exclude the short accounting period.

TABLE 1 SAMPLE

	AU	CH	CN	DE	ES	FR	GB	HK	IT	RU	ZA	BR	CA	KR	JP	TOTAL
Initial firms	64	29	58	49	45	47	131	51	52	48	52	48	60	50	29	813
Excluded:																
Foreign firms	4			1	2	5	1	13	2		8					36
Subsidiaries of listed foreign firms	2			3	2	1	5	4	3	1	7	7	1		1	37
HK firms with CN ultimate parent								10								10
Firms with other foreign influence	3						10				2					15
Subsidiaries of listed domestic firms			3	3	4			1	5	8	2	2	1	1	1	31
US GAAP used in every year		8		1						6			10			25
Not all firm-years available	11	3	21	10	8	2	26	4	9	16	4	4	3	11		132
Firms	44	18	34	31	29	39	89	19	33	17	29	35	45	38	27	527
Industry distribution:																
Oil and gas	3		3		4	2	6		1	3	1	1	9	4		37
Basic materials	6	3	4	6	1	1	5			5	7	6	11	4		59
Industrials	6	2	8	5	7	8	15	4	5	1	5	2	2	8	10	88
Consumer goods	1	2	3	6	1	7	10	1	5	1	2	9	2	5	2	57
Health care	2	4		1	1	2	3			1	2	1			5	22
Consumer services	6		4	6	3	7	18	3	7	2	5	3	7	3	4	78
Telecommunications	1	1	1	1	1	1	4	1	1		2	1	3	2	1	21
Utilities	2		3	1	4	3	5	3	3	1		1	1	1		28
Financials	17	5	6	5	6	6	21	7	11	3	5	11	10	8	3	124
Technology		1	2		1	2	2							3	2	13
Average market capitalisation in bn US dollars in 2013	19.1	54.4	28.0	34.1	20.3	37.0	26.8	18.2	12.1	19.0	10.0	13.7	21.3	17.6	15.5	23.0
Percentage of firms with a Big Four auditor in 2013	100%	100%	88.2%	100%	100%	100%	97.8%	100%	100%	100%	96.6%	94.3%	100%	100%	92.6%	97.9%

5 *Results*

5.1. PENSION DISCOUNT RATES

Table 2 shows the results for pension discount rates. We first exclude all firms which have no defined benefit pension plans in their home country in any of the sample years⁶. Consequently, this analysis comprises 367 firms and 2,641 firm-years.

Overall, we find that disclosure is 'comparable' for analysis (explained below) for 67.3% of firm-years (1,777 out of 2,641). Disclosure quality varies substantially between countries. Apart from China (which scores 94.4% but has only four sample firms), disclosure quality is highest in Brazil (92.9%) and the UK (87.5%), and lowest in Switzerland (36.6%) and South Korea (13.2%).

In South Korea, in addition to the low number of firms disclosing a comparable pension discount rate, there is often no description of the pension plans. In Australia, comparisons across firms are more difficult than the disclosure score of 61.1% suggests, because some firms disclose the discount rate gross of tax while others disclose it net of tax.

Ideally, for a comparable analysis firms should disclose a single discount rate for the domestic/home defined benefit pension plans, and this is done in the majority of cases (1,389 firm-years). Unfortunately, establishing whether the rate disclosed relates to the home country is not always straightforward because some pension notes do not mention any country. However, we were often able to link discount rates to the home country using the following approaches: when the name of national mortality tables or legislation (eg, 'State Second Pension' in the UK) is mentioned; or when the list of subsidiaries reveals that the firm has no foreign subsidiaries.

Disclosure can also be made in other ways than above but still be considered comparable. First, IAS 19 requires a separate discount rate to be used for each currency area, and therefore disclosure of a discount rate for the Euro area is satisfactory for comparisons (114 firm-years). This practice is most often seen in France.

Second, a firm may have several pension plans but some of them are small (eg, not material even if the firm has mentioned it). Consequently, it is satisfactory just to disclose the discount rate of the main plan (103 firm-years). This practice is most often seen in the UK.

Third, a firm may provide several rates for different plans (47 firm-years). Fourth, when a firm has pension plans but does not disclose a discount rate, we read the notes to find out whether this is because pensions are immaterial (two firm-years).

Fifth, in some cases, it is not entirely clear whether the rate disclosed relates to the home country, but an informed reader can make a reasonable assumption that it is (73 firm-years). Finally, there are several other disclosures which enable comparisons (49 firm-years), eg, different rates for active members and pensioners.

⁶ We do not consider pension plans of associates or joint ventures.

TABLE 2 PENSION DISCOUNT RATES

	AU	CH	CN	DE	ES	FR	GB	HK	IT	RU	ZA	BR	CA	KR	JP	SUM
Firms	44	18	34	31	29	39	89	19	33	17	29	35	45	38	27	527
Less: No DB pensions in home country in any year	22	1	30		17	1	15	10		9	16	21	11		7	160
Firms for analysis	22	17	4	31	12	38	74	9	33	8	13	14	34	38	20	367
Firm-years for analysis	198	153	36	279	108	342	666	81	297	72	117	56	102	114	20	2,641
Firm-years with comparable disclosure of rate	121	56	34	218	69	222	583	44	187	47	82	52	38	15	9	1,777
In %	61.1%	36.6%	94.4%	78.1%	63.9%	64.9%	87.5%	54.3%	63.0%	65.3%	70.1%	92.9%	37.3%	13.2%	45.0%	67.3%
Home country	106	55	34	201	41	111	487	32	136	36	59	44	27	13	6	1,389
Euro area				8	1	96			9							114
Main plan in home country		1			7	2	72	9			7	2	3			103
Several rates for different plans	2				2		6	2	24		5	2	4			47
Immaterial										1					1	2
Assumption can be made that rate is for home country	8			9	3		17	1	16	10	2		4	1	2	73
Other	5				15	13	1		2		9	4				49
Firm-years with non-comparable disclosure of rate	77	97	2	61	39	120	83	37	110	25	35	4	64	99	11	864
No disclosure	3				10		3	1	60	19	5				2	103
Range	30	2	2	5	20	49	5	24	25	6	16	1	3	79	1	268
Weighted average for all countries	20	90		39	1	67	37						29			283
Country unclear	24	5		17		4	38	12	11		3		32	20	8	174
Other unclear									9		10	3				22
Incomplete					8				5		1					14
Comparable disclosure of rate per year as percentage																
2005	72.7%	23.5%	100%	74.2%	66.7%	55.3%	86.5%	44.4%	57.6%	75.0%	76.9%					68.6%
2006	72.7%	23.5%	100%	77.4%	66.7%	50.0%	86.5%	44.4%	57.6%	75.0%	76.9%					68.2%
2007	68.2%	29.4%	100%	77.4%	50.0%	47.4%	87.8%	55.6%	57.6%	75.0%	76.9%					67.8%
2008	63.6%	29.4%	100%	74.2%	66.7%	63.2%	86.5%	55.6%	57.6%	62.5%	76.9%					69.3%
2009	59.1%	23.5%	100%	71.0%	66.7%	71.1%	86.5%	55.6%	63.6%	62.5%	76.9%					70.1%
2010 (SUM does not include BR)	54.5%	35.3%	100%	77.4%	66.7%	71.1%	87.8%	55.6%	66.7%	62.5%	69.2%	92.2%				71.6%
2011 (SUM does not include BR, CA and KR)	54.5%	41.2%	75.0%	80.6%	58.3%	71.1%	87.8%	55.6%	63.6%	62.5%	69.2%	92.9%	32.4%	15.8%		71.3%
2012 (SUM does not include BR, CA and KR)	54.5%	47.1%	75.0%	80.6%	58.3%	76.3%	87.8%	55.6%	69.7%	62.5%	53.8%	85.7%	32.4%	13.2%		72.4%
2013 (SUM does not include BR, CA, KR and JP)	50.0%	76.5%	100%	90.3%	75.0%	78.9%	90.5%	66.7%	72.7%	50.0%	53.8%	100%	47.1%	10.5%	45.0%	77.8%
Comparable disclosure of both rate and duration in 2013	8	7	2	16	3	12	51	5	7	2	2	5	12	1	7	140
In %	36.4%	41.2%	50.0%	51.6%	25.0%	31.6%	68.9%	55.6%	21.2%	25.0%	15.4%	35.7%	35.3%	2.6%	35.0%	38.1%

There are 864 firm-years with non-comparable disclosure of pension discount rates. First, for 103 firm-years, there are pension plans but no disclosure. Some of the non-disclosure may be because pensions are immaterial. But then we wonder why those firms disclosed the existence of pension plans in the first place, or why they did not disclose that pensions are immaterial (as a few firms have done, see above).

Second, a range of discount rates is disclosed in 268 firm-years, and a range is useless⁷ for comparing discount rates across firms (unless it is very narrow). Third, for 283 firm-years, a weighted average discount rate for all countries is disclosed. This is not useful for comparative purposes because it is not possible to establish a benchmark. Fourth, for 174 firm-years it is not clear to which country the discount rate(s) relate. Fifth, for 22 firm-years, the disclosure is unclear for other reasons, eg, a weighted average discount rate is given that reflects both pension and medical plans. Finally, there are 14 firm-years where the disclosure is incomplete, ie, there is disclosure for some but not all of the significant plans.

Next, we investigate whether disclosure quality changed over time. We focus on those 11 countries for which we have data for all of 2005-2013. Disclosure quality was lowest in 2007 (67.8%) and improved in all of the following years apart from 2011. In particular, it improved from 72.4% in 2012 to 77.8% in 2013. This can be attributed to the revised IAS 19, which came into effect in 2013 and required additional disclosures, including the duration of the pension obligation. Many firms substantially improved their overall pension disclosures in 2013. Notwithstanding this improvement, it is usually the same firms that continually provide non-comparable disclosure over many years, and often even all years.

Finally, for 2013 we analyse whether the disclosures about both the pension discount rate and the duration enable meaningful comparisons across firms and/or countries. Overall, only 38.1% of firms (140 out of 367) provide comparable disclosure for this. In many cases, there is no disclosure of the duration (107 firms, not shown in Table 2).

Disclosure is best in the UK (68.9%) and worst in South Korea (2.6%). The difference in disclosure quality across the 15 countries is statistically significant (based on a χ^2 test of independence: χ^2 test statistic = 63.15, p-value = 0.00).

Although we are not studying compliance, we note here that IAS 19 requires disclosure of discount rates (paragraphs 138, 144). If these are for groups of plans, then the information should be 'in the form of weighted averages or relatively narrow ranges'. There should be disaggregation for plans with materially different risks, eg, by geographical area. By investigating the 268 firm-years with a range, we find that there are 38 firm-years with a range of more than 5% (eg, disclosure of '3.5-10%' as the discount rate range), which we do not consider to be 'relatively narrow'. In fact, only 99 firm-years have a range which does not exceed 1%.

5.2. IMPAIRMENT

Table 3 shows the results for impairments of PPE. We first exclude all firms which do not have a PPE note in any of the sample years, which mainly occurs when PPE is immaterial. Consequently, this analysis comprises 514 firms and 3,776 firm-years.

⁷ It may be possible to establish that the upper or lower bound of the range relates to the home country, but we have not attempted this.

TABLE 3 IMPAIRMENT

	AU	CH	CN	DE	ES	FR	GB	HK	IT	RU	ZA	BR	CA	KR	JP	SUM
Firms	44	18	34	31	29	39	89	19	33	17	29	35	45	38	27	527
Less: No PPE note in any year	3					1	2				1	3			3	13
Firms for analysis	41	18	34	31	29	38	87	19	33	17	28	32	45	38	24	514
Firm-years for analysis	369	162	306	279	261	342	783	171	297	153	252	128	135	114	24	3,776
Firm-years with comparable disclosure	369	155	299	269	238	259	779	171	274	147	245	122	135	114	24	3,600
In %	100%	95.7%	97.7%	96.4%	91.2%	75.7%	99.5%	100%	92.3%	96.1%	97.2%	95.3%	100%	100%	100%	95.3%
Firm-years with non-comparable disclosure	0	7	7	10	23	83	4	0	23	6	7	6	0	0	0	176
Impairment combined with depreciation		7	2	1		30	2		4							46
Impairment shown net of reversals				3		18	1		12	6	6	1				47
Impairment of PPE combined with other asset class				2		16			7							25
Other unclear for both impairment and reversal			5		1	16						5				27
Impairment or reversal unclear (but not both)				4	22	3	1				1					31
Comparable disclosure per year as percentage																
2005	100%	100%	100%	93.5%	93.1%	76.3%	100%	100%	93.9%	100%	100%					96.0%
2006	100%	100%	100%	93.5%	93.1%	76.3%	100%	100%	93.9%	100%	96.4%					95.7%
2007	100%	94.4%	97.1%	96.8%	89.7%	81.6%	100%	100%	93.9%	100%	92.9%					95.5%
2008	100%	94.4%	97.1%	96.8%	82.8%	76.3%	100%	100%	93.9%	94.1%	96.4%					94.4%
2009	100%	94.4%	97.1%	100%	86.2%	76.3%	100%	100%	90.9%	94.1%	96.4%					94.7%
2010 (SUM does not include BR)	100%	94.4%	97.1%	100%	89.7%	78.9%	100%	100%	90.9%	94.1%	96.4%	96.9%				95.2%
2011 (SUM does not include BR, CA and KR)	100%	94.4%	97.1%	96.8%	93.1%	73.7%	100%	100%	93.9%	94.1%	96.4%	93.8%	100%	100%		94.9%
2012 (SUM does not include BR, CA and KR)	100%	94.4%	97.1%	96.8%	96.6%	73.7%	100%	100%	87.9%	94.1%	100%	96.9%	100%	100%		94.9%
2013 (SUM does not include BR, CA, KR and JP)	100%	94.4%	97.1%	93.5%	96.6%	68.4%	95.4%	100%	90.9%	94.1%	100%	93.8%	100%	100%	100%	93.3%

Overall, we find that disclosure is 'comparable' for 95.3% of firm-years (3,600 out of 3,776). For this topic, we consider disclosure to be comparable if we are able to find the numbers for both PPE impairment and any reversal. Our main data source is the PPE table, but if that does not provide clear disclosure, we search elsewhere in the notes.

If a firm does not mention impairment and/or reversal, we assume that there is none (or that it is immaterial) and consider the disclosure to be comparable. Disclosure quality varies between countries. There is 100% disclosure in five countries: Australia, Hong Kong, Canada, South Korea and Japan. For three countries, disclosure quality is below 95%: Italy (92.3%), Spain (91.2%) and France (75.7%).

There are 176 firm-years with non-comparable disclosure of PPE impairment and its reversal. First, for 46 firm-years, impairment is combined with depreciation. Such disclosure does not allow comparisons of impairment across firms. Second, impairment is disclosed net of reversals in 47 firm-years. Impairment and reversal are two different issues and therefore a proper analysis requires information about both.

Third, for 25 firm-years, impairment of PPE is combined with that of another asset class, mostly intangible assets. This does not allow proper comparisons. Fourth, for 27 firm-years, the disclosure is unclear for other reasons, eg, impairment disclosure is both net of reversal and combined with another asset class. For the issues discussed so far, disclosure is unclear for both impairment and reversal. Finally, for 31 firm-years, either impairment or reversal (but not both) are unclear.

As an example of why these problems matter, let us look at the cases where it is not possible to disentangle the amount of impairment reversal. In our view, impairment reversals are particularly interesting because, if a firm has an unusually large amount of impairment reversal (for its country), this may suggest manipulation of earnings or some other accounting problems.

Next, we investigate whether disclosure quality changed over time in those 11 countries for which we have data for all of 2005-2013. Disclosure quality was highest in 2005 (96.0%) and lowest in 2013 (93.3%).

In most countries, there is not much change over time. However, there is yearly fluctuation in countries with lower disclosure quality. This is partly because impairments and reversals occur at different times and more disclosure is required in a year with both impairment and reversal, which makes non-comparable disclosure more likely in such a year. Therefore, there are more firms which provide non-comparable disclosure in only a few years (say, one to three years) than firms which do so in many years (say, seven to nine years).

Using the 2013 data, we find that the difference in disclosure quality across the 15 countries is statistically significant (based on a χ^2 test of independence: χ^2 test statistic = 65.50, p-value = 0.00).

As noted above, we are not studying compliance, but firms which comply with IAS 36 would produce 'comparable' information: paragraphs 126-131 require various disclosures for each period, including the amounts of impairment and of reversal (by asset or by cash-generating unit); and the amounts of impairment loss and reversal (by asset class), separated between amounts in profit or loss and amounts in other comprehensive income.

5.3. CAPITALISATION OF DEVELOPMENT COSTS

Table 4 shows the results for capitalisation of development costs. First we exclude all firms which do not have research and development expenditure in each of the sample years. Consequently, this analysis comprises 233 firms and 1,689 firm-years. We do not include data on internally developed software.

Overall, we find that disclosure is 'comparable' for 84.3% of firm-years (1,424 out of 1,689). For this topic, we consider disclosure to be comparable if we can find all of the following data: (1) capitalised development costs during the year, (2) research and development expenses from the income statement, and (3) the part of research and development expenses which is related to amortisation of previously capitalised development costs. Disclosure quality varies between countries. It is highest in Australia, Russia and Canada (all 100%), and lowest in Hong Kong and Italy (both 55.6%).

There are 265 firm-years with non-comparable disclosure. The main problem, affecting 113 firm-years, is unclear data type (2) only. This data is generally collected from the income statement or the corresponding note. For 78 (51+27) firm-years, both data types (1) and (3) are unclear. These data are generally collected from the intangibles table, and the lack of clarity is mostly because capitalised development costs are combined with other intangible assets (51 firm-years). Given that data type (1) and (3) are usually collected from a different part of the financial statements than data type (2), only 18 firm-years have non-comparable disclosure of all types at once.

Next, we investigate disclosure quality over time in those 11 countries for which we have data for all of 2005-2013. Overall, disclosure quality did not change much over time. It was lowest in 2005 (83.3%) and highest in 2006 (86.3%). Among the firms with non-comparable information, there are many firms (more than one third) with such information in all nine years.

Using the 2013 data, we find that the difference in disclosure quality across the 15 countries is statistically significant (based on a χ^2 test of independence: χ^2 test statistic = 25.96, p-value = 0.026).

Although we are not studying compliance, we record that IAS 38 (paragraphs 118, 136) requires various disclosures about research and development for each relevant period: additions from internal development and from business combination, impairments and reversals, amortisation, and amount charged as expense.

TABLE 4 CAPITALISATION OF DEVELOPMENT COSTS

	AU	CH	CN	DE	ES	FR	GB	HK	IT	RU	ZA	BR	CA	KR	JP	SUM
Firms	44	18	34	31	29	39	89	19	33	17	29	35	45	38	27	527
Less: No R&D expenditure in each year	33	6	19	12	14	14	51	16	20	13	16	23	39	6	12	294
Firms for analysis	11	12	15	19	15	25	38	3	13	4	13	12	6	32	15	233
Firm-years for analysis	99	108	135	171	135	225	342	27	117	36	117	48	18	96	15	1,689
Firm-years with comparable disclosure	99	104	130	146	93	199	295	15	65	36	104	34	18	72	14	1,424
In %	100%	96.3%	96.3%	85.4%	68.9%	88.4%	86.3%	55.6%	55.6%	100%	88.9%	70.8%	100%	75.0%	93.3%	84.3%
Firm-years with non-comparable disclosure	0	4	5	25	42	26	47	12	52	0	13	14	0	24	1	265
Capitalised development costs during the year (1) unclear		4			7	9	5							1		26
R&D expenses from the income statement (2) unclear			3		5	10	14	7	40		2	14		18		113
Amortisation of capitalised development costs (3) unclear							1	1								2
(1) and (2) unclear																0
(1) and (3) unclear - combined with other intangible asset				10	1	5	26				9					51
(1) and (3) unclear - other				15	7	2	1							2		27
(2) and (3) unclear					18				9						1	28
(1), (2) and (3) unclear			2		4			4	3		2			3		18
Comparable disclosure per year as percentage																
2005	100%	91.7%	100%	89.5%	60.0%	92.0%	78.9%	33.3%	53.8%	100%	92.3%					83.3%
2006	100%	100%	100%	89.5%	80.0%	92.0%	81.6%	33.3%	53.8%	100%	92.3%					86.3%
2007	100%	100%	100%	84.2%	73.3%	92.0%	84.2%	33.3%	53.8%	100%	92.3%					85.7%
2008	100%	91.7%	100%	78.9%	73.3%	92.0%	86.8%	66.7%	53.8%	100%	92.3%					85.7%
2009	100%	91.7%	93.3%	84.2%	73.3%	88.0%	86.8%	66.7%	53.8%	100%	92.3%					85.1%
2010 (SUM does not include BR)	100%	91.7%	93.3%	84.2%	66.7%	88.0%	89.5%	66.7%	53.8%	100%	92.3%	83.3%				85.1%
2011 (SUM does not include BR, CA and KR)	100%	100%	93.3%	84.2%	66.7%	88.0%	89.5%	66.7%	53.8%	100%	92.3%	66.7%	100%	78.1%		85.7%
2012 (SUM does not include BR, CA and KR)	100%	100%	93.3%	84.2%	66.7%	84.0%	89.5%	66.7%	61.5%	100%	76.9%	66.7%	100%	75.0%		84.5%
2013 (SUM does not include BR, CA, KR and JP)	100%	100%	93.3%	89.5%	60.0%	80.0%	89.5%	66.7%	61.5%	100%	76.9%	66.7%	100%	71.9%	93.3%	83.9%

6. *Conclusions on disclosure weaknesses in IFRS reporting*

High quality accounting information involves comparability between entities and completeness of disclosure in terms of what is necessary for a faithful representation of the economic phenomena. In terms of IFRS information, the comparability should be international. In this briefing, we have reported our findings that result from examining the disclosures made by 527 firms from 15 countries in the period 2005 to 2013. We looked at three topics on which disclosure is particularly important because of large areas of judgement and discretion in IFRS reporting: pension discount rates, impairment of PPE, and capitalisation of development costs.

We particularly investigated whether firms disclosed sufficient information to allow an analyst to compare like-with-like among IFRS reporters (called 'comparable' disclosure here). For example, we asked whether there is enough disclosure to identify:

- the discount rate used for pension obligations relating to workers in the parent company's country;
- the amount of impairment reversal on PPE for a particular year; and
- the capitalised development costs during the year.

From this perspective, many firms made inadequate disclosures. For example, impairments of PPE were sometimes mixed with depreciation, sometimes mixed with those for other assets and sometimes netted against reversals.

For pension disclosures, 32.7% of firm-years had non-comparable disclosure of discount rate. The main problems were that 10.1% of firms disclosed a range of rates rather than a rate, and that 10.7% of firms disclosed a weighted average rate for several countries. Disclosures did improve over time, particularly with a revised version of IAS 19 which had effect in 2013. However, only 38.1% of firms made comparable disclosures of both rate and duration of obligations in 2013, the first year in which duration had to be disclosed. Disclosure quality varies hugely across countries, with UK firms being the best (68.9% satisfactory disclosure of both rate and duration) and South Korean the worst (2.6%).

For impairment and its reversal, comparable disclosure was more prevalent (95.3% of firm-years). A very high proportion of the problems (of various types) relate to France, Italy and Spain.

For capitalisation of development costs, there was non-comparable disclosure in 15.7% of firm-years. This was due mostly to lack of information on research and development expense (6.7%) or on both capitalised costs and their amortisation (4.6%). Again, there was a significant difference across countries, with Hong Kong and Italy providing the weakest disclosures.

The purposes of our main research and of this briefing do not include a study of compliance with IFRS disclosure requirements. However, the thinness of disclosure on some topics in some countries hints at non-compliance. It is difficult to assess the degree to which non-disclosure is explained by immateriality. Nevertheless, on some issues, compliance is called into question. For example, some disclosures of pension discount rates do not seem to be disaggregated by different geographical risk.

In some cases, we considered certain types of disclosure sufficient for analysis and comparison even if it did not fully comply with IFRS. For example, if we could make an informed guess about a piece of information (eg, whether a discount rate related to the parent's home country), we gave the firm the benefit of the doubt. So our scores of 'non-comparable' are generous to firms; and a 'non-compliance' measure might be higher. This might suggest that preparers in some countries had a weaker understanding of the requirements, or perhaps there was inadequate monitoring by auditors and inadequate monitoring and enforcement by regulators.

The implication for analysts and other readers of annual reports is that, particularly in a few countries, disclosure is insufficient to understand and compare financial statements on these important topics which involve management judgement and discretion. In general, these problems do not stem from inadequate requirements in accounting standards, although the IASB might wish to see if requirements can be made even clearer, such as by explicitly stating that various types of netting are not allowed. The IASB is currently working on a project to add more structure to disclosures and to make them more clearly 'principles-based'. Our findings are relevant to this.

References

Ball, R., 2006. International Financial Reporting Standards (IFRS): pros and cons for investors. *Accounting and Business Research*, International Accounting Policy Forum, 36 (supplement), 5-27.

Gee, M., Haller, A. and Nobes, C.W., 2010. The influence of tax on IFRS consolidated statements: the convergence of Germany and the UK. *Accounting in Europe*, 7(1), 97-122.

Kvaal, E. and Nobes, C.W., 2010. International differences in IFRS policy choice: a research note. *Accounting and Business Research*, 40(2), 173-187.

Stadler, C. and Nobes, C.W., 2014. The influence of country, industry and topic factors on IFRS policy choice. *Abacus*, 50(4), 386-421.

ABOUT THE AUTHORS

Christopher Nobes is Professor of Accounting at Royal Holloway (University of London) and at the University of Sydney. He was a member of the Accounting Standards Committee of the UK and Ireland (1987-90) and represented the UK on the Board of the International Accounting Standards Committee (1993-2001). He is also a member of the Financial Reporting Committee of ICAEW. He won the 'Outstanding International Educator Award' of the American Accounting Association (2002) and the 'Distinguished Academic Award' of the British Accounting and Finance Association (2015).

Christian Stadler is a Lecturer in Accounting and Finance at Lancaster University Management School. He holds a Diploma in Business Management from the University of Regensburg (Germany) and a PhD in Accounting from Royal Holloway (University of London). Prior to joining Lancaster, he was a Lecturer in Accounting at Royal Holloway. His research areas are financial reporting and international accounting. His work on IFRS policy choice has been published in *Abacus*, *Accounting and Business Research* and *Accounting, Organizations and Society*.

ACKNOWLEDGEMENTS

The authors are grateful for comments from two anonymous reviewers (one academic and one practitioner) and for research assistance from Joshua Sandin, Shiyun Song and Rebecca Warren.

ICAEW connects over 147,000 chartered accountants worldwide, providing this community of professionals with the power to build and sustain strong economies.

Training, developing and supporting accountants throughout their career, we ensure that they have the expertise and values to meet the needs of tomorrow's businesses.

Our profession is right at the heart of the decisions that will define the future, and we contribute by sharing our knowledge, insight and capabilities with others. That way, we can be sure that we are building robust, accountable and fair economies across the globe.

ICAEW is a member of Chartered Accountants Worldwide (CAW), which brings together 11 chartered accountancy bodies, representing over 1.6m members and students globally.

www.charteredaccountantsworldwide.com
www.globalaccountingalliance.com

ICAEW

Chartered Accountants' Hall
Moorgate Place
London
EC2R 6EA
UK

T +44 (0)1908 248 250
E contactus@icaew.com
icaew.com/academic

