

Worldwide application of IFRS 3, IAS 38 and IAS 36, related disclosures, and determinants of non-compliance

ACCA RESEARCH REPORT 134

Ioannis Tsalavoutas,
Lecturer in Accounting, The University of Stirling

Paul André
Professor of Accounting, ESSEC Business School, Paris
Director ESSEC Financial Reporting Centre

Dionysia Dionysiou,
Lecturer in Finance, The University of Stirling

ACCA's international research programme generates high-profile, high-quality, cutting-edge research. All research reports from this programme are subject to a rigorous peer-review process, and are independently reviewed by two experts of international standing, one academic and one professional in practice.

The Council of the Association of Chartered Certified Accountants consider this study to be a worthwhile contribution to discussion but do not necessarily share the views expressed, which are those of the authors alone. No responsibility for loss occasioned to any person acting or refraining from acting as a result of any material in this publication can be accepted by the authors or publisher. Published by Certified Accountants Educational Trust for the Association of Chartered Certified Accountants, 29 Lincoln's Inn Fields, London WC2A 3EE.

ACKNOWLEDGEMENTS

This report is the result of a research effort spanning a period of 18 months. The authors are grateful to many people for their support. The project would not have been possible without the financial support and encouragement of ACCA. Yin Wang (Company Reporting Practices Ltd) has contributed greatly during the development of the coding scheme and the data collection process. Michael Mavromatis (Axios Systems) contributed in the early stages of the project in the development of the structure of the database in which the data collected was stored. Richard Martin (ACCA), Barbara Davidson (IASB), Michael Stewart (IASB) and an anonymous referee have provided helpful comments on earlier versions of the present report. Ioannis Tsalavoutas and Dionysia Dionysiou thank the Accounting and Finance Division at the University of Stirling, and Paul André thanks the ESSEC KPMG Financial Reporting Centre for additional financial support.

Contents

Executive summary	5
1. Introduction	10
2. IFRS 3 Business Combinations	15
3. IAS 38 Intangible Assets	25
4. IAS 36 Impairment of Assets	32
5. Determinants of compliance levels with disclosures mandated by IFRS 3, IAS 38 and IAS 36	41
6. Conclusions	62
Appendix: Screen-shot of the database developed and used for the data collection	65
References	66

Abbreviations

ANC	Autorité des Normes Comptables
CAS	Chinese Accounting Standards for Business Enterprises
EC	European Commission
EFRAG	European Financial Reporting Advisory Group
ESMA	European Securities and Markets Authority
FASB	Financial Accounting Standards Board
FRC	Financial Reporting Council
FRRP	Financial Reporting Review Panel
GAAP	Generally Accepted Accounting Principles
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
ICB	Industry classification benchmark
ICAEW	Institute of Chartered Accountants in England and Wales
ICAS	Institute of Chartered Accountants of Scotland
IFRS	International Financial Reporting Standards
MASB	Malaysian Accounting Standards Board
NZICA	New Zealand Institute of Chartered Accountants
PRC	People's Republic of China
SEC	Securities and Exchange Commission

This report investigates the accounting for, and information disclosed under, IFRS 3 Business Combinations, IAS 36 Impairment of Assets, and IAS 38 Intangible Assets, and examines compliance levels with the mandated disclosures and their determinants.

The uniform application of IFRS across different jurisdictions has been heavily questioned, since the implementation of high-quality accounting standards (which IFRS claim to ensure) may not necessarily lead to high-quality reporting because of the influences of different socio-economic environments on financial reporting practices (Larson and Street 2004; Ball 2006; Nobes 2006; Soderstrom and Sun 2007; Weetman 2006; Zeff 2007). This means that equal levels of compliance with mandatory disclosure requirements and/or consistent measurement and display of similar transactions between different companies may not be achieved. This concern is investigated here, first, by examining the accounting for, and the information disclosed under, IAS 36 Impairment of Assets, IAS 38 Intangible Assets and IFRS 3 Business Combinations. Secondly, levels of compliance with these three standards' mandated disclosures and their determinants are considered. These investigations involved a large sample of companies from different countries around the world.

Focusing on these three standards is important for users and standard setters. First, several studies, including those from the Financial Reporting Review Panel (FRRP 2006), the European Commission (EC 2008), the Institute of Chartered Accountants in England and Wales (ICAEW 2007), the Securities and Exchange Commission (SEC) (2007) and Company Reporting Ltd (2007; 2008) consistently indicate that there is an underlying issue of compliance with these standards and that certain areas within the standards themselves pose problems in terms of comparability. Second, given the requirements in IFRS 3 that intangible assets be recognised separately on acquisition (FRRP 2006: 4), mergers and acquisitions significantly increase the importance of intangibles in firms' financial statements. Third, the recently revised IFRS 3 (effective for financial periods starting on or after 1 July 2009), together with the result of a desired convergence on the topic of business combinations between the IASB and FASB, introduces a number of significant changes, the implications of which have yet to be investigated.

Major contributions arise from the present research. First, this report documents the level of mergers and acquisitions (M&A) activity and its impact on financial statements, including the types of asset acquired and their significance, the treatment of non-controlling interests and the level of acquisition-related costs expensed. This leads to a reflection

on the accounting policies introduced with IFRS 3. Second, this report documents the significance and prevalence of, and accounting for, intangible assets across countries and industries. Third, the report discusses the frequency and magnitude of the impairments recognised across countries and industries, while capturing information about the assumptions companies use for impairment testing. Fourth, it shows the level of compliance with the mandated disclosures across countries and industries. Fifth, it identifies the firm- and country-level determinants of these compliance levels.

Overall, the report highlights areas on which preparers, regulators and enforcement bodies need to focus to improve the level of disclosure by companies. This should result in more complete provision of information to the users of the financial reports. Furthermore, it highlights areas that standard setters may need to improve in order to eliminate ambiguity in the interpretation of the standards. This should result in greater comparability of the information provided by companies.

SAMPLE SELECTION

Most EU listed companies adopted IFRS in 2005 for their consolidated financial statements, while a significant number of other countries have now also adopted IFRS or claim significant convergence of their national accounting standards with IFRS. Nonetheless, very little is known about the accounting for, and related disclosures under IAS 36, IAS 38 and IFRS 3, not only among companies within the EU but also those outside it that have recently adopted/converged with IFRS. This report, therefore, draws on a large sample of companies in and outside the EU.

In order to examine the accounting for, and related disclosures under, the three standards for the first year of implementation of IFRS 3 (financial year 2010/11), a sample of 544 non-financial companies was selected from the EU, Australia, China, Hong Kong, New Zealand, Brazil, South Africa and Malaysia. The companies were constituents of their countries' premier stock market indices as at 1 June 2011. For the EU, constituents of the S&P Europe 350 index as at 1 June 2011 are also used. This allows a focus on the companies that are the most likely to be followed by a significant number of investors (foreign and domestic).

SUMMARY OF FINDINGS

Reflecting on the findings, overall, this report documents significant disparities in the mandated information provided by different companies about business combinations, intangible assets and impairment testing.

Disclosures about business combinations (IFRS 3)

- For 280 companies (ie 51.5% of the sample) there is an indication that at least one business combination took place. Of these, 51 (or 18.2%) indicate that they had one or more business combinations by disclosing some information, such as number of businesses acquired, consideration transferred, related costs expensed or method of payment, but do not disclose any further information. It is assumed that these business combinations are considered immaterial (individually and collectively) and hence that detailed information is not merited. Nevertheless, the question that arises is why do some firms disclose only selected information?
- Similarly, 240 out of the 280 firms report the actual price/consideration transferred for completing the combinations conducted and an identical number of firms disclose the method of payment for their combinations. As above, it is not clear why some companies do disclose and some do not.
- Only 101 companies disclose the acquisition-related expenses incurred and expensed in the income statement. In an attempt to identify the relative importance of such disclosure, the research found that the mean (median) ratio of acquisition-related costs over profit before tax for the firms disclosing such information separately is 2% (1%). Two conclusions arise from this. First, the associated acquisitions costs expensed are very modest relative to the size of the companies in the sample and the volume of the business combinations conducted. As a result, the change introduced by IFRS 3, ie expensing all acquisition-related costs, does not lead to a significant change in companies' financial performance. Second, why do other firms not disclose such information or clearly state that it is immaterial?
- Although 258 companies disclose that they recognise goodwill, only 61 disclose a qualitative description of the factors that make up this goodwill. This leads to the conclusion that a large number of companies fall short of the IFRS 3 requirement for such information. In most cases, even the 61 companies that do provide a description give nothing more than a brief statement referring to synergies expected to arise from the combinations. There appears to be a lack of guidance on what is expected from this requirement. Note that the ICAS and NZICA study (2011) recommends deletion of this requirement.
- Out of the 76 companies for which acquisitions involve between 50% and 99% of the acquiree's assets, 33 remain silent on how the non-controlling interest is measured. Hence, users do not receive full information as IFRS 3 now

offers two potential ways of measuring non-controlling interest. Additionally, only 11 companies (14.4%) explicitly state that they measure their non-controlling interest at fair value (full goodwill approach), indicating that the newly introduced alternative method is not popular among firms.

- On average, 38.9% of the total purchase price is allocated to 'Other intangible assets'. Companies are not explicit on what is recognised in this 'class' of assets so there is a need for supportive disclosures on what these assets constitute.
- A large number of the sample companies do not disclose pro forma information about the business combinations. Does this mean that it is too costly or 'impracticable' to do so in all these cases?

Reflecting on the above findings, it becomes apparent that, without specific guidance on when and how items should be disclosed, companies provide significantly disparate information about business combinations, resulting in a lack of comparability. From a user's perspective, it is difficult to determine whether this disparity is because firms do not view their acquisitions as material, do not understand the mandated requirements and/or simply do not follow the standard to the letter.

Application of IAS 38 and related disclosures

- The research showed that 'other intangibles' feature as a separate class of intangible assets in the statement of financial position of 453 of the 517 companies (ie 87.6%) that have at least one type of intangible asset other than goodwill. Additionally, this type of asset represents, on average, 5.28% of companies' total assets. This would make one to expect that companies supply readers with more details about these assets. However, this is not the case.
- In countries such as the UK, Belgium, Hong Kong, France, Denmark, the Netherlands and Australia, almost 30% of companies' total assets relate to intangible assets (including goodwill). Additionally, constituents of the consumer services and healthcare industries appear to make higher investments in intangible assets, including goodwill (respectively 36% and 40% of total assets of these two industries). Thus, intangible assets are one of the most material asset types in a large number of companies in the larger stock markets worldwide.
- A large proportion of the sample companies do not disclose whether the useful lives of intangible assets (either acquired or internally generated) are indefinite or finite and, if finite, the useful lives or the amortisation rates used. Similarly, a large proportion of the sample firms do not disclose the line item(s) of the income statement in which any amortisation of intangible assets is included. Companies in the consumer goods and consumer services industries provide this information more frequently than firms in the utilities and basic materials industries.

- There are 151 companies that give an indication of having at least one intangible asset with indefinite useful life. Only 58% (ie 88) of these companies, however, disclose the reasons supporting the assessment of an indefinite useful life and/or the factor(s) that played a significant role in determining that the asset has an indefinite useful life.
- The majority of firms that should disclose a reconciliation of movement of the carrying amount of intangible assets at the beginning and end of the period, do so (about 94%).
- No company was identified that measures intangible assets at fair value (this is consistent with earlier studies, eg Glaum et al. 2007). As a result, there are no effects on the comparability of accounting information with companies from China (or the US) where the revaluation model is not permitted. The IASB could consider the usefulness of permitting this practice.
- IAS 36 requires companies to disclose the growth rate used to extrapolate cash flow projections beyond the period covered by the most recent budgets/forecasts. In practice, 21% of the 485 companies that disclose some information about the cash flow estimations do not disclose this information.
- IAS 36 has recently introduced a requirement for companies to disclose (i) the period over which management has projected cash flows; (ii) the growth rate used to extrapolate cash flow projections; and (iii) the discount rate(s) applied to the cash flow projections, if fair value less costs of disposal has been used and fair value less costs of disposal is determined using discounted cash flow projections. Of the surveyed companies, 22 fall into this category and 21 of these do provide the newly introduced mandated disclosures.

Overall, intangible assets account for a large proportion of companies' assets and yet relevant mandatory disclosures are not provided in full. For the IASB, ensuring that there is sufficient and comprehensive guidance to promote the best possible communication of relevant information should be considered a key priority.

Application of IAS 36 and related disclosures

- Almost all companies reporting recognition of an impairment disclose the amount of the impairment separately (334 out of 339 companies), as required by the standard. The most frequent type of asset to be impaired is plant and machinery, with land and buildings to follow. It is more frequent for companies to recognise an impairment on an intangible asset with finite useful life than on goodwill. This may not be that surprising if one considers the standard's requirement to test these for impairment at an individual level, whereas goodwill is tested against the recoverable amount of an entire cash-generating unit.
- The large majority of companies reporting recognition of a reversal of an impairment disclose separately the amount of the reversal (93 out of 101 companies), as is required by IAS 36. Even so, only 37 companies disclose a required justification for the reversal recognised.
- Of the 495 companies for which paragraphs 134 and 135 are potentially relevant, 35 (7.1%) remain silent as to the methods adopted for measuring the recoverable amounts of the assets, even though this is required. On a more positive note, although 75 companies disclose that the period of cash flows used in the impairment testing process exceeds five years (which is not recommended by the standard), they do give a justification for why cash flows beyond a five-year period have been used.
- Although IAS 36 recommends that the discount rates used during the impairment-testing process be calculated on a pre-tax basis, a large number of the sample companies (92) use post-tax discount rates.

Given the complexity of the standard and the depth of information it requires, the analysis illustrates the disparities between companies in the amounts and types of information actually provided. This reinforces the need for a review of the disclosures mandated by IAS 36 along with provision of specific guidance on when this information is expected. Arguably, this report's recommendation for specific guidance on the application of the materiality principle across different disclosure requirements seems pertinent, especially in IAS 36.

Additionally, beyond the need for promoting better guidance about the disclosures mandated by the standard in general, there are two areas related to recognition and measurement that also appear to need improvement. The first relates to the use of post-tax discount rates in the impairment testing calculations. Although in principle the standard seems to require pre-tax discount rates, it is worded in a way that allows companies to use post-tax rates instead. This apparently results in great variation in practice, which hinders comparability of the information reported. Further, while one would expect companies to use pre- or post-tax cash flows when using pre- or post-tax discount rates, respectively, this is not necessarily verifiable given the relevant disclosure requirements in the standard.

The second area relates to the option companies have in reversing impairment losses recognised. IAS 36 requires a company to disclose the main events and circumstances that led to recognition of reversals of impairment losses (providing that these reversals are material). Only 37% of companies do so while the mean (median) percentage of reversal of impairments over operating profit is a non-trivial 7% (1%). Given that these reversals appear to be significant and that this practice is not permitted under US GAAP and CAS, it is surprising that companies fall short of the standards' requirements. This is another example where guidance with regards to materiality would be useful.

Levels of compliance with mandated disclosures¹

- The mean (median) overall compliance score is 83% (84%). Interestingly, 75% of the sample firms have at least 75% compliance levels. Firms with the lowest compliance scores (ie the bottom quartile) report minimum compliance levels of 33%. At the other end of the spectrum, those in the top quartile (25%) of highly compliant firms comply with at least 93% with the requirements of the three standards.
- Mean (median) compliance levels of just above 80% are valid not only for total compliance scores, but also for individual compliance levels with IFRS 3, IAS 36 and IAS 38.
- For the 23 countries examined, this report documents average compliance scores from 77% to 90%. Specifically, New Zealand is the country with the highest average compliance of 97%. Ireland is the country with the second highest average disclosure score of 91%. UK follows with 90%. In contrast, some countries report much lower compliance levels. Greece is the country with the lowest compliance score, at only 67%. Brazil has a disclosure score of 75%. Austria, Spain, China, South Africa and Portugal are at 76%.
- Less variability on average compliance levels is seen at the industry level. Compliance scores by industry ranges from 80% to 88%. The oil and gas industry is weaker in its overall compliance scores (80%), while the technology sector has the highest compliance score, 87%.

Determinants of compliance with mandatory disclosures

- Firms reporting impairments comply less with mandatory disclosure requirements of IFRS 3, IAS 36 and IAS 38 than do firms without impairments.
- Cross-listing in the US increases compliance levels, which is consistent with the bonding and signalling hypotheses.
- The strongest the enforcement mechanisms in a country, the higher the compliance levels. In fact, it is the auditing component of the enforcement environment that drives this result.
- Compliance levels are lower when a company is from a country with a legal system of French origin.

Earlier evidence indicates that companies did not fully comply with previous national mandatory disclosure requirements. The present results indicate that companies continue not to do so even after adopting IFRS. Hence, the research findings in this report are in line with concerns that adoption of IFRS does not necessarily lead to high-quality reporting across different jurisdictions. Beyond the quality of the standards, different firm and country-level factors (eg enforcement, audit environment, listings) influence financial reporting practices.

CONCLUSION AND RECOMMENDATIONS

This report documents a high level of disparity of information and what appears to be non-compliance, across a broad international set of firms, with the mandatory disclosure requirements in IFRS 3, IAS 36 and IAS 38. Although materiality thresholds have been imposed by the researchers, access to inside information would be necessary to determine whether 1) companies consider certain transactions (eg a business combination) or items (eg an intangible asset or an impairment loss) not to be material enough, 2) the standards are misunderstood/not clear enough, or 3) companies deliberately fail to follow the mandatory disclosure requirements.

This research is very timely in that it reflects on the current debate about the need for or usefulness of mandatory disclosures within IFRS. In January 2013, the IASB hosted a public Disclosure Forum to consider the challenging area of disclosure overload. Participants included some of the organisations that have undertaken work in the area of disclosure in financial reporting (see EFRAG 2012; ICAS and NZICA 2011)). In May 2013, the IASB issued a Feedback Statement about this event and, in July 2013, the chairman of the IASB, Hans Hoogervorst, gave a speech entitled 'Breaking the boilerplate' outlining '10 good proposals to make disclosures more effective'. Furthermore, FASB and EFRAG, among others, have expressed concerns about the potentially excessive quantity of mandated disclosures and the need for a disclosure framework. Finally, in July 2013, the IASB started its post-implementation review of IFRS 3 (2008), part of which is the identification of areas in which 'implementation problems or unexpected costs with IFRS 3 were encountered' (IFRS Foundation 2013b). The recommendations below aim to further this debate and discussion.

To facilitate easier application of IFRS by preparers and enhance clarity and comparability of accounting information for users, this report recommends that the IASB consider revisiting the disclosure requirements at a standards level. Such a review should reflect on the need for and provision of specific materiality thresholds that would trigger the disclosure of particular information. Additionally, in the absence of disclosure, IFRS should require companies to provide an explicit statement explaining when disclosure is not merited or explaining where providing certain disclosures is impractical, which would reduce information asymmetry and improve comparability across companies. This will require a broad consultation with preparers, users, auditing firms, enforcement bodies and academics.

1. Compliance scores are summarised where each item is of equal importance (CK method). Chapter 5 also presents results using a method of measuring compliance where each standard is of equal importance (PC method). Results are qualitatively similar.

Moreover, the report highlights a few individual items with which a majority of the sample firms, irrespective of country or industry, fail to comply. This can be interpreted as a signal that the relevant standards may not be clear about what is expected. Interestingly, some of these items are included in the list of proposed items for deletion from the relevant standards in the recommendations of the ICAS/NZICA (2011) report. Given that the IASB is taking a view that each disclosure item should be judged separately (Hoogervorst's third proposal in 'Breaking the boilerplate' July 2013), these particular items need to be revisited and potentially re-worded. The items from specific paragraphs identified as those with lower compliance (see Table 5.5, page 51) could be a good starting point for the IASB. This would reduce the possible misinterpretation of mandatory disclosure requirements.

The study is also timely given enforcement initiatives. ESMA (2013) has recently announced the 'European common enforcement priorities for 2013 financial statements'. It refers to specific aspects of the IFRS application in relation to, among others, impairment of non-financial assets (including a focus on information about cash-flow projections, key assumptions and sensitivity analysis) and disclosure of significant accounting policies. This follows the 2012 enforcement priorities, which discussed valuation of goodwill and intangible assets with indefinite life and related disclosures (including a call for more granular disclosures). As studies from professional bodies and academics indicate, non-compliance with mandated disclosures is an issue that was observed long before the mandatory implementation of IFRS. As a result, transparency depends not only on standards mandating high-quality accounting but also on rigorous enforcement of these standards. Enforcement is a significant determinant of compliance and more specifically the auditing environment. Consistent and full application of the mandated disclosures depends on both the enforcement bodies and the auditing function in each country.

1. Introduction

1.1 AIMS AND OBJECTIVES

Most EU listed companies adopted IFRS in 2005 for their consolidated financial statements and many other countries have done the same, while still others claim significant convergence of their national accounting standards with IFRS. Nonetheless, the uniform cross-jurisdictional application of IFRS (or convergence of national standards with IFRS) has been heavily questioned since the implementation of high-quality accounting standards (which IFRS claim to ensure) may not necessarily lead to high-quality reporting (Larson and Street 2004; Ball 2006; Nobes 2006; Weetman 2006; Soderstrom and Sun 2007; Zeff 2007). This means that equal levels of compliance with mandatory disclosure requirements and/or consistent measurement and display of similar transactions between different companies may not necessarily be achieved. The research investigated this concern by examining a large sample of companies from different countries with a focus on mandated disclosures of IAS 36 Impairment of Assets, IAS 38 Intangible Assets, and IFRS 3 Business Combinations.

Studies conducted by several institutions, such as the FRRP (2006), ICAEW (2007), SEC (2007), Company Reporting Ltd (2007; 2008), and European Commission (2008), consistently indicate that there is an underlying issue of non-compliance with these standards, and that there are particular areas that pose special problems in terms of comparability of information disclosed. In addition, mergers and acquisitions waves in the last decade have significantly increased the importance of intangibles in firms' financial statements, as a result of the requirements of IFRS 3 to recognise separately intangible assets on acquisition (FRRP 2006).² Nonetheless, little was known about whether companies from the EU have improved in relation to the level of information they disclose with regard to the three standards or about the disclosure behaviour of companies from countries outside the EU that have recently adopted IFRS. Evidence indicating whether non-EU companies that apply IFRS produce financial statements with disclosure compliance levels comparable to those of EU companies was sparse. Accordingly, as well as identifying the companies' financial reporting choices with regards to IFRS 3, IAS 38 and IAS 36, investigations into whether companies comply with the disclosure requirements and into possible reasons for non-compliance are pertinent.

On that basis, the research reported here had the following objectives.

- To hand-collect information directly from the companies' financial statements and identify the accounting for and related information disclosed under IAS 36 Impairment of Assets, IAS 38 Intangible Assets, and IFRS 3 Business Combinations across countries and industries.

- To investigate international compliance with the mandatory disclosure requirements for these three standards, namely IFRS 3, IAS 36 and IAS 38.
- To investigate firm- and country-level determinants of company compliance levels.

For the first objective, no threshold of materiality was set and the research simply captured and reported all the information provided by companies about each topic. More specifically, following the steps of Fasshauer et al. (2008), a database was developed to facilitate a systematic collection of different types of disclosures required by the three standards studied. In this way, the frequency and size of business combinations reported were identified, as were the amounts of acquisition-related costs incurred and recognised as expenses, and the measurement methods of any non-controlling interests. Subsequently, the research identified the magnitude of intangible assets on companies' financial statements and the methods used to recognise these intangibles. Additionally, the most common types of intangible assets recognised and how many companies recognise intangible assets with indefinite useful lives, other than goodwill, were identified. The research also looked at the methods used for testing for impairment (where relevant), the assumptions used for measuring the recoverable amount of a cash-generating unit (eg discount rates; horizon of management budgets; growth rates used to extrapolate management projections of future cash flows), and determine their frequencies. Finally, the research considered the types of asset impaired and the reasons that give rise to an impairment loss (or a reversal); and the effect that intangible asset impairments (or reversals) have on companies' operating profit as reported in the financial statements. The Appendix provides an extract of the list of the items captured directly from companies' financial statements.

To address the second objective, in line with earlier research, specific benchmarks were set for assuming materiality of information and a disclosure checklist was developed with the items mandated by the three standards. Then, following two disclosure index methods, aggregate compliance scores were computed as well as compliance scores for each standard separately. Findings are reported on an aggregate, on a country and on an industry basis.

To address the third research objective, the findings about the second research objective (ie compliance scores) were used to conduct univariate as well as OLS cross-sectional multivariate regression analyses. These analyses indicate the firm- and country-level factors associated with higher or lower compliance levels.

2. For example, an Ernst & Young (2009) study of over 700 deals that took place in 2007 indicates that 23% of the deal values were allocated to identifiable assets, while close to 50% were allocated to goodwill.

1.2 RELEVANCE OF THE RESEARCH TO REGULATORS, ENFORCEMENT BODIES AND STANDARD SETTERS

This research is relevant to practice, with an appeal to standard setters, regulators and academics. This is because there is currently heated debate among all stakeholders about the role and necessary extent of mandatory disclosures. Additionally, there have been some studies (mostly from professional bodies and regulators) about the disclosures mandated by these standards, but the results of these studies can now be considered as outdated and more recent evidence is needed for informing the current debate. This research contributes to this end.

More specifically, one of the main objectives of the IASB, as stated in the second paragraph of the IFRS constitution, is to produce enforceable standards (IFRS 2013a). Additionally, one of the main improvements expected from IFRS adoption was that of comparability. This means that 'users must be able to compare the financial statements of different entities in order to evaluate their relative financial position, performance and changes in financial position. Hence, the measurement and display of the financial effect of like transactions and other events must be carried out in a consistent way for different entities (emphasis added)' (IFRS Framework 2009, 29: 85). In fact, it is well documented that companies do not always comply with mandatory disclosure requirements in adopted standards (see Chapter 5). The evidence shows that the existence of legislation and enforcing bodies does not guarantee full compliance (Yeoh 2005).

In view of this background, in January 2013 the IASB hosted a public disclosure forum to consider the challenging area of disclosure overload. Some of the organisations that have worked on disclosure in financial reporting (eg ANC, EFRAG, FASB, FRC, ICAS, NZICA, and ESMA) were invited to present their findings at this meeting. In May 2013, the IASB issued a Feedback Statement about this event and, in June 2013, the chairman of the IASB Hans Hoogervorst, in his speech entitled 'Breaking the Boilerplate', outlined '10 good proposals to make disclosures more effective' (Hoogervorst, 2013). In addition, as part of the discussion paper on the forthcoming revisions in the IASB Conceptual Framework, a lot of attention is given to whether more guidance and 'communication principles' should be provided in the revised Framework. In line with this, in October 2013 the IASB announced the formation of a new staff group to focus on the 'Disclosure Initiative' (IASB 2013a). Moreover, the FASB is involved in the 'Disclosure Framework' project, with the intention of improving effectiveness of disclosures in notes to financial statements while establishing disclosure requirements in various standards. Finally, in July 2013, the IASB started its post-implementation review of IFRS 3 (2008), part of which is the identification of areas in which 'implementation problems or unexpected costs with IFRS 3 were encountered' (IASB 2013b).

This study complements and extends earlier studies (FRRP 2006; ICAEW 2007; Glaum et al. 2007; EC 2008) by providing an in-depth analysis and evaluating the disclosures provided by a large worldwide sample of companies that reported under IFRS (or converged national standards) during the first year of adoption of IFRS 3 as revised in 2008. By identifying the levels and types of corporate disclosure, this report also complements recent research by ICAS and NZICA (2011) that proposes reductions in and changes to the disclosures mandated by the standards under examination.

Overall, the present research makes two major contributions. First, it highlights areas on which preparers, regulators and enforcement bodies need to focus to improve the level of disclosure by companies. This should result in the provision of more complete information to the users of the financial reports. Second, it highlights areas that standard setters may need to improve in order to reduce ambiguity in the standards. This should result in greater comparability of the information provided by companies.

1.3 SAMPLE COMPOSITION

Choice of countries and period

To examine worldwide convergence of disclosures under IFRS 3, IAS 36, IAS 38, a broad range of countries with different institutional and regulatory regimes that have made IFRS mandatory or that indicate convergence with IFRS are needed. Second, it is also necessary to have a mix of countries with developed and emerging stock markets.

Using the above criteria, companies were selected from the following 23 countries: Australia, Austria, Belgium, Brazil, China, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Malaysia, the Netherlands, New Zealand, Norway, Portugal, South Africa, Spain, Sweden, Switzerland and the UK for the financial year 2010. The year 2010 was chosen to ensure that all firms were applying the revised standards, following adopted changes in 2008 (the 2011 annual report was used for firms with their financial year end between January and June 2010).

Although countries in the EU imposed the mandatory implementation of IFRS in 2005, non-EU countries either adopted IFRS or converged their national standards to IFRS in subsequent years. For example, in China 'The new Chinese Accounting Standards for Business Enterprises (CAS)' were published by the Ministry of Finance (MoF) in 2006 and became effective on 1 January 2007. These standards are substantially converged with IFRS, except for certain modifications (eg to disallow the reversal of impairment losses on long-term assets), which allegedly reflect China's unique circumstances and environment (iasplus.com 2014). Chinese companies are required to disclose similar information to that of other companies that publish their accounts in accordance with IFRS. Whether, and to what

extent, these requirements are followed is an interesting question to investigate.³

Additionally, the Malaysian Accounting Standards Board (MASB) announced in August 2008 that Malaysia would achieve full convergence with IFRS by 1 January 2012 (MASB 2008). The plan for convergence has been implemented in several phases. The first step began on 1 January 2005 when the MASB standards were renamed Financial Reporting Standards (FRS) and their numbering changed to correspond to those of the IFRS (MIA 2005). The FRS comprised 38 standards, of which 21 are new standards and 17 revised reporting standards. The new and revised FRSs became effective on 1 January 2006. These included FRS 3, FRS 136, and FRS 138 (ie IFRS 3, IAS 36 and IAS 38).⁴

Further, Australia, Brazil, Hong Kong, New Zealand and South Africa were chosen as they have also either adopted IFRS or converged their national standards to IFRS. The rationale for focusing on the chosen countries is that, although they all have adopted IFRS or have converged their national accounting standards to IFRS, they do not share many common features in socio-economic context, legal background, familiarity with IFRS or level of stock-market development. In this way, this report explores whether IFRS are applied consistently across different countries and whether de facto comparability is achieved. Focusing on such a diverse sample of companies provides recent evidence on what the European listed companies report in these areas (ie it extends the studies conducted by FRRP (2006), ICAEW (2007), and EC (2008)) and sheds light on non-EU companies' disclosures, for which earlier evidence is limited.

Choice of firms

Consistent with the approach followed by Kvaal and Nobes (2010) and Fasshauer et al. (2008), the sample represents the 'blue chip' companies in these geographical areas (excluding financial institutions). The sample selection process follows three steps. First, the largest listed firms in the 23 countries were identified. For the European countries, the constituency of the European S&P 350 was used, which includes the largest and more liquid EU companies that are the most followed and analysed. Beyond the European S&P 350 companies, individual European firms included in large-cap country-specific indices were added to the potential sample in order

to increase sample sizes at the country level (see Table 1.1).

The largest non-European companies were identified from various country indices, on the basis of their market value. Following this, the sample included the 50 largest non-financial companies in the ASFA Index (Australia) and the non-financial firms of the IBRX 50 index (Brazil), the non-financial firms of Shanghai SSE 50 Index (China), the non-financial firms of the 50 largest firms in the Hang Seng Index (Hong Kong), the non-financial firms of the FTSE Bursa Malaysia KLCI (Malaysia), the non-financial firms of the NZX 15 (New Zealand) and the non-financial firms of FTSE/JSE RAFI 40 (South Africa).

Table 1.1 describes the sample composition process, providing information about each step overall and at the country level. From the 843 firms in total comprising the above indices, the firms participating in the general financial sectors (195 in total) are excluded. To avoid multiple uses of the same firm, firms cross-listed in another country of investigation are included only for the country of primary listing. There are 26 firms excluded owing to this type of cross-listing. Firms with dual shares (10 firms) are also excluded. Subsequently, after identifying the financial year end (FYE) for each firm, the annual report that corresponds to the first IFRS 3 implementation year was collected from the company's webpage or Thomson One Banker database. Firms following US GAAP (13) and Canadian GAAP (1) were also excluded. Firms that do not report financial statements in English (22) and firms for which financial or other necessary data (from various sources) are not available (13) were also excluded.

Finally, as the research investigated levels of compliance with the three standards, firms for which none of the three standards (IFRS 3, IAS 36 or IAS 38) apply were removed from the sample (19). As Table 1.1 shows, following the application of these criteria, 544 companies were left in the sample.

Table 1.2 provides information on the sample composition by country and industry. The latter classification is based on the 10 industries specified by the Industry Classification Benchmark (ICB). Approximately 17% of the sample consists of UK firms (91 firms), 8% of French firms (45) and 7% of Australian firms (38). The weight of the remaining countries is much smaller.

3. IAS 38 allows both the cost model and the revaluation model for the measurement of intangible assets. ASBE 6 (Accounting Standards for Business Enterprises) only allows the cost model. Additionally, ASBE 8 prohibits the reversal of all impairment losses but IAS 36 only prohibits the reversal of impairment loss for goodwill. Furthermore, business combinations involving entities under common control are outside the scope of IFRS 3 but addressed in ASBE 20. Finally, reverse acquisitions are covered in IFRS 3 but are not addressed in ASBE 20. All these differences were taken into account in the capturing of the data and reporting of the findings.

4. FRS 3 was updated to incorporate the amendments in IFRS 3 (2008). These amendments were effective for annual periods beginning on or after 1 July 2010, resulting in their being relevant for Malaysian companies a year later than for the remaining companies in the sample. Given the differences in recognition and measurement of goodwill and non-controlling interests between the two standards, this report's analyses of Malaysian disclosures focus on the disclosures mandated by the old version of IFRS 3.

Table 1.1: Sample selection process

Country	Suggested sample					Companies excluded								Final sample
	Criterion for inclusion	Additional EU firms not constituent of S&P 350	Initial no of companies	Excluding financials	N	Gross listed	Dual shares	US GAAP	Canadian GAAP	Accounts not available in English	Accounts/data not available	IFRS3, IAS38 and IAS36 not applicable	Total	
Australia	50 largest non-financial		50	0	50	3	1	3	0	0	3	2	38	
Austria	S&P 350*	ATX	20	3	17	0	0	0	0	0	0	2	15	
Belgium	S&P 350*	BEL 20	19	8	11	0	0	0	0	0	0	0	11	
Brazil	IBRX 50		50	13	37	0	3	1	0	4	3	1	25	
China	Shanghai SSE 50		50	22	28	0	0	0	0	18	1	0	9	
Denmark	S&P 350*	OMXC 20	20	5	15	1	0	0	0	0	0	1	13	
Finland	S&P 350*	OMXH 25	25	3	22	1	0	0	0	0	0	0	21	
France	S&P 350*	CAC 40	52	6	46	1	0	0	0	0	0	0	45	
Germany	S&P 350*	DAX 30	37	5	32	0	2	1	0	0	0	0	29	
Greece	S&P 350*	ASE 20	20	9	11	0	0	0	0	0	0	2	9	
Hong kong	50 Largest Hang Seng Index		50	22	28	3	0	0	0	0	0	1	24	
Ireland	S&P 350*	ISEQ 20	21	1	20	1	0	0	0	0	0	1	18	
Italy	S&P 350*	S&P/MIP	32	11	21	0	0	0	0	0	1	0	20	
Malaysia	FTSE BURSA Malaysia KLCI		30	7	23	1	0	0	0	0	1	2	19	
Netherlands	S&P 350*	AEX	26	5	21	2	0	0	0	0	2	0	17	
New Zealand	NZX 15		15	3	12	0	0	0	0	0	0	1	11	
Norway	S&P 350*	OBX	24	3	21	1	0	2	1	0	0	0	17	
Portugal	S&P 350*	PSI-20	20	3	17	0	0	0	0	0	0	0	17	
South Africa	FTSE/JSE RAFI 40		40	13	27	4	0	0	0	0	0	2	21	
Spain	S&P 350*	IBEX 35	35	8	27	1	0	0	0	0	0	1	25	
Sweden	S&P 350*	OMXS 30	33	5	28	5	1	0	0	0	0	1	21	
Switzerland	S&P 350*	SMI	47	13	34	1	1	4	0	0	0	0	28	
UK	S&P 350*	FTSE 100	127	27	100	1	2	2	0	0	2	2	91	
Total			843	195	648	26	10	13	1	22	13	19	544	

Table 1.2: Sample composition by country and industry

Country	Basic materials	Consumer goods	Consumer services	Healthcare	Industrials	Oil and gas	Technology	Telecommunications	Utilities	Total
Australia	10	2	8	3	8	4	0	1	2	38
Austria	1	0	0	1	8	2	0	1	2	15
Belgium	2	1	3	2	1	0	0	2	0	11
Brazil	5	7	4	0	4	1	0	2	2	25
China	5	0	1	0	2	1	0	0	0	9
Denmark	0	3	0	5	4	1	0	0	0	13
Finland	5	1	2	1	7	1	2	1	1	21
France	1	10	11	2	11	2	3	1	4	45
Germany	5	7	3	3	6	0	2	1	2	29
Greece	1	0	1	0	3	2	0	1	1	9
Hong Kong	0	5	6	0	5	1	1	2	4	24
Ireland	1	4	5	2	5	1	0	0	0	18
Italy	1	5	1	0	3	2	1	1	6	20
Malaysia	0	4	2	0	4	2	0	4	3	19
Netherlands	3	3	2	0	4	2	2	1	0	17
New Zealand	1	0	2	2	3	0	0	1	2	11
Norway	2	1	1	0	2	10	0	1	0	17
Portugal	4	0	3	0	4	1	0	2	3	17
South Africa	9	2	4	1	2	1	0	2	0	21
Spain	1	1	2	1	9	3	1	1	6	25
Sweden	3	3	2	1	9	0	1	2	0	21
Switzerland	3	5	1	6	10	1	1	1	0	28
UK	11	11	23	3	18	8	6	4	7	91
Total	74	75	87	33	132	46	20	32	45	544

1.4 STRUCTURE OF THE REPORT

The rest of this report is organised as follows. Chapter 2 provides an overview of IFRS 3 Business Combinations and discusses its applicability in the sample. The chapter continues by presenting pertinent findings from the current research and discusses their implications. Chapters 3 and 4 replicate the analysis for IAS 38 Intangible Assets and IAS 36 Impairment of Assets, respectively. The information presented in these three chapters does not explicitly measure compliance with the standards. Rather, it captures any relevant information disclosed by each firm and presents relevant descriptive statistics. Chapter 5 provides detailed evidence on compliance. It examines whether firms comply with the disclosures mandated by IFRS 3, IAS 38 and IAS 36. It reports disclosure scores and investigates factors that are associated with compliance, while considering earlier relevant evidence after controlling for firm-, industry- and country-specific factors. Finally, Chapter 6 summarises the findings and conclusions while reflecting on the objectives.

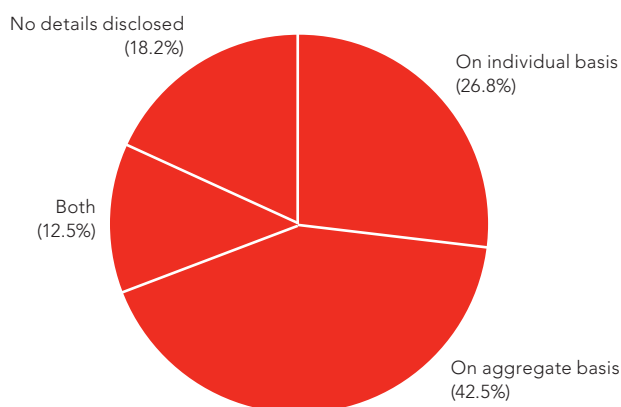
2. IFRS 3 Business Combinations

2.1 INTRODUCTION

Paragraph 59(a) of IFRS 3 requires companies to disclose detailed information on business combinations that occur during a reporting period. The standard prompts the preparer of the financial statements to follow the disclosures mandated in the application guidance (ie Appendix B of the standard) and those specified in paragraph B64 in particular. The information required by paragraph B64 is to be presented for 'individually' material transactions. Companies are required to report this information only in aggregate (paragraph B65) for individually immaterial transactions. This chapter draws on the disclosures mandated by paragraphs B64 and B65. It presents evidence of the information disclosed by the sample firms and discusses the level of variation in the disclosures provided.

When companies' financial statements and accompanying notes are examined, it becomes apparent that when a firm provides some information relating to business combinations, it does not necessarily imply that all IFRS 3 requirements are applicable to that firm. A company may provide some information about business combinations that took place during the year but it may not consider these transactions to be sufficiently material (either individually or collectively) to necessitate producing all the information required by the standard. Where companies apply this type of discretion it can result in significant disparity in the information provided to financial statement users. The researchers did not impose a materiality threshold here and simply captured relevant disclosures as found. Instead, to judge the extent of companies' compliance with the disclosures mandated by the standard, a compliance score was developed for the analysis discussed in Chapter 5 of this report.

Figure 2.1: Companies indicating having had at least one business combination, analysed by level of detail of corresponding information disclosed.



2.2 ACQUISITIONS REPORTED AND RELATED DISCLOSURES

How information on business combinations is provided

As a first step, the research identified firms that undertook at least one business combination in the period under examination. There were 280 companies (51.5% of the 544 sample firms) that indicated that at least one business combination took place in the period under examination. It is generally accepted that mergers and acquisitions are positively correlated with economic growth conditions (eg DePamphilis 2011). Considering the 2007–8 financial crisis (which was having widespread effects at the time of the corporate financial statements analysed), it is plausible that business combinations would be fewer and smaller than when economies worldwide were growing.⁵

Figure 2.1 indicates how the 280 companies for which there is an indication of a business combination disclose the information on combinations. Of these, 42.5% (119 companies) disclose some information about business combinations on an aggregate basis and 26.8% (75 companies) on an individual basis. Additionally, 12.5% (35 companies) disclose some information both on an individual and on an aggregate basis. Interestingly, a relatively large number of companies (51, or 18.2% of this sub-sample) indicate that they had one or more business combinations by disclosing some information such as number of businesses acquired, consideration transferred, related costs expensed or method of payment, but do not disclose any further information. It must be assumed that these business combinations are considered immaterial (individually and collectively) by the companies concerned.

Not all the 280 companies disclose the exact number of business combinations made during the year, indicating the variation in the level of the information provided across companies. Only 208 (74.3%) companies provide this information. For these latter firms, the mean (median) number of business combinations made per company is 3.6 (2.0). Figure 2.2 shows that, from these 208 companies, 86 (41.3%) conducted only one business combination and four companies (1.9%) conducted more than 20 business combinations in the first year of the application of IFRS 3 (2008).

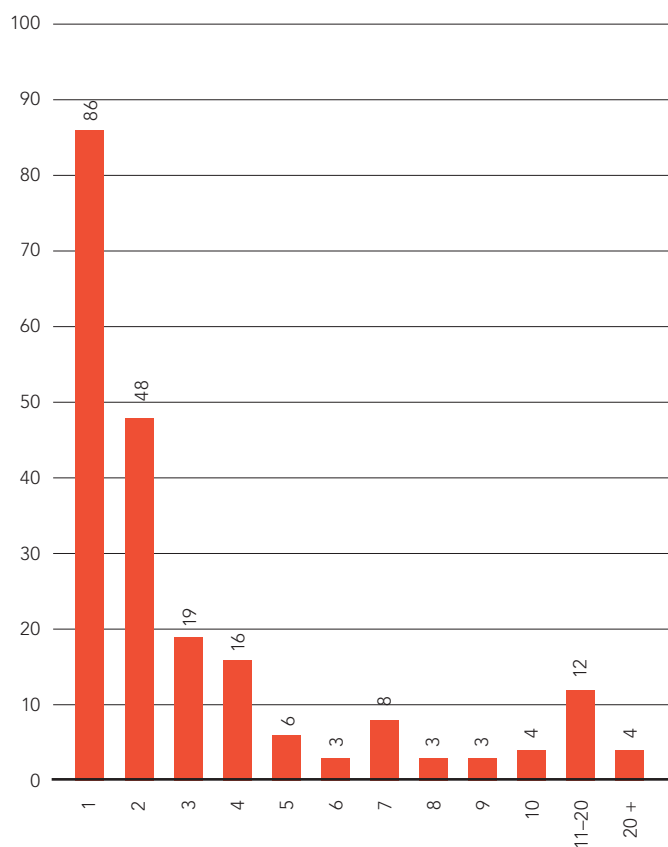
Of the 75 companies that disclose some information on an individual basis (see Figure 2.1), only 48 firms disclose the exact number of transactions completed. For this sub-set of firms, the mean (median) number of business combinations made per company is 4.9 (3). Of the 119 companies disclosing some information about business combinations on an aggregate basis, 112 disclose the exact number of transactions completed. For this sub-set of firms, the mean (median) number of business combinations made per company is 2.6 (1.0). Of the 35 companies that disclose some information about business combinations both on an individual and on an aggregate basis (see Figure 2.1), only 20

5. As an example, Glaum et al. (2007) report that of the 357 European companies with financial years ending between 31 December 2005 and 31 March 2006 making up their sample, 241 (68%) reported acquisitions during 2005.

disclose the exact number of transactions completed. For this sub-set of firms, the mean (median) number of business combinations made per company was 6.5 (5.5). For the remaining 28 companies that disclose the number of business combinations conducted during the year, the mean (median) number is 3.0 (1.5). Nonetheless, these firms remain silent on other information (eg value of goodwill recognised, method of payment, acquisition-related costs, and so on) and, as a result, they are classified within the 51 non-disclosing companies in Figure 2.1.

The exact number of business combinations incurred during the year can give useful insights to the users of financial statements about a company's approach to future growth. Moreover, such information could assist financial statement users to evaluate the importance a company places on acquisitions. Thus, as a first observation, the data presented in Figures 2.1 and 2.2 and subsequent analysis indicate a significant variation in disclosure across companies, which also makes comparison of the information provided a difficult task.

Figure 2.2: Distribution of the number of business combinations reported



Fair values of assets acquired

The revised paragraph B64(f) of IFRS 3 requires the acquirer to disclose the acquisition-date fair value of the total consideration transferred.⁶ Out of the 280 firms that indicate at least one business combination, 240 (85.7%) disclose the actual price/consideration. Many companies provide relevant information on an aggregate basis making it impossible for users of financial statements to determine the consideration transferred for every single combination conducted. It is, however, possible to determine the consideration transferred for total business combinations per company, for which the mean (median) is 484.4 (79.8) million euros. Of the 75 companies that disclose some information about business combinations on an individual basis (see Figure 2.1), 74 disclose the related consideration paid. For these companies, the mean (median) cost is €557.1m (€51.5m).

These values could be taken as an indication of what the companies perceive to be individually material transactions and they disclose other relevant information on an individual basis.

Of the 119 companies that disclose some information about business combinations on an aggregate basis, 112 disclose the related costs. For these companies, the mean (median) cost is €427.52m (€86.46m). Of the 35 companies that disclose some information both on an individual and on an aggregate basis about business combinations, 33 disclose the related considerations. For these companies, the mean (median) cost is €690.40m (€277.66m). It becomes apparent that 21 of the 240 companies that disclose the cost of business combinations conducted during the year remain silent on other information (eg value of goodwill recognised, method of payment, acquisition-related costs and so on). These firms are classified within the 51 companies in Figure 2.1 above that indicate having made a business combination but disclose no relevant information.

Overall, if the information on the consideration paid or transferred, as required by the standard, is disclosed, it can provide financial statements users with a good indication of the significance of business combinations incurred during the year. This would assist users to evaluate whether the information on business combinations mandated by the standard merits being provided or not.

Regarding the latter point, to determine the relative significance of the aggregate level of business combinations carried out by the 240 firms that disclose the consideration transferred, Figure 2.3 shows the mean ratio of the firm's aggregate business combination purchase price to its previous year's market capitalisation, averaged out by industry.

6. Paragraph 67(d) of the old IFRS 3 explicitly required a firm to disclose 'the cost of the combination and a description of the components of that cost, including any costs directly attributable to the combination'.

Table 2.1: Mean volume (in million euros) of business combinations per firm by country and industry

Country	Basic materials	Consumer goods	Consumer services	Healthcare	Industrials	Oil and gas	Technology	Telecommunications	Utilities
Australia	71.37		52.50	291.57	750.56	134.83		72.90	6.80
Austria				15.00	43.16	934.53		0.60	
Belgium								318.00	
Brazil	83.95	697.49	5.86						
China			94.40		84.56				
Denmark		247.27		43.23	19.64				
Finland	19.30	13.00	10.00				55.50	30.70	
France		258.88	138.50	610.72	975.50	1,094.00	425.60	2,776.00	1,907.10
Germany	262.00	102.90	59.10	5,137.10	75.40		4,643.00		
Greece	306.29					88.36			
Hong Kong		1,717.24	320.23		421.24	2,409.64	33.19		12.73
Ireland		161.50	10.06	2.86	132.28				
Italy		129.00	590.70		79.00	219.00	14.22	524.00	988.50
Malaysia		6.40	221.87		13.19				5.03
Netherlands	154.00	2,696.00	258.00		415.54	54.90			
New Zealand									0.84
Norway	240.90		428.08		149.74	2.71		8.59	
Portugal	0.50		8.65		7.00			9.86	
South Africa		137.86	102.47		204.79			5.39	
Spain					88.37		20.32		
Sweden		48.97			250.69		422.62	58.78	
Switzerland	95.79	1,226.07	21.73	7,523.27	132.59		68.42	34.39	
UK	665.66	765.00	160.39	394.58	137.95	714.78	70.97	81.00	503.01

Figure 2.3: Purchase price in relation to previous year's market values

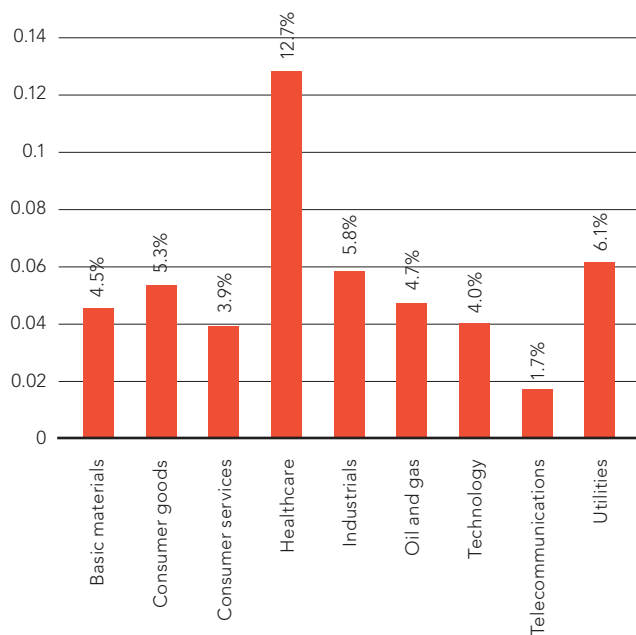


Figure 2.3 shows that firms in the healthcare industry, on average, carried out the most significant business combinations, averaging 12.7% of their previous year's market capitalisation. Firms in the telecommunications industry made the least significant business combinations at, on average, 1.7% of their previous year's market capitalisation. The remaining industries' business combinations range, on average, from 4% to 6% of their previous year's market capitalisation.

To provide a clearer picture of the magnitude of business combinations across countries and industries, Table 2.1 shows the mean volume (in million euros) of business combinations by country and industry, drawing on the 240 firms in the sample that disclose this information.

Consistent with the evidence that mergers and acquisitions are positively correlated with economic growth conditions (eg DePamphilis 2011), companies in countries that were less affected by the economic crisis appear to be the ones that invested more on acquiring new businesses. (eg Australia, Germany, Switzerland and the UK document higher values of business combinations).

The variation in the disclosure of consideration transferred (sometimes on an individual basis, sometimes in aggregate and sometimes missing) again makes it difficult to determine the economic significance of the business combinations.

Acquisition-related costs

Paragraph 53 of IFRS 3 defines acquisition-related costs as those the acquirer incurs to effect a business combination. The same paragraph continues by requiring an acquirer to account for acquisition-related costs as expenses in the periods in which the costs are incurred and the services are received. This latter requirement was introduced in IFRS 3. Under the requirements of the old standard, such costs were capitalised as part of goodwill.⁷

Of the 280 companies that indicate making a business combination, analysis reveals that only 101 disclose separately the actual acquisition-related costs that were expensed (although the majority of companies make an explicit statement that such costs are expensed in the income statement). The mean (median) value of such costs is €6.56m (€2.64m) per company.

Of those companies that report information about individual business combinations (75 firms; Figure 2.1), only 29 companies separately disclose actual acquisition-related costs. The mean (median) value of individual acquisition related costs is €5.8m (€3.6m). Of the 119 companies that report information about business combinations on an aggregate basis, only 43 disclose actual acquisition-related costs. The mean (median) value of individual acquisition related costs is €7.0m (€1.4m). Of the 35 companies that report information about business combinations both on an aggregate and an individual basis, 27 disclose actual acquisition-related costs. The mean (median) value of individual acquisition-related costs is €7.0m (€3.8m). Finally, two of the companies that are classified as 'not disclosed' in Figure 2.1 above do indicate making at least one business combination during the year and disclose the actual values of those costs expensed, but they remain silent on other related issues (such as value of the combinations that took place).

The relative importance of such disclosures is measured by looking at the ratio of acquisition-related costs to profit before tax. The mean (median) of this ratio for the 101 firms disclosing such information separately is 2% (1%). The mean (median) ratio for the 29 of these companies that report information on individual business combinations is again 2% (1%). This analysis, along with the actual amounts discussed above, indicates that the associated acquisitions costs expensed are very modest, relative to the size of the companies in the sample and the volume of the business combinations conducted (see Figure 2.3 and Table 2.1). As a result, arguably, the change introduced by IFRS 3 does not lead to a significant change in companies' financial performance.

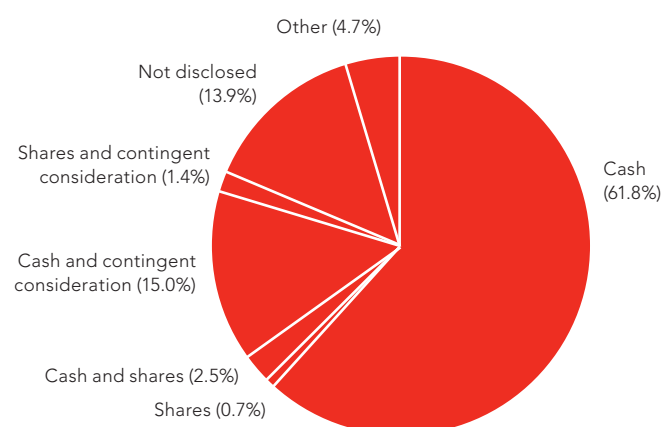
Method of payment

Paragraph B64(f) of IFRS 3 requires an acquirer to disclose the acquisition-date fair value of each major class of consideration, such as: (i) cash, (ii) other tangible or intangible assets, (iii) liabilities incurred and (iv) equity interests of the acquirer, including the number of instruments or interests issued or issuable and the method of measuring the fair value of those instruments or interests. The standard continues by requiring specific information on contingent consideration arrangements (paragraph B64(g)).

Figure 2.4 shows the method of payment disclosed by the 280 companies that indicate that they conducted at least one business combination during the year. The majority of firms paid in cash (173 or 61.8% of companies), or cash and contingent consideration (42 or 15% of companies). Payment by transferring shares or shares and contingent consideration was used by only 0.7% and 1.4%, respectively (six companies in total).

Figure 2.4 also shows that 13.9% of the companies that indicate that at least one business combination took place do not disclose the payment method for the acquisitions (ie 39 out of the 280). (These firms are classified within the 51 companies in Figure 2.1 above that indicate making a business combination but no relevant information is disclosed.)

Figure 2.4: Method of payment



7. As a result, the discussion that follows does not refer to companies from Malaysia, for which the old version of IFRS 3 applied at the time of the period examined. The same applies to China.

Payment by transferring shares or shares and contingent consideration appears to relate to cases where a company discloses information separately for a business combination. More specifically, in 59 of the 75 companies that disclose information about business combinations on an individual basis (see Figure 2.1), the method of payment was cash and in 12 cases was cash and contingent consideration. In only one case was the payment in the form of a transfer of shares. One firm in this category remains silent in respect of the method of payment. Eight (ie 6.7%) of the 119 companies that provide information on an aggregate basis (see Figure 2.1) do not disclose the method of payment used. Additionally, in 77 cases the method of payment was cash and in 19 cases was cash and contingent consideration. In only three cases was the payment made with a transfer of shares or transfer of shares and contingent consideration. Further, two of the companies that disclose information on both an aggregate and an individual basis for business combinations (out of 35 firms; see Figure 2.1) used the transfer of shares and contingent consideration as their method of payment.

2.3 GOODWILL AND OTHER ASSETS RECOGNISED DURING BUSINESS COMBINATIONS

Paragraph B64(i) of IFRS 3 requires an acquirer to disclose the amounts recognised as of the acquisition date for each major class of assets acquired and liabilities assumed. Interestingly, this requirement results in a reduction of the information required because the old version of the standard also required disclosure of the carrying amounts of each of those classes, determined in accordance with IFRS, immediately before the combination.

Identification and disclosure of these classes of asset is important, not only to give the users of the financial statements a clear picture of the nature and size of the assets acquired but also because any difference between the aggregate amounts of the consideration transferred, any non-controlling interest and the net identifiable assets acquired will be recognised as goodwill.

Paragraph B64(e) of IFRS 3 requires an acquirer to disclose a qualitative description of the factors that make up the goodwill recognised. Examples of qualitative description could be expected synergies from combining the operations of the acquiree and the acquirer, and intangible assets that do not qualify for separate recognition, or other factors. The standard does not, however, provide examples of expected practice, leaving high discretion to the financial statements preparers as to what to disclose. Additionally, from a user's

perspective, it is not clear what kind of information should be expected. It is worth noting that the recent study by ICAS and NZICA (2011) recommends that this requirement be deleted from the standard, claiming that this information is usually not useful.

Additionally, one of the main changes introduced in IFRS 3 is the measurement of non-controlling interests. This also has an impact on the values of goodwill recognised during a business combination (through what are commonly known as the full goodwill or partial goodwill methods). More specifically, paragraph 19 of IFRS 3 requires that, for each business combination, the acquirer shall measure any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets.⁸

Along these lines, for each business combination in which the acquirer holds less than 100% of the equity interest in the acquiree at the acquisition date, paragraph B64(o) requires an acquirer to disclose: (i) the amount of the non-controlling interest in the acquiree recognised at the acquisition date and the measurement basis for that amount, and (ii) for each non-controlling interest in an acquiree measured at fair value, the valuation technique(s) and significant inputs used to measure that value.

Although it is more common for an acquirer to pay a premium over the fair value of the net assets acquired (ie goodwill is recognised), it is not rare for an acquirer to make a bargain purchase, ie a business combination takes place at a lower price, where the net fair value of the acquiree exceeds the purchase price. In this case, negative goodwill results. The acquirer shall recognise the resulting gain in profit or loss on the acquisition date. Following along these lines, paragraph B64(n) of IFRS 3 requires an acquirer to disclose the amount of any gain recognised in a bargain purchase, the line item in the statement of comprehensive income in which the gain is recognised, and a description of the reasons why the transaction resulted in a gain.

Considering all the above requirements, the figures and tables that follow shed light on the type of information disclosed by the 280 sample firms that indicate that they conducted at least one business combination, and the variation in the practices followed.

8. As noted previously, this discussion is not relevant to companies from Malaysia, for which the old version of IFRS 3 applies. The same applies for companies from China.

Magnitude of and justification for goodwill recognised

Starting from goodwill, 258 of these companies (ie 92.1%) disclose explicitly that goodwill was recognised during their transactions and 249 of these 258 companies disclose the actual amount of goodwill recognised. Some 18 out of the 280 companies (ie 6.4% of the sample) state explicitly that no goodwill was recognised. The remaining four companies (ie 1.4%) remain silent.

It is worth noting that only 61 (23.6%) of the 258 companies that disclose goodwill recognition disclose a qualitative description of the factors that make up the goodwill recognised (as required by paragraph B64(e) of the standard). Considering that this information might be more relevant when a company discloses some information on an individual basis, such information could be given in the notes accompanying the financial statements of the 75 companies that disclose some information on an individual basis (see Figure 2.1). Although all these 75 companies report that goodwill was recognised, only three of them disclose a qualitative description of the factors that make up the goodwill recognised. Of the 119 companies that disclose some information on an aggregate basis for business combinations (see Figure 2.1), 104 report that goodwill was recognised during these acquisitions. Nonetheless, only 37 of these 104 companies disclose a qualitative description of the

factors that make up the goodwill recognised. Even so, the proportion of firms that disclose a qualitative description of the factors that make up the goodwill recognised is increased substantially in the sub-sample of 35 companies (again see Figure 2.1) that report some information about business combinations both on an aggregate and on an individual basis. There are 21 companies in this sub-sample that report such information. Interestingly, in most cases, the description that companies usually provide is nothing more than a brief statement making a reference to the synergies expected to arise from the combinations.

In conclusion, although informing financial statement users about the benefits arising from a business combination and why they pay a premium is considered pertinent, the way this requirement is phrased is vague. The result is that companies either do not disclose any information or just repeat the wording from the standard. Unless this requirement is re-worded to be more precise, the proposal from ICAS and NZICA (2011) for its deletion might result in less clutter in companies' notes to the financial statements.

Of the 240 companies that disclose the price of business combinations, 222 report the value of goodwill recognised during these transactions (sometimes on aggregate, sometimes on an individual basis). An analysis of the figures

Figure 2.5: Goodwill on purchase price, per industry (no distinction is made about the way the information is disclosed, eg aggregated, on an individual basis or both)

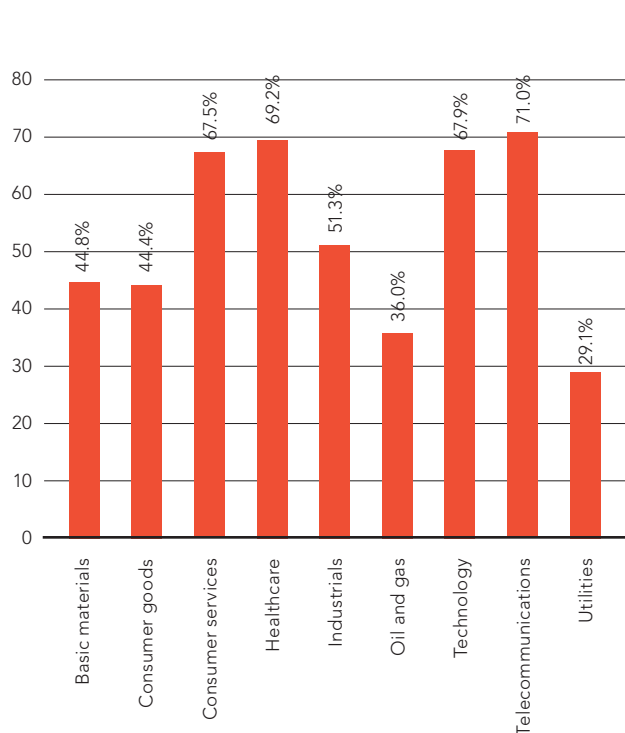
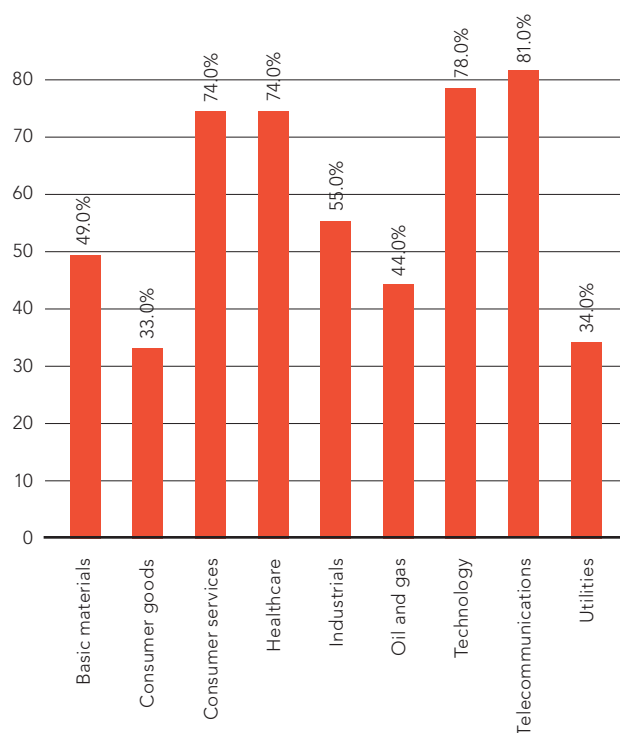


Figure 2.6: Goodwill on purchase price, per industry (information disclosed on an aggregate basis)



reported indicates that a large proportion of the purchase price in a business combination represents the premium paid. More specifically, the mean (median) percentage of goodwill recognised over the purchase price is 54% (51%) with a standard deviation of 36%.

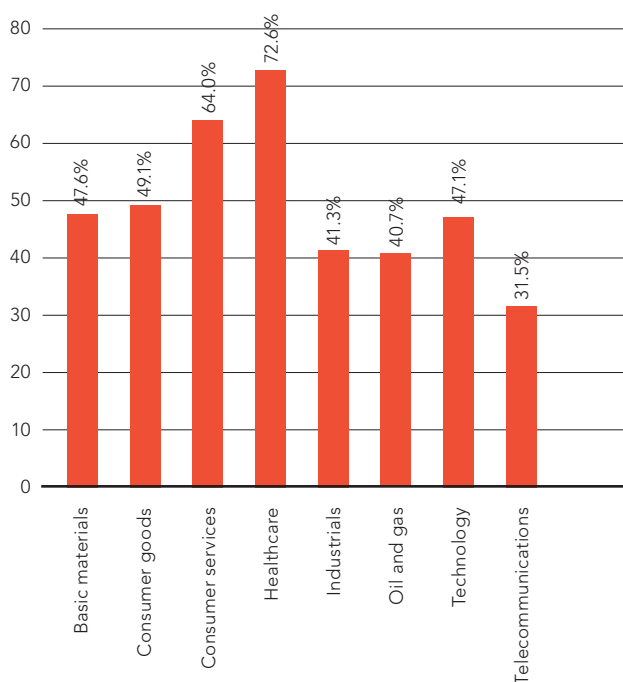
To shed more light on the magnitude of goodwill recognised, Figure 2.5 shows the per-firm average ratio of goodwill recognised to total purchase price of business combinations by industry, for the 222 companies that disclose this information. Notably, firms in the telecommunications industry (ie the industry that had the lowest values of acquisitions relative to the prior year’s market value; see Figure 2.3) pay, on average, the highest premium (71.0%). The lowest premium paid is in the utilities industry (29.1%).

Figure 2.6 shows the mean proportion of goodwill on purchase price for the 99 companies (out of 119) that report some information about business combination on an aggregate basis (as shown in Figure 2.1), including the purchase price of the combination. Here, as in the findings shown in Figure 2.5, firms in the telecommunications industry seem to pay the higher premium (81% of the purchase price). Utility firms appear again to be those that pay the smallest premium (33%), when the business combination is on an aggregated basis.

When the information about business combinations is disclosed on an individual basis, the picture of the premium paid changes. Figure 2.7 shows the mean proportion of goodwill on purchase price for the 75 companies that report some information about business combinations on an individual basis, including the purchase price of the combination. Firms in the telecommunications industry now seem to pay the smallest premium as a percentage of the purchase price, at 32%. The healthcare industry, which is the industry that reports the highest purchase prices, according to Figure 2.3, seems to pay the most generous premiums when a business combination is disclosed on an individual basis (average premium of 73%).⁹

As far as negative goodwill is concerned, only 12 companies explicitly stated that negative goodwill has been recognised and only four of these explain the reasons why negative goodwill arose.

Figure 2.7: Goodwill on purchase price, per industry (information disclosed on an individual basis)



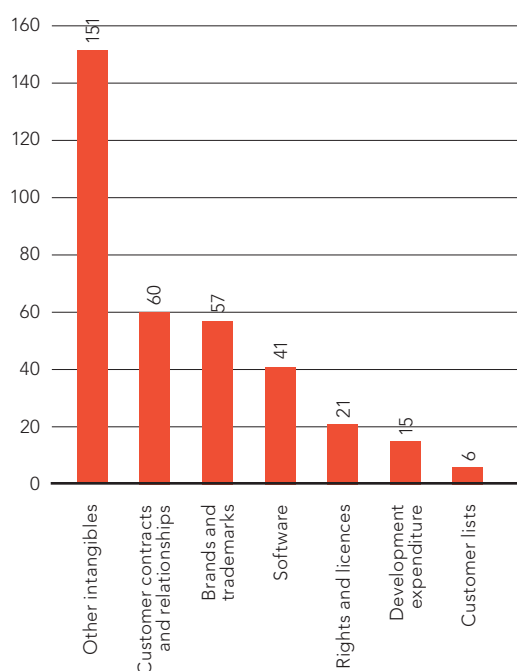
9. No relevant information is reported for companies in the utilities industry.

Magnitude of intangible assets recognised

There is a requirement for acquirers to disclose the amounts recognised, as of the acquisition date, for each major class of asset acquired and liabilities assumed; this section focuses specifically on the amounts of intangible assets recognised. First, Figure 2.8 reports the frequency with which a particular class of intangible asset appears in the disclosures provided. This is for the business combinations conducted during the year and for which an actual number is disclosed separately. 'Other intangibles' is the most frequent class of intangible asset recognised (151 cases). The frequency of 'Customer contracts and relationships' and 'Brands and trademarks' follows (60 and 57 cases, respectively). The class of intangibles with the smallest frequency is 'Customer lists'.

Figure 2.9 expands on this issue and reports the mean ratio between each class of intangible asset recognised and total purchase price of business combinations, per company. It is worth highlighting the fact that 'other intangible assets' represent on average 38.9% of the total purchase price. This is interesting if one considers that companies are not explicit about what is recognised in this 'class' of asset. The second largest mean ratio per company is rights and licences (30.7%). Development expenditure capitalised during business combinations represents the lower mean ratio of intangible assets recognised to total purchase price of business combinations per company (14.3%).

Figure 2.8: Frequencies of classes of intangible assets recognised, per company

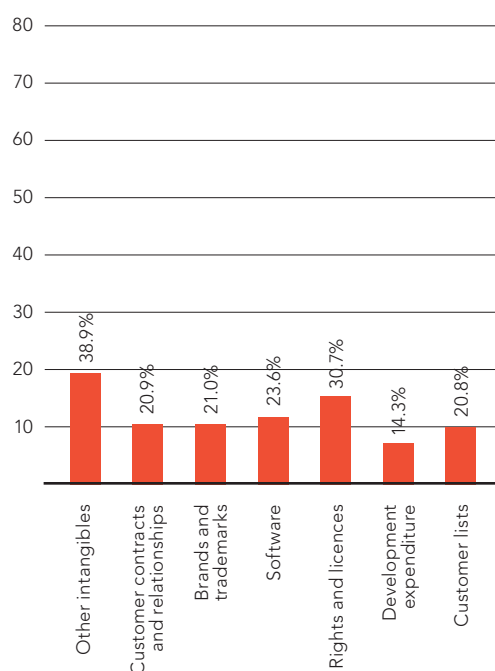


Recognition of non-controlling interest

Regarding recognition of a non-controlling interest, only 76 of the 280 companies that indicate making a business combination note that the concluded acquisitions involved between 50% and 99% of the acquiree's assets. In 11 of these cases, it is disclosed that the non-controlling interest is measured at fair value. In 32 cases, it is stated explicitly that the non-controlling interest is measured at the present ownership instruments' proportionate share in the recognised amounts of the acquiree's identifiable net assets. The remaining 33 companies are silent on how the non-controlling interest is measured.

Information about their non-controlling interest is more detailed (in proportional terms) in the footnotes of the 36 companies that disclose information about business combinations on an aggregate basis and also indicate that a non-controlling interest is recognised during a business combination. Eight companies out of the 36 disclose that the non-controlling interest is measured at fair value while 16 companies explicitly state that the non-controlling interest is measured at the present ownership instruments' proportionate share in the recognised amounts of the acquiree's identifiable net assets. The remaining 12 companies are silent on how their non-controlling interest is measured.

Figure 2.9: Mean ratio between each class of intangible asset recognised and total purchase price of business combinations, per company



This research also included examination of the footnotes of the companies that disclose information about business combinations on an individual basis and that also indicate that a non-controlling interest is recognised during a business combination (20 companies). Eight out of 20 companies make it explicit that non-controlling interest is measured at the present ownership instruments' proportionate share of the recognised amounts of the acquiree's identifiable net assets. The remaining 12 companies remain silent in this respect.

Of the 76 companies that concluded acquisitions involving a non-controlling interest, 33 are silent on how this non-controlling interest is measured. Given that IFRS 3 introduced two potential ways of measuring non-controlling interest in contrast to the US accounting standard, the analysis leads to the conclusion that financial statement users do not receive full information.

2.4 PRO FORMA DISCLOSURES

Paragraph B64(q) of IFRS 3 requires an acquirer to disclose the amounts of revenue and profit or loss of the acquiree, since the acquisition date, included in the consolidated statement of comprehensive income for the reporting period. It also requires disclosure of the revenue and profit or loss of the combined entity for the current reporting period, as though the acquisition date for all business combinations that occurred during the year had been as of the beginning of the annual reporting period. If disclosure of any of the information required by this subparagraph is impracticable, the acquirer shall disclose that fact and explain why the disclosure is impracticable. This information is required for individually material business combinations but it is also required for individually immaterial business combinations occurring during the reporting period that are material collectively (paragraph B65(q)).

Analysis shows that out of the 75 companies in Figure 2.1 that disclose information about business combinations on an individual basis, only 40 of them report pro forma information for individual business combinations. Additionally, 84 companies out of the 154 that disclose information about business combinations on an individual basis and/or on aggregate basis report this information.

While this information might be useful for benchmarking and forecasting future consolidated results from a user's perspective, firms must find it impracticable or too costly to produce and thus do not do so. It is noted that the recent study by ICAS and NZICA (2011) recommends that this latter requirement be deleted from the standard.

2.5 SUMMARY

This chapter provides evidence of the actual information provided by companies about business combinations. The following findings relate to specific disclosures mandated by IFRS 3, which stand out from the analysis. No attempt to score compliance with IFRS 3 mandated disclosures is made, given that the researchers set no threshold at which 'material information' is defined and, hence, merits disclosure. Such an analysis is provided in Chapter 5.

- There is an indication that at least one business combination took place in 280 companies (ie 51.5% of the sample). Of these, 51 (or 18.2%) indicate that they had one or more business combination by disclosing some information, such as the number of businesses acquired, the consideration transferred, related costs expensed or method of payment, but do not disclose any further information. It must be assumed that these business combinations are considered immaterial (individually and collectively) and hence detailed information is not merited. Why do some firms disclose only selected information?
- Similarly, 240 out of the 280 firms report the actual price/consideration transferred for completing the combinations conducted and an identical number of firms disclose the method of payment for their combinations. Again, it is not clear why some companies do disclose and some do not.
- Only 101 companies disclose the acquisition-related expenses incurred and expensed in the income statement. In an attempt to identify the relative importance of such disclosure, the mean (median) ratio of acquisition-related costs over profit before tax for the firms disclosing such information separately was measured and found to be 2% (1%). Two conclusions arise from this. First, the associated acquisitions costs expensed are very modest relative to the size of the companies in the sample and the volume of the business combinations conducted. As a result, the change introduced by IFRS 3, ie expensing all acquisition-related costs, does not lead to a significant change in companies' financial performance. Second, why do the other firms not disclose such information or clearly state that it is immaterial?
- Although 258 companies disclose that they recognise goodwill, only 61 give a qualitative description of the factors that make up the goodwill recognised. This leads to the conclusion that a large number of companies fall short of the IFRS 3 requirement for such information. In most cases, the description that the 61 companies provide is nothing more than a brief statement making a reference to synergies expected to arise from the combinations. There appears to be a lack of guidance on what is expected from this requirement. Note that the ICAS and NZICA study (2011) recommends deletion of this requirement.
- Of the 76 companies for which acquisitions involve between 50% and 99% of the acquiree's assets, 33 remain silent on how the non-controlling interest is measured. IFRS 3 now offers two potential ways of measuring non-controlling interest and if neither is disclosed then report users do not receive full information. Additionally, only 11 companies (14.4%) make explicit that they measure their non-controlling interest at fair value (full goodwill approach).
- On average, 38.9% of the total purchase price is allocated to 'Other intangible assets'. Given that companies are not explicit on what is recognised in this 'class' of assets, the question of why there are no supportive disclosures on what these assets constitute seems pertinent.
- A large number of companies do not disclose pro forma information about the business combinations. Can it be concluded that it is too costly or impracticable to do so in that many cases?

The above findings indicate that without specific guidance on when and how items should be disclosed, there is significant disparity in the information that companies provide about business combinations, and thus a lack of comparability. From a user's perspective, it is difficult to determine whether this disparity is the result of firms' not viewing their acquisitions as material, not understanding the mandated requirements and/or simply not following the standard to the letter.

3. IAS 38 Intangible Assets

3.1 INTRODUCTION

IAS 38 Intangible Assets governs the recognition criteria and measurement models as well as relevant disclosures on intangible assets. IAS 38 (paragraph 8) defines an intangible asset as 'an identifiable non-monetary asset without physical substance'. Even if an item satisfies the definition and recognition criteria of an intangible asset, it should be shown on the statement of financial position of a firm only if a) it is probable that future economic benefits will flow to the enterprise and b) the item has a cost that can be measured with reliability.

As a result of IAS 38, internally generated intangible assets are expensed when they are incurred. In particular, IAS 38 explicitly states that internally generated goodwill shall not be recognised as an asset because it is not an identifiable resource (ie it is not separable, nor does it arise from contractual or other legal rights) controlled by the entity that can be measured reliably at cost. Goodwill is intentionally not included in the list of potential intangible assets (although it is traditionally considered as an intangible asset) because it is a non-identifiable intangible asset. In fact, the identifiability issue was dealt with specifically in the revised IAS 38, which became effective for periods starting on or after 1 January 2009 and is relevant to the current research.

Additionally, internally generated brands, mastheads, publishing titles, customer lists and items similar in substance shall not be recognised as intangible assets. The argument for this treatment is that expenditure on internally generated brands, mastheads, publishing titles, customer lists and items similar in substance cannot be distinguished from the cost of developing the business as a whole. Such items are not recognised, therefore, as intangible assets.

Nonetheless, the standard requires that these items be recognised as intangible assets when they are acquired in a business combination or as separate assets. In fact, in accordance with IFRS 3, if an intangible asset is acquired in a business combination (or in a separate transaction), the cost of that intangible asset is its fair value at the acquisition date.

This fair value will reflect market participants' expectations, at the acquisition date, about the probability that the expected future economic benefits embodied in the asset will flow to the entity.

There are two exceptions to the rule, stated above, that internally generated intangible assets should be expensed when they are incurred. First, according to IAS 38, when computer software is not an integral part of the related hardware, that software is treated as an intangible asset. If computer software, in particular, is either purchased or developed internally and the amount is material, it is capitalised. Second, under certain circumstances, expenditures classified as development expenditure can be capitalised. More specifically, no intangible asset arising from research (or from the research phase of an internal project) shall be recognised. Expenditure on research (or on the research phase of an internal project) shall be recognised as an expense when it is incurred. An intangible asset arising from development (or from the development phase of an internal project) shall, however, be recognised if, and only if, several criteria are met.¹⁰

As shown in the previous chapter (Figures 2.8 and 2.9) and as noted in earlier literature (Glaum et al. 2007; and Ernst & Young 2009), companies recognise large amounts of intangible assets (other than goodwill) while conducting business combinations. As a result, a large proportion of companies' non-current assets consist of intangible assets. This chapter considers the evidence of previous studies that have indicated significant variation in practices followed in the measurement and recognition methods that companies apply to intangible assets.

There follow some descriptive analyses of the various classes of intangible assets on companies' statements of financial positions. Subsequently, the relevant information that companies disclose is discussed (eg a model for measurement after recognition and amortisation methods have been chosen). Finally, the findings are presented about the level of the relevant disclosures companies provide.

10. Development costs are recognised as intangible assets if, and only if, all six of the following factors can be demonstrated: 1) the technical feasibility of completing the intangible asset for use or sale; 2) the intention to complete and use or sell it; 3) the ability to use or sell it; 4) how the intangible asset will generate probable future economic benefits; 5) the availability of adequate technical, financial, and other resources to complete and sell or use the intangible asset; and 6) the ability to measure reliably the expenditures related to the intangible asset during its development.

3.2 SIGNIFICANCE OF INTANGIBLE ASSETS

This discussion begins by focusing on the net book value of various classes of intangible assets captured from the sample firms' statements of financial position. This sheds light on the significance and prevalence of intangible assets.

Of the sample of 544 companies, 517 have at least one type of intangible asset (other than goodwill) recognised in their statement of financial position. The mean (median) value of total intangible assets (other than goodwill) is €1,310m (€682.55m). The standard deviation is €1,230m. Notably, 491 companies of the 517 that have at least one intangible asset have recognised goodwill resulting from acquisitions either in the year of examination and/or from acquisitions undertaken in earlier periods. For this set of firms, the mean (median) value of goodwill is €2,490m (€605.70m). The standard deviation is €5,460m.

Figures 3.1 and 3.3 show the mean value of total intangible assets (beyond goodwill) and goodwill, per country and per industry. This allows a better understanding of the total 'investment' in intangible assets of the sample companies. As shown in Figure 3.2, goodwill amounts recognised are larger than those for intangibles in 19 of the 23 countries examined in value and as percentages of the total firm assets. Goodwill ranges from 0.63% (in China) to almost 26% (in the UK) of total assets, while total intangibles (other than goodwill) range from 1.63% (in China) to 13.51% of total assets (again in China and the UK, respectively).

Figure 3.1: Mean value of intangible assets (other than goodwill) and goodwill, per country

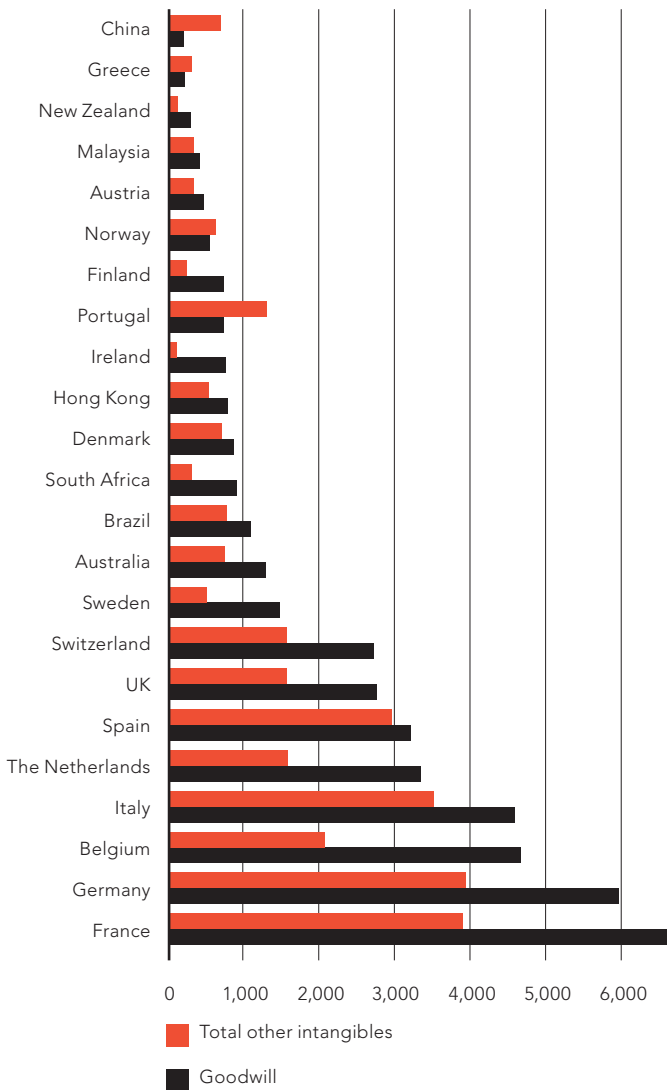
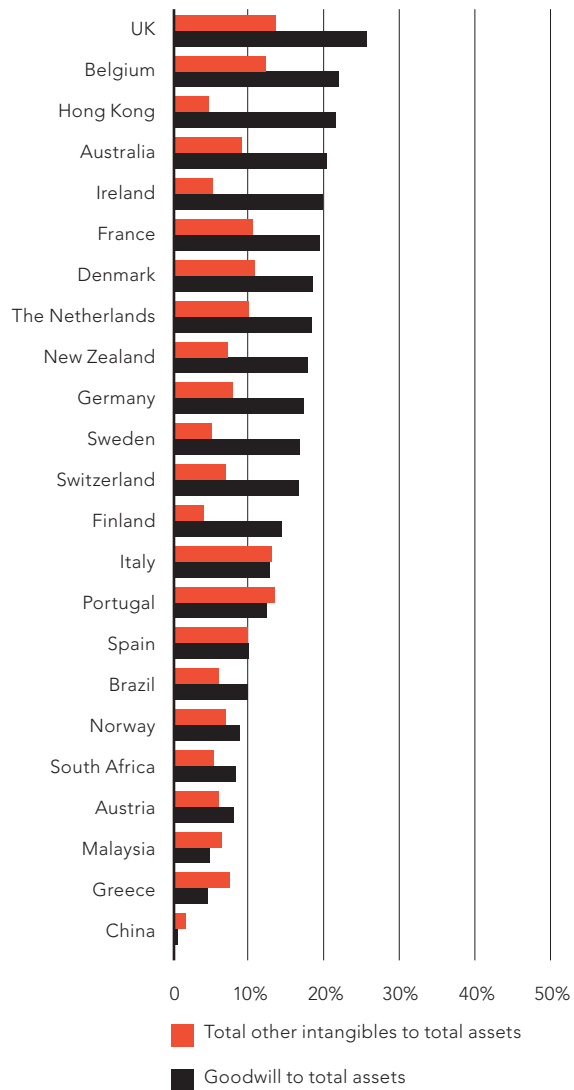


Figure 3.2: Intangible assets (other than goodwill) and goodwill as a percentage to total assets, per country



According to Figures 3.3 and 3.4, goodwill is larger than total other intangibles in actual values and as a percentage of total assets in most industries (only in the oil and gas industries are total other intangibles of higher actual value than goodwill). Goodwill ranges from 6% (utilities) to 26.8% (technology) of total assets, while other intangibles range from 4% (basic materials) to 14.1% (technology) of total assets.

These descriptive statistics indicate that in the UK, Belgium, Hong Kong, France, Denmark, the Netherlands and Australia, as much as 39% of companies' total assets takes the form of intangible assets (including goodwill). Companies in Malaysia, Greece and China invest the lowest amounts in intangible assets (ie less than 11% of total assets, including goodwill). At an industry level, consumer services and healthcare are the two industries with the highest investment in intangible assets, including goodwill, at 36% and 40% of total assets, respectively.

Figure 3.3: Mean value of intangible assets (other than goodwill) and goodwill, per industry

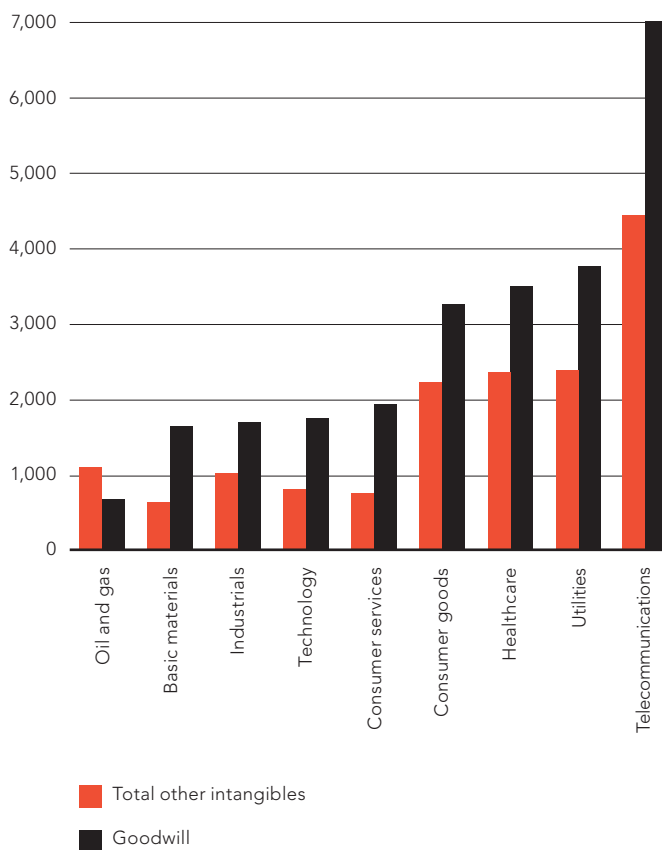
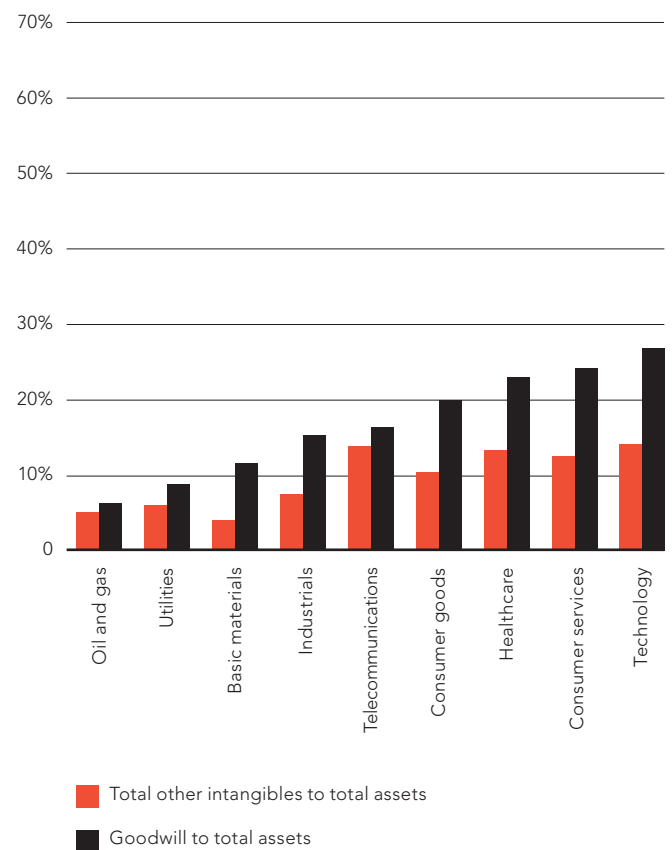


Figure 3.4: Intangible assets (other than goodwill) and goodwill as a percentage to total assets, per industry



3.3 TYPES OF INTANGIBLES IN COMPANIES' STATEMENTS OF FINANCIAL POSITION

To provide a better understanding of the types of intangible asset that companies recognise in their statements of financial position, Figure 3.5 reveals the frequencies with which different classes of intangible asset feature in companies' financial statements. Figure 3.6 shows these different types of asset as an average percentage of total assets.

The most frequent type of intangible is 'other intangibles'. This is because 'other intangibles' is the most frequent class of intangible asset recognised during business combinations (see Figures 2.8 and 2.9 in the previous chapter). In fact, other intangibles feature in the statement of financial position of 453 of the 517 companies (ie 87.6%) that have at least one type of intangible asset other than goodwill (see Figure 3.5). According to Figure 3.5, 'Software' features in 246 cases (ie in 47.6% of the 517 companies). The frequency of other types of intangibles, such as 'brands and trademarks', 'rights and licences', 'customer contracts' and 'development expenditure', ranges from 112 to 153 cases (21.6% to 29.6% of cases). The frequencies of 'Carbon allowances' and 'Customer lists' are only 23 and 11 (4.5% and 2.1% of cases), respectively.

It appears that the largest values of intangible assets as an average percentage of total assets relate to 'Other intangibles', which represent on average 5.28% of the firm's total assets (see Figure 3.6). 'Brands and Trademarks' (5.17% of total assets) and 'Rights and Licences' (5.24% of total assets) have somewhat lower values and untabulated analyses indicate that these are most common in particular industries, eg pharmaceutical and manufacturing. Customer contracts and lists represent lower percentages of total assets (2.76% and 1.71%, respectively), while software (which is the second most frequent type of intangible) represents only 1.61% of the total assets. Carbon allowances have the smallest percentage of total assets (0.40%).

It is noted that 'development expenditure' appears to represent on average about 2% of companies' total assets. Although this may be considered somewhat low as a percentage, for companies' in some specific industries, this type of intangible asset seems to be more material. More specifically, in untabulated analysis, 60% and 40% of the firms in the technology and healthcare industries respectively recognise these types of intangible asset. In fact, the average level of these assets as a percentage of total assets is 3% and 5% respectively. This information indicates the need for and importance of a specific accounting policy for the treatment of such costs.

Figure 3.5: Frequency of types of intangible assets

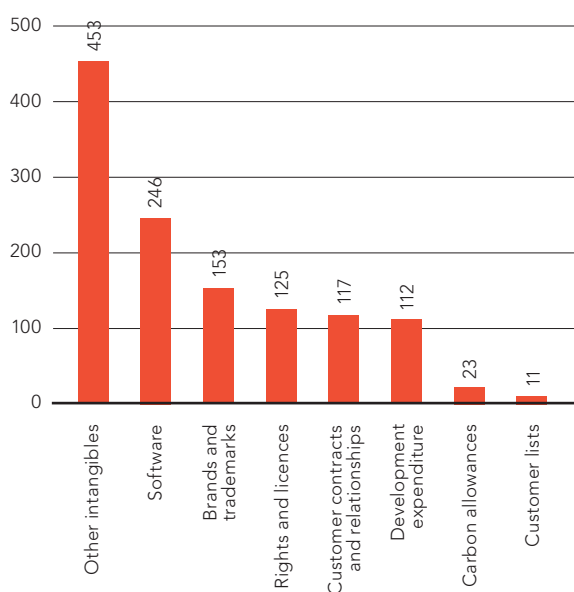
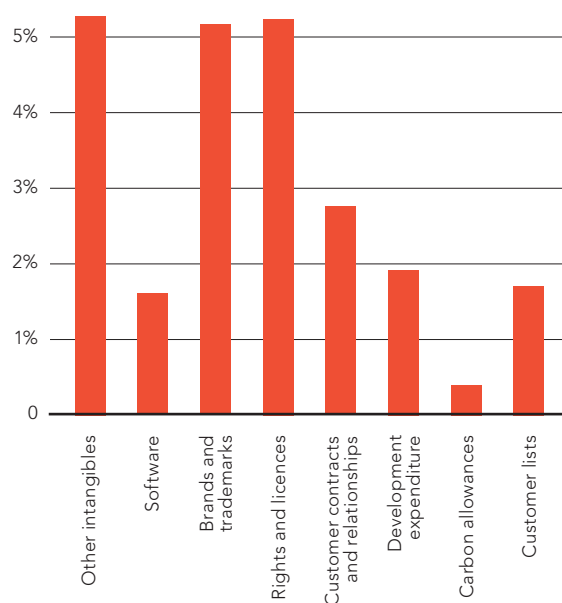


Figure 3.6: Types of intangible assets as an average percentage of total assets



3.4 DISCLOSURES RELATED TO INTANGIBLE ASSETS

In order for users of the financial statements to be informed about the effects and the significance of intangible assets, IAS 38 requires companies to provide a series of disclosures. According to paragraph 118, an entity shall disclose the following for each class of intangible assets, distinguishing between internally generated intangible assets and other intangible assets: (a) whether the useful lives are indefinite or finite and, if finite, the useful lives or the amortisation rates used, (b) the amortisation methods used for intangible assets with finite useful lives, (c) the gross carrying amount and any accumulated amortisation (aggregated with accumulated impairment losses) at the beginning and end of the period, (d) the line item(s) of the income statement of comprehensive income in which any amortisation of intangible assets is included, as well as (e) a reconciliation of the carrying amount at the beginning and end of the period.

Tables 3.1 and 3.2 provide an analysis of the percentage of companies that disclose the above information. Table 3.1 provides the level with which companies respond to each individual sub-paragraph of IAS 38 when their financial statements indicate that they do have internally generated intangible assets. The analysis reveals that this type of information is relevant in 269 out of the 517 companies. Table 3.2 provides the corresponding information for 503 companies (out of the 517) whose financial statements indicate that they have acquired intangible assets.

The information presented above reveals that a large proportion of firms for which this information is relevant (about 26% out of the 269), do not disclose the line item(s) of the income statement in which any amortisation of intangible assets is included. Further (untabulated) analysis reveals that only in New Zealand and Norway do all companies provide this information while in Australia and France only 44% and 58% of companies (respectively) do so. Across industries, companies in the oil and gas industry generally provide this information (92%) while companies in the consumer goods and consumer services industries more frequently do not (only 26 out of the 38 and 34 out of 51 companies for which this item is relevant, respectively).

It is noteworthy that the study by ICAS and NZICA (2011) recommends that this requirement be deleted from the standard, stating a lack of consistency between IAS 38 and IAS 16 Property, Plant and Equipment. Whether companies should disclose the line in which both depreciation and amortisation items are included is an open question.

A small but nevertheless significant proportion (about 16%) do not disclose whether the useful lives are indefinite or finite and, if finite, the useful lives or the amortisation rates used (225 out of 269 disclose this information). Companies in Belgium, Finland, France, Germany, Malaysia, Norway, Portugal, South Africa and Spain often do not provide information about either useful lives or amortisation rates. By contrast, all companies in Australia, Sweden and Denmark provide both sets of information. Across industries, companies in the consumer goods and consumer services industries generally provide information about both useful

Table 3.1: Provision of the information required by paragraph 118 of IAS 38 (regarding internally generated intangible assets)

IAS 38 Para 118	
An entity shall disclose the following for each class of internally generated intangible assets:	
whether the useful lives are indefinite or finite and, if finite, the useful lives or the amortisation rates used	83.6% (225 out of 269)
the amortisation methods used for intangible assets with finite useful lives	85.5% (230 out of 269)
the gross carrying amount and any accumulated amortisation (aggregated with accumulated impairment losses) at the beginning and end of the period	96.3% (259 out of 269)
the line item(s) of the income statement in which any amortisation of intangible assets is included	73.6% (198 out of 269)
a reconciliation of the carrying amount at the beginning and end of the period showing:	94.4% (254 out of 269)
(i) additions, indicating separately those from internal development, those acquired separately, and those acquired through business combinations	
(ii) assets classified as held for sale or included in a disposal group classified as held for sale in accordance with IFRS 5 and other disposals;	
(iii) increases or decreases during the period resulting from revaluations under paragraphs 75, 85 and 86 and from impairment losses recognised or reversed directly in other comprehensive income in accordance with IAS 36 Impairment of Assets (if any);	
(iv) impairment losses recognised in profit or loss during the period in accordance with IAS 36 (if any);	
(v) impairment losses reversed in profit or loss during the period in accordance with IAS 36 (if any);	
(vi) any amortisation recognised during the period;	
(vii) net exchange differences arising on the translation of the financial statements into the presentation currency, and on the translation of a foreign operation into the presentation currency of the entity; and	
(viii) other changes in the carrying amount during the period.	

lives and amortisation rates (92% for both industries). By contrast, companies in the utilities and basic materials industries frequently do not provide this information (only 10 out of the 15, and 23 out of 31 companies for which this item is relevant, respectively).

Almost a similar proportion of firms (about 14%) do not disclose the amortisation methods used for intangible assets with finite useful lives (ie 39 out of 269 do not disclose this information).¹¹ Further (untabulated) analysis reveals that companies from Brazil, Finland, France, Germany, Hong Kong, Italy, the Netherlands, Norway, South Africa, Spain and the UK are those that more often fail to provide this information. By contrast, all companies in Sweden, Belgium, Portugal and Denmark provide this information. Across industries, companies in the telecommunications and oil and gas industries generally provide this information (91% for both industries). On the other hand, companies in the basic materials industry mostly do not provide the amortisation methods used for intangible assets with finite useful lives (only 24 out of the 31 companies for which this item is relevant provide this information).

As indicated in Table 3.2 below, the level of information provided in the mandated disclosures about acquired intangible assets is similar to that given for internally generated intangible assets. More specifically, a large proportion of firms for which this information is relevant (about 21% out of 503 firms), do not disclose the line item(s) of the income statement in which any amortisation of intangible assets is included. Further (untabulated) analysis reveals that only in New Zealand, Norway and Ireland do all companies provide this information, whereas very low proportions of firms in Australia, Greece, France and South Africa do so (63%, 67%, 68% and 44%, respectively). Across industries, analysis shows that most companies in the telecommunications industry (90%) provide this information. On the other hand, companies in the consumer goods industry quite often do not provide this information (only 50 out of the 73 companies for which this item is relevant provide this information).

About 21% do not disclose whether the useful lives of acquired intangible assets are indefinite or finite and, if finite, the useful lives or the amortisation rates used (395 out of 503 firms disclose this information. Many companies in Belgium, Brazil, China, Greece, Italy, Malaysia and Spain do not provide information about both the useful lives and amortisation rates when an intangible asset is acquired (in all these countries fewer than 70% of firms provide this information). On the other hand, more than 90% of the companies for which the item is relevant in the Netherlands, the UK, Norway and Austria do provide this information. Across industries, the analysis shows that most companies in the consumer goods and consumer services industries provide both sets of information when an intangible asset is acquired (92% for industries in both sectors), which is similar to the cases where an intangible asset is internally generated. Companies in the

Table 3.2: Provision of the information required by paragraph 118 of IAS 38 (regarding acquired intangible assets)

IAS 38 Para 118	
An entity shall disclose the following for each class of acquired intangible assets:	
whether the useful lives are indefinite or finite and, if finite, the useful lives or the amortisation rates used	78.5% (395 out of 503)
the amortisation methods used for intangible assets with finite useful lives	83.1% (418 out of 503)
the gross carrying amount and any accumulated amortisation (aggregated with accumulated impairment losses) at the beginning and end of the period	94.0% (473 out of 503)
the line item(s) of the income statement in which any amortisation of intangible assets is included	78.9% (397 out of 503)
a reconciliation of the carrying amount at the beginning and end of the period showing:	93.8% (472 out of 503)
(i) additions, indicating separately those from internal development, those acquired separately, and those acquired through business combinations	
(ii) assets classified as held for sale or included in a disposal group classified as held for sale in accordance with IFRS 5 and other disposals	
(iii) increases or decreases during the period resulting from revaluations under paragraphs 75, 85 and 86 and from impairment losses recognised or reversed directly in other comprehensive income in accordance with IAS 36 Impairment of Assets (if any);	
(iv) impairment losses recognised in profit or loss during the period in accordance with IAS 36 (if any);	
(v) impairment losses reversed in profit or loss during the period in accordance with IAS 36 (if any);	
(vi) any amortisation recognised during the period	
(vii) net exchange differences arising on the translation of the financial statements into the presentation currency, and on the translation of a foreign operation into the presentation currency of the entity; and	
(viii) other changes in the carrying amount during the period.	

11. ICAS and NZICA (2011) recommend that this requirement be deleted from the standard.

utilities and basic materials industries frequently do not provide this information (25 out of the 38, and 48 out of the 67 companies, respectively, for which this item is relevant provide this information).

Information on the amortisation methods used for intangible assets with finite useful lives is not disclosed by about 17% of the firms (85 of 503 firms do not provide this information). Further (untabulated) analysis reveals that a majority of companies from Brazil (75%), China (75%), Denmark (76%), Finland (77%), France (79%), Germany (65%), Italy (75%), the Netherlands (79%), and Norway do not provide this information. It is worth noting that only in New Zealand do all companies disclose this information. Across industries, analysis shows that most companies in the telecommunications industry provide this information (90%). On the other hand, nearly one-third of companies in the technology industry do not do so (6 of the 20 companies for which this item is relevant do not provide this information).

Beyond the above disclosures, paragraph 122 of IAS 38 requires further information to be disclosed, where relevant. Sub-paragraph (a) requires a firm with an intangible asset that is assessed as having an indefinite useful life to disclose the carrying amount of that asset and the reasons supporting the assessment of an indefinite useful life. Additionally, the entity shall describe the factor(s) that played a significant role in determining that the asset has an indefinite useful life. Analysis reveals that 151 companies (out of the 503 firms that have at least one acquired intangible asset beyond goodwill) indicate that they have at least one intangible asset with indefinite useful life. Only 58% (ie 88) of these companies disclose the reasons supporting their assessment that the asset has an indefinite useful life and/or the factor(s) that played a significant role in determining this. This picture is almost uniform across countries and industries, with only the companies in the consumer goods industry standing out (75% of the 36 applicable companies in this industry provide this information).

Paragraph 122 of IAS 38 requires disclosure about specific items or circumstances under which an intangible asset has been recognised. For example, it requires a description of the carrying amount and remaining amortisation period of any individual intangible asset that is material to the entity's financial statements. For intangible assets acquired by way of a government grant and initially recognised at fair value, disclosure of further information is also required. Finally, the disclosure of the existence and carrying amounts of intangible assets whose title is restricted and the carrying amounts of intangible assets pledged as security for liabilities or the amount of contractual commitments for the acquisition of intangible assets is also required. In fact, there are very few companies in the sample for which this information is relevant (between 1 and 19 companies out of the 503 to which these items are relevant) and all these firms provide this information.

Finally, it is interesting to note that the research could not identify any firm that is following the revaluation model for the measurement of intangible assets after recognition. All companies follow the cost model for their measurement. As a result, the disclosures required in paragraph 124 of IAS 38 are not relevant for the sample firms.

3.5 SUMMARY

This report provides evidence of the actual information provided by companies about their intangible assets. More specifically, it captures both the accounting for and the disclosures provided by the sample firms under IAS 38. The following findings stand out from this analysis.

- 'Other intangibles' feature as a separate class of intangible assets in the statement of financial position of 453 of the 517 companies (ie 87.6%) that have at least one type of intangible asset other than goodwill. Additionally, this type of asset represents, on average, 5.28% of companies' total assets. Would one not expect companies to supply readers with more details?
- In countries such as the UK, Belgium, Hong Kong, France, Denmark, the Netherlands and Australia, up to 39% of companies' total assets take the form of intangible assets (including goodwill). Additionally, companies in the consumer services and healthcare industries appear to make higher investments in intangible assets, including goodwill (36% and 40% of total assets, respectively). Intangible assets are among the most material asset type in a large number of companies in the major stock markets worldwide.
- A large proportion of companies do not disclose whether the useful lives of intangible assets (either acquired or internally generated) are indefinite or finite and, if finite, the useful lives or the amortisation rates used. Similarly, a large proportion of the sample firms do not disclose the line item(s) of the income statement in which any amortisation of intangible assets is included. Companies in consumer goods and consumer services industries provide this information more frequently, in contrast to firms in utilities and basic materials industries.
- There are 151 companies that indicate having at least one intangible asset with an indefinite useful life. Only 58% (ie 88) of these companies disclose the reasons supporting their assessment of an indefinite useful life and/or the factor(s) that played a significant role in determining this assessment.
- The majority of firms that should disclose a reconciliation of movement of the carrying amount of intangible assets at the beginning and end of the period, do so (about 94%).
- No company was found that measures intangible assets at fair value (this is consistent with earlier studies, eg Glaum et al. 2007). As a result, there are no effects on the comparability of accounting information with companies from China (or the US) where the revaluation model is not permitted. The IASB may wish to consider the usefulness of permitting this practice.

Overall, intangible assets account for a large proportion of companies' assets and, at the same time, relevant mandatory disclosures are not provided in full. From the IASB's point of view, ensuring that there is sufficient and comprehensive guidance that would promote the best possible communication of relevant information should be considered a key priority.

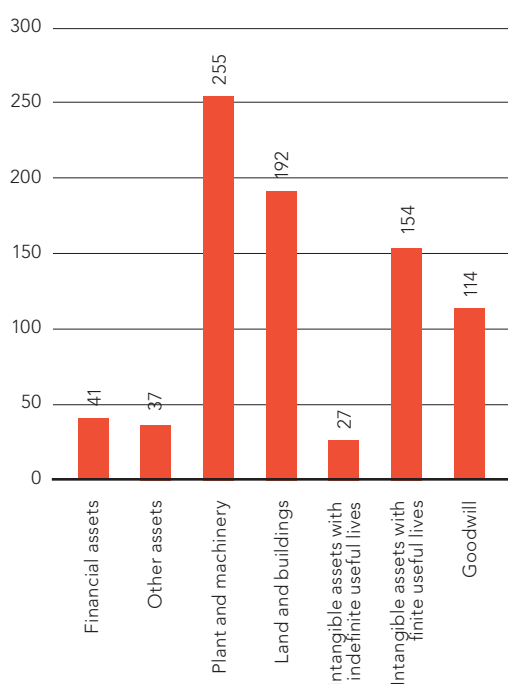
4. IAS 36 Impairment of Assets

4.1 INTRODUCTION

IAS 36 Impairment of Assets contains impairment guidance for most tangible and intangible assets, except for impairments of specific types of assets (eg deferred tax assets, assets arising from employee benefits, intangible assets arising from insurance contracts) that are addressed in other standards. This chapter discusses the various ways in which the sample firms accounted for impairment of their assets and the various relevant disclosures that they provided.

In order to maintain consistency with the previous two chapters, the discussion here focuses mainly on impairment testing of goodwill and other intangible assets with indefinite or finite useful lives. Some information about impairment testing of other types of asset is also provided.

Figure 4.1: Frequencies of assets impaired



4.2 RECOGNITION OF IMPAIRMENTS

Paragraph 126 of IAS 36 requires a firm to disclose the amount of impairment losses recognised in profit or loss during the period. Companies should also disclose the line item(s) of the statement of comprehensive income in which those impairment losses are included. Additionally, an entity shall disclose the amount of impairment losses on revalued assets recognised in other comprehensive income during the period. All this information is to be disclosed for each class of assets.

Of the 544 sample companies examined, 339 recognise an impairment loss. Additionally, 334 of them do disclose separately the amount of the impairment loss. Figure 4.1 shows the frequencies of impairments recognised across different types of asset as disclosed by the 339 companies in the sample that recognised an impairment loss.

As shown in Figure 4.1, plant and machinery constitute the most frequent type of asset to be impaired (in 255 or 75.2% of firms). Impairment of land and buildings is the second most frequent type of impairment, affecting 192 of the 339 firms (56.6%). It is also evident that a large number of firms recognise impairment losses among intangible assets with finite useful lives and goodwill (154 and 114 firms out of the 339, or 45.4% and 33.6% respectively). With regard to financial assets, other assets and intangible assets with indefinite useful lives, only a small portion of firms (41, 37 and 27 firms, respectively) document impairment losses.¹²

Tables 4.1 and 4.2 disaggregate the information related to companies reporting impairment of goodwill, intangible assets with infinite and finite useful lives across countries and industries, respectively. It is worth noting that, with the exception of companies in Greece, Malaysia and the UK, it is more frequent for companies to recognise an impairment on an intangible asset with finite useful life than on goodwill (see Table 4.1). The most frequent instances of goodwill impairment charges are, in relation to the country sub-sample, companies based in France (23 out of 45 French firms in the overall sample), Italy (7 out of 20 firms), Malaysia (6 out of 19 firms) and South Africa (7 out of 21 firms). The most frequent instances of impairment charges for intangible assets with finite useful lives are in Austria (8 out of 15 sample firms), Belgium (6 out of 11 firms), Germany (18 out of 29 firms), France (21 out of 45 firms) and Italy (9 out of 20 firms).

12. In an attempt to contextualise these findings in relation to past experience, see the findings by Glaum et al. (2007). Of the 357 European firms they analyse during the first year of IFRS adoption in the EU, approximately 70% recognised an impairment. For about one-third of them, the impairment related to goodwill and for a similar number it related to intangible assets with finite useful lives. Glaum et al. (2007) also report that impairment of intangible assets with indefinite useful lives was scarce. These findings suggest that there is no apparent difference in the frequency of impairments recognised or an effect of the economic situation in the period of study on incidence of impairments.

Across industries (see Table 4.2), as across countries, it is more frequent for companies to recognise an impairment on an intangible asset with finite useful life than on goodwill or an intangible asset with indefinite useful life. Companies in the telecommunications industry are an exception of this generalisation. In fact, the most frequent instances of goodwill impairment charges are also for companies based in the telecommunications industry (14 out of 32 firms). The

most frequent instances of impairment charges for intangible assets with finite useful lives are in the healthcare (13 out of 33 firms), telecommunications (12 out of 32 firms), and utilities industries (17 out of 45 firms). It is worth noting that a larger proportion of companies in the consumer goods and consumer services industries (12% and 11.5% respectively) recognise an impairment of intangible assets with indefinite useful lives than is the case in other industries.

Table 4.1: Frequencies of impairment charges recognised across countries

Country	Sample size	Companies reporting an impairment (%)	Companies reporting an impairment on goodwill	Companies reporting an impairment on intangible assets with indefinite useful lives	Companies reporting an impairment on intangible assets with finite useful lives
Australia	38	17 (45%)	4	4	4
Austria	15	12 (80%)	3	1	8
Belgium	11	9 (82%)	1	0	6
Brazil	25	5 (20%)	1	0	1
China	9	8 (89%)	1	0	2
Denmark	13	7 (54%)	1	1	5
Finland	21	13 (62%)	4	1	8
France	45	38 (84%)	23	7	21
Germany	29	23 (79%)	8	2	18
Greece	9	4 (44%)	2	0	0
Hong Kong	24	9 (38%)	1	0	3
Ireland	18	8 (44%)	1	1	3
Italy	20	16 (80%)	7	1	9
Malaysia	19	12 (63%)	6	1	3
Netherlands	17	12 (71%)	4	0	6
New Zealand	11	4 (36%)	0	0	0
Norway	17	13 (76%)	5	1	5
Portugal	17	12 (71%)	1	1	2
South Africa	21	18 (86%)	7	1	8
Spain	25	16 (64%)	5	0	7
Sweden	21	12 (57%)	3	0	8
Switzerland	28	18 (64%)	4	2	6
UK	91	53 (58%)	22	3	21
Total	544	339 (62%)	114	27	154

Table 4.2: Frequencies of impairment charges recognised across industries

	Sample size	Companies reporting an impairment (%)	Companies reporting an impairment on goodwill	Companies reporting an impairment on intangible assets with indefinite useful lives	Companies reporting an impairment on intangible assets with finite useful lives
Basic materials	74	54 (73%)	10	0	15
Consumer goods	75	45 (60%)	17	9	19
Consumer services	87	53 (61%)	19	10	22
Healthcare	33	16 (48%)	2	2	13
Industrials	132	82 (62%)	32	2	38
Oil and gas	46	33 (72%)	7	1	12
Technology	20	9 (45%)	1	0	6
Telecommunications	32	20 (63%)	14	1	12
Utilities	45	27 (60%)	12	2	17
Total	544	339 (62%)	114	27	154

Table 4.3 sheds more light on the relative importance of the impairment losses recognised by the sample firms. The table shows the median value of impairment loss recognised relative to operating profit for the 334 companies that disclose the amount of impairment recognised.¹³

Companies in the healthcare and oil and gas industries have the largest amounts of impairment loss recognised, equal to 5.2% and 4.4% of operating profits, respectively. The industries with the lowest impairment losses recognised, of 2.1% and 1.8% of operating profit respectively, are consumer services and basic materials. The remaining industries have impairment losses recognised between 2.3% and 3.5% of operating profit.

The country analysis shows that Greece has the largest amount of impairment losses, equal to 16% of operating profits. Austria, France and Germany recognise impairment losses equal to 6.6%, 5.7% and 5.6% of operating profits, respectively. Companies in Ireland recognise impairments of about 4.7% of operating profits, while other countries recognise impairment losses between 3.9% and 1.1%. The countries with the lowest relative amounts of impairment losses recognised are Brazil and China (0.9%), Finland (0.7%) and Portugal (0.3%).

Table 4.3: Median values of impairment charges recognised across countries and industries as a percentage of operating profit

Country	Basic materials	Consumer goods	Consumer services	Healthcare	Industrials	Oil and gas	Technology	Telecommunications	Utilities	Overall country median
Australia	0.004	1.351	0.010		0.076	0.041		0.032	0.031	0.026
Austria	0.012			- 2.435	0.063	0.106		0.038	0.080	0.066
Belgium	0.188	0.019	0.008	6.371	0.033			0.014		0.027
Brazil	0.013	0.016				0.009			0.002	0.009
China	0.003		0.220		0.003	0.022				0.009
Denmark		0.077		0.030	0.046	0.210				0.032
Finland	0.088		0.647	0.011	0.005				0.002	0.007
France	0.001	0.013	0.057	0.086	0.062	0.074	5.000	0.080	0.115	0.057
Germany	0.131	0.041	0.744	0.148	0.043		0.015	0.107	0.269	0.056
Greece	0.319				- 0.042			0.390		0.160
Hong Kong		0.067	0.019		0.016				0.001	0.017
Ireland	- 6.619	0.058	0.007	0.234	0.078					0.049
Italy		0.092	0.007		0.064	0.023	0.183	0.011	0.006	0.020
Malaysia		0.130	11.643		11.643	0.028		0.136	0.069	0.035
Netherlands	0.082	0.028	0.021		0.020	0.122	0.016	0.012		0.022
New Zealand	0.064			0.009	0.287				0.010	0.037
Norway	0.012	0.002	0.070		0.309	0.044		0.001		0.019
Portugal	- 0.509		0.003		0.039	0.027		0.054	0.001	0.003
South Africa	0.024	0.006	0.012	0.048	0.012	0.005		0.050		0.012
Spain		0.042	0.000		0.019	0.181	0.002		0.037	0.027
Sweden	- 0.934	0.006	0.006		0.022		0.022	0.019		0.021
Switzerland	0.034	0.005	- 4.273	0.089	0.007	0.049		0.004		0.011
UK	0.045	0.024	0.029	0.056	0.017	0.055	0.035	0.468	0.321	0.039
Overall industry median	0.018	0.028	0.021	0.052	0.023	0.044	0.033	0.030	0.036	0.029

13. When operating profit is actually a loss, the ratios presented in Table 4.3 are negative.

4.3 REVERSAL OF IMPAIRMENT

For impairments recognised for any asset other than goodwill, in case of subsequent increase of the recoverable amount, a reversal of the impairment loss is permitted by IAS 36. This is prohibited, however, for impairments recognised for goodwill. It is noted that under the accounting standards in China once an impairment loss is recognised, it shall not be reversed in a subsequent period. (This is also the case under US GAAP.)

Along these lines, paragraph 126 of IAS 36 requires a firm to disclose the amount of reversals of impairment losses recognised in profit or loss during the period. It also requires disclosure of the line item(s) of the statement of comprehensive income in which those impairment losses are reversed, as well as the amount of reversals of impairment losses on revalued assets recognised in other comprehensive income during the period (if relevant).

Untabulated analysis reveals that 101 companies (ie 18.6% of the total sample of 544 companies) report that they recognise a reversal of an impairment. Only 93 of these companies disclose the amount of the reversal separately. The mean (median) value of reversal of impairment recognised is €33.5m (€7.0m) and the standard deviation is €78.6m. When exploring any industry or country trend for these reversals, it can be seen that there is at least one company from every industry that recognises a reversal of an impairment, with 24 firms being industrials (out of 132 in the total sample) and only one firm being from the telecommunications industry. The former is not surprising considering the prevalence of industrial firms in the sample. Similarly, with the exception of New Zealand, there is at least one company from every country that recognises a reversal of an impairment, with 12 firms being from France and Germany (out of 45 and 29 respectively in the total sample) and 14 (out of 91 in the total sample) being from the UK.

Finally, paragraph 130 of IAS 36 requires a company to disclose the main events and circumstances that led to recognition of these reversals of impairment losses (providing that these reversals are material). Of the 101 companies that report a reversal of an impairment, 37 disclose a justification for the reversal that is recognised. The mean (median) percentage of reversal of impairments over operating profit is 7% (1%). Given that these reversals appear to be significant and that this practice is not permitted under US GAAP and CAS, it is surprising that companies fall short of the standard's requirements.

4.4 IMPAIRMENT TESTING OF GOODWILL AND OTHER INTANGIBLE ASSETS WITH INDEFINITE USEFUL LIVES

Probably the most controversial and complex area in IAS 36 is that of impairment testing of goodwill and other intangible assets with indefinite useful lives. This is because (as in section 2.3, page 19) very large amounts of such assets can be found on the balance sheets. Moreover, a significant number of assumptions around impairment testing are required.

Mandated disclosures vary depending on the type of asset (goodwill and other intangible assets with indefinite useful lives versus other assets) as well as each asset's materiality. As an example, according to paragraph 130 of IAS 36, a company shall disclose the events and circumstances that led to recognition or reversal of an impairment loss and the amount of impairment loss recognised or reversed. This is required only for each material impairment loss recognised or reversed during the period.

According to IAS 36 (paragraph 80), for the purpose of impairment testing, goodwill acquired in a business combination shall, from the acquisition date, be allocated to each of the acquirer's cash-generating units (CGUs), or group of CGUs, that is expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units or groups of units.¹⁴ Following on from this, according to paragraph 134, a company has to disclose specific information for each CGU (or group of CGUs) for which the carrying amount of goodwill or intangible assets with indefinite useful lives allocated to that unit (or group of units) is significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite useful lives. Similar information has to be disclosed if some or all of the carrying amount of goodwill or intangible assets within definite useful lives is allocated across multiple CGUs (or groups of units), and the amount allocated to each unit (group of units) is not significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite useful lives.

The previous chapter identifies 491 companies with goodwill recognised (see section 3.2, page 26) and 151 companies for which there is an indication of having at least one intangible asset with indefinite useful life (see section 3.4, page 29). Further investigation reveals that only three of these 151 companies do not also have goodwill recognised. Additionally, one firm had goodwill that was fully impaired during the period under investigation. As a result, the disclosures on impairment testing required by IAS 36 are potentially relevant (paragraphs 134 and 135) to 495 companies. In practice, although a firm may report separately an amount of goodwill, this may not be considered as sufficiently material to trigger disclosure of the information mandated by the standard.

14. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets.

Hence, companies may disclose only some of this information. Information from the notes to the financial statements of the sample firms was collected and the findings are presented below.

Of the 495 companies, 408 allocate goodwill and/or other intangible assets with indefinite useful lives across different CGUs. Figure 4.2 shows the frequencies of CGUs reported across these 408 firms. It becomes apparent that for a large number of companies (292 out of the 408 or 71.6%) goodwill is concentrated in six or fewer CGUs. There are 43 companies (10.5%) that report only one CGU as containing a significant amount of goodwill while 33 companies (8.1%) report that goodwill is allocated to more than 12 CGUs.

IAS 36 defines the recoverable amount as the higher of the asset's fair value less the costs of selling it and its value in use. On the basis of this requirement, a company is required to disclose the recoverable amount of the unit (or group of units) to which significant goodwill (and/or other intangible assets with indefinite useful lives) has been allocated. A company is also required to disclose the basis on which the recoverable amount of the unit (or group of units) has been determined (ie value in use or fair value less costs of disposal). Figure 4.4 shows the number of companies disclosing the method adopted for determining the recoverable amount, and the actual methods adopted.

As shown in Figure 4.3, 35 (7.1%) out of the 495 companies for which paragraphs 134 and 135 are potentially relevant remain silent about the methods adopted. Value in use is the most frequently used method of measuring recoverable amounts, being applied by 384 companies. Only 28 of the 408 companies (ie nearly 6%) use fair value less costs of selling, while 48 companies (ie nearly 10%) employ both valuation methods to determine the recoverable amount.

Untabulated analysis reveals that of the 28 companies that use only fair value less costs of selling, seven are from Germany, four from Australia, and three from South Africa. Of the 48 companies that use both methods, four are from Australia, eight from France, six from Germany, five from Italy and eight from the UK. Additionally, four companies from Portugal and three from each of Greece, Germany, France, Denmark, Spain and Austria are included in the 35 companies that do not disclose the method adopted.

When looking at an industry level, most of the 28 companies that use only fair value less costs of disposal are companies in the industrials, basic materials and consumer services industries (seven, five and six companies respectively).

Figure 4.2: Frequencies of the cash-generating units (CGUs) reported

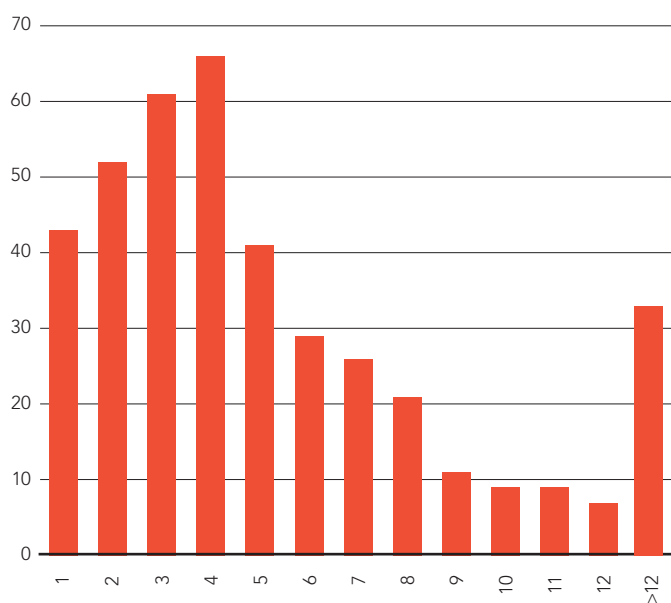
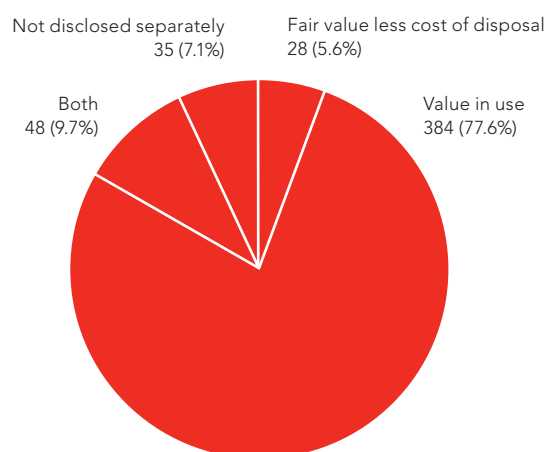


Figure 4.3: Frequencies of company disclosures of the method adopted for determining the recoverable amount



4.5 RELATED DISCLOSURES

Disclosures related to value-in-use calculations

Determining value in use of an asset or a CGU involves estimation of the future cash inflows and outflows to be derived from continuing use of the asset or the CGU and from its ultimate disposal, as well as application of the appropriate discount rate when calculating the net present value of those future cash flows. In estimating future cash flows, IAS 36 (paragraph 33) stipulates that projections based on the companies' budgets/forecasts shall cover a maximum period of five years, unless a longer period can be justified. Projections beyond the forecasted horizon are based on expected steady or declining growth rates (terminal values). According to paragraph 134 (d(iii)) of IAS 36, companies that employ value in use to determine the recoverable amounts of CGUs have to disclose detailed information on these cash flow estimations for each CGU that contains significant portions of the company's overall goodwill balance.

More specifically, the following disclosures are required:

- each key assumption on which management has based its cash flow projections for the period covered by the most recent budgets/forecasts
- a description of management's approach to determining the value(s) assigned to each key assumption
- the period over which management has projected cash flows based on financial budgets/forecasts approved by management; when the period used is greater than five years, an explanation of why that longer period is justified
- the growth rate used to extrapolate cash flow projections beyond the period covered by the most recent budgets/forecasts, and
- the discount rate(s) applied to the cash flow projections.

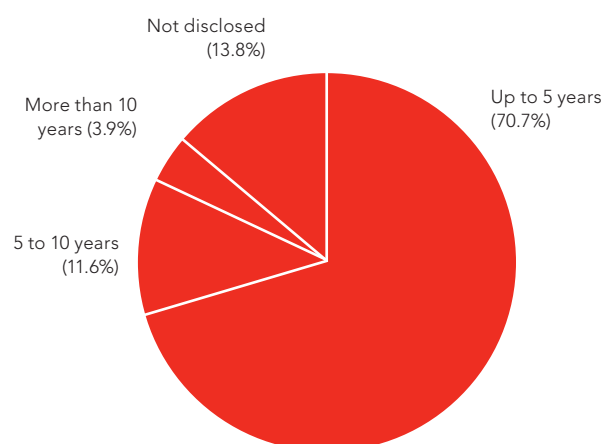
From the information presented in Figure 4.3, it would be expected that 432 companies (ie the 384 that apply the value in use and the 48 that apply both the value in use and the fair value less costs of selling method) would supply some information about the cash flow projections used in the impairment testing process. In fact, IAS 36 allows firms to apply an estimated figure for fair value less costs of disposal that is not based on an active market (paragraph 20). As a result, for some companies, the fair value less costs of selling is calculated using a discounted cash flow analysis similar to calculations of value in use, and market participant assumptions are taken into account. Hence, firms reporting that they use fair value less costs of disposal may also disclose some information about future cash flow projections. Finally, some companies may give some information about cash flow projections but not disclose which method they use for measuring the recoverable amount and may not disclose other information relevant to these cash flow estimations (eg discount rates applied). The present analysis reveals that 484 companies disclose some information about cash flow projections (eg periods of cash flows used, discount or growth rates applied).

Figure 4.4 shows the periods of the cash flows used in the impairment testing process for these 484 companies. Although 342 companies (ie about 71%) follow the standard to the letter and indicate that the period of cash flows used is up to five years, 75 companies (about 16%) disclose that this period exceeds five years. In fact, 19 companies (3.9%) disclose that the period of cash flow projections used exceeds 10 years. It is worth noting that all these 75 companies follow the standard in that they give a justification for using cash flows beyond a five-year period.

Companies disclosing that the period of cash flows used exceeds five years are mostly from Brazil, France and Sweden (37.5%, 19%, and 37% respectively). It is mostly companies from the consumer goods, healthcare, telecommunications and utilities industries that disclose using a period of cash flows exceeding five years (19%, 23%, 23% and 35% respectively).

Paragraph 51 of IAS 36 explains that estimated future cash flows should reflect assumptions that are consistent with the way the discount rate is determined. Otherwise, the effect of some assumptions will be counted twice or ignored. Because the time value of money is considered by discounting the estimated future cash flows, these cash flows exclude cash inflows or outflows from financing activities. Similarly, because the discount rate is determined on a pre-tax basis (as paragraph 55 explicitly requires), future cash flows are also estimated on a pre-tax basis. Paragraph 20 of Appendix A in IAS 36 adds, however, that when the basis used to estimate the discount rate is post-tax, that basis is adjusted to reflect a pre-tax rate.

Figure 4.4: Periods of cash flows used in impairment-testing estimations



Under the most likely assumption that all companies would apply a discount rate on a pre-tax basis, paragraphs 134 and 135 require companies to disclose the discount rate used without further information on whether this is pre-tax or post-tax. Additionally, there is no explicit requirement for companies to disclose whether estimated future cash flows have a pre-tax or post-tax basis.

The present analysis reveals that, of the 485 companies that disclose some information about the cash flow estimations, 449 disclose the average discount rate used in the impairment testing process. Nonetheless, a large number of the sample companies use post-tax discount rates, which conflicts with the standards' requirements. More specifically, of the 485 companies that disclose some information about the cash flow estimations, 92 companies (ie 19%) explicitly disclose that the discount rates used are post-tax. Interestingly, two companies disclose that they use a combination of post- and pre-tax discount rates. Figure 4.5 reflects these findings.

Further analysis reveals that a large proportion of companies from France (22 of the 45 in the total sample), from Germany (11 of the total 29) and some from Australia (7 of the total 38) explicitly disclose that the discount rates used are post-tax. From an industry perspective, mostly companies from the healthcare (8 of the 33 in the total sample), basic materials (14 of the total 74), utilities (11 of the total 46) and technology (5 of the total 74) industries explicitly disclose that the discount rates used are post-tax.

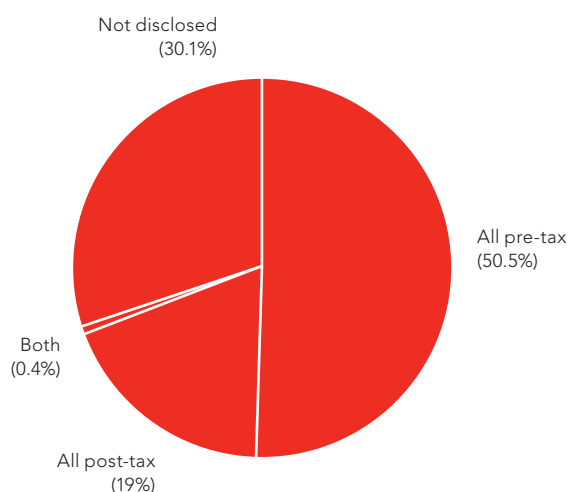
Table 4.4 provides the average pre-tax discount rate used across the 241 sample companies that disclose it separately. Significant variation is noted across countries and industries.

Across countries, the pre-tax discount rate used ranges from 8.6% (Ireland) to 14.3% (China). Across industries, the pre-tax discount rate ranges from 9.6% (utilities) to 12.2% (technology).

The following statistics indicate the effect that discount rates used have on information disclosed and the potential effects they may have in the impairment testing estimations. The average post-tax discount rate used in the various industries is 10.3% in healthcare, 8.3% in basic materials, 7.5% in utilities and 10.3% in technology. These contrast with 10.6%, 11.1%, 9.6% and 11.7% respectively, as shown in the 'Total' row of Table 4.4.

As discussed above, there is no requirement for companies to disclose whether the estimated cash flows used are post- or pre-tax. As a result, only a small number of companies provide this information. In fact, 31 companies disclose that all estimates of cash flows are made on a pre-tax basis whereas 34 companies disclose that all estimates of cash flows are made on a post-tax basis. Of these, 5 companies are from the Netherlands (out of the 17 in the total sample) and 12 from the UK (out of the 91 in the total sample). As far as the companies that disclose that all the estimated cash flows are estimated on a post-tax basis are concerned, this analysis reveals that 10 companies are from France, 4 are from Italy and 4 are from South Africa. There is no industry trend in any of the two categories.

Figure 4.5: Tax basis of discount rates used in impairment-testing estimations



Interestingly, 33 of the 34 companies that disclose that all estimates of cash flows are made on a post-tax basis also disclose that the discount rates used are themselves estimated on a post-tax basis. There is no information about the basis of cash flows used in the remaining 59 companies that disclose that the discount rates used are based on a post-tax estimation.

Another key element in estimating the present value of future cash flows is the cash flows that are expected beyond the detailed planning period (the terminal value). To get to the terminal value, the basis cash flow is usually extrapolated from the cash flows forecasted for the final years of the detailed planning period. The growth rate should reflect the expected long-term sustainable growth of the CGU's cash flows. Following along these lines, IAS 36 requires companies to disclose the growth rate used for extrapolating cash flow projections beyond the period covered by the most recent budgets/forecasts.

Analysis reveals that, only 384 (ie 79%) of the 485 companies disclosing some information about cash flow estimations, disclose this information. Many companies from China (44%), Denmark (50%), Ireland (31%) and Malaysia (36%) do not provide this information. From an industry perspective, many companies from utilities (30%), basic materials (28%), healthcare (20%) and oil and gas (17%) industries do not provide this information.

Disclosures related to estimations of fair value less cost of disposal

Companies have to disclose information about the assumptions made if the recoverable amount for a unit (or group of units) is based on a fair value less costs of disposal approach for measuring the recoverable amount of a CGU to which significant values of goodwill or other intangible assets with indefinite useful lives have been allocated. This is similar to the requirements for a firm to disclose specific information about the assumptions made when value in use calculations have been employed.

Drawing on the 28 companies that disclose explicitly that fair value less costs of disposal was used, 22 companies can be shown to disclose the methodology used to determine fair value less costs of disposal. Surprisingly, 21 of these companies disclose that this value is determined by using discounted cash flow projections, and they disclose: (i) the period over which management has projected cash flows; (ii) the growth rate used to extrapolate cash flow projections; and (iii) the discount rate(s) applied to the cash flow projections. It is noted that disclosure of this information became mandatory with the revised IAS 36 and it appears that, to a large extent, companies do follow this requirement.

Three of these companies are from Australia, seven are from Germany and two from each of Brazil, the Netherlands and South Africa. From an industry perspective, it is mostly companies from the consumer services (5) and basic materials (4) industries that follow this approach and disclose this information.

Table 4.4: Average pre-tax discount rates used across countries and industries

Country	Basic materials	Consumer goods	Consumer services	Healthcare	Industrials	Oil & gas	Technology	Telecommunications	Utilities	Totals
Australia	0.139		0.134	0.110	0.135	0.135		0.138	0.128	0.131
Austria	0.084					0.110		0.126	0.087	0.103
Belgium	0.088		0.095	0.104	0.081			0.080	0.080	0.091
Brazil	0.125	0.078	0.205		0.114					0.129
China	0.143									0.143
Denmark		0.084		0.096	0.104	0.160				0.101
Finland	0.103	0.100		0.098	0.107		0.110		0.104	0.105
France		0.120	0.110	0.082	0.092		0.116			0.103
Germany					0.110		0.088			0.105
Greece										ND
Hong Kong		0.119	0.055		0.101			0.110	0.104	0.100
Ireland		0.059	0.094	0.100	0.090					0.086
Italy		0.092					0.100	0.143	0.096	0.103
Malaysia		0.130	0.094						0.075	0.122
Netherlands	0.126	0.120	0.095			0.093	0.187	0.106		0.120
New Zealand	0.151		0.111	0.193	0.132			0.120	0.138	0.136
Norway		0.090	0.106		0.097	0.112				0.103
Portugal					0.116				0.080	0.098
South Africa	0.092	0.108	0.158							0.113
Spain	0.114				0.080		0.090	0.097	0.083	0.090
Sweden	0.105	0.117	0.120	0.089	0.105			0.131		0.109
Switzerland	0.104	0.095	0.064	0.102	0.117		0.127	0.070		0.103
UK	0.085	0.115	0.109	0.110	0.112	0.106	0.118	0.132	0.096	0.110
Total	0.111	0.105	0.109	0.106	0.112	0.111	0.117	0.122	0.096	0.109

4.6 SUMMARY

IAS 36 is probably the most complex standard as regards mandated disclosures. Its complexity arises partly from the large amount of information required and partly from the perceived sensitivity/proprietary nature of some of this information, from the companies' point of view.

The relevant literature suggests that asset impairment-testing regimes (including those embedded in IAS 36) are flawed as they offer preparers the opportunity to exercise discretion to the detriment of transparency, comparability and decision usefulness (Carlin and Finch (2010) with reference to Watts (2003a) and Watts (2003b)). A study that confirms these concerns is that of Andrews (2006), which looks at UK firms in the pre-IFRS era. Andrews (2006: 3) states that 'what is clear from this report, within the context of FRS 11,¹⁵ is that disclosures in the sample reports about how companies have arrived at the impairment loss are inconsistent'. The analysis in the present report confirms these earlier findings and pertinent concerns as it reveals the following points.

- Almost all companies reporting recognition of an impairment disclose the amount of the impairment separately (334 out of 339 companies), as required by the standard. The most frequent type of asset to be impaired is plant and machinery, with land and buildings to follow. Regarding intangible assets, it is more frequent for companies to recognise an impairment on an intangible asset with finite useful life than on goodwill. This may not be that surprising if one considers the standard's requirement to test these for impairment at an individual level, whereas goodwill is tested against the recoverable amount of an entire cash-generating unit.
- The large majority of companies reporting recognition of a reversal of an impairment disclose separately the amount of the reversal (93 out of 101 companies), which is required by IAS 36. Yet only 37 companies disclose a required justification for the reversal recognised.
- Of the 495 companies for which paragraphs 134 and 135 are potentially relevant, 35 (7.1%) remain silent about the methods adopted for measuring the recoverable amounts of the assets, although required. On a more positive note, although 75 companies disclose that the period of cash flows used in the impairment testing process exceeds five years (which is not recommended by the standard), they do justify their use of the longer periods.
- Although IAS 36 recommends that the discount rates used during the impairment testing process be calculated on a pre-tax basis, a large number of the sample companies (92) use post-tax discount rates.

- IAS 36 requires companies to disclose the growth rate used for extrapolating cash flow projections beyond the period covered by the most recent budgets/forecasts. Nonetheless, 21% of the 485 companies that disclose some information about the cash flow estimations do not disclose this information.
- IAS 36 has recently introduced a requirement for companies to disclose (i) the period over which management has projected cash flows; (ii) the growth rate used for extrapolating cash flow projections; and (iii) the discount rate(s) applied to the cash flow projections, if fair value less costs of disposal has been used and this value is determined using discounted cash flow projections. The analysis shows that 22 companies fall into this category and 21 of these do make the newly introduced mandated disclosures.

The analysis illustrates the dispersion in the level and type of information that is actually provided by companies, as they possibly interpret the complexity of the standard and the depth of information it requires. This reinforces the need for a review of the disclosures mandated by IAS 36 together with provision of specific guidance as to when this information is expected. Arguably, this recommendation for specific guidance on the application of the materiality principle across different disclosure requirements is pertinent, especially for IAS 36.

Additionally, beyond the need for promoting better guidance about the disclosures mandated by the standard in general, two issues related to recognition and measurement also appear to call for improvement. The first relates to the use of post-tax discount rates in the impairment-testing calculations. Although, in principle, the standard seems to require pre-tax discount rates, it is worded in a way that allows companies to use post-tax instead. This appears to result in great variation in practice, which hinders the comparability of the information reported. Further, while companies would be expected to use pre- or post-tax cash flows when using pre- or post-tax discount rates, respectively, this is not necessarily verifiable given the relevant disclosure requirements in the standard.

The second issue here relates to the option companies have for reversing impairment losses recognised. IAS 36 requires a company to disclose the main events and circumstances that led to recognition of reversals of impairment losses (providing that these reversals are material). Only 37% of companies do so while the mean (median) percentage of reversal of impairments over operating profit is a non-trivial 7% (1%). Given that these reversals appear to be significant and that this practice is not permitted under US GAAP and CAS, it is surprising that companies fall short of the standard's requirements. This is another example of where guidance about materiality would be useful.

15. It is noted that FRS 11 is very similar to IAS 36.

5. Determinants of compliance levels with disclosures mandated by IFRS 3, IAS 38 and IAS 36

The previous chapters examined and discussed the accounting for and the disclosures provided by the sample firms in relation to IFRS 3, IAS 36 and IAS 38. This chapter covers the development of a compliance index and the calculation of companies' compliance levels, and explores the potential influence of corporate and country factors on these compliance levels.

The chapter is structured as follows. First, it discusses the findings of the existing literature about the disclosure requirements of national standards and regulations in general. It then reflects on earlier evidence about compliance with disclosures mandated by IFRS in general and disclosures mandated by IFRS 3, IAS 36 and IAS 38 in particular. Following this review, there is an outline of the reasons for investigating compliance factors with the mandatory requirements of the three standards, an explanation of the research design and presentation of the empirical findings.

5.1 EARLIER EVIDENCE ON COMPLIANCE WITH MANDATED DISCLOSURES AND RESEARCH QUESTIONS

Disclosures mandated by national accounting standards and IFRS

Various studies examine compliance with national accounting standards and regulations. These mainly investigate compliance for periods during the late 1980s and the 1990s; very few examine compliance after 2000 (see eg Tai et al. 1990; Cooke 1992; Solas 1994; Wallace et al. 1994; Craig and Diga 1998; Owusu-Ansah 1998; Owusu-Ansah and Yeoh 2005). The focus of most of these studies is on specific jurisdictions, often in developing countries such as Jordan, Bangladesh and Tanzania. This body of work suggests that companies do not fully comply with disclosure requirements included in national accounting standards. Compliance levels are very rarely close to, let alone higher than, 90%, with the majority of studies reporting average compliance levels of approximately 70% to 80%. Great variability in the compliance scores is also documented (see a more detailed literature review in Tsalavoutas 2011).

Existing evidence indicates similar results for compliance with IFRS mandatory disclosures. Companies do not fully comply with IFRS disclosure requirements. Low levels of compliance are reported, while great variability in compliance scores is also documented (see eg Cairns, 2001; Street and Gray 2001; Abd-Elsalam and Weetman 2003, 2007; Hassan et al. 2006; Peng et al. 2008).

Aiming to identify the determinants of low compliance levels, Craig and Diga (1998), Tower et al., (1999), Street and Gray (2001) and Al-Shammari et al. (2008) conducted empirical tests. Their findings suggest that compliance with IFRS disclosure requirements can be explained (at least partly) by specific company characteristics (such as size, profitability and liquidity) and by country characteristics that influence its financial reporting systems (such as a common law versus a civil code legal tradition, enforcement mechanisms, shareholder protection, and market development). These studies conclude that the adoption of high quality standards does not necessarily lead to higher provision of mandatory disclosures.

It is worth noting, however, that these studies do not examine compliance with IFRS mandatory disclosures after their implementation in the EU in 2005. They investigate periods from the early 2000s and focus on older versions of IAS, ie not the revised IAS and newly introduced IFRS, which were intended to provide a 'stable platform' for the first years of IFRS mandatory implementation in the EU.

Work looking at compliance levels following IFRS implementation in the EU includes the academic studies by Fekete et al. (2008) looking at Finland, Tsalavoutas (2011) looking at Greece, and Glaum et al. (2013) using a sample from many EU countries. Studies from professional or enforcement bodies include those from the FRRP (2006), the European Commission (EC 2008), the ICAEW (2007), the SEC (2007; 2011) and Company Reporting Ltd (2007; 2008). All studies report low compliance with IFRS mandatory disclosures. Therefore, there are solid arguments supporting concerns about the 'quality' of financial statements after the adoption of IFRS (eg Schipper 2005; Ball 2006; Nobes 2006; Weetman, 2006). Additionally, the academic studies by Fekete et al. (2008), Tsalavoutas (2011) and Glaum et al. (2013) report empirical tests confirming that compliance with IFRS disclosure requirements in the first years of mandatory adoption in Europe can also be partially explained by specific characteristics of companies and their countries.

Compliance with the disclosures mandated by IFRS 3, IAS 36 and IAS 38

In its review of the 2005 financial reports of UK listed companies under IFRS, the FRRP identifies disparity between companies in compliance with the disclosure requirements about intangible assets and impairment testing (FRRP 2006: 2 and 4). Similarly, in 2008, the European Commission published an evaluation of the application of IFRS in the 2006 financial reports of 270 EU listed companies. This report states that '...there exists an underlying issue of non-compliance that needs to be addressed' (EC 2008: 12). It also identifies specific areas that '...pose certain problems in terms of comparability' (EC 2008: 13).

In a similar vein, studies conducted by the ICAEW in 2007 (on behalf of the EU) and by Glaum et al. (2007) also note problems related to the disclosures required by these standards. As an example, Glaum et al. (2007: 7–8) identify that:

'...one-third of the companies do not provide a description of the components of the business combination costs, which should include "costs directly attributable to the combination". Regarding the purchase price allocation (PPA), about one-fourth of the companies do not provide information regarding the classes of acquired assets, liabilities and contingent liabilities. In other instances, information on PPA is provided but is limited in content. In most instances, companies provide information for only one class of intangible assets. Only about 40% of the companies provide a rationale for the recognition of goodwill. Furthermore, those providing this disclosure in general only vaguely refer to expected synergy effects and growth expectations'.

Additionally, the ICAEW (2007: 98) study reports that there are:

‘numerous instances of companies: failing to disclose how they have applied the principles in the appropriate IFRS in their accounting policies; or disclosing accounting policies which appear to be irrelevant. Frequently occurring examples of the problems include: accounting policies that explain the treatment of indefinite lived intangible assets in the financial statements of companies that appear not to have such assets; and accounting policies that explain the criteria used to capitalise internally generated intangible assets (including development costs) in the financial statements of companies that appear not to undertake such activities’.

More recently, in 2011, the SEC Staff paper (SEC 2011) presents observations on the application of IFRS in practice, by looking at approximately 140 companies listed in the US that prepared their financial statements in accordance with IFRS as issued by the IASB. The sample period of this study report is similar to that used in the current report (ie financial period 2010/11).

The following observations on impairment testing are discussed in SEC (2011). First, although ‘many companies disclosed the use of a post-tax discount rate, it was not always clear if those companies also used post-tax cash flow estimates’ (SEC 2011: 26). Additionally, SEC (2011) identifies lack of disclosure of some key assumptions and judgements used in computing the value in use and fair value less costs of disposal. Moreover, SEC (2011) reports that although several instances of companies’ recognition of goodwill impairments are noted, narrative discussion of events and circumstances that led to the recognition or reversal of the impairment loss is absent. Regarding business combinations-related disclosures, the SEC staff had to engage with registrants and ask them for several pieces of information for clarification (owing to the lack of relevant information in the notes accompanying the financial statements).

In other words, there is ample evidence of non-compliance with the mandated disclosures of these standards across some EU member states during the early periods of mandatory implementation of IFRS. By contrast, previous studies reveal little about whether companies have improved their disclosure levels since the early years of IFRS adoption and whether companies outside the EU, which have recently adopted IFRS or converged accounting standards with IFRS, provide high levels of mandated disclosures. The present study sheds more light on this issue. Further, it provides recent evidence on compliance with IFRS mandatory disclosure requirements and their determinants for a larger set of firms than previously studied.

5.2 RESEARCH DESIGN

Compliance measurement

The sample consists of 544 non-financial companies from 23 countries for the year 2010 and all firms are applying the revised standards. The amendments in IFRS 3 (2008) were effective for annual periods beginning on or after 1 July 2009. For firms whose financial year begins on or after 1 July 2009, the 2010 annual report is used, while for the remaining firms the 2011 annual report is used. The sample represents the companies that are the largest, most liquid and most followed by analysts in these geographical areas (see Chapter 1, section 1.3 and Tables 1.1 and 1.2 for further details).

This report follows earlier studies, including Street and Gray (2001), Tsalavoutas et al. (2010) and Tsalavoutas (2011), in the method for measuring compliance. A disclosure index containing all the items mandated by IFRS 3, IAS 36, IAS 38 is used as a scoring sheet for each company.

The scoring sheet (ie the research instrument for this part of the study) is based on the one developed by Tsalavoutas et al. (2010), which has already been tested for its validity. This has been updated in line with the requirements introduced by IFRS 3 and any changes made to the other two standards, IAS 36 and IAS 38. This process has revealed 110 items that companies are expected to disclose in line with these three standards. Table 5.1 disaggregates the total number of items included in the research instrument across the three standards. (See Table 3.1 for an example of part of the scoring sheet.)

Table 5.1: Items derived from the three Standards and the relevant paragraphs

Standards	Paragraphs	Number of items derived from the Standards
IFRS 3	B64–B67	52
IAS 36	126–135	39
IAS 38	118–124	19
		Total: 110

Before the sample firms could be scored using this sheet, the following points were considered. Firms that consider that particular amounts are immaterial are not obliged to disclose the requested information. To make sure that the scoring does not penalise a company for not disclosing information that may not be material, the following criteria were set before deciding whether the disclosures mandated by a standard were applicable or not.

As far as IFRS 3 is concerned, when assessing whether an acquisition is individually material, it was first determined whether the purchase price, including goodwill, represents at least 5% of consolidated net assets. If not, pro forma data were examined, if available. An acquisition is also considered individually material if the acquired firm contributes more than 5% of the consolidated revenue or profit. The same criteria were used for collectively material acquisitions to find whether paragraph B65 of IFRS 3 applies.

The disclosures required by IAS 36 are applicable even if a firm does not recognise any impairment loss, simply because it has to test goodwill and other intangible assets with indefinite useful lives annually for impairment. If an impairment and/or a reversal of an impairment takes place and is material, further disclosures are triggered. A 5% threshold of impairment over profit before tax is applied to determine whether an impairment or a reversal of an impairment was regarded as material and, therefore, should necessitate more relevant disclosures. As a result, to render the standard inapplicable, a firm should not have any goodwill or intangible assets with indefinite useful life and should not have recognised a material impairment or reversal of impairment for its remaining assets.

Finally, as far as disclosure mandated by IAS 38 is concerned, if a company elects to report separately the net book value of a class of intangible assets in its financial statements, it is assumed that the company considers this item to be material and, as a result, the corresponding mandated disclosure should be disclosed.

These criteria were then applied to the contents of the annual report of each of the 544 sample firms. Reading the whole report increases the ability to judge whether an item or even a standard is applicable or not. Each report was then manually checked against the items included in the scoring sheet. If a required item is disclosed, it was scored as one. If it is not disclosed, it was scored as zero. This approach is commonly known as the 'dichotomous' method (Cooke 1992). In fact, the above classification is not strictly 'dichotomous' given that some items may not be applicable to every company and as a result they are scored as 'not applicable' (NA).

As suggested by Tsalavoutas et al. (2010) and Tsalavoutas (2011), two indices were employed here concurrently for calculating the total compliance score for each firm: the Partial Compliance (hereafter *PC*) and Cooke (hereafter *CK*) methods. Although not under these names, these two indices are also used by Street and Gray (2001).¹⁶

The first method (*PC*) gives equal weight to each individual standard (*X*) applicable to a given firm (*j*). According to this approach, each standard is of equal importance. This is expressed as follows where (*PC_j*) is the total compliance score for each company (*j*).

$$PC_j = \frac{\sum_{j=1}^N X_j}{R_j} \quad (1)$$

As discussed above, if a required mandatory item within a standard is disclosed it was scored as one and otherwise zero (or as N/A if it is not applicable to this particular firm). The

sum of scores was divided by the total number of applicable items within a standard. This resulted in a compliance score for that standard (*X_j*). A total compliance score was then computed for each firm *j* (*PC_j*) by adding the compliance scores for each applicable standard *X* for firm *j* and dividing the sum by the number of standards applicable to that firm (*R_j*). The degree of compliance for each company (*PC_j*) is restricted between 0 and 1 ($0 \leq PC_j \leq 1$) or between 0% and 100%.

The second method (ie *CK*) assumes that each item (rather than each standard) is of equal importance and, thus, it gives equal weight to the individual items that any of the standards requires to be disclosed. The disclosure index *CK* for each company *j* (*CK_j*) is calculated as the ratio of the total items disclosed *C_j* (with regard to all three standards) to the maximum possible applicable items *N_j* of all standards for company *j* where *CK_j* is the total compliance score for the company *j*.

$$CK_j = \frac{\sum_{j=1}^N C_j}{N_j} \quad (2)$$

Similarly to *PC_j*, *CK_j* is restricted between 0 and 1 ($0 \leq CK_j \leq 1$) or between 0% and 100%. Overall, the higher the disclosure scores (*PC* and *CK*), the higher the firm's compliance with the disclosure requirements of IFRS 3, IAS 36 and IAS 38.

Most studies investigating compliance with national accounting standards' and/or IFRS mandated disclosures (see section 5.1) employ only one disclosure index method (usually the *CK* method). In practice, compliance scores computed under the *PC* and *CK* methods are often statistically different from each other (eg Tsalavoutas et al. 2010; Tsalavoutas 2011) and, as a result, different factors emerge as significant determinants of companies' disclosure levels. Street and Gray (2001) and Tsalavoutas (2011) use both methods and find different determinants of compliance, depending on which compliance score is used.

Given the differences between the two scoring methods along with evidence suggesting that the disclosure scores are often associated with different explanatory factors, both compliance methods were used in the present research to provide robust analyses. Only compliance determinants that are statistically significant were used when measuring compliance scores under both *PC* and *CK* methods.

16. To ensure the reliability of the scoring instrument, the compliance scores were computed for a random sub-sample of 10 companies independently, where each set of scores was compared with the scores computed by each researcher individually. This process yielded similar results each time.

Determinants of compliance

The aim of this research was inter alia to reveal the factors influencing compliance levels across different jurisdictions. Earlier research was used as the starting point in pursuing this objective, including Street and Gray (2001), Abd-Elsalam and Weetman (2003), Glaum and Street (2003) and Glaum et al. (2013). Cross-sectional multivariate regression analysis was carried out with the dependent variable being the compliance score calculated with the PC and CK methods. Independent variables are proxies that capture key factors likely to affect compliance levels. Earlier literature provides evidence that financial reporting quality is jointly determined by reporting standards, incentives faced by management, and enforcement and capital-market supervision (eg Ball et al. 2003; Hope 2003; Leuz et al. 2003; Bushman et al. 2004; Francis et al. 2005; Francis and Wang 2008). It can be argued that compliance with mandated disclosure is a function of both company-level and country-level determinants. The text below provides the details of both types of independent variable used.

First, there are the variables that relate particularly to the three standards of interest for this study, ie IFRS 3, IAS 36 and IAS 38. Conducting business combinations during the year or recognising an impairment might attract attention and, thus, might affect the overall disclosure behaviour of a firm. Further, the greater the level of intangible assets, the more material these could be considered. Therefore, an indicator variable is used that takes one if there is a business combination and zero otherwise (*Business_Comb*). Two additional variables are included for the disclosures mandated by IAS 36 and IAS 38: an indicator variable that takes one if an impairment is reported and zero otherwise (*Impairment*) and the ratio between total intangible assets (including goodwill) and total assets (*Intangibles*).

Although a positive relationship between compliance levels and *Intangibles* would be expected, the sign of the relationship between the other two variables (ie *Business_Comb* and *Impairment*) and compliance levels cannot be predicted. One conjecture is that an impairment or a business combination increases attention from the users, who then demand a greater amount of information. This 'pressure' should lead to higher compliance. In practice, provision of more mandated disclosures conveys both proprietary and non-proprietary information (eg discount and growth rates) as well as good and bad news to the users of financial statements. This may justify the apparent reluctance of many companies to provide more information (see Tsalavoutas and Dionysiou (2014) for more details on this rationale.)

The country-level variables suggested by earlier studies were used in the present research. Kvaal and Nobes (2010; 2012) report that even after adopting IFRS, EU companies often use accounting practices that were required under their national GAAP before the introduction of IFRS. This implies that companies in different countries may apply IFRS mandatory disclosure requirements differently, indicating variance in

compliance levels among mandatory IFRS adopters across various jurisdictions. Therefore, companies in countries where local accounting standards required disclosures similar to those required by IFRS could be considered as more familiar with IFRS's requirements (UK GAAP and IFRS required similar types of disclosure in a number of areas whereas there were more differences between Greek GAAP and IFRS, for example). As a result, higher disclosure scores would be expected where companies enjoyed this familiarity with IFRS-mandated disclosures.

To examine this IFRS familiarity hypothesis, the variable *Absence_disclos*, as measured by Ding et al. (2007) was used. *Absence_disclos* measures the extent to which the rules about certain accounting disclosure issues are missing from Domestic Accounting Standards but are covered in IFRS. Hence, the higher the *Absence_disclos* the less the familiarity with IFRS disclosures and the more likely is a negative relationship with compliance levels.

According to Frost et al. (2006), the disclosure system of a country (ie relevant disclosure regulations, monitoring and enforcement) is stronger for countries with greater market development (market development is captured by country market capitalisation, number of listed companies and transaction volume). Therefore, a higher level of stock market development should enhance compliance. A World Bank indicator was used to capture market development, defined as the market capitalisation of each country as a percentage of its GDP (*MktDevelop*), as at the end of 2010. A positive relation with compliance levels would suggest that companies operating in more-developed markets comply more with mandatory disclosure requirements than those in less-developed markets.

The degree of enforcement in a country may also affect the level of companies' compliance with mandated disclosure (Hope 2003). It is, in fact, one of the main potential obstacles of comparability after adopting IFRS across different jurisdictions that is discussed in the literature (Nobes 2006; Zeff 2007). Glaum et al. (2013) report that strength of enforcement was one of the main influential factors explaining compliance levels with the disclosures mandated by IFRS 3 and IAS 36 for a sample of EU companies in 2005.

La Porta et al. (1998; 2006) and Djankov et al. (2008) provide various scores with which they capture country-specific indices including the level of public enforcement, power of investigator, criminal sanctions, legal tradition/origin and market development. Preiato et al. (2013) also present a recent and updated index, focusing specifically on auditing and accounting enforcement.¹⁷

17. Preiato et al. (2013: 2) explain that the indices for each country are based on a checklist including 11 items about auditors, their training and oversight, exposure to IFRS and litigation risk (maximum weighted score 15), and eight items about the country's enforcement body, including its powers, activities and resources (maximum score 12). To construct these measures for 51 countries at 2002, 2005 and 2008, Preiato et al. (2013) use publicly available data, primarily surveys completed by FEE (2001), CESR (2006, 2007, 2009) and IFAC (2011) and annual reports of enforcement bodies to compile indices.

The Djankov et al. (2008) enforcement index (*EnforceDLLS*) is constructed to capture non-enforcement. It takes values from zero to one, with zero as a country with maximum enforcement. Therefore, a negative relationship is expected between *EnforceDLLS* and compliance scores (suggesting higher compliance when higher enforcement is imposed).¹⁸ The sensitivity tests used in the present research are the enforcement indices as in Preiato et al. (2013: 21–2), namely *EnforceAudit_{PBT}* (an index combining the level of activity of independent enforcement bodies and important features of the audit environment likely to affect the quality of enforcement of financial reporting requirements by auditors in a country) and *Enforce_{PBT}* (an index focusing only on the level of activity of independent enforcement bodies). Across the 51 countries for which Preiato et al. (2013) computed the indices, *EnforceAudit_{PBT}* ranges between 5 and 25, with 25 indicating higher enforcement. Similarly, more rigorous enforcement is suggested by higher numbers of *Enforce_{PBT}*. Thus, a positive relationship between Preiato et al.'s enforcement indices (2013) and compliance levels is expected.

Moreover, earlier studies indicate that disclosures are affected by a country's legal system. Jaggi and Low (2000) report that firms in common law countries provide more extensive disclosures than firms registered in civil code countries. In a similar vein, Hope (2003) reports that disclosure levels are driven by legal origin. On that basis, does legal origin of the country in which each firm is domiciled affect compliance with mandatory disclosure requirements? Djankov et al. (2008) provide a classification of legal origin. The vector *LegalOrigin* is a set of dummy variables capturing legal systems of English, French, Scandinavian and German origin (*OriginEN*, *OriginFR*, *OriginSC* and *OriginGR*, respectively).

Following previous studies, the present study also tested for various firm-level variables. Firms cross-listed in other countries are expected to have higher disclosure levels. First, firms that consider themselves higher-quality firms signal their better quality by listing in other markets (usually offering investor protection equal to or of higher quality than the markets of their primary listing) and join their peers there (Siegel 2005). This is commonly referred to as the signalling hypothesis. With regard to cross-listing in the US, in particular, Coffee (1999, 2002) has introduced the bonding hypothesis, which suggests that firms voluntarily choose to list (ie bond) in the US because a US listing enhances investor protection and reduces agency costs (see also Ball 2001).

Finally, from a practical point of view, cross-listing in another market requires companies to provide more disclosures or more compliant financial statements simply because the disclosure requirements may be higher and the enforcement mechanisms more rigorous in the secondary market of listing. Street and Gray (2001) report a significant positive relation between compliance and cross-listing in the US or in other markets, beyond the market of primary company listing. In the present study, cross-listing is captured with a binary variable, *CrossList*, which takes a value of one if a firm is listed in any other market (including the US) beyond its primary listing market, and zero otherwise. Additionally USlisting is used, being a binary variable that takes a value of one when the firm is listed in the US and zero otherwise.

DeAngelo (1981) and Watts and Zimmerman (1986) suggest that large audit firms perform higher-quality audits. Having clients with poor-quality financial statements jeopardises an auditor's reputation. Thus, audit companies that are larger and more sensitive to the public eye have greater incentives to ensure that their clients' financial statements do not breach accounting standards (DeAngelo 1981; Fama and Jensen 1983). Additionally, large and international audit companies have greater competence and expertise on IFRS (Dumontier and Raffournier 1998). This is particularly relevant to the objectives of the present study. Higher levels of auditor expertise and competence should result in higher levels of compliance with IFRS in their clients' financial statements. Accordingly, companies employing one of the four largest auditing firms (ie PwC, KPMG, E&Y and Deloitte, commonly known as the 'Big Four' auditors) should have higher compliance levels with IFRS mandatory disclosures. To test this proposition, an indicator variable (*AuditFirm*) coded 1 was constructed for companies that use one of the Big Four audit firms and zero otherwise.¹⁹ Considering auditing's significance, it is also posited that the overall country audit environment enhances enforcement's ability to explain compliance. For this reason, when testing *Enforce_{PBT}* or *EnforceDLLS*, the Preiato et al. (2013) index *Audit_{PBT}* is added as this captures only the importance of auditors as an enforcement mechanism.

Additional firm-level variables were controlled for in the present study, ensuring that the findings are not driven by firm size, capital structure (gearing), profitability and firm liquidity. Company size (*Size*) is defined as the natural logarithm of market value as at four months after the first financial year end of each firm (*Datastream* item *MV* = price by number of shares outstanding). Gearing (*Gearing*) is defined as total debt (*Worldscope* item *WC022355*) by total assets (*Worldscope* item *WC02999*). Profitability (*Profitab*) is defined as net income available to common shareholders (*Worldscope* item *WC 01751*) as a percentage of total assets.

18. Glaum et al. (2013) report findings with the enforcement index of Djankov et al. (2008). They adjust the index as $1 - \text{EnforceDLLS}$ so that higher values indicate a more rigorous enforcement environment. They document a positive relationship between enforcement and compliance.

19. When a company is audited by two audit firms, as happens in France or Greece, and at least one is a Big Four firm, *AuditFirm* is coded as 1 in this study.

Finally, liquidity (*LIQ*) is defined as current assets (*Worldscope* item WC02201) divided by current liabilities (*Worldscope* item WC03101).

Large firms face high political costs when they do not comply with mandatory disclosure requirements. Additionally, smaller firms are more sensitive to proprietary costs, implying higher compliance for larger firms. At the same time, a large firm has incentives to disclose less-detailed information to avoid investor and government attention (see Wallace et al. 1994; Wallace and Naser 1995), implying a negative relationship between firm size and compliance scores. Highly leveraged firms document higher levels of disclosures on gearing (Francis et al. 2005), possibly owing to the disclosure requirements of debt holders. Nonetheless, companies with low gearing may provide high levels of mandatory disclosures to 'screen' themselves; in countries where banks are the major providers of finance, even disclosures from highly geared firms may be redundant. Similarly, profitability and liquidity can serve as proxies in several theoretical frameworks, and as a result the direction of their relationships with companies' levels of disclosures cannot be hypothesized (see Tsalavoutas (2011) for references).

To control for the fact that companies in different industries may have different incentives for providing particular levels of disclosures, firms in this study are categorised into 'manufacturing' versus 'non-manufacturing' on the basis of their industry participation, according to the International Classification Benchmark (ICB). One binary variable, *DManufact*, is used (avoiding the common practice of using multiple industry dummy variables, which adds multicollinearity to the regression models). *DManufact* takes a value of one when a firm operates in one of the following industry sectors: basic materials, consumer goods, industrials, oil and gas or technology. *DManufact* takes a value of zero when the company is in the consumer services, healthcare, telecommunications or utilities industries.

The overall relationship between the compliance levels (as captured by *PC* and *CK* methods) and their determinants can be expressed as:

$$\text{Compliance} = f(\text{Impairment}, \text{BusComb}, \text{Intangibles}, \text{Absence_disclos}, \text{MktDevelop}, \text{Enforcement}, \text{Audit}, \text{CrossList}, \text{USlisting}, \text{Size}, \text{Profitab}, \text{Gearing}, \text{LIQ}, \text{LegalOrigin}, D_{\text{Manufact}})$$

(3)

As discussed above, variations of Eq. 3 are presented here by using the alternative proxies for enforcement and audit mechanisms.

Additionally, all monetary values are converted into euros. If the firm's reporting currency is not the euro, the corresponding historic (daily) bilateral exchange rate, as at the financial year end day, stated on the European Central Bank website is used to convert the collected figures in euros (or as at four months later when calculating the firm market value four months after the year-end).²⁰ In order to address concerns about heteroskedasticity, White' corrected coefficients (1980) are used.²¹ The level of multicollinearity is documented, noting that a variance inflation factor (VIF) greater than 10 can indicate problems.

20. When firms are cross-listed, DataStream sometimes provides accounting information in a currency different from the reporting one. In such cases, the exchange rate that DataStream uses is used here and converted back to the reporting currency. Then, if that differs from the euro, it is converted to euros using the bilateral exchange rate from the European Central Bank.

21. Heteroscedasticity can arise as a result of outliers (Gujarati 2003: 390). Outliers are defined and excluded by using Cook's Distance method as a measure (Fielding and Gilbert 2004; Pallant, 2005).

5.3 EMPIRICAL FINDINGS

Descriptive statistics on compliance levels

After imposing the above-mentioned criteria for materiality, it is concluded that compliance with IFRS 3 is applicable in 116 firms, that with IAS 38 is applicable in 517 firms and that with IAS 36 is applicable in 522 firms. Table 5.2 provides descriptive statistics on the compliance levels with each standard separately, as well as the total compliance scores computed with *PC* and *CK* methods.

The mean (median) overall compliance *PC* and *CK* score is 83% (85%) and 83% (84%), respectively. Interestingly, 75% of the sample firms have at least 75% compliance levels. Firms with the lowest *PC* and *CK* compliance scores (ie the bottom quartile) report minimum compliance levels of 25% and 33%, respectively. At the other end of the spectrum, the highly compliant firms in the top quartile (25%) each comply with at least 93% of the requirements of the three standards.

It is worth noting that mean (median) compliance levels of just above 80% are valid not only for total *PC* and *CK* compliance scores, but also for individual compliance levels with IFRS 3,

IAS 36 and IAS 38. The mean (median) compliance levels are 81% (84%), 81% (86%) and 85% (83%) with IFRS 3, IAS 36 and IAS 38, respectively. Interestingly, the top 25% of highly compliant firms document 100% compliance levels with IAS 36 and IAS 38 but slightly lower (ie 92%) with IFRS 3 disclosure requirements. At the other end, minimum compliance levels with IFRS 3 are higher compared with compliance with IAS 36 and IAS 38. Minimum compliance with IFRS 3 is 33%, whereas minimum compliance levels with IAS 36 and IAS 38 are 0% and 17%, respectively. Nevertheless, 75% of firms comply with at least 71% of the IFRS 3 requirements, 73% with IAS 36 requirements, and with 80% of the IAS 38 requirements. The standard deviation (*SD*) ranges between 16% and 19% (as shown in Table 5.2). Therefore, there is an economically significant level of non-compliance with the three standards.

The table presents compliance levels with IFRS 3, IAS 36 and IAS 38. *N* stands for number of firms, while *N%* stands for number of firms as a percentage of the total number of firms for which the standard is determined to be applicable (ie 116 in IFRS 3, 522 in IAS 36, and 517 in IAS 38). Total *PC* and Total *CK* stands for total compliance level having followed the '*PC* Method' and '*CK* method' respectively.

Table 5.2: Descriptive statistics on compliance with IFRS 3, IAS 36 and IAS 38 mandatory disclosure requirements

Compliance score (%)	IFRS 3		IAS 36		IAS 38		Total <i>PC</i>		Total <i>CK</i>	
	<i>N</i>	<i>N%</i>	<i>N</i>	<i>N%</i>	<i>N</i>	<i>N%</i>	<i>N</i>	<i>N%</i>	<i>N</i>	<i>N%</i>
0–0.09	0	0.0%	8	1.5%	0	0.0%	0	0.00%	0	0.00%
0.10–0.19	0	0.0%	1	0.2%	1	0.2%	0	0.00%	0	0.00%
0.20–0.29	0	0.0%	2	0.4%	1	0.2%	1	0.18%	0	0.00%
0.30–0.39	2	1.7%	6	1.1%	3	0.6%	2	0.37%	4	0.74%
0.40–0.49	1	0.9%	15	2.9%	12	2.3%	13	2.39%	7	1.29%
0.50–0.59	10	8.6%	39	7.5%	11	2.1%	26	4.78%	30	5.51%
0.60–0.69	14	12.1%	27	5.2%	67	13.0%	51	9.38%	51	9.38%
0.70–0.79	18	15.5%	93	17.8%	20	3.9%	87	15.99%	89	16.36%
0.80–0.89	35	30.2%	118	22.6%	169	32.7%	177	32.54%	180	33.09%
0.90–100	36	31.0%	213	40.8%	233	45.1%	187	34.38%	183	33.64%
N	116	100.0%	522	100%	517	100%	544	100%	544	100%
Mean	81.02%		81.29%		84.86%		82.82%		82.81%	
SD	16.02%		19.71%		16.54%		14.00%		13.59%	
Min	33.30%		0.00%		16.70%		25.00%		33.30%	
p25	71.00%		72.70%		80.00%		75.95%		75.00%	
Median	83.95%		85.70%		83.30%		85.20%		84.40%	
p75	92.00%		100.00%		100.00%		93.30%		93.30%	
Max	100.00%		100.00%		100.00%		100.00%		100.00%	

Table 5.3 provides a descriptive analysis of compliance with the three standards for each country. IFRS 3 is not applicable for any company in Malaysia, New Zealand or Portugal.

For the 23 countries examined, Table 5.3 documents the average compliance *PC* and *CK* scores from 77% to 90%. Specifically, New Zealand is the country with the highest average compliance scores, ie 98% *PC* and 97% *CK*. Ireland is the country with the second highest average disclosure scores, ie of 92% *PC* and 91% *CK*. The UK follows with scores of 90% for both *PC* and *CK*. In contrast, some other countries report much lower compliance levels. Greece is the country with the lowest levels of *PC* and *CK* compliance scores, at only 63% and 67% respectively. Brazil has *PC* and *CK* disclosure scores of 74% and 75%, respectively, and Austria of *PC* 74% and *CK* 76%, Spain of *PC* 75% and *CK* 76%, China and South Africa of *PC* 77% and *CK* 76%, and Portugal of *PC* 78% and *CK* 76%. Therefore, there are a significant number of firms in these countries that are poor compliers.

Figures 5.1 and 5.2 plot the average *PC* and *CK* compliance scores respectively, by country.

It is noticeable that when the compliance scores are partitioned by industry, there is less variability on average *PC* and *CK* compliance levels compared with that shown for country partitioning (see Figure 5.3, Figure 5.4 and Table 5.4). Compliance scores by industry range from 80% to 88%. The oil and gas industry is weaker in overall compliance scores (80%), while technology has the highest compliance *PC* and *CK* scores of 88% and 87%, respectively.

Table 5.3: Analysis by country: compliance with IFRS 3, IAS 36 and IAS 38 disclosure requirements

	IFRS 3	IAS 36	IAS 38	Total PC	Total CK
Australia					
N	5	36	33	38	38
Mean	74.48%	80.25%	81.91%	79.96%	80.87%
SD	7.19%	25.56%	16.84%	15.31%	12.83%
Min	66.70%	0.00%	16.70%	40.00%	50.00%
Median	75.00%	86.60%	81.80%	83.30%	83.30%
Max	85.70%	100.00%	100.00%	100.00%	100.00%
Belgium					
N	3	11	11	11	11
Mean	72.37%	84.47%	88.43%	84.64%	84.21%
SD	27.80%	11.21%	12.41%	9.14%	8.78%
Min	44.40%	63.60%	70.00%	66.80%	66.70%
Median	72.70%	84.60%	90.90%	84.80%	84.40%
Max	100.00%	100.00%	100.00%	95.80%	95.70%
China					
N	1	9	9	9	9
Mean	50.00%	79.46%	76.67%	77.30%	76.47%
SD	.	20.36%	21.47%	16.63%	16.77%
Min	50.00%	33.30%	40.00%	57.50%	55.60%
Median	50.00%	75.00%	80.00%	77.50%	77.80%
Max	50.00%	100.00%	100.00%	100.00%	100.00%
Finland					
N	4	21	21	21	21
Mean	72.58%	82.12%	87.23%	84.07%	83.98%
SD	15.97%	12.50%	14.71%	9.46%	9.18%
Min	50.00%	57.10%	60.00%	63.90%	68.20%
Median	76.40%	81.80%	90.90%	81.70%	83.30%
Max	87.50%	100.00%	100.00%	100.00%	100.00%
Germany					
N	4	29	29	29	29
Mean	93.15%	75.94%	83.30%	79.77%	81.96%
SD	4.62%	25.77%	16.81%	14.43%	11.16%
Min	90.00%	0.00%	36.40%	45.00%	56.30%
Median	91.30%	83.30%	90.00%	84.70%	84.00%
Max	100.00%	100.00%	100.00%	100.00%	100.00%

	IFRS 3	IAS 36	IAS 38	Total PC	Total CK
Austria					
N	4	15	15	15	15
Mean	67.73%	67.80%	89.11%	76.74%	73.99%
SD	11.92%	27.34%	16.21%	14.72%	15.89%
Min	57.10%	16.70%	40.00%	51.80%	54.50%
Median	64.60%	63.60%	100.00%	73.50%	70.60%
Max	84.60%	100.00%	100.00%	100.00%	100.00%
Brazil					
N	1	19	24	25	25
Mean	63.60%	75.24%	71.22%	74.39%	74.81%
SD	.	23.05%	22.80%	19.12%	19.22%
Min	63.60%	28.60%	20.00%	33.30%	33.30%
Median	63.60%	81.80%	80.00%	80.00%	80.00%
Max	63.60%	100.00%	100.00%	100.00%	100.00%
Denmark					
N	2	13	13	13	13
Mean	76.20%	75.47%	91.61%	83.53%	84.08%
SD	33.66%	18.95%	11.01%	11.68%	12.43%
Min	52.40%	42.90%	66.70%	58.40%	54.50%
Median	76.20%	75.00%	100.00%	85.70%	85.70%
Max	100.00%	100.00%	100.00%	100.00%	100.00%
France					
N	16	44	44	45	45
Mean	80.38%	79.89%	76.62%	78.78%	78.35%
SD	13.79%	15.86%	16.16%	12.22%	12.15%
Min	50.00%	33.30%	40.00%	36.70%	37.50%
Median	81.65%	81.80%	80.00%	80.10%	80.00%
Max	100.00%	100.00%	100.00%	100.00%	100.00%
Greece					
N	2	8	9	9	9
Mean	58.35%	48.40%	76.67%	63.07%	66.93%
SD	11.81%	34.65%	17.32%	22.28%	19.22%
Min	50.00%	0.00%	50.00%	25.00%	33.30%
Median	58.35%	50.00%	80.00%	63.30%	64.70%
Max	66.70%	100.00%	100.00%	100.00%	100.00%

	IFRS 3	IAS 36	IAS 38	Total PC	Total CK
Hong Kong					
N	5	23	20	24	24
Mean	74.58%	73.21%	87.17%	79.54%	78.85%
SD	24.90%	24.67%	13.12%	15.22%	14.25%
Min	33.30%	0.00%	60.00%	42.90%	42.90%
Median	80.00%	78.60%	83.30%	83.75%	81.40%
Max	100.00%	100.00%	100.00%	100.00%	100.00%
	IFRS 3	IAS 36	IAS 38	Total PC	Total CK
Italy					
N	4	20	20	20	20
Mean	56.03%	84.77%	78.69%	79.78%	80.28%
SD	16.87%	14.52%	14.53%	8.70%	10.44%
Min	33.30%	45.50%	60.00%	59.70%	56.30%
Median	59.05%	85.70%	80.00%	81.30%	81.40%
Max	72.70%	100.00%	100.00%	95.50%	95.20%
Netherlands					
N	4	17	17	17	17
Mean	87.78%	85.77%	88.93%	87.14%	87.15%
SD	8.56%	14.54%	13.19%	11.64%	11.54%
Min	75.00%	46.20%	60.00%	53.10%	52.20%
Median	91.60%	85.70%	90.90%	87.90%	87.50%
Max	92.90%	100.00%	100.00%	100.00%	100.00%
Norway					
N	3	17	15	17	17
Mean	90.20%	83.07%	87.33%	84.91%	84.44%
SD	16.97%	17.84%	18.99%	13.65%	14.97%
Min	70.60%	35.00%	33.30%	57.50%	44.00%
Median	100.00%	86.70%	100.00%	88.80%	88.90%
Max	100.00%	100.00%	100.00%	100.00%	100.00%
Spain					
N	3	24	25	25	25
Mean	72.70%	72.68%	78.04%	75.98%	76.11%
SD	14.76%	25.53%	17.84%	18.45%	18.21%
Min	60.00%	0.00%	40.00%	45.40%	38.90%
Median	69.20%	81.80%	80.00%	78.40%	78.90%
Max	88.90%	100.00%	100.00%	100.00%	100.00%
Switzerland					
N	10	28	28	28	28
Mean	85.48%	89.61%	89.98%	89.43%	89.37%
SD	17.88%	11.87%	12.46%	9.06%	9.29%
Min	55.60%	54.50%	50.00%	65.90%	66.70%
Median	95.00%	91.30%	95.45%	90.90%	91.10%
Max	100.00%	100.00%	100.00%	100.00%	100.00%
South Africa					
N	2	21	19	21	21
Mean	71.35%	77.50%	77.69%	76.80%	76.47%
SD	1.91%	19.40%	20.82%	15.58%	15.65%
Min	70.00%	46.20%	40.00%	45.00%	45.50%
Median	71.35%	77.80%	80.00%	76.20%	77.80%
Max	72.70%	100.00%	100.00%	100.00%	100.00%

	IFRS 3	IAS 36	IAS 38	Total PC	Total CK
Ireland					
N	4	15	15	18	18
Mean	85.23%	87.47%	97.45%	92.27%	91.17%
SD	7.00%	11.94%	6.73%	8.27%	9.03%
Min	75.00%	66.70%	80.00%	75.00%	75.00%
Median	87.50%	83.30%	100.00%	92.40%	91.60%
Max	90.90%	100.00%	100.00%	100.00%	100.00%
	IFRS 3	IAS 36	IAS 38	Total PC	Total CK
Malaysia					
N	0	16	14	19	19
Mean	.	82.98%	81.64%	82.89%	83.22%
SD	.	12.53%	16.03%	11.38%	11.54%
Min	.	50.00%	42.90%	64.30%	63.60%
Median	.	83.30%	80.00%	80.90%	81.30%
Max	.	100.00%	100.00%	100.00%	100.00%
New Zealand					
N	0	11	10	11	11
Mean	.	97.73%	95.42%	96.79%	96.88%
SD	.	5.39%	7.83%	4.96%	4.74%
Min	.	83.30%	80.00%	85.80%	88.20%
Median	.	100.00%	100.00%	100.00%	100.00%
Max	.	100.00%	100.00%	100.00%	100.00%
Portugal					
N	0	17	17	17	17
Mean	.	66.77%	89.23%	78.02%	76.09%
SD	.	13.60%	10.11%	8.87%	9.82%
Min	.	50.00%	72.70%	65.50%	61.10%
Median	.	69.20%	90.00%	76.90%	75.00%
Max	.	100.00%	100.00%	100.00%	100.00%
Sweden					
N	6	20	21	21	21
Mean	79.75%	87.83%	90.26%	88.50%	88.07%
SD	12.69%	11.22%	16.93%	11.32%	10.56%
Min	54.50%	66.70%	40.00%	62.60%	65.50%
Median	84.50%	88.30%	100.00%	91.90%	91.30%
Max	87.50%	100.00%	100.00%	100.00%	100.00%
UK					
N	33	88	88	91	91
Mean	89.48%	89.82%	89.80%	89.75%	89.68%
SD	10.35%	12.35%	13.65%	9.26%	8.96%
Min	66.70%	42.90%	40.00%	51.40%	50.00%
Median	89.50%	91.30%	100.00%	90.90%	90.90%
Max	100.00%	100.00%	100.00%	100.00%	100.00%

Figure 5.1: Mean compliance by country, according to PC method

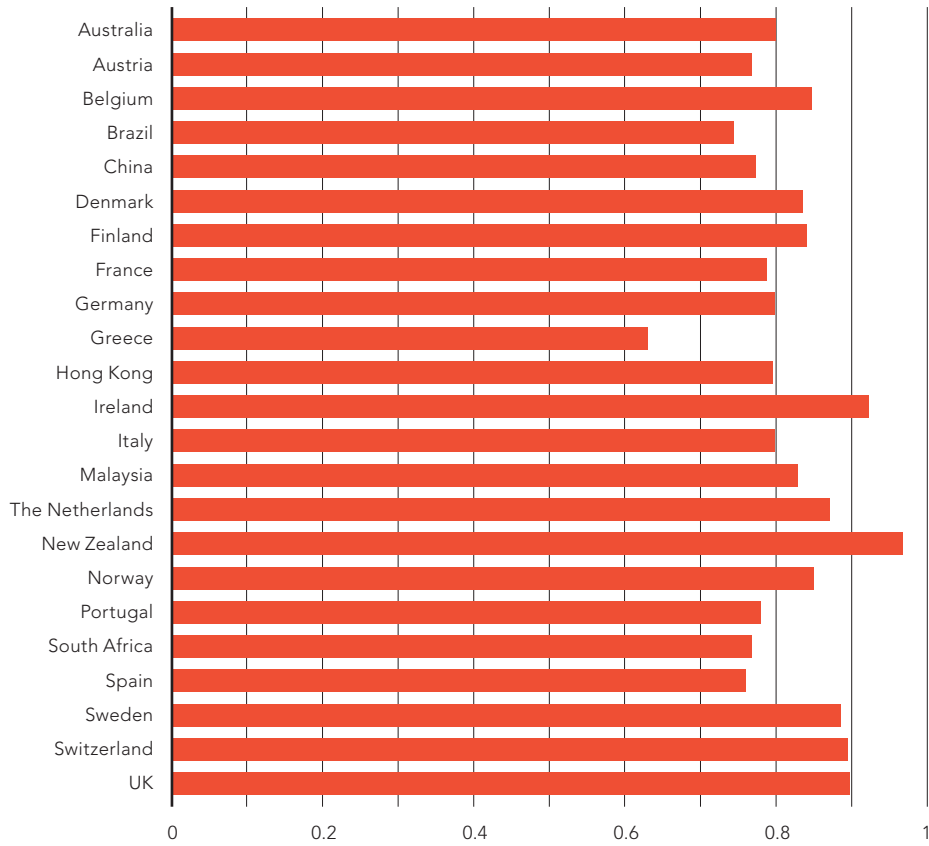


Figure 5.2: Mean compliance by country, according to CK method

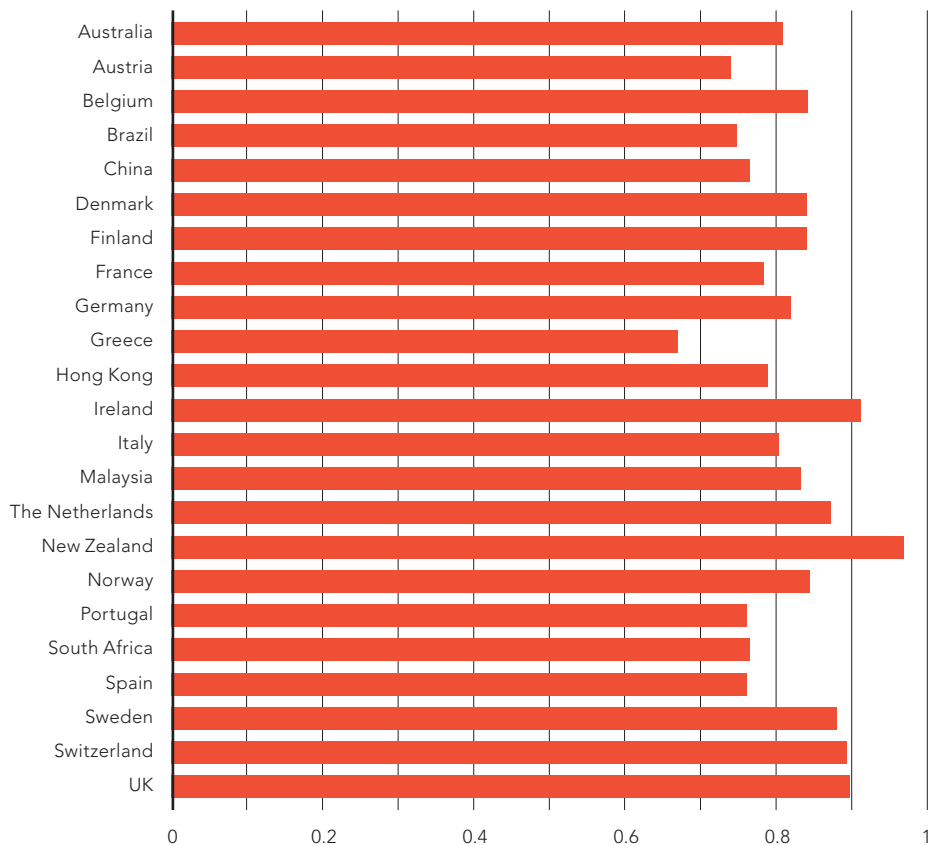


Figure 5.3: Mean compliance by industry, according to PC method

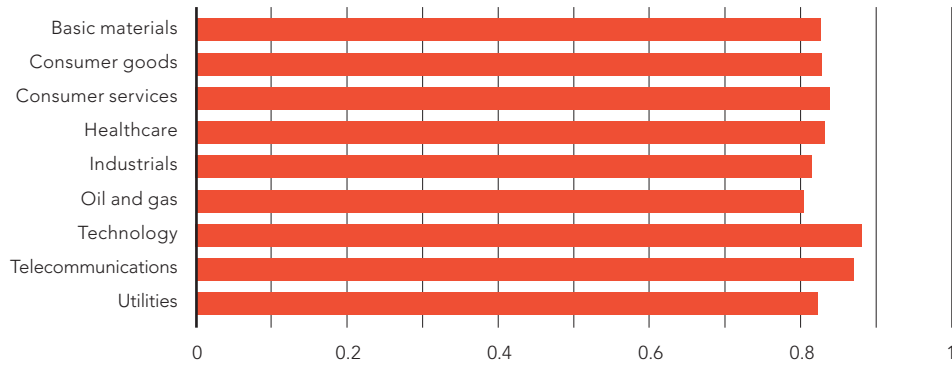


Figure 5.4: Mean compliance by industry, according to CK method

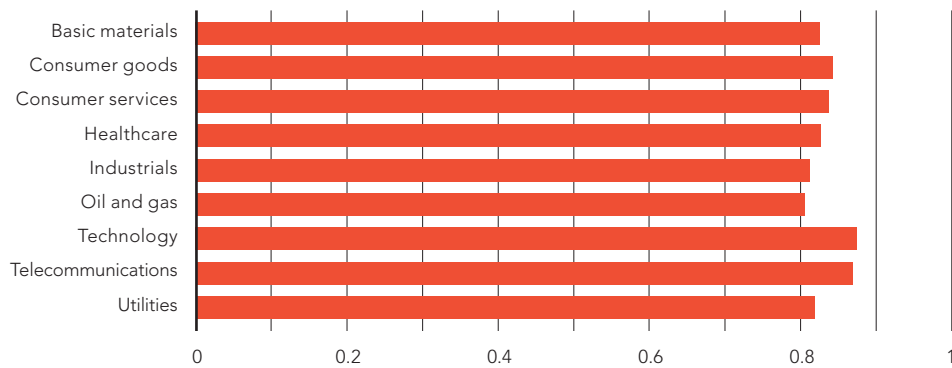


Table 5.4: Analysis by industry: compliance with IFRS 3, IAS 36 and IAS 38 disclosure requirements

	IFRS 3	IAS 36	IAS 38	Total PC	Total CK
Basic materials					
N	9	72	69	74	74
Mean	82.52%	82.45%	83.89%	82.56%	82.55%
SD	17.83%	19.05%	19.18%	14.84%	14.09%
Min	50.00%	0.00%	20.00%	45.00%	45.50%
Median	89.50%	85.70%	83.30%	86.75%	85.35%
Max	100.00%	100.00%	100.00%	100.00%	100.00%
Consumer goods					
N	17	73	74	75	75
Mean	83.49%	81.58%	83.95%	82.77%	84.17%
SD	18.64%	22.25%	16.88%	14.59%	13.10%
Min	33.30%	0.00%	40.00%	36.70%	37.50%
Median	90.00%	85.70%	83.30%	85.70%	86.40%
Max	100.00%	100.00%	100.00%	100.00%	100.00%
Consumer services					
N	14	81	86	87	87
Mean	82.86%	82.02%	84.85%	83.87%	83.68%
SD	15.11%	16.23%	16.61%	12.94%	12.63%
Min	50.00%	33.30%	16.70%	45.80%	45.50%
Median	83.75%	83.30%	83.30%	84.60%	83.30%
Max	100.00%	100.00%	100.00%	100.00%	100.00%
Healthcare					
N	10	33	32	33	33
Mean	72.23%	82.12%	86.65%	83.11%	82.63%
SD	17.87%	19.28%	15.56%	12.38%	12.68%
Min	44.40%	28.60%	40.00%	52.30%	52.60%
Median	73.35%	85.70%	90.45%	86.40%	87.00%
Max	100.00%	100.00%	100.00%	100.00%	100.00%
Industrials					
N	41	127	129	132	132
Mean	80.34%	79.67%	84.30%	81.48%	81.13%
SD	14.62%	21.77%	17.11%	14.93%	14.47%
Min	50.00%	0.00%	33.30%	25.00%	33.30%
Median	83.30%	83.30%	83.30%	85.00%	84.10%
Max	100.00%	100.00%	100.00%	100.00%	100.00%

	IFRS 3	IAS 36	IAS 38	Total PC	Total CK
Oil and Gas					
N	6	44	37	46	46
Mean	75.10%	77.63%	86.38%	80.37%	80.45%
SD	8.81%	22.28%	14.30%	15.27%	14.87%
Min	62.50%	0.00%	60.00%	40.00%	44.00%
Median	77.50%	78.40%	90.00%	79.85%	80.25%
Max	84.60%	100.00%	100.00%	100.00%	100.00%
Technology					
N	7	20	20	20	20
Mean	91.17%	88.89%	86.05%	88.11%	87.42%
SD	11.82%	13.46%	15.02%	7.78%	8.36%
Min	66.70%	57.10%	50.00%	70.90%	69.00%
Median	91.70%	94.45%	90.00%	90.00%	88.70%
Max	100.00%	100.00%	100.00%	100.00%	100.00%
Telecommunications					
N	7	31	31	32	32
Mean	82.44%	84.74%	89.35%	86.95%	86.83%
SD	13.31%	16.18%	14.16%	11.48%	11.84%
Min	69.20%	28.60%	42.90%	54.30%	50.00%
Median	75.00%	86.70%	100.00%	90.25%	91.10%
Max	100.00%	100.00%	100.00%	100.00%	100.00%
Utilities					
N	5	41	39	45	45
Mean	78.84%	79.21%	83.01%	82.20%	81.83%
SD	26.42%	17.96%	14.57%	14.02%	14.57%
Min	33.30%	42.90%	40.00%	42.90%	42.90%
Median	90.00%	83.30%	81.80%	83.30%	83.30%
Max	100.00%	100.00%	100.00%	100.00%	100.00%

Table 5.5: Summary of paragraphs in IFRS 3, IAS 36 and IAS 38 for which high non-compliance (less than 80% compliance) is observed

IFRS 3
B64 (sub d) – mean compliance 55%
The primary reasons for business combination and a description of how the acquirer obtained control of the acquiree.
B64 (sub e) – mean compliance 78%
A qualitative description of the factors that make up the goodwill recognised, such as expected synergies from combining operations of the acquiree and the acquirer, intangible assets that do not qualify for separate recognition, or other factors.
B64 (sub h) – mean compliance 36%
For acquired receivables: (i) the fair value of the receivables; (ii) the gross contractual amounts receivable; and (iii) the best estimate at the acquisition date of the contractual cash flows not expected to be collected. The disclosures shall be provided by major class of receivable, such as loans, direct finance leases and any other class of receivables.
B64 (sub q) – mean compliance 71%
The following information: (i) the amounts of revenue and profit or loss of the acquiree since the acquisition date included in the consolidated statement of comprehensive income for the reporting period; and (ii) the revenue and profit or loss of the combined entity for the current reporting period as though the acquisition date for all business combinations that occurred during the year had been as of the beginning of the annual reporting period.
B65/B64 (referring to individually immaterial business combinations occurring during the reporting period that are material collectively)(subh) – mean compliance 41%
For acquired receivables: (i) the fair value of the receivables; (ii) the gross contractual amounts receivable; and (iii) the best estimate at the acquisition date of the contractual cash flows not expected to be collected. The disclosures shall be provided by major class of receivable, such as loans, direct finance leases and any other class of receivables.
B65/B64_(referring to individually immaterial business combinations occurring during the reporting period that are material collectively) (subq) – mean compliance 73%
The following information: (i) the amounts of revenue and profit or loss of the acquiree since the acquisition date included in the consolidated statement of comprehensive income for the reporting period; and (ii) the revenue and profit or loss of the combined entity for the current reporting period as though the acquisition date for all business combinations that occurred during the year had been as of the beginning of the annual reporting period.
B67 (sub a) – mean compliance 23%
If the initial accounting for a business combination is incomplete (see paragraph 45) for particular assets, liabilities, non-controlling interests or items of consideration and the amounts recognised in the financial statements for the business combination thus have been determined only provisionally: (i) the reasons why the initial accounting for the business combination is incomplete; (ii) the assets, liabilities, equity interests or items of consideration for which the initial accounting is incomplete; and (iii) the nature and amount of any measurement period adjustments recognised during the reporting period in accordance with paragraph 49.
IAS 36
129 (sub a) – mean compliance 60%
The amount of impairment losses recognised in profit or loss and directly in equity during the period.
129 (sub b) – mean compliance 42%
The amount of reversals of impairment losses recognised in profit or loss and directly in equity during the period
131 (sub b) – mean compliance 53%
The main events and circumstances that led to the recognition of these impairment losses and reversals of impairment losses.
134 (sub a) – mean compliance 80%
The carrying amount of goodwill allocated to the unit (group of units).
134 (sub b) – mean compliance 54%
The carrying amount of intangible assets with indefinite useful lives allocated to the unit (group of units).
134 (sub eiii) – mean compliance 71%
A description of management’s approach to determining the value(s) assigned to each key assumption, whether those value(s) reflect past experience or, if appropriate, are consistent with external sources of information, and, if not, how and why they differ from past experience or external sources of information.
IAS 38
118 (sub a)(referring to acquired intangible assets) – mean compliance 79%
Whether the useful lives are indefinite or finite and, if finite, the useful lives or the amortisation rates used.
118 (sub d)(referring to internally generated intangible assets) – mean compliance 74%
The line item(s) of the income statement in which any amortisation of intangible assets is included.
118 (subd) (referring to acquired intangible assets) – mean compliance 79%
The line item(s) of the income statement in which any amortisation of intangible assets is included.
122 (sub a) – mean compliance 58%
For an intangible asset assessed as having an indefinite useful life, the carrying amount of that asset and the reasons supporting the assessment of an indefinite useful life. In giving these reasons, the entity shall describe the factor(s) that played a significant role in determining that the asset has an indefinite useful life.

Table 5.5 provides further information on the paragraphs of each of the three standards studied and in which high non-compliance levels are observed. A compliance level below 80% is considered a significant non-compliance level for the purposes of this study and is set as a benchmark for showing the information separately in Table 5.5. (The information about IAS 38 is repeated from section 3.4, for purposes of completeness.)

The IASB is currently undertaking the post-implementation review of IFRS 3. It also acknowledges the need for improving the disclosure requirements within standards and indicates that future work will take place at the standards level. The information presented in Table 5.5 could be a starting point for IASB attempts to improve disclosure requirements at the standard level. More explanation about when and under which circumstances these disclosures would be expected is desirable, as is more guidance for companies on what constitutes the required level of disclosure, in practical terms.

Determinants of compliance with IFRS 3, IAS 36 and IAS 38 Univariate analysis

The high levels of non-compliance and the high levels of variation in compliance raise a question as to which factors affect compliance with mandatory disclosure requirements. Table 5.6 provides descriptive statistics for the explanatory variables used in this study.

Panel A provides detailed information about the country indices used, ie Legal Origin, *Absence_disclos*, *EnforceAudit_{PBT}*, *Enforce_{PBT}*, *Enforce_{DLLS}*, *Mkt_Develop* and *Audit_{PBT}*. Seven countries in the sample are classified as having a legal system of English origin (ie Australia, Hong Kong, Ireland, Malaysia, New Zealand, South Africa and the UK) and four countries as having one with a German origin (ie Austria, China, Germany and Switzerland). Eight countries have a legal system with a French origin (ie Belgium, Brazil, France, Greece, Italy, Netherlands, Portugal and Spain) and four countries' systems have a Scandinavian origin (ie Denmark, Finland, Norway and Sweden).

Panel B provides detailed descriptive statistics about the continuous independent variables. This shows that *Absence_disclos* index takes values between zero and 18 and the mean (median) value for the sample firms is 6.69 (6.0). Considering that higher *Absence_disclos* suggests lower familiarity with IFRS, ie that there are more differences between the disclosure requirements of national GAAP and IFRS (Ding et al. 2007), these values suggest that most companies in the sample are from countries with relatively high familiarity with IFRS disclosure requirements.

Mean (median) *EnforceAudit_{PBT}* is 19.3 (19) with minimum being 12 and maximum 24. *Enforce_{PBT}* has a mean (median) of 8.25 (9), indicating that a very large component of *EnforceAudit_{PBT}* comes from audit factors of enforcement. The Djankov et al. (2008) enforcement index ranges from zero to one. For the sample, the mean (median) *Enforce_{DLLS}* is 0.44 (0.50). Overall, the descriptive statistics related to the enforcement indices suggest that the sample consists of a mixture of companies from relatively high- and low-enforcement environments.

Moreover, the Preiato et al. (2013) audit index, *Audit_{PBT}* has a mean (median) of 11.06 (11), while its minimum and maximum values are 4 and 14, respectively. This suggests that the majority of countries examined have an audit environment of higher quality which should, in turn, affect the levels of enforcement and compliance.

Market development (*MktDevelop* – market capitalisation to GDP) ranges from 16% (Italy and Ireland) to 481% (Hong Kong), while mean (median) *MktDevelop* is 117.6% (102%) (see panel B for these values). Beyond Hong Kong, other countries in the sample with high market capitalisation to GDP (over 100%) are Australia (129%), Malaysia (173%), South Africa (279%), Sweden (126%), Switzerland (232%) and the UK (138%).

Table 5.6: Descriptive statistics of independent variables

Panel A: Country level indices

Country	Legal Origin	Absence_disclos	Enforce AuditPBT	EnforcePBT	EnforceDLLS	Mkt Develop	AuditPBT
Australia	English	3	24	11	0.5	1.29	13
Austria	German	17	12	4	1	0.18	8
Belgium	French	10	19	10	0.5	0.58	9
Brazil	French	12	14	6	0.5	0.72	8
China	German	6	16	7	0	0.80	9
Denmark	Scandinavian	13	21	10	0.75	0.74	11
Finland	Scandinavian	11	15	6	0	0.50	9
France	French	8	20	8	0.5	0.76	12
Germany	German	9	19	9	1	0.44	10
Greece	French	18	13	5	0.5	0.24	8
Hong Kong	English	2	23	10	0	4.81	13
Ireland	English	0	19	6	0	0.16	13
Italy	French	9	22	9	0	0.16	13
Malaysia	English	6	19	9	1	1.73	10
Netherlands	French	2	20	9	0	0.85	11
New Zealand	English	6	19	9	0	0.26	10
Norway	Scandinavian	3	22	11	1	0.60	11
Portugal	French	8	14	7	1	0.36	7
South Africa	English	1	13	6	0	2.79	7
Spain	French	18	16	8	1	0.85	8
Sweden	Scandinavian	5	16	5	1	1.26	11
Switzerland	German	15	18	6	0.75	2.32	12
UK	English	0	24	10	0	1.38	14

Panel B: Independent variables

Variables	N	Mean	sd	min	p25	Median	p75	max
Impairment	544	0.62	0.49	0.00	0.00	1.00	1.00	1.00
BusComb	544	0.51	0.50	0.00	0.00	1.00	1.00	1.00
Intangibles	544	0.25	0.50	0.00	0.05	0.17	0.34	7.62
Absence_disclos	544	6.69	5.64	0.00	2.00	6.00	10.50	18.00
MktDevelop	544	1.17	1.01	0.16	0.50	0.85	1.38	4.81
EnforceAuditPBT	544	19.31	3.77	12.00	16.00	19.00	23.00	24.00
EnforcePBT	544	8.25	1.97	4.00	6.00	9.00	10.00	11.00
EnforceDLLS	544	0.44	0.42	0.00	0.00	0.50	1.00	1.00
AuditFirm	544	0.96	0.19	0.00	1.00	1.00	1.00	1.00
AuditPBT	544	11.06	2.27	7.00	9.00	11.00	13.00	14.00
CrossList	544	0.90	0.30	0.00	1.00	1.00	1.00	1.00
Ulisting	544	0.23	0.42	0.00	0.00	0.00	0.00	1.00
Size	544	12.40	20.00	0.05	2.79	5.39	12.20	197.00
Profitab	544	0.07	0.09	-1.14	0.03	0.06	0.09	0.89
Gearing	544	0.26	0.15	0.00	0.15	0.24	0.36	0.78
LIQ	544	1.59	1.57	0.00	0.97	1.31	1.81	24.75
OriginEN	544	0.41	0.49	0.00	0.00	0.00	1.00	1.00
OriginFR	544	0.13	0.34	0.00	0.00	0.00	0.00	1.00
OriginSC	544	0.31	0.46	0.00	0.00	0.00	1.00	1.00
OriginGR	544	0.15	0.36	0.00	0.00	0.00	0.00	1.00
Dmanufact	544	0.64	0.48	0.00	0.00	1.00	1.00	1.00

N stands for the number of observations (firms), mean is the mean measure, sd stands for the standard deviation, p25 and p75 capture the first and third quartiles, respectively. Median stands for median. Impairment is a binary variable that takes a value of one when there is an impairment, and zero otherwise. BusComb is a binary variable that takes a value of one when there is a business combination and zero otherwise. Intangibles is the ratio of total intangibles to total assets. Absence_disclos is the Ding et al. (2007) index capturing differences in disclosure requirements between national GAAP and IFRS. EnforceAudit_{PBT} captures public enforcement (the sum of enforcement and audit country indexes) as in Preiato et al. (2013), Enforce_{PBT} is the country enforcement index of Preiato et al. (2013) and Enforce_{DLLS} is the country enforcement index as in Djankov et al. (2008). MktDevelop is the market capitalisation of a country as a percentage of its GDP, as at the end of 2010. It is taken from the World Bank website. Audit_{PBT} is the country Preiato et al. (2013) audit index and AuditFirm is a firm-level binary variable that takes a value of one when firms use as auditors one of the Big Four accounting firms, and zero otherwise. CrossList is a binary variable that takes a value of one if the firm is cross-listed in another country. Size is defined as the market value as at four months after the financial year end (in millions of euros), Profitab is the net income by total assets, Gearing is defined as total debt by total assets value and LIQ is defined as current assets divided by current liabilities. OriginEN, OriginFR, OriginSC and OriginGR are dummy variables that take a value of one when a firm has English, French, Scandinavian or German legal origin and zero otherwise. DManufact is a binary variable that takes a value of one when a firm operates in the basic materials, consumer goods, industrials, oil and gas or technology industries. DManufact takes a value of zero for the consumer services, healthcare, telecommunications or utilities industries.

Looking at the remaining descriptive statistics in Panel B, *Impairment* and *BusComb* have mean (median) values of 0.62 (1.0) and 0.52 (1.0), respectively, indicating that there is an impairment in 62% of the sample and at least one business combination in 52% of the sample. The mean (median) value for *Intangibles* equals 25% (17%) of companies' total assets.

AuditFirm has a mean of 0.96, indicating that 96% of the sample uses one of the Big Four auditing firms. This is not surprising considering that the sample consists of the blue chip firms around the world. Given the levels of non-compliance identified above, this also suggests that a number of Big Four clients are not fully complying and that having a Big Four auditor does not necessarily imply 100% compliance.

CrossList has a mean of 0.90, therefore 90% of the firms in the sample are listed in more than one stock exchange around the world, which is not surprising as these are the largest firms around the world. Unreported investigation indicates that three EU firms (from Spain, France and the UK) also have their shares traded in a non-IFRS country (Argentina or Mexico) as well as having additional listings in at least one other IFRS country. One Malaysian firm cross-lists in Japan without additional listing in any IFRS country. When examining US-cross listing (*USlisting*) in particular, Table 5.6 shows that 22% of the sample firms are also listed in the US.

Regarding other company-specific information related to the sample firms, mean (median) firm market value as at four months after the financial year end is €1.176m (€5.39m). Firms have a mean (median) net income to total assets (*Profitab*) equal to 7% (6%), total debt to total assets (*Gearing*) equal to 26% (24%) and current assets to current liabilities (*LIQ*) equal to 159% (131%). Overall, the sample firms appear profitable, with low debt and short-term liquidity risk.

Finally, 41% of the firms are categorised as having legal systems of English origin, 13% as French, 31% as Scandinavian and 15% as German; 64% of the sample participates in the manufacturing industry sectors (basic materials, consumer goods, industrials, oil and gas or technology industries).

Table 5.7 presents Pearson correlation coefficients between the *PC* and *CK* compliance scores, as well as between the various explanatory variables. The correlation between *PC* and *CK* compliance scores is highly positive (0.958) and statistically significant at the 1% level. Therefore, the two compliance measures capture similar information.

The two compliance scores are significantly correlated with various explanatory variables examined. *PC* and *CK* scores are negatively correlated with *Absence_disclos*, having correlation coefficient of -0.22 , statistically significant at the 1% level. As expected, this suggests lower compliance when national accounting standards have fewer disclosure requirements.

PC and *CK* disclosure scores are positively correlated with *EnforceAudit_{PBT}* with coefficients of 0.21 and 0.23 (statistically significant at the 1% level). This suggests that, in line with the expectations, firms operating in countries with more rigorous

enforcement have higher disclosure scores. In the same vein, *Enforce_{PBT}*'s correlations coefficients with *PC* and *CK* scores are 0.107 and 0.131, while *Enforce_{DLLS}*'s corresponding correlations coefficients are -0.145 and -0.144 , respectively. Consistent with the expectations and earlier literature, rigorous enforcement seems to be correlated with higher compliance.

Similarly, firms having as auditors one of the Big Four auditing firms appear to report higher compliance (*AuditFirm* has a significant correlation coefficient of 0.09 and 0.11 with *PC* and *CK*, respectively). As expected, a country's audit environment is also positively correlated with compliance. *Audit_{PBT}* has statistically significant (at the 1% level) correlation coefficients with *PC* and *CK* scores of 0.259 and 0.271, respectively.

Firms cross-listed in other countries (including the US) also document positive correlation coefficients with *PC* and *CK* compliance scores. The relevant coefficients are 0.08 and 0.07, respectively (statistically significant at the 10% level), suggesting weak evidence of higher compliance for firms listed in more than one country.

Moreover, legal origin seems to be correlated with compliance scores. English and Scandinavian legal origins have positive (and statistically significant) correlation coefficients with the two compliance scores (coefficients of about 0.17 and 0.07, respectively), while French legal origin is negatively correlated (coefficient of about -0.23). German legal origin has a negative correlation with compliance, but not at a statistically significant level.

None of the remaining variables seems to be statistically significantly correlated with the disclosure levels, although some statistically significant correlation coefficients among the explanatory variables are noticeable. The highest absolute correlation coefficients among the explanatory variables are between *Absence_disclos* and the Preiato et al. (2013) and Djankov et al. (2008) enforcement indices. In particular, the coefficient between *Absence_disclos* and *EnforceAudit_{PBT}* is -0.621 (statistically significant at the 1% level), while its correlation with *Enforce_{PBT}*, *Enforce_{DLLS}* and *Audit_{PBT}* are -0.509 , 0.585 and -0.592 , respectively (all significant at the 1% level). *Absence_disclos* is significantly correlated with many explanatory variables including the binary legal origin variables.

In addition, firm size is positively correlated (and statistically significant) with *Impairment*, *Buscomb*, *Enforcement*, *Mkt_Develop* and *CrossList*. This suggests that larger firms have more frequent impairments and business combinations and they are listed in more developed markets with greater public enforcement. Profitability is positively correlated (and statistically significant) with the level of intangibles, as well as with levels of enforcement and market development. Hence, firms in countries with higher levels of enforcement and more developed capital markets have a higher proportion of intangibles and are more profitable. At the same time, profitability is negatively correlated with *Absence_disclos*, suggesting that the more profitable firms are those based in countries with better familiarity with IFRS disclosures.

Finally, *gearing* is lower when market enforcement and development levels are higher (negative and statistically significant correlation coefficients). *Gearing* is also less when firms have business combinations, when their audit firm is one of the Big Four accounting firms, when they cross-list in other countries, and when their size is small and profitability is low. On the other hand, *Absence_disclos* is positively correlated with gearing, suggesting that more highly geared firms are based in countries with lower familiarity with IFRS disclosures.

Table 5.8 provides further univariate analyses in which the sample is divided into sub-samples on the basis of firm-level and country-level variables and the significance of the differences of the mean (median) compliance scores are tested for each sub-sample.

Starting with the firm-level variables, mean (median) *PC* and *CK* compliance score is 0.83 (0.87) and 0.84 (0.87) for firms without impairment, while firms with an impairment have *PC* and *CK* compliance scores of 0.83 (0.84) and 0.82 (0.83), respectively. The median differences of the sub-groups are statistically significant at the 5% level, suggesting lower disclosures for firms with impairments (which is consistent with expectations).

There are more limited univariate firm-level differences for the remaining variables. Firms listed in the US (*USlisting*) document higher compliance than those not listed in the US, with the difference being statistically significant at the 10% level, and only referring to the median *PC* and *CK* score differences. Firms with a Big Four auditor document higher compliance than that of the group without a Big Four auditor. Mean (median) difference is statistically significant for the *CK* method, but the difference is statistically significant only for the median differences for the *PC* method. Further, firms listed in more than one market (*CrossListing*) document higher compliance only when the *PC* method is used (at the 10% level). Finally, no statistical difference in the compliance levels of firms with more or fewer intangibles is observed.

When the sample is partitioned on the basis of the median of country-level variables, the differences in *PC* and *CK* disclosure scores between the corresponding sub-groups are significantly different, at the 1% level. As expected, countries with low *Absence_disclos* show higher compliance levels. Again in line with expectations, firms in countries with high (low) *EnforceAudit_{PBT}*, *Enforce_{PBT}* (*Enforce_{DLLS}*) document higher *PC* and *CK* compliance scores compared with those with a low (high) enforcement index. The differences are statistically

Table 5.7: Pearson correlation coefficients

	PC method	CK method	Impairment	BusComb	Intangibles	Absence_disclos	EnforceAudit _{PBT}	Enforce _{PBT}	Enforce _{DLLS}	MktDevelop	AuditFirm	AuditPBT	CrossList	USlisting	Size	Profitab	Gearing	LIQ	Origin EN	Origin SC	Origin FR	Origin GR	
PC method	1																						
CK method	0.958***	1																					
Impairment	-0.029	-0.056	1																				
BusComb	0.077*	0.069	0.080*	1																			
Intangibles	0.080*	0.069	-0.099**	0.130***	1																		
Absence_disclos	-0.222***	-0.220***	0.036	-0.022	-0.024	1																	
EnforceAudit _{PBT}	0.212***	0.231***	-0.047	0.093**	0.080*	-0.621***	1																
Enforce _{PBT}	0.107**	0.131***	-0.024	-0.007	0.055	-0.509***	0.874***	1															
Enforce _{DLLS}	-0.145***	-0.144***	0.065	-0.061	-0.060	0.585***	-0.380***	-0.211***	1														
MktDevelop	0.020	0.013	-0.080*	0.012	-0.023	-0.307***	0.226***	0.164***	-0.242***	1													
AuditFirm	0.088**	0.111***	0.002	0.073*	-0.091**	-0.160***	0.133***	0.099**	-0.111***	0.038	1												
AuditPBT	0.259***	0.271***	-0.058	0.161***	0.086**	-0.592***	0.907***	0.587***	-0.449***	0.235***	0.136***	1											
CrossList	0.080*	0.074*	0.174***	0.155***	0.071*	-0.061	0.155***	0.087**	-0.040	0.025	0.089**	0.182***	1										
USlisting	0.063	0.065	0.052	0.045	0.110**	-0.099**	0.073*	0.064	-0.036	0.082*	0.018	0.066	0.170***	1									
Size	-0.059	-0.046	0.179***	0.094**	-0.013	-0.027	0.117***	0.087**	-0.033	0.093**	0.020	0.119***	0.041	0.046	1								
Profitab	0.058	0.060	-0.108**	-0.008	0.198***	-0.146***	0.122***	0.106**	-0.100**	0.204***	-0.016	0.111***	-0.034	0.021	0.060	1							
Gearing	-0.032	-0.016	-0.038	-0.087**	-0.065	0.139***	-0.110**	-0.038	0.128***	-0.177***	-0.097**	-0.151***	-0.077*	0.001	-0.078*	-0.225***	1						
LIQ	-0.034	0.017	-0.068	-0.151***	-0.100**	-0.020	0.011	0.017	0.053	0.049	-0.025	0.004	-0.019	-0.074*	-0.079*	0.094**	-0.238***	1					
Origin EN	0.172***	0.176***	-0.134***	-0.054	0.032	-0.746***	0.542***	0.457***	-0.531***	0.469***	0.069	0.506***	0.011	0.102**	-0.045	0.138***	-0.127***	0.087**	1				
Origin SC	0.074*	0.072*	0.002	0.021	-0.041	0.071*	-0.133***	-0.127***	0.212***	-0.148***	0.078*	-0.111***	0.115***	-0.005	-0.089**	0.081*	-0.061	0.007	-0.324***	1			
Origin FR	-0.224***	-0.230***	0.055	0.008	0.036	0.424***	-0.284***	-0.157***	0.128***	-0.362***	-0.134***	-0.336***	-0.060	-0.062	0.005	-0.136***	0.234***	-0.113***	-0.557***	-0.262***	1		
Origin GR	-0.016	-0.012	0.112***	0.045	-0.052	0.411***	-0.254***	-0.306***	0.367***	-0.037	0.003	-0.157***	-0.045	-0.055	0.140***	-0.092**	-0.071*	0.021	-0.347***	-0.163***	-0.281***	1	
D _{manufact}	-0.056	-0.044	0.053	-0.012	-0.110**	0.026	-0.060	-0.073*	0.040	-0.042	-0.032	-0.037	0.022	-0.047	-0.001	-0.039	-0.148***	0.175***	-0.098**	0.102**	-0.031	0.079*	

Notes: 'PC method' and 'CK method' stand for compliance scores deriving from PC and CK methods, respectively.

All variables are as described in Table 5.6.

Number of observations is 544.

***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

significant at the 1% level, suggesting that higher enforcement environment is associated with higher compliance scores.

Moreover, firms in countries with an audit environment of higher quality ($Audit_{PBT}$) report statistically significant higher (at the 1% level) PC and CK compliance scores compared with firms in a lower quality audit environment. Finally, the univariate findings on market development are similar to the findings for audit environment. Firms in more well-developed capital markets document statistically significant higher compliance scores than those in less-developed capital markets. These findings are also consistent with the predictions.

Multivariate analysis

As univariate analysis does not control for the confounding effects of other factors, Table 5.9 provides four models for multivariate analysis. The dependent variables are the compliance disclosure scores. The models are presented twice, using the PC and CK compliance scores. Models 1 follow Glaum et al. (2013) and examines for the impact of enforcement using the Djankov et al. (2008) enforcement index ($Enforce_{DLLS}$). Models 2 uses the updated Preiato et al. (2013) enforcement index $EnforceAudit_{PBT}$ while in Models 3 $EnforceAudit_{PBT}$ is separated into $Enforce_{PBT}$ and $Audit_{PBT}$ to allow examination of the impact of the audit environment on compliance separately from other enforcement factors. Similarly, Models 4 augments Models 1 by adding $Audit_{PBT}$. Some interesting results emerge.

Table 5.8: Compliance across sub-samples

		Firm-level variables				Country-level variables					
		PC method		CK method		PC method		CK method			
		No	Yes	No	Yes	> median	=< median	> median	=< median		
<i>Impairment</i>	N	205	339	205	339	<i>Absence_disclos</i>	N	247	297	247	297
	mean	0.833	0.825	0.838	0.822		mean	0.857	0.804	0.856	0.805
	median	0.871	0.843	0.871	0.833		median	0.893	0.816	0.880	0.821
	t-test	0.623		1.247			t-test	4.521***		4.476***	
	Wilcoxon	2.374**		2.476**			Wilcoxon	4.885***		4.675***	
<i>BusComb</i>	N	264	280	264	280	<i>EnforceAudit_{PBT}</i>	N	191	353	191	353
	mean	0.817	0.839	0.818	0.837		mean	0.798	0.845	0.795	0.846
	median	0.838	0.856	0.833	0.850		median	0.809	0.857	0.818	0.857
	t-test	-1.780*		-1.600			t-test	-3.509***		-3.908***	
	Wilcoxon	-1.166		-1.191			Wilcoxon	-3.124***		-3.516***	
<i>USListing</i>	N	420	124	420	124	<i>Enforce_{PBT}</i>	N	254	290	254	290
	mean	0.823	0.844	0.823	0.844		mean	0.805	0.848	0.801	0.851
	median	0.847	0.867	0.841	0.869		median	0.817	0.864	0.818	0.870
	t-test	-1.453		-1.491			t-test	-3.610***		-4.293***	
	Wilcoxon	-1.848*		-1.895*			Wilcoxon	-3.418***		-4.027***	
<i>AuditFirm</i>	N	21	523	21	523	<i>Enforce_{DLLS}</i>	N	232	312	232	312
	mean	0.767	0.831	0.753	0.831		mean	0.860	0.804	0.858	0.806
	median	0.792	0.855	0.783	0.846		median	0.883	0.829	0.875	0.826
	t-test	-1.602		-1.940*			t-test	4.794***		4.606***	
	Wilcoxon	-1.762*		-2.050**			Wilcoxon	4.543***		4.549***	
<i>CrossList</i>	N	56	488	56	488	<i>Audit_{PBT}</i>	N	212	332	212	332
	mean	0.795	0.832	0.799	0.831		mean	0.791	0.852	0.792	0.851
	median	0.800	0.856	0.810	0.848		median	0.801	0.870	0.812	0.873
	t-test	-1.714*		-1.531			t-test	-4.850***		-4.837***	
	Wilcoxon	-1.744*		-1.477			Wilcoxon	-4.643***		-4.669***	
<i>Intangibles</i>	N	272	272	272	272	<i>MktDevelop</i>	N	260	284	260	284
	mean	0.819	0.838	0.819	0.837		mean	0.808	0.847	0.808	0.847
	median	0.850	0.856	0.840	0.848		median	0.820	0.876	0.826	0.875
	t-test	-1.577		-1.496			t-test	-3.247***		-3.386***	
	Wilcoxon	-0.867		-0.875			Wilcoxon	-3.764***		-3.749***	

Notes:
The table presents descriptive statistics of the compliance scores (PC and CK), after partitioning the sample into sub-samples on the basis of firm-level and country-level variables.
For binary variables, the partition is based on the 'yes' or 'no' sub-groups (1 and 0, respectively).
For numerical variables, the partition is based on the median value of the corresponding variables.
All variables are defined in Table 5.6. Wilcoxon and T-test are used to examine the median and mean differences between each sub-sample respectively.
***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

According to Table 5.9, Impairment has a negative coefficient in the range from -0.02 to -0.03, statistically significant in all models. These coefficients imply that firms reporting impairments comply less with mandatory disclosure requirements of IFRS 3, IAS 36 and IAS 38 than do firms without impairments. This is not surprising considering the descriptive statistics provided in Table 5.2, which indicate that compliance levels with the disclosures mandated by IAS 36 exhibit the highest standard deviation across the three standards, with many companies scoring at the lower end of the spectrum. This finding also confirms the findings of earlier literature suggesting that asset-impairment testing regimes (such as those embedded in IAS 36) are flawed as they offer preparers the opportunity to exercise discretion to the detriment of transparency, comparability and decision usefulness (Carlin and Finch (2010) with reference to Watts (2003a) and Watts (2003b)).

Intangibles has a positive coefficient (about 0.015) in all models. It is always statistically significant when compliance is measured using the *PC* method. When measuring compliance using the *CK* method, intangibles significantly affect compliance only in Models 1, where enforcement is measured following Djankov et al. (2008). Hence, it appears that the higher the levels of intangibles in comparison with total assets, the more material will these intangible assets be considered to be, prompting the companies to disclose more information. This conclusion depends, however, upon the method used for measuring compliance (*PC* vs. *CK*) and upon the method used for capturing country enforcement.

Consistent with the evidence provided in earlier studies (eg Glaum et al. 2013), the stricter the enforcement environment in a country, the greater are the corporate compliance levels. When using the Djankov et al. (2008) enforcement index,

Table 5.9: Regression analysis results

	PC method								CK method							
	Model 1 (PC)		Model 2 (PC)		Model 3 (PC)		Model 4 (PC)		Model 1 (CK)		Model 2 (CK)		Model 3 (CK)		Model 4 (CK)	
	Coef	t-stat	Coef	t-stat	Coef	t-stat	Coef	t-stat	Coef	t-stat	Coef	t-stat	Coef	t-stat	Coef	t-stat
Constant	0.840	(11.71)***	0.808	(10.78)***	0.801	(10.66)***	0.792	(10.46)***	0.858	(12.50)***	0.758	(9.86)***	0.759	(10.19)***	0.778	(10.29)***
Impairment	-0.032	(-2.84)***	-0.028	(-2.52)***	-0.026	(-2.22)**	-0.022	(-1.93)*	-0.025	(-2.23)**	-0.022	(-2.00)**	-0.023	(-2.07)**	-0.019	(-1.75)*
BusComb	0.007	(0.64)	0.011	(1.01)	0.002	(0.20)	-0.001	(-0.11)	0.014	(1.32)	0.011	(1.06)	0.007	(0.68)	0.009	(0.87)
Intangibles	0.016	(2.42)***	0.016	(2.35)***	0.013	(1.98)**	0.011	(1.80)*	0.015	(1.82)*	0.013	(1.58)	0.011	(1.36)	0.011	(1.36)
Absence_disclos	-0.003	(-2.06)**	-0.002	(-1.41)	-0.002	(-1.36)	-0.002	(-1.34)	-0.003	(-1.60)	-0.003	(-1.79)*	-0.002	(-1.08)	-0.002	(-1.03)
MktDevelop	-0.004	(-0.78)	0.001	(0.13)	-0.002	(-0.38)	-0.001	(-0.22)	-0.006	(-1.15)	-0.005	(-0.85)	-0.005	(-0.94)	-0.006	(-1.01)
EnforceAudit _{pBT}			0.005	(2.64)***							0.005	(2.57)***				
Enforce _{pBT}					-0.001	(-0.31)							-0.001	(-0.32)		
Enforce _{DLLS}	-0.026	(-1.72)*					-0.021	(-1.31)	-0.034	(-2.23)**					-0.025	(-1.61)
Audit _{pBT}					0.011	(3.54)***	0.009	(2.97)***					0.009	(3.26)***	0.008	(2.80)***
AuditFirm	0.034	(1.40)	0.039	(1.70)*	0.035	(1.53)	0.034	(1.45)	0.023	(1.01)	0.046	(1.97)**	0.047	(1.94)*	0.029	(1.24)
CrossListing	0.029	(1.45)	0.040	(2.04)**	0.029	(1.42)	0.016	(0.79)	0.018	(0.92)	0.008	(0.43)	0.018	(0.89)	0.007	(0.34)
USListing	0.028	(2.55)***	0.028	(2.62)***	0.028	(2.59)***	0.032	(2.97)***	0.025	(2.32)**	0.025	(2.26)**	0.025	(2.31)**	0.026	(2.38)***
Size	-0.001	(-0.26)	-0.007	(-1.87)*	-0.007	(-1.74)*	-0.005	(-1.19)	-0.001	(-0.32)	-0.002	(-0.61)	-0.004	(-0.93)	-0.003	(-0.66)
Profitab	0.017	(0.24)	0.042	(0.68)	0.058	(0.90)	0.065	(1.01)	0.022	(0.55)	0.035	(0.58)	0.065	(1.04)	0.064	(0.99)
Gearing	0.059	(1.69)*	0.046	(1.33)	0.054	(1.54)	0.053	(1.51)	0.048	(1.41)	0.046	(1.32)	0.045	(1.34)	0.052	(1.52)
LIQ	-0.002	(-0.23)	0.002	(0.23)	-0.003	(-0.37)	-0.002	(-0.27)	0.000	(0.06)	0.000	(0.03)	-0.001	(-0.26)	0.000	(0.06)
OriginFR	-0.040	(-2.07)**	-0.036	(-1.87)*	-0.031	(-1.59)	-0.027	(-1.37)	-0.045	(-2.35)***	-0.035	(-1.77)*	-0.038	(-1.95)*	-0.034	(-1.74)*
OriginSC	0.031	(1.25)	0.015	(0.63)	0.011	(0.44)	0.029	(1.13)	0.028	(1.11)	0.028	(1.19)	0.008	(0.31)	0.023	(0.93)
OriginGR	0.017	(0.81)	0.021	(1.04)	0.024	(1.16)	0.025	(1.19)	0.024	(1.17)	0.027	(1.36)	0.018	(0.89)	0.029	(1.42)
D _{manufact}	-0.004	(-0.34)	-0.009	(-0.84)	-0.002	(-0.21)	-0.002	(-0.21)	-0.008	(-0.77)	-0.009	(-0.86)	-0.005	(-0.45)	-0.006	(-0.58)
N	514	511	516	513	516	512	516	513								
R	0.144	0.170	0.169	0.158	0.138	0.151	0.150	0.146								
F-test	5.86***	6.49***	6.59***	6.42***	5.50***	5.75***	5.77***	5.80***								
Max VIF	3.25	3.35	3.35	3.34	3.25	3.35	3.35	3.34								

Notes: White corrected OLS coefficients.

Dependent variables are the compliance score based on the *PC* and *CK* method.

Explanatory variables are as explained in Table 5.6.

Reported results are for regressions excluding observations with |Cook's Distance| > (4 divided by the number of sample firms).

t-statistics are in parenthesis.

***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

$Enforce_{DLLS}$ has negative and statistically significant coefficients of -0.026 and -0.034 (Models 1). When the Djankov et al. (2008) index is replaced with that of Preiato et al. (2013), $EnforceAudit_{PBT}$ has a positive (0.005) and statistically significant coefficient (at the 1% level in both Models 2). This finding confirms that enforcement mechanisms are key to comparable levels of disclosure across different jurisdictions, even if they have adopted IFRS. Interestingly, when separating $EnforceAudit_{PBT}$ into $Enforce_{PBT}$ and $Audit_{PBT}$ (Models 3), enforcement that does not incorporate audit components ceases to be statistically significant. $Enforce_{PBT}$ is no longer positive or statistically significant, while its impact is captured by $Audit_{PBT}$, which has a coefficient of about 0.01 (statistically significant at the 1% level) in both Models 3. This finding suggests that the auditing components of the enforcement environment are those that drive enforcement. This finding is also confirmed by Models 4, which replicate the analysis of Models 3 by replacing $Enforce_{PBT}$ with $Enforce_{DLLS}$. While in Models 1 $Enforce_{DLLS}$ is significantly negative in explaining compliance, in Models 4 Djankov et al.'s enforcement index (2008) is no longer statistically significant, with $Audit_{PBT}$ to absorb its impact. $Audit_{PBT}$ again has a positive and statistically significant coefficient (at the 1% level), in both Models 4.

Therefore, these results extend the finding of Glaum et al. (2013) that enforcement increases compliance by providing evidence that enforcement increases compliance because it incorporates audit components. When audit components are completely absent from an enforcement index (eg $Enforce_{PBT}$), enforcement is not significant. It is significant only when country audit environment is taken into account.

Considering auditing impact at a firm level, with the use of the binary variable $AuditFirm$ that takes a value of one when a firm has one of the world's Big Four auditors as an auditing company, the results indicate limited ability of $AuditFirm$ to enhance compliance. $AuditFirm$ is positive in all models, but statistically significant only when $EnforceAudit_{PBT}$ is used (Models 2). This suggests that beyond the enforcement and auditing country environment, having a prestigious auditor facilitates higher compliance levels. The results for the remaining models that use different enforcement measures suggest that $AuditFirm$ does not significantly affect compliance (except in Model 3 (CK)). Nonetheless, caution is needed when interpreting these results, as 96% of the firms have one of the Big Four auditors (see Table 5.6 Panel B). Therefore, the ability of $AuditFirm$ to explain disclosure compliance may also be limited, as the sample may already capture the impact of having a Big Four auditor.

In addition, it is worth mentioning that $CrossList$ reports a statistically significant (at the 5% level) positive coefficient of 0.04 in Model 2 (PC), but statistically non-significant in all remaining models. Similar to $AuditFirm$, 90% of the sample firms (see Table 5.6 Panel B) are cross-listed in at least one more market beyond the market of their primary listing. Therefore, the findings may already reflect the impact of cross-listing. On examining whether additional listing in the US affects disclosure compliance (24% of the firms are also listed in the US as well as in their market of primary listing; see Table 5.6 Panel B), results are consistent with expectations and with earlier literature. $USlisting$ has a positive coefficient of about 0.03 and statistically significant at the 1% level in all models. Therefore, IFRS firms listed in the US comply with IFRS disclosure requirements more than IFRS firms not listed in the US at all. This is consistent with the bonding and signalling hypotheses.

Finally, consistent with the univariate analysis, Table 5.9 also reports that compliance levels are lower when a company is from a country with a legal system of French origin. $OriginFR$ reports a negative and statistically significant coefficient of about -0.03 to -0.04 across the models. This indicates that firms from countries with legal systems of French origin exhibit lower levels of compliance.

5.4 SUMMARY AND CONCLUSIONS

In the study reported here, a compliance index was developed with respect to mandatory disclosure requirements in IFRS 3, IAS 36 and IAS 38, companies' compliance levels were calculated and the potential influence of corporate and country factors on these compliance levels was explored. Earlier literature shows varying levels of compliance with mandatory disclosure requirements in general and with these standards in particular. The study examines a broader set of countries than previously and takes into account recent revisions of these standards. The analysis leads to the following conclusions.

Levels of compliance²²

- The mean (median) overall compliance score is 83% (84%). Interestingly, 75% of the sample firms have at least 75% compliance levels. Firms with the lowest compliance scores (ie the bottom quartile) report minimum compliance levels of 33%. At the other end of the spectrum, the top quartile (25%) of highly compliant firms comply with at least 93% with the requirements of the three standards.
- Mean (median) compliance levels of just above 80% are valid not only for total compliance scores, but also for individual compliance levels with IFRS 3, IAS 36 and IAS 38.
- Among the 23 countries examined, average compliance scores range from 77% to 90%. Specifically, New Zealand is the country with the highest average compliance, at 97%. Ireland is the country with the second highest average disclosure score, at 91%. The UK follows with 90%. In contrast, some countries report much lower compliance levels. Greece is the country with the lowest compliance score, at only 67%. Brazil has a disclosure score of 75%. Austria, Spain, China, South Africa and Portugal are at 76%.
- There is less variability on average compliance levels at the industry sector level. Compliance scores by industry range from 80% to 88%. The oil and gas industry is weaker in its overall compliance scores (80%) than average, while the technology industry has the highest compliance score, at 87%.

Determinants of compliance with mandatory disclosures

- Firms reporting impairments comply less with the mandatory disclosure requirements of IFRS 3, IAS 36 and IAS 38 than do firms without impairments.
- Cross-listing in the US increases compliance levels, which is consistent with the bonding and signalling hypotheses.
- The higher level of the enforcement in a country, the higher the compliance levels. It is the auditing component of the enforcement environment that drives this result.
- Compliance levels are lower when a company is from a country of French legal origin.

Earlier evidence indicates that companies in the past have not fully complied with national mandatory disclosure requirements. The results of the present study indicate that companies continue not to do so even after adopting IFRS. Hence, the findings are in line with concerns that adoption of IFRS does not necessarily lead to high-quality reporting across different jurisdictions. Beyond the quality of the standards, different firm and country-level factors (eg enforcement, audit environment, listings) influence financial reporting practices.

22. Compliance scores where each item is of equal importance (CK method) are summarised. This chapter also presents results using a compliance score where each standard is of equal importance (PC method). Results are qualitatively similar.

6. Conclusions

6.1 SUMMARY OF AIMS AND OBJECTIVES

This study had the following research objectives.

- To collect information directly from the sample companies' financial statements and identify their policies for business combinations, impairment testing and intangible assets.
- To investigate international compliance with the mandatory disclosure requirements for three important standards, namely IFRS 3, IAS 36 and IAS 38.
- To investigate the firm-specific and country-specific determinants of the identified compliance levels (eg familiarity with IFRS; level of stock market development; foreign listing; legal tradition).

This research makes two major contributions. First, it highlights areas on which preparers, regulators and enforcement bodies need to focus to improve the level of disclosure by companies. This should result in the provision of more complete information to the users of the financial reports. Second, it highlights areas that standard setters may need to improve in order to eliminate ambiguity in the interpretations of the standards. This should result in greater comparability of the information provided by companies.

6.2 SAMPLE DESCRIPTION

In 2005, most EU-listed companies adopted IFRS for their consolidated financial statements, while other countries have now also adopted IFRS or claim significant convergence of their national accounting standards with IFRS. Nonetheless, little was known about the financial statement effects of the three standards of interest and about companies outside the EU that have recently adopted IFRS. Evidence indicating whether non-EU companies that apply IFRS produce comparable financial statements (in terms of choices followed and compliance levels with mandated disclosures) to those of EU companies was sparse. In order to examine these issues for the first year of implementation of IFRS 3 (financial year ending 2010/2011), a sample of 544 non-financial companies from the EU, Australia, China, Hong-Kong, New Zealand, Brazil, South Africa and Malaysia were studied. The sample companies are constituents of these countries' premier stock market indices as at 1 June 2011. As far as the companies from EU countries are concerned, the sample firms were also constituents of the S&P Europe 350 index as at 1 June 2011. This allowed the study to focus on the companies that are most followed by investors (foreign and domestic).

6.3 MAIN FINDINGS

Companies provide highly variable levels of information on business combinations, intangible assets and impairment testing. The disparity is a result of companies' differing decisions as to whether a particular transaction (ie a business combination) or an item (ie an intangible asset or an impairment loss) is material enough to warrant providing the relevant mandated information. Disparity may also occur because what is required by the standards is not very clear and/or because companies deliberately fail to follow the mandatory disclosure requirements to the letter. More specifically, the following findings stand out.

With regard to IFRS 3, 280 companies (ie 51.5% of the sample firms) give an indication that at least one business combination took place during the year examined but only 208 of these companies disclose the exact number of companies acquired, information that is required by the standard. Additionally, although the standard requires firms to disclose the business combination price and the method of payment, only 240 companies out of these 280 firms report the actual price/consideration transferred for completing the combinations conducted, and a similar number of firms disclose the method of payment for these combinations. Furthermore, only 101 companies disclose the acquisition-related expenses incurred and expensed in the income statement, even though this information is mandated by the standard.

Moreover, although 258 companies disclose that they recognise goodwill arising because of the acquisitions conducted, only 61 disclose a qualitative description of the factors that make up the goodwill recognised. In addition, although IFRS 3 requires disclosures about the measurement of non-controlling interest recognised, 33 companies (out of the 76 companies for which the concluded acquisitions involve between 50% and 99% of the acquiree's assets) remain silent on how the non-controlling interest is measured. Finally, a large number of companies fall short of the standard's requirement to disclose pro forma information about the business combinations conducted. It is interesting that some of these areas have been highlighted in the past as areas where companies do fall short of the standard's requirements (see Glaum et al. 2007) and it appears that companies continue doing so under IFRS 3. Concerns are also raised regarding some of the newly introduced requirements.

With the implementation of IFRS 3, no new disclosure requirements were introduced to IAS 38. As a result, this study reflects on the mandated disclosures by IAS 38 and the findings of earlier literature that have highlighted significant variation in practices as well as levels of disclosures provided by companies in the EU. The analysis indicates that there are some areas for which there is still much dispersion in the disclosures provided.

Although IAS 38 requires companies to disclose whether the useful lives of intangible assets (either acquired or internally generated) are indefinite or finite and, if finite, the useful lives or the amortisation rates used, a large proportion of the sample firms do not disclose the required information.

Similarly, irrespective of the requirement for companies to disclose the line item(s) of the income statement in which any amortisation of intangible assets is included, a large proportion of the sample firms do not provide this information. Additionally, the analysis indicates that there are 151 companies that have at least one intangible asset with indefinite useful life. Nonetheless, only 58% of these companies disclose the reasons supporting their assessment of an indefinite useful life and/or the factor(s) that played a significant role in determining that the asset has an indefinite useful life (as IAS 38 requires).

'Other intangibles' feature as a separate class of intangible assets in the statement of financial position of 453 of the 517 (ie 87.6%) companies that have at least one type of intangible asset other than goodwill. Additionally, this type of asset represents, on average, 5.28% of companies' total assets. Given the significance of this category for many firms, should they not supply readers with more details?

A further finding relates to the measurement choice for intangible assets under IAS 38. Although companies are allowed to use the revaluation model for intangibles under IAS 38, no company was found that measures intangible assets with this method (which is consistent with earlier studies, eg Glaum et al. 2007). As a result, there are no effects on the comparability of accounting information between companies from China and other countries, even though the revaluation model is not permitted under CAS.

As regards the disclosures related to impairment testing, almost all the companies that report recognition of an impairment disclose the amount of the impairment separately (334 out of 339 companies), as required by the standard. The most frequent type of asset to be impaired is plant and machinery, with land and buildings to follow. For intangible assets, it is more frequent for companies to recognise an impairment on an intangible asset with finite useful life than on goodwill.

The large majority of companies that report recognition of a reversal of an impairment disclose separately the amount of the reversal (93 out of 101 companies), as is required by IAS 36. Only 37 companies disclose a justification for the reversal recognised, however, regardless of the explicit requirement in IAS 36.

There is, again, significant disparity in the information provided on the disclosures related to impairment testing of goodwill and other intangible assets with indefinite useful lives. As an example, 35 (7.1%) out of the 495 companies for which this information is potentially relevant remain silent regarding the methods adopted for measuring the recoverable amounts of assets (although IAS 36 does require the disclosure of this information). On a more positive note, although 75 companies disclose that the period of cash flows

used in the impairment testing process exceeds five years (which is not recommended by the standard) they do follow the standard in that they give a justification for using cash flows beyond a five-year period.

Further, although IAS 36 recommends that the discount rates used during the impairment testing process should be calculated on a pre-tax basis, a large number of the sample companies (92) use post-tax discount rates. Additionally, IAS 36 requires companies to disclose the growth rate used for extrapolating cash flow projections beyond the period covered by the most recent budgets/forecasts. Nonetheless, 21% of the 485 companies that disclose some information about the cash flow estimations do not disclose this.

Finally, the revised IAS 36 introduced the requirement for companies to disclose: the period over which management has projected cash flows; the growth rate used to extrapolate cash flow projections, and the discount rate(s) applied to the cash flow projections, if fair value less costs of disposal has been used and this value is determined using discounted cash flow projections; 22 companies fall into this category, and 21 of these disclose the newly introduced mandated disclosures.

The analyses reveal that the mean (median) overall compliance *PC* (each standard is of equal importance) and *CK* (each item is of equal importance) score is 83% (85%) and 83% (84%), respectively. About 25% of the firms have compliance scores lower than 75%, with the minimum compliance levels being 25% (*PC*) and 33% (*CK*). Mean (median) compliance level is 81% (84%), 81% (86%) and 85% (83%) with IFRS 3, IAS 36 and IAS 38, respectively. Interestingly, the top 25% of highly compliant firms document 100% compliance levels with IAS 36 and IAS 38 but slightly lower (ie 92%) with IFRS 3 disclosure requirements. At the other end, minimum compliance levels with IFRS 3 are higher compared with those with IAS 36 and IAS 38. Minimum compliance with IFRS 3 is 33%, whereas minimum compliance levels with IAS 36 and IAS 28 are 0% and 17%, respectively.

New Zealand is the country with the highest average compliance, while Ireland and the UK follow in second and third place, respectively. Greece is the country with the lowest average compliance levels, with Brazil, Austria and Spain following. Interestingly, there are no large variations in compliance levels when examining the data across industries.

The study sought to identify the determinants of the compliance levels measured. Surprisingly, firms reporting impairments comply less with the mandatory disclosure requirements of IFRS 3, IAS 36 and IAS 38 than firms without impairments. As expected, companies with larger values of intangible assets relative to total assets comply more with mandatory disclosure requirements than firms with lower values of such assets. Furthermore, the higher the level of enforcement in a country the higher the compliance levels identified. More specifically, it is the quality of the audit environment that drives this result. Finally, compliance levels are lower when a company's home country uses the French legal system but greater if a company is cross-listed in the US.

6.4 IMPLICATIONS

A broad international set of firms exhibit a high level of disparity of information and, apparently, of non-compliance with the mandatory disclosure requirements in IFRS 3, IAS 36 and IAS 38. Although the study imposed materiality thresholds, inside information would be needed to enable a conclusion as to whether these disparities are the result of:

- companies considering certain transactions (eg a business combination) or items (eg an intangible asset or an impairment loss) to be not sufficiently material, or,
- the standards being misunderstood/not clear enough, or
- companies deliberately failing to follow the mandatory disclosure requirements.

Some areas of non-compliance have been highlighted in the past (see FRRP 2006; ICAEW 2007; Glaum et al. 2007; EC 2008). This creates serious concerns about the role and importance of IFRS in improving cross-jurisdictional transparency and comparability of financial statements. In addition, concerns are raised about some of the newly introduced requirements of IFRS 3, such as the method for measuring a non-controlling interest.

The research is very timely in that it engages with the current debate about the need for, or usefulness of, mandatory disclosures within IFRS. In January 2013, the IASB hosted a public disclosure forum to consider the challenging area of disclosure overload. Participants included some of the organisations that have undertaken work in the area of disclosure in financial reporting (eg ANC, EFRAG, ESMA, FASB, FRC, ICAS, and NZICA). In May 2013, the IASB issued a Feedback Statement on this event and, in June 2013, the chairman of the IASB, Hans Hoogervorst, outlined '10 good proposals to make disclosures more effective' in his speech entitled 'Breaking the boilerplate'. Furthermore, concerns about the potentially excessive quantity of mandated disclosures and the need for a disclosure framework have been expressed by the FASB and EFRAG, among others. Finally, in July 2013, the IASB started its post-implementation review of IFRS 3 (2008), part of which is the identification of areas in which 'implementation problems or unexpected costs with IFRS 3 were encountered' (IFRS Foundation 2013b). The following recommendations aim to further this debate and discussion.

In an effort to facilitate easier application of IFRS by preparers and enhance understandability and comparability of

accounting information for users, the IASB should consider revisiting the disclosure requirements at a standards level. Such a review should reflect on the need for and provision of specific materiality thresholds to trigger the disclosure of particular information. Additionally, in the absence of disclosure, IFRS should require companies to provide an explicit statement explaining why disclosure is not merited or explaining when providing certain disclosures is impracticable, which would reduce information asymmetry and improve comparability across companies. This will require a broad consultation with preparers, users, auditing firms, enforcement bodies and academics.

Moreover, there are a few individual items with which a majority of firms, irrespective of country or industry, fail to comply. This could be interpreted as a signal that these aspects of the standards are not clear as to what is expected. Interestingly, some of these items are among those recommended for deletion from the relevant standards by the ICAS/NZICA (2011) report. Given that the IASB is taking a view that each disclosure item should be judged separately (Hoogervorst's third proposal in 'Breaking the boilerplate', July 2013), these particular items should be revisited and potentially re-worded. The items from specific paragraphs identified as those with lower compliance (see Table 5.5) could be a good starting point for the IASB. This would reduce the possible misinterpretation of mandatory disclosure requirements.

This study is also timely given current enforcement initiatives. ESMA (2013) has recently announced the 'European common enforcement priorities for 2013 financial statements'. It refers to specific aspects of the IFRS application in relation to, among others, impairment of non-financial assets (including a focus on information about cash-flow projections, key assumptions and sensitivity analysis) and disclosure of significant accounting policies. This follows the 2012 enforcement priorities, which discussed the valuation of goodwill and intangible assets with indefinite life and related disclosures (including a call for more granular disclosures). As studies from professional bodies and academics indicate, non-compliance with mandated disclosures is an issue that has been observed long before the mandatory implementation of IFRS. As a result, transparency depends not only on high-quality accounting standards but also on rigorous enforcement of these standards. This study identifies enforcement, and more specifically the auditing environment, as a significant determinant of compliance. Consistent and full application of the mandated disclosures falls onto both the enforcement bodies and the auditing function in each country.

Appendix: Screen-shot of the database developed and used for the data collection

Generic info and actual disclosures provided (relevant figures)	
Co Name:	<input type="text"/>
Reporting currency	USD
Business Combinations	Yes
Number of Transactions	9
Total cost of Business Combinations	1275000000
Acquisition related costs recognised as an expense	<input type="text"/>
Method of payment	Cash
Information Disclosed	On Individual basis
Goodwill on Acquisition	Yes
Amount of Goodwill recognised	1091000000
Non-controlling interest recognised?	No
How non-controlling interest is measured?	Not disclosed
Negative Goodwill	No
Amount of Negative Goodwill	<input type="text"/>
Amount of software costs acquired	128000000
Amount of customer lists acquired	<input type="text"/>
Amount of development expenditure acquired	<input type="text"/>
Amount of brands and or trademarks acquired	<input type="text"/>
Amount of product rights and or licences acquired	<input type="text"/>
Amount of carbon allowances acquired	<input type="text"/>
Amount of customer contracts and or relationships acquired	<input type="text"/>
Amount of other intangibles acquired	228000000
Total value of goodwill	4085000000
NBV of software costs	306000000
NBV of customer lists	<input type="text"/>
NBV of development expenditure	<input type="text"/>
NBV of brands and or trademarks	<input type="text"/>

References

- Abd-Elsalam, O. and Weetman, P. (2003), 'Introducing International Accounting Standards to an Emerging Capital Market: Relative Familiarity and Language Effect in Egypt', *Journal of International Accounting, Auditing and Taxation*, 29 (2): 63–84.
- Abd-Elsalam, O. and Weetman, P. (2007), 'Measuring Accounting Disclosure in a Period of Complex Changes: The Case of Egypt', *Advances in International Accounting*, 20: 75–104.
- Al-Shammari, B., Brown, P. and Tarca, A. (2008), 'An Investigation of Compliance with International Accounting Standards by Listed Companies in the Gulf Co-operation Council Member States', *The International Journal of Accounting*, 43 (4): 425–47.
- Andrews, R. (2006), *Impairment of Assets – Measurement Without Disclosure?*, ACCA Research Report, No. 92 <http://www2.accaglobal.com/pubs/general/activitiesx/research/research_archive/rr-092-001.pdf>, last accessed 10 March 2014.
- Ball, R. (2001), 'Infrastructure Requirements for an Economically Efficient System of Public Financial Reporting and Disclosure', *Brookings-Wharton Papers on Financial Services*, 127–69.
- Ball, R. (2006), 'International Financial Reporting Standards (IFRS): Pros and Cons for Investors', *Accounting and Business Research*, International Accounting Forum, 5–27.
- Ball, R., Robin, R. and Wu, J. (2003), 'Incentives Versus Standards: Properties of Accounting Income in Four East Asian Countries', *Journal of Accounting and Economics*, 36: (1–3), 235–70.
- Bushman, R., Piotroski, J. and Smith, A. (2004), 'What Determines Corporate Transparency?', *Journal of Accounting Research*, 42 (2): 207–52.
- Cairns, D. (2001), *International Accounting Standards Survey 2000* (London: David Cairns).
- Carlin, T. M. and Finch, N. (2010), 'Evidence on IFRS Goodwill Impairment Testing by Australian and New Zealand Firms', Working paper <<http://ssrn.com/abstract=1550425>>. (9 February).
- Coffee, J. (1999), 'The Future as History: The Prospects for Global Convergence in Corporate Governance and its Implications', *Northwestern University Law Review*, 93 (3): 641–708.
- Coffee, J. (2002), 'Racing Towards the Top? The Impact of Cross-listings and Stock Market Competition on International Corporate Governance', *Columbia Law Review*, 102: (7) 1757–831.
- CESR (Committee of European Securities Regulators) (2006), *Final Report of the Review Panel on the Implementation Review of CESR's Standard no. 1 on Financial Information*, (Paris, France).
- CESR (2007), *CESR's review of the implementation and enforcement of IFRS in EU* (ref. CESR/07-352) <http://www.esma.europa.eu/system/files/07_352.pdf>, accessed 10 March 2014.
- CESR (2009), *CESR Re-assesses Application of its Standard No. 1 on Financial Information in Europe* (Paris, France). ref. CESR/09-374.
- Company Reporting Ltd (2007), 'Issue of the Month: Impairments', No. 201.
- Company Reporting Ltd (2008), 'Issue of the Month: Intangible Assets and Amortisation', No. 214.
- Cooke, T. (1992), 'The Impact of Size, Stock Market Listing and Industry Type on Disclosure in the Annual Reports of Japanese Listed Corporations', *Accounting and Business Research*, 22 (87): 229–37.
- Craig, R., Diga, J. (1998), 'Corporate Accounting Disclosure in ASEAN', *Journal of International Financial Management and Accounting*, 9 (3): 246–74.
- DeAngelo, L. (1981), 'Auditor Size and Audit Quality', *Journal of Accounting and Economics*, 3 (3): 183–99.
- DePamphilis, D. (2011), *Mergers, Acquisitions, and Other Restructuring Activities*, 6th edn. (Elsevier). London.
- Ding, Y., Hope, O.K., Jeanjean, T. and Stolowy, H. (2007), 'Differences Between Domestic Accounting Standards and IAS: Measurement, Determinants and Implications', *Journal of Accounting and Public Policy*, 26 (1): 1–38.
- Djankov, S., La Porta, R., Lopez-De-Silanes, F. and Shleifer, A. (2008), 'The Law and Economics of Self-Dealing', *Journal of Financial Economics*, 88 (3): 430–65.
- Dumontier, P. and Raffournier, B. (1998), 'Why Firms Comply Voluntarily with IAS: An Empirical Analysis with Swiss Data', *Journal of International Financial Management and Accounting*, 9 (3): 216–45.
- EC (European Commission) (2008), 'Evaluation of the Application of IFRS in the 2006 Financial Statements of EU Companies' <http://ec.europa.eu/internal_market/accounting/docs/studies/2009-report_en.pdf>, accessed 10 March 2014.
- EFRAG (European Financial Reporting Advisory Group) (2012), 'Towards a Disclosure Framework for the Notes', discussion paper, resource document <http://www.efrag.org/files/ProjectDocuments/PAAinE%20Disclosure%20Framework/121015_Disclosure_Framework_-_FINAL1.pdf>, last accessed 25 September 2013.
- Ernst & Young (2009), *Acquisition accounting – what's next for you?* <http://www2.eycom.ch/publications/items/2009_acquisition_accounting/2009_Acquisition_accounting.pdf>, accessed 10 March 2014.

- ESMA (2013), *European Enforcers Review of Impairment of Goodwill and Other Intangible Assets in the IFRS Financial Statements* <<http://www.esma.europa.eu/system/files/2013-02.pdf>>, accessed 31 March 2014.
- Fama, E. and Jensen, M.J. (1983), 'Agency Problems and Residual Claims', *Journal of Law and Economics*, 26 (2): 327–49.
- Fasshauer, J., Glaum, M. and Street, D. (2008), *Adoption of IAS 19 by Europe's Premier Listed Companies*, ACCA Research Report No. 100 (London: CAET).
- FASB (in progress), 'Disclosure Framework' <http://www.fasb.org/jsp/FASB/FASBContent_C/ProjectUpdatePage&c;id=1176156344894>.
- FEE (Fédération des Experts Comptables Européens), (2001), 'Enforcement Mechanisms in Europe: A Preliminary Investigation of Oversight Systems', April <<http://www.fee.be/publications/main.htm>>, accessed 5 June 2003.
- Fekete, S., Matis, D. and Lukács, J. (2008), *Factors Influencing the Extent of Corporate Compliance with IFRS – The Case of Hungarian Listed Companies* <<http://ssrn.com/abstract=1295722>>, accessed 10 March 2014.
- Fielding, J. and Gilbert, N. (2004), *Understanding Social Statistics* (London: Sage).
- Francis, J., Khurana, I. and Pereira, R. (2005), 'Disclosure Incentives and Effects on Cost of Capital Around the World', *The Accounting Review*, 80 (4): 1125–62.
- Francis, J. and Wang, D. (2008), 'The Joint Effect of Investor Protection and Big 4 Audits on Earnings Quality Around the World', *Contemporary Accounting Research*, 25 (Spring): 157–95.
- Frost, C. A., Gordon, E.A. and Hayes, A.F. (2006), 'Stock Exchange Disclosure and Market Development: An Analysis of 50 International Exchanges', *Journal of Accounting Research*, 44 (3): 437–83.
- FRRP (Financial Reporting Review Panel) (2006), 'Preliminary Report on Implementation of IFRS', Press Notice 98 <<https://www.frc.org.uk/FRC-Documents/FRRP/Preliminary-Report-on-Implementation-of-IFRS.aspx>>, accessed 10 March 2014.
- Glaum, M., Schmidt, P., Street, D. L. and Vogel, S. (2013), 'Compliance with IFRS3- and IAS36-required Disclosures Across 17 European Countries: Company- and Country-level Determinants', *Accounting and Business Research*, 43 (3): 163–204.
- Glaum, M., Street, D. (2003), 'Compliance with the Disclosure Requirements of Germany's New Market: IAS versus US GAAP', *Journal of International Financial Management and Accounting*, 14 (1): 64–100.
- Glaum, M., Street, D. and Vogel, S. (2007), *Making Acquisitions Transparent: An Evaluation of M&A-Related IFRS Disclosures by European Companies in 2005* <http://www.pwc.ch/user_content/editor/files/publ_adv/pwc_acquisitions_transparent_e.pdf>.
- Gujarati, D. (2003), *Basic Econometrics*, Fourth edn, (New York: McGrawHill).
- Hassan, O.A.G., Giorgioni, G. and Romilly, P. (2006), 'The Extent of Financial Disclosure and its Determinants in an Emerging Capital Market: The Case of Egypt', *International Journal of Accounting, Auditing and Performance Evaluation*, 3 (1): 41–67.
- Hoogervorst, H. (2013), 'Breaking the boilerplate' <<http://www.ifrs.org/Alerts/Conference/Documents/2013/HH-Amsterdam-June-2013.pdf>>, accessed March 2014.
- Hope, O-K. (2003), 'Firm-level Disclosures and the Relative Roles of Culture and Legal Origin' *Journal of International Financial Management and Accounting*, 14 (3) (Autumn): 218–48.
- IASB (2013a), 'Disclosure initiative' <<http://www.ifrs.org/Alerts/PressRelease/Pages/IASB-announces-new-staff-group-to-focus-on-Disclosure-Initiative-October-2013.aspx>>.
- IASB (2013b) <<http://www.ifrs.org/Current-Projects/IASB-Projects/PIR/PIR-IFRS-3/Project-news/Pages/IASB-begins-the-Post-implementation-Review-of-Business-Combinations-Standard.aspx>>.
- iasplus.com (2014), [website], 'China', <<http://www.iasplus.com/en/jurisdictions/asia/country5>>, accessed 12 March 2014.
- ICAEW (Institute of Chartered Accountants in England and Wales) (2007), *EU Implementation of IFRS and the Fair Value Directive* <http://ec.europa.eu/internal_market/accounting/docs/studies/2007-eu_implementation_of_ifrs.pdf>, accessed 10 March 2014.
- ICAS and NZICA (Institute of Chartered Accountants of Scotland and the New Zealand Institute of Chartered Accountants) (2011), *Losing the Excess Baggage – Reducing Disclosures in Financial Statements to What's Important*.
- IFAC (International Federation of Accountants) (2011). 'Member Body Compliance Program' <<http://www.ifac.org/ComplianceAssessment/published.php>>, last accessed March 2014.
- IFRS Foundation (2009), *Framework for the Preparation and Presentation of Financial Statements* (London).
- IFRS Foundation (2013a). 'Constitution Revised and approved by the Trustees' <<http://www.ifrs.org/The-organisation/Governance-and-accountability/Constitution/Documents/IFRS-Foundation-Constitution-January-2013.pdf>>, accessed March 2014.

- IFRS Foundation (2013b), 'IASB begins the Post-implementation Review of Business Combinations Standard' [press release], 25 July <<http://www.ifrs.org/Current-Projects/IASB-Projects/PIR/PIR-IFRS-3/Project-news/Pages/IASB-begins-the-Post-implementation-Review-of-Business-Combinations-Standard.aspx>>, accessed 12 March 2014.
- Jaggi, B. and Low, P.Y. (2000), 'Impact of Culture, Market Forces, and Legal System on Financial Disclosures', *International Journal of Accounting*, 35 (4): 495–519.
- Kvaal, E. and Nobes, C. (2010), 'International Differences in IFRS Policy Choice: A Research Note', *Accounting and Business Research*, 40 (2): 173–87.
- Kvaal, E. and Nobes, C. (2012), 'IFRS Policy Changes and the Continuation of National Patterns of IFRS Practice', *European Accounting Review*, 21 (2): 343–71.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, W.R. (1998), 'Law and Finance', *Journal of Political Economy*, 106 (6): 1113–55.
- La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2006), 'What Works in Securities Laws?', *Journal of Finance*, 61 (1): 1–32.
- Larson, R.K. and Street, D.L. (2004), 'Convergence with IFRS in an Expanding Europe: Progress and Obstacles Identified by Large Accounting Firms' Survey', *Journal of International Accounting Auditing and Taxation*, 13 (2): 89–119.
- Leuz, C., Nanda, D.J. and Wysocki, P.D. (2003), 'Earnings Management and Investor Protection: An International Comparison', *Journal of Financial Economics*, 69 (3): 505–27.
- MASB (Malaysian Accounting Standards Board) (2008), *Malaysia's Convergence with IFRS in 2012* <<http://www.masb.org.my>>, accessed 10 March 2014
- MIA (Malaysian Institute of Accountants) (2005), 'MASB Moves Closer to Convergence with their Planned Renaming of MASB Standards', *Accountants Today*, January and February; 49.
- Nobes, C. (2006), 'The Survival of International Differences Under IFRS: Towards a Research Agenda', *Accounting and Business Research*, 36 (3): 233–45.
- Owusu-Ansah, S. (1998), 'The Impact of Corporate Attributes on the Extent of Mandatory Disclosure and Reporting by Listed Companies in Zimbabwe', *The International Journal of Accounting*, 33 (5): 605–31.
- Owusu-Ansah, S. and Yeoh, J. (2005), 'The Effect of Legislation on Corporate Disclosure Practices', *Abacus*, 41 (1): 92–109.
- Pallant, J. (2005), *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS Version 12*, (Berkshire, USA: Open University Press).
- Peng, S., Tondkar, R.H., Smith, J. and Harless, D.W. (2008), 'Does Convergence of Accounting Standards Lead to the Convergence of Accounting Practices? A Study from China', *The International Journal of Accounting*, 43 (4): 448–68.
- Preiato, J.P., Brown, P.R. and Tarca, A. (2013), 'Mandatory Adoption of IFRS and Analysts' Forecasts: How Much Does Enforcement Matter?', UNSW Australian School of Business Research Paper <<http://ssrn.com/abstract=1499625>>, accessed 10 March 2014.
- Schipper, K. (2005), 'The Introduction of International Accounting Standards in Europe: Implications for International Convergence', *European Accounting Review*, 14 (1): 101–26.
- SEC (Securities and Exchange Committee) (2007), 'Staff Observations in the Review of IFRS Financial Statements' <http://www.sec.gov/divisions/corpfin/ifrs_staffobservations.htm>, accessed 10 March 2014
- SEC (2011), 'An Analysis of IFRS in Practice: A Securities and Exchange Commission Staff Paper', 16 November <<http://www.sec.gov/spotlight/globalaccountingstandards/ifrs-work-plan-paper-111611-practice.pdf>>, accessed 10 March 2014.
- Siegel, J. (2005), 'Can Foreign Firms Bond Themselves Effectively by Renting US Securities Laws?', *Journal of Financial Economics*, 75 (2): 319–59.
- Soderstrom, N.S. and Sun, K.J. (2007), 'IFRS Adoption and Accounting Quality: A Review', *European Accounting Review*, 16 (4): 675–702.
- Solas, C. (1994), 'Financial Reporting Practice in Jordan: An Empirical Test', *Advances in International Accounting*, 7: 43–60.
- Street, D. and Gray, S. (2001), *Observance of International Accounting Standards: Factors Explaining Non-compliance*, ACCA Research Report, No. 74 (London: CAET).
- Tai, B.Y.K., Au-Yeung, P.K., Kwok, M.C.M. and Lau, L.C.W. (1990), 'Non-compliance with Disclosure Requirements in Financial Statements: The Case of Hong Kong Companies', *The International Journal of Accounting*, 25 (2): 99–112.
- Tower, G., Hancock, P. and Taplin, R.H. (1999), 'A Regional Study of Listed Companies' Compliance with International Accounting Standards', *Accounting Forum*, 23 (3): 293–305.
- Tsalavoutas, I., Evans, L. and Smith, M. (2010), 'Comparison of Two Methods for Measuring Compliance with IFRS Mandatory Disclosure Requirements', *Journal of Applied Accounting Research*, 11 (3): 213–28.
- Tsalavoutas, I. (2011), 'Transition to IFRS and Compliance with Mandatory Disclosure Requirements: What is the Signal?', *Advances in Accounting*, 27 (2): 390–405.
- Tsalavoutas, I. and Dionysiou, D. (2014), 'Value Relevance of IFRS Mandatory Disclosure Requirements', *Journal of Applied Accounting Research*, 15 (1) (forthcoming).

Wallace, R. S. O., Naser, K. (1995), 'Firm-specific Determinants of the Comprehensiveness of Mandatory Disclosures in the Corporate Annual Reports of Firms Listed on the Stock Exchange of Hong Kong', *Journal of Accounting and Public Policy*, 14 (4): 311–68.

Wallace, R.S.O., Naser, K. and Mora, A. (1994), 'The Relationship Between the Comprehensiveness of Corporate Annual Reports and Firm Characteristics in Spain', *Accounting and Business Research*, 25 (97): 41–53.

Watts, R. and Zimmerman, J. (1986), *Positive Accounting Theory* (Prentice Hall: New Jersey).

Weetman, P. (2006), 'Discovering the 'International' in Accounting and Finance', *British Accounting Review*, 38 (4): 351–70.

White, H. (1980), 'A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity', *Econometrica*, 48 (4): 817–838.

Zeff, S. (2007), 'Some Obstacles to Global Financial Reporting Comparability and Convergence at a High Level of Quality', *British Accounting Review*, 39 (4): 290–302.

RR/134/001

ISBN: 978-1-85908-489-2

Worldwide application of IFRS 3, IAS 38 and IAS 36, related disclosures, and determinants of non-compliance

