

IFRS COMPLIANCE IN THE YEAR OF THE PIG: HONG KONG IMPAIRMENT TESTING

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ABSTRACT

Several studies have suggested that the adoption of IFRS can enhance the quality of financial reports, in turn improving their reliability and usefulness (Wyatt, 2005; Barth *et al.*, 2008). However, such studies generally assume that the introduction of IFRS guarantees consistency and compliance in practice. Given that goodwill impairment testing under IFRS presents a technically challenging task (Hoogendoorn, 2006; Wines *et al.*, 2007) that can materially impact the determination of economic profit, this study focuses on assessing the compliance quality of a large sample of Hong Kong firms that are mature IFRS adopters. By examining the detailed disclosures made by 264 large listed firms in 2007, three years after Hong Kong's adoption of IFRS, an alarmingly high rate of non compliance with HKAS 36 still exists among these goodwill-intensive firms, casting doubts over the hypothesis that lax compliance is a characteristic associated solely with early adoption.

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1. INTRODUCTION

The globe's financial reporting landscape has undergone dramatic change over the course of the past decade. A key driving force for this has been the rapid uptake of IFRS in substitution for localised accounting rules.¹ This trend has been highly evident in the South East Asian zone, with numerous key regional economies, including Australia, New Zealand, Malaysia and Singapore all adopting IFRS.

Hong Kong has also moved onto an IFRS reporting framework.² Given Hong Kong's prominence as a regional capital hub and financial centre and as a window on China (which has not thus far moved to IFRS adoption), the move to this new body of rules has an added and wider significance in Hong Kong's case than in many other adopter jurisdictions (Batten & Fetherston, 2002; Green, 2003).

A number of studies of the impact of the adoption of IFRS have suggested that the transition from local GAAP to IFRS can have a favourable impact on the quality of financial reporting information (Wyatt, 2005; Barth *et al.*, 2008). The benefits flowing from the increasing harmonisation of accounting standards, a phenomenon driven substantially by the increasing uptake and spread of IFRS have also been widely anticipated (Street, 2002).

Yet as with any substantial and complex change, variations may arise between anticipated and actual effects in the world of practice. One respect in which this theory practice gap is slowly becoming salient to researchers in the context of IFRS implementation relates to the question of compliance. This represents a precondition to the achievement of harmonisation and unification of practice, yet in much of the accounting and reporting literature, this dimension of practice has been overlooked.

A particularly technically challenging element of the IFRS framework is its impairment testing regime (Hoogendoorn, 2006). The difficulties associated with the implementation of the IFRS impairment testing regime stem not only from the complex conceptual web woven through the standard which embodies the regime, IAS 36 *Impairment of Assets*, but also because of the intricately detailed disclosure regime prescribed within the standard (Lonergan, 2007; Carlin & Finch, 2008).

Testing goodwill for impairment requires not only the application of detailed financial modelling, but also results in a heavy compliance burden as firms reporting subject to IFRS are called upon to provide insight into the assumptions used, benchmarks referred to and processes used in the formation of a judgement on the value of the most vexed of all intangible assets. Yet if IAS 36 is to fulfil its promise, this high hurdle must be met.

However, a still nascent literature is raising questions as to whether this is occurring in the real world landscape of financial reporting. For a financial services hub and entrepôt such as Hong Kong, much potentially turns on the answer to this question. Therefore, this study focuses on compliance levels and quality among a sample of large enterprises whose equity securities are listed for quotation on the Hong Kong Stock Exchange. The device used as a basis for interrogating the compliance issue is an assessment of the degree to which these

¹ In some more unusual cases, certain jurisdictions have leapt from a position of having essentially no meaningfully consistently enforced accounting framework to the full embrace of IFRS. In the Asia Pacific region, Cambodia represents an example of such a jurisdiction.

² Hong Kong implemented mandatory IFRS for all reporting periods commencing on and after 1 January 2005.

firms have adhered to the technical disclosure requirements of IAS 36 in relation to their conduct of goodwill impairment testing.

To avoid the confounding effects often associated with first time adoption of complex provisions, this study looks at practice in the third year after the onset of mandatory IFRS based reporting in Hong Kong. This interval allows for the avoidance of capturing errors of practice driven by early period adoption inexperience and thus supports the generation of greater clarity in relation to the underlying compliance picture.

To pursue this matter, the remainder of the paper is structured as follows. Section 2 contains a brief overview of the relevant literature and an explanation of the gravity and implications of the compliance problem in financial reporting. Section 3 provides details of the data and methods drawn upon for the purposes of the study. Section 4 contains an overview and discussion of the empirical results, while conclusions and suggestions for future research are set out in Section 5.

2. GOODWILL REPORTING ARRANGEMENTS IN HONG KONG

Hong Kong adopted IFRS for all reporting periods commencing on or after 1 January 2005, with HKAS 36 *Impairment of Assets* embodying the requirements of the IFRS impairment testing framework in that jurisdiction.³ The adoption of this approach to goodwill accounting and reporting marked a radical departure from prior practice in Hong Kong. Prior to the transition to IFRS, goodwill was typically written off against reserves upon acquisition, or less frequently, amortised against periodic earnings (Moliterno, 1993).

Thus the rise of IFRS based reporting represented a particularly stark contrast between the brutal simplicity of the prior indigenous reporting rules and the Byzantine nature of their new usurpers. Yet even with IFRS goodwill accounting rules and their close analogues in US GAAP in their relative infancy, concerns have emerged about their role and effect.

Watts (2003) represents an early and high profile example of some of the criticisms which have been levelled at the new complex approach to goodwill accounting and reporting. He characterises the FASB's decision to opt for an impairment testing based regime in SFAS142 as an error in judgement likely to leave open the pathway to aggressive earnings management and systematic asset value over statements.

Other commentators, including Massoud & Rayborn (2003) have expressed similar sentiments, and questioned the desirability of a reporting framework so reliant on subjective judgements without appropriate verification checks and balances. Others have asserted the existence of obvious technical flaws in the manner in which asset impairment standards have been drafted (Haswell & Langfield-Smith, 2008).

Consistent with the concerns raised in these conceptual contributions, evidence is accumulating in the empirical literature of an array of problems associated with impairment testing regimes.

³ HKAS 36 is the functional equivalent of IAS 36. The two may be treated as interchangeable for all intents and purposes.

These include a lack of evidence that earnings numbers derived under the present regime are more value relevant than those generated under the previous capitalise and amortise regime (e.g. Chen *et al.*, 2006); evidence that write off timing is consistent with managerial opportunism (Anantharaman, 2007); evidence of undue delays in recognising impairment losses (Henning *et al.*, 2004; Hayn & Hughes, 2006; Ramanna & Watts, 2007) and evidence of gaming in the manner in which goodwill is allocated between reporting units⁴ in a bid to minimise the chance of forced impairment losses (Zhang & Zhang, 2007).

Contributions to the literature by practitioners have also expressed strong concerns about the operation and effect of the impairment based regime for goodwill reporting, one author recently offering the view that the IFRS impairment framework is likely to yield misleading results at odds with any discernible thread of logic or principle (Lonergan, 2007).

All of these authors express concerns, for varying reasons, about the quality of the information product emanating from the impairment testing framework for goodwill measurement and reporting. Yet in expressing their concerns, these contributors to the literature appear to have neglected the question of compliance.

That is, many researchers appear to have assumed that preparers of financial statements systematically comply with the technical requirements of the accounting standards which embody the impairment testing framework and that the information quality deficiencies which are attributed to the operation of the framework result from factors such as the opportunistic exercise of discretion.

While not equating technical compliance with reporting standards and the quality or serviceability of the resulting disclosures (following Schuetze, 1992; Clarke *et al.*, 2003), the degree to which firms adhere to the requirements of applicable standards must nonetheless be viewed as a matter which has the capacity to materially influence and in cases of non compliance detract from the decision usefulness of financial statements.

Fraudulent deviation from required reporting norms and standards⁵ represents one well recognised species of financial reporting pathogen. The opportunistic exercise of discretion allowable within reporting frameworks represents another⁶ frequently researched problem. The degree of compliance with the technical architecture of the applicable reporting framework arguably represents a separate species of pathogen, differentiable from the former two on the basis of motivational foundation.

Specifically, whereas the motivations for fraudulent and legal but opportunistic reporting choices can typically be explained with reference to the wealth transfer effects of such behaviour, no such blanket explanation can be offered in relation to the degree of technical compliance. Arguably, the possible causal factors for this particular species of reporting pathogen may be far broader, including lack of understanding of reporting frameworks by preparers, lack of resources to fully implement the requirements of applicable standards on the part of preparers and lack of understanding and resources on the part of auditors, as examples.

⁴ Or CGUs (cash generating units) in the IFRS terminology – see Carlin *et al.* (2007).

⁵ This type of pathogen has been termed “feral accounting” by Clarke *et al.* (2003). This was also the key interest of writers such as Briloff (1972); Mulford & Comiskey (2002); Schilit (2002) and Smith (1992).

⁶ This aspect of reporting is the focus of much of the agency based literature, for example; Healy (1985); Watts & Zimmerman (1986) as key source contributions.

Equally, the policy implications of systematic (but not fraudulently or opportunistically motivated) deviations from the precepts of mandatory reporting frameworks differ materially from those raised in cases of fraud or by dint of excessive manoeuvre space within the boundaries (or at the intersection of the boundaries) of reporting standards.

Yet, as argued above, the compliance degree question has thus far been relatively overlooked in the financial reporting literature. Nonetheless, careful scrutiny of published research unveils a limited number of contributions which bear on this matter and which raise potent questions in relation to the actual impact of IFRS in the domain of practise.

In an examination of the relationship between compliance and analyst forecast errors, Hodgson *et al.* (2008) document an inverse relationship between these two constructs, highlighting the importance of the compliance issue from an empirical standpoint. The same authors (Hodgson *et al.*, 2008) find that compliance varies according to auditor choice, reinforcing the notion that despite the “evenness” of the obligations imposed by IFRS, the practical context of application is uneven, due to inconsistent compliance.

Though valuable, these contributions are best viewed as preliminary. They open more questions than they resolve. These include the need to develop insight into whether unevenness in compliance afflicts certain forms of financial reporting constructs more than others, whether adoption effects offer a dominant or residual explanation for material compliance deviance and whether compliance is a constant phenomenon in a cross jurisdictional sense, or idiosyncratic depending on institutions and geography.

The setting, timing and focus of this paper support the capacity to bring insights to bear on each of these matters and in so doing contribute to a broader understanding of the compliance issue and its implications. The methodology and data drawn upon to sustain these objectives are discussed in section 3, below.

3. DATA COLLECTION AND RESEARCH METHODOLOGY

This study examines compliance practice in relation to goodwill impairment disclosures amongst large Hong Kong Stock Exchange listed firms in the third year of IFRS implementation in that jurisdiction. In constructing the final research sample, a number of steps were involved. First, companies were required to be the members in Main Board of Hong Kong Stock Exchange (HKEx) as at December 2007.

At the year end December 2007, there were 1,048 firms listed on the HKEX with a total market capitalisation of \$20,536 billion. All firms were stratified by individual market capitalisation and the 500 largest firms selected for the next stage. As at December 31 2007, these firms had an aggregate market capitalisation of \$20,242 billion and accounted for 98.57% of total market capitalisation.

Of these firms, 236 had no goodwill and were therefore excluded from the sample. Consequently, the final research sample comprised 264 companies with a total year end

market capitalisation of \$12,922 billion, representing 62.93% of the total market capitalisation in HKEx as at December 31 2007.⁷

Firms listed on the HKEx report in a variety of currencies. Among those firms included in the final research sample, 68% reported in Hong Kong Dollars, 27% reported in Chinese Renminbi and 5% reported in US Dollars. To allow for consistent analysis, all non Hong Kong Dollar data was translated into Hong Kong Dollars.⁸ All balance sheet items were translated at exchange rates prevailing at the year end applicable to each firm included in the research sample. Profit and loss items were translated at a 12 month average exchange rate for 2007.

To allow for industry segmentation of data, all firms were allocated to one of five industry groupings comprising organizations with related principle lines of business. These were, Consumer Goods & Conglomerates; Financials; Telecommunications & Services; Materials & Industrial Goods and Utilities, Energy & Construction.

An overview of the asset base and goodwill base of the research sample, arranged by industry sector and expressed in \$HK is set out in Table 1, below.

Table 1: Overview of Research Sample - 2007

Sectors	Number of companies	Total Assets (\$ million)	Total Goodwill (\$ million)	Goodwill as % of Total Assets
Consumer Goods & Conglomerate	77	2,232,557.57	82,981.53	3.72%
Financials	25	33,189,160.81	332,073.77	1.00%
Telecommunication & Services	62	1,760,793.76	96,021.53	5.45%
Materials & Industrial Goods	37	531,686.67	11,193.52	2.11%
Utilities, Energy & Construction	63	2,422,749.97	39,435.56	1.63%
TOTAL (n)	264	40,136,948.78	561,705.91	1.40%

In approaching the research question, a two layered comparative/evaluative methodology was employed. The first layer of the methodology requires a comparison to be made between the content of a firm's impairment testing disclosure and a checklist of requirements derived from the text of HKAS 36. This allows disclosures to be categorised according to a bi-modal "comply" or "non-comply" taxonomy.

⁷ Details of 264 companies comprising in the final research sample, their market capitalization and values of goodwill balances are presented in the Appendix 1.

⁸ FX rates used for this purpose were sourced from the OANDA database.

The second layer of the methodology looks beyond distribution of disclosures into the basic categories of “comply” and “non-comply” and recognises that within the “comply” category of disclosures there is a gradation of quality. Thus, as discussed below, an additional element of the methodology employed is the construction of multi-category disclosure quality taxonomies which provide a more nuanced perspective on disclosure practice than simple “comply” versus “non-comply” categorisations.

Bearing this in mind, several dimensions of the IFRS goodwill reporting regime are of potential interest and can be investigated by dint of required disclosures under HKAS 36. The first relates to the role of cash generating units (henceforth CGUs) as the crucible within which the impairment testing process transpires.

Paragraph 80 of HKAS 36 requires that for the purpose of impairment testing, goodwill is to be allocated to each of the reporting entity’s CGUs (or groups of CGUs) expected to benefit from the goodwill. To avoid the creation of an excessive reporting systems burden, this allocation is only required down to CGUs or groups of CGUs which represent the lowest level at which goodwill is monitored for internal management purposes.

However, to guard against inappropriate aggregation,⁹ paragraph 80 stipulates that the CGUs (or groups thereof) should not be larger than segments defined for the purpose of segment reporting.¹⁰

This is important, because the number of CGUs to which goodwill is allocated for the purposes of impairment testing itself has the capacity to impact on the likelihood of an impairment loss being recognised. Where elements of a group enterprise whose cash flows are imperfectly correlated and whose risk profiles differ are fused as one CGU rather than two or more, the excess “headroom” between the estimated fair value and book value of the assets of better performing units serves as a shock absorber for the riskier or more poorly performing elements.

Were these elements disaggregated, the shock absorber effect would be removed, and the surplus of fair value over book value embedded in the less risky or stronger performing business elements could not foil deficiencies in riskier or weaker performing business elements, removing the capacity to avoid impairment write downs.

Thus, in coming to understand the characteristics of the goodwill reporting regime, developing an image of the apparent level of “aggregation” of CGUs as defined by reporting entities is of prime significance.¹¹ This is pursued by comparing the number of reported controlled subsidiary entities, business segments and defined cash generating units for each firm in our sample.

The completeness and quality of disclosures relating to goodwill at the CGU level is also assessed by examining the extent to which each sample firm’s total goodwill balance can be

⁹ The CGU aggregation problem has also been recognised elsewhere in the literature. For example; Wines *et al.* (2007). It is notable that the literature concerning segment reporting, which shares close parallels with aspects of the literature which touches on CGU definition also reports high variation in practice, and a tendency to report fewer rather than more sectors, given the potential competitive costs associated with these disclosures. See; Rennie & Emmanuel (1992); Wines (1997); Doupnik & Seese (2001).

¹⁰ Pursuant to HKAS 14 – *Segment Reporting*.

¹¹ See, Carlin & Finch (2007).

reconciled with the sum of disclosed CGU goodwill allocations. Where the total disclosed goodwill of the firm does not reconcile to the total value of goodwill allocated to CGUs, the quality and completeness of disclosure is judged to be lower than where complete reconciliation is possible.

Having examined the aggregation issue, attention is turned to manner in which recoverable amount of CGU assets has been estimated. This requires reference to fair value or value in use, and disclosure which of these reference bases has been adopted. While it is likely that in most circumstances recoverable value will be determined by reference to value in use,¹² the possibility that the fair (market) value of certain asset classes may be reliably determinable, for example, by dint of the existence of active markets for assets of the class in question, means that it will on some occasions be feasible to determine recoverable amount on a fair value basis.

HKAS 36 stipulates¹³ that adoption of a fair value approach to the determination of recoverable amount is not dependent on the existence of an active market for the assets in question, but also makes clear the need for some reasonable basis for making a reliable estimate of the amount obtainable from the disposal of assets in arm's length transactions between knowledgeable and willing parties as a prerequisite to the adoption of this method. Consequently, the circumstances in which this choice is exercised also represent an object of potential research interest, and the frequency with which sample firms resorted to either method is reported in section four of the paper.¹⁴

While HKAS 36 calls for limited disclosure of the assumptions and processes used by an organisation which has elected to use fair value as the benchmark for impairment testing,¹⁵ several specific and detailed disclosures are called for in the event that value in use is the basis adopted for the determination of recoverable amount. These appear designed to assist financial statements users to assess the robustness of the discounted cash flow modelling process used to estimate recoverable amount, and include;

- (i) a description of each key assumption on which management has based its cash flow projections for the period covered by the most recent budgets/forecasts. Key assumptions are those to which the unit's (group of units') recoverable amount is most sensitive;¹⁶
- (ii) 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;¹⁷

¹² The reason for this relates to the degree likelihood that appropriate market based value benchmarks are readily available as a means of assessing recoverable amount. In many instances this will not be so, resulting in value in use as the default approach to the estimation of recoverable amount.

¹³ Paragraph 20.

¹⁴ We examine the use of the fair value basis for impairment testing elsewhere – see Carlin *et al.* (2008). We argue that there is evidence of opportunistic behaviour in the manner in which reporting entities elect to use the fair value as the basis for impairment testing rather than the far more commonly employed value in use approach.

¹⁵ As to which, see HKAS 36, paragraph 134.

¹⁶ HKAS 36, Paragraph 134 d (i).

¹⁷ HKAS 36, Paragraph 134 d (ii).

- (iii) the period over which management has projected cash flows based on financial budgets/forecasts approved by management and, when a period greater than five years is used for a cash-generating unit (group of units), an explanation of why that longer period is justified;¹⁸
- (iv) the growth rate used to extrapolate cash flow projections beyond the period covered by the most recent budgets/forecasts, and the justification for using any growth rate that exceeds the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market to which the unit (group of units) is dedicated;¹⁹ and
- (v) the discount rate(s) applied to the cash flow projections.²⁰

Inspection of the assumptions made in relation to key factors such as discount rates, growth rates, forecast periods and terminal value periods supports the development of a more nuanced comprehension of the degree of conservatism or aggression inherent in the development of value in use estimates, meaning that these are also of primary interest in developing an understanding of the operation of the goodwill reporting regime. Consequently, an assessment of the disclosures relating to both discount rates and growth assumptions made by sample firms pursuant to HKAS 36 is reported in section four, below.

In order to generate quality assessments, it was necessary to develop a compliance and disclosure quality taxonomy for both discount rate and growth rate based disclosures. In relation to discount rate disclosures, the taxonomy applied required the allocation of each sample firm to one of four dimensions being “multiple explicit discount rates”, “single explicit discount rates”, “range of discount rates” and “no effective disclosure”.

Allocation of a firm to the first of these categories indicated that the firm was fully compliant with the requirements of HKAS 36 in relation to discount rate disclosures, and that the degree of transparency inherent in its disclosures was sufficient to allow an external analyst to develop meaningful insights into the process of impairment testing employed by the sample firm. Firms assigned to this category provided details of the specific discount rate used to discount cash flows for the purpose of impairment testing for each defined CGU, and used varying discount rates as the risk characteristics of CGUs varied.

Firms were assigned to the second category “single explicit discount rate” where they provided details of a specific discount rate for each CGU, but there was no observed variation in discount rates assigned to CGUs, even though CGU risk levels were arguably different. The quality of compliance and disclosure for firms in this category was assessed as lower than that of firms in the first category.

Firms were assigned to the third category “range of discount rates”, where they provided details of discount rates employed for the purpose of recoverable amount modelling and impairment testing, but rather than specifying a particular discount rate used in the context of testing for impairment in a particular CGU, simply provided details of a range of discount rates used across a range of CGUs. It is questionable whether this practice fulfils the

¹⁸ HKAS 36, Paragraph 134 d (iii).

¹⁹ HKAS 36, Paragraph 134 d (iv).

²⁰ HKAS 36, Paragraph 134 d (v).

disclosure requirements stipulated under HKAS 36, and it is clear that the quality of this form of disclosure is lower than in categories one and two, above.

Finally, where the degree of information provided in relation to discount rates was so limited that it would not sustain any meaningful external evaluation, firms were assigned to a fourth category, labelled “no effective disclosure”. These firms were judged not to have complied with the relevant requirements of HKAS 36, and the quality of their disclosures was poor.

In contemplating the quality of disclosures relating to growth rates as required under HKAS 36, a similar methodology was employed, with firms also characterised according to a four point taxonomy, anchored at the high quality end by the category “multiple explicit growth rates” for each CGU and “no effective disclosure” at the low quality end. Two intermediate categories “range of growth rates” and “single growth rate” for all CGUs” (in that order of assessed quality) filled out the scale. In relation to the disclosures pertaining to the length of the forecast periods, “multiple explicit forecast period” sat at the high quality end, and “no effective disclosure” at the low quality end, with “single explicit forecast period” as the intermediate category. The results of the analytical procedures employed for the purposes of the study are reported in section 4, below.

4. RESULTS AND DISCUSSION

In approaching the compliance issue in the Hong Kong context, the threshold question examined was the degree to which balance sheet goodwill could be reconciled with the total value of goodwill allocated to CGUs. The disclosure task required of firms to comply with this basic requirement is not challenging, and the data demonstrates that for many sample firms, did not represent a problem. As Table 2 shows, some 75% of sample firms fully complied with this threshold requirement by the third year of IFRS implementation in Hong Kong.

Troublingly, however, the remaining quarter of firms did not satisfy this basic disclosure requirement, with most cases of non compliance being instances where financial reports exhibited a total dereliction of the need to produce sufficiently transparent disclosures to allow balance sheet to note disclosure reconciliation possible. The basic impact of the lack of capacity to trace goodwill to the CGU level is to remove the capacity of financial statement users to make robust independent assessments of goodwill value, since the most forensic disclosure requirements of HKAS 36 are at the CGU level. Without knowledge of what CGUs have been defined by firms, and what level of goodwill value has been attributed to each CGU, reporting relating to goodwill is highly opaque and of little material assistance to financial statement users.

Table 2: CGU Allocation Compliance by Sectors - 2007

Sectors	Number of companies	Fully compliant	Ostensibly compliant	Non-compliant
Consumer Goods & Conglomerate	77	59	-	18
Financials	25	21	-	4
Telecommunication & Services	62	48	1	13
Materials & Industrial Goods	37	31	-	6
Utilities, Energy & Construction	63	39	2	22
TOTAL (n)	264	198	3	63
<i>Percentage of the whole sample</i>	<i>100.0%</i>	<i>75%</i>	<i>1%</i>	<i>24%</i>

The next matter examined for the purposes of the study, described as the CGU aggregation phenomenon, is substantially more complex than the threshold matter of value reconciliation attended to above. Recall (from the discussion in section 3) that the concern here is that firms reduce their impairment charge risk by defining fewer, larger CGUs as a means of offsetting strong and poor elements within their businesses and masking the existence of impairments where these may in fact have occurred.

Because of the information asymmetries inherent in conducting analysis of the aggregation issue drawing upon published financial statement data, it is necessary to approach evidence bearing on the aggregation phenomenon from an aggregate perspective, rather than on a firm by firm basis. The methodology prescribed in section three explains a rationale for a comparison between the number of business segments and CGUs defined by a firm, given the standard's explicit admonitions in relation to the size of CGUs relative to defined business segments.

However, there is little probative force in this comparison on an individual firm basis, given the enormous variety of idiosyncratic circumstances faced by each different enterprise included in the sample. However, the lack of probative value at the individual firm level does not translate to a lack of probative value at the portfolio level, since with a sufficiently sized sample, idiosyncratic factors may be expected to largely offset, leaving the trace of a core pattern.

As the data in Tables 3 and 4 demonstrate, a clear pattern does emerge from the data, bearing on the issue of CGU aggregation. An obvious concern relates to the 20% of firms which made no effective disclosures in relation to the number of CGUs they defined. No further comment on this than that offered in relation to the goodwill balance sheet to CGU value reconciliation problem need be offered, since the consequences of these compliance failures are consistent.

Of more particular interest in this context is the systemic tendency evident in the data to define fewer CGUs than business segments, by a substantial margin. This is the dominant trend in the data, and provides a strong basis for concern that there are numerous instances in which firms incorporated into the research sample defined a smaller than appropriate number of CGUs, with the consequence of less rigour and robustness in the impairment testing process.

Table 3: Business Segments and CGU Aggregation by Sectors - 2007

Sectors	No. CGUs> No. Segments	No. CGUs= No. Segments	No. CGUs< No. Segments	No effective disclosure
Consumer Goods & Conglomerate (n=77)	8	14	39	16
Financials (n=25)	2	4	15	4
Telecommunication & Services (n=62)	12	12	27	11
Materials & Industrial Goods (n=37)	3	11	18	5
Utilities, Energy & Construction (n=63)	9	7	30	17
TOTAL (n=264)	34	48	129	53
<i>Percentage of the whole sample</i>	<i>12.8%</i>	<i>18.2%</i>	<i>48.9%</i>	<i>20.2%</i>

Table 4: Analysis of Controlled Entities, Business segments and CGUs by Sectors - 2007

Sectors	Avg. No. Controlled Entities	Avg. No. Business Segments	Avg. No. CGUs	Avg. value Goodwill (\$ mil)	Avg. Goodwill per CGU (\$ mil)	Ratio CGUs to Segments
Consumer Goods & Conglomerate (n=77)	38.92	3.30	2.15	1,077.68	501.82	0.65:1
Financials (n=25)	49.76	4.52	2.76	13,282.95	4,809.34	0.61:1
Telecommunication & Services (n=62)	30.92	2.74	2.30	1,548.73	673.36	0.84:1
Materials & Industrial Goods (n=37)	25.86	3.22	1.78	302.53	169.84	0.55:1
Utilities, Energy & Construction (n=63)	45.59	3.45	2.60	625.96	241.15	0.75:1
TOTAL (n=264)	37.83	3.31	2.29	2,127.67	929.48	0.69:1

Where firms apply the requirements of HKAS 36 in relation to the testing for goodwill impairment, a key matter for transparency relates to the approach taken as a basis for determining whether or not impairment has occurred. A small but notable proportion of sample firms (almost 6% - some 15 firms) failed to provide any insight at all into the approach they had used in undertaking this task.

Recall that the two basic approaches provided for within the scope of the standard are the value in use approach and the fair value approach, with combination of these on a CGU by CGU basis possible, though, judging by the survey of practice distilled in Table 5, not on a common basis. A similarly small proportion of firms adopted a fair value approach to impairment testing.²¹ As Table 5 makes very clear, the overwhelmingly dominant practice approach to goodwill impairment testing adopted by firms included in the research sample was the value in use technique.

²¹ These firms raise concerns in relation to the lack of quality discussions evident in most of their reports in relation to the basis upon which they benchmarked or estimated fair value. However, given that these represented a small residue of the total sample, this issue is not highlighted in detail here. For specific treatment of issues directly relating to the fair value basis for impairment testing, see Carlin *et al.* (2008).

Much turns on this choice. As HKAS 36 makes clear, where the value in use approach is used as a basis for impairment testing, detailed disclosures in relation to the key dimensions of cash flow models used as a basis for estimating value in use are required. Primary among these are disclosures relating to discount rates applied as central elements of these cash flow models.

Table 5: Method Employed to Determine Recoverable Amount of CGUs - 2007

Sectors	No. of companies	Fair Value Method	Value in Use Method	Mixed Method	Method not disclosed
Consumer Goods & Conglomerate	77	1	71	1	4
Financials	25	1	21	2	1
Telecommunication & Services	62	4	53	1	4
Materials & Industrial Goods	37	-	35	1	1
Utilities, Energy & Construction	63	2	54	2	5
TOTAL (n)	264	8	234	7	15
<i>Percentage of the whole sample</i>	<i>100.0%</i>	<i>3.0%</i>	<i>88.6%</i>	<i>2.7%</i>	<i>5.7%</i>

As Table 6 demonstrates, even amongst firms which clearly flagged that they had adopted the value in use approach for at least part of their overall impairment testing task, approximately 12% were mute on so fundamental a matter as to the discount rate employed for testing purposes, even in the presence of an explicit directive for disclosure of this information. A further 8.3% of firms provided disclosures of dubious value, indicating a range of rates applied across the firm, but not assisting to lead users to an understanding of the central tendency amongst those rates, and thus to a capacity to develop strong insights into management assessments in relation to CGU risk levels.

The remaining 80% (approximately) of firms either disclosed the application of a single or multiple explicit discount rates in the context of their impairment testing processes. At face value, holding aside questions as to whether an effective 20% non compliance rate with a mandatory disclosure requirement in audited financial statements produced by large listed corporations represents an acceptable state of affairs;²² it may appear that there are no substantial reasons for concern about this majority of firms.

Yet what is striking about this data is the infrequency with which firms which made explicit and meaningful discount rate disclosures disclosed multiple, CGU specific discount rates, and the frequency with which they disclosed the application of a blanket whole of firm discount rate. Clearly, some firms which disclosed the use of a single discount rate will have assigned goodwill to only one CGU. In other cases, firms may segment businesses with inherently similar characteristics for convenience of reporting and management, leading also to the adoption of a single whole firm rate.

²² We are strongly of the opinion that it does not.

Yet it is strongly arguable that these (and other similar scenarios) cannot adequately explain why 162 of 193 firms in the final research sample which made meaningful discount rate disclosures used only one discount rate. For many of these firms, the practical reality is that they have assigned goodwill to more than one CGU and the risk characteristics of their portfolios of CGUs are heterogeneous rather than homogenous.

This is of concern not only because the disclosure of a blanket discount rate removes valuable information in relation to intra firm risk variation from the public eye,²³ but also because it heightens the risk that individual CGUs have been subjected to impairment testing at discount rates lower than appropriate to reflect true risk to cash flows.

The data clearly hints at the possibility that in at least some cases, inappropriately low discount rates may have been applied for the purposes of impairment testing. For example, in the consumer goods & conglomerates industry sector, the lowest observed discount rate was 2.6%. Having regard to risk free rates and equity premia prevailing at the time, this raises obvious concerns. However, beyond raising the question, the methodology employed for the purposes of this paper does not extend to an analytical approach amenable to the formation of judgements on the appropriate (or otherwise) level of discount rates.²⁴

Table 6: Discount Rate Disclosures - (Value in Use and Mixed Method Used Only) 2007²⁵

Sectors	Multiple Discount Rate (no. of firms)	Single Discount Rate (no. of firms)	Range of Discount Rate (no. of firms)	No Effective Disclosure (no. of firms)	Min Discount Rate (pre-tax) (%)	Max Discount Rate (pre-tax) (%)	Average Discount Rate (pre-tax) (%)
Consumer Goods & Conglomerate (n=72)	10	45	11	6	2.60	23.70	10.25
Financials (n=23)	8	11	1	3	3.10	25.90	9.26
Telecommunication & Services (n=54)	6	40	2	6	5.00	22.36	12.03
Materials & Industrial Goods (n=36)	3	30	1	2	4.68	20.00	10.77
Utilities, Energy & Construction (n=56)	4	36	5	11	5.00	20.00	10.94
TOTAL (n=241)	31	162	20	28	2.60	25.90	10.80
<i>Percentage</i>	12.9%	67.2%	8.3%	11.6%			

Just as an analysis of the discount rate disclosures made by sample firms raised serious concerns, so to disclosures in relation to other dimensions of the value in use modelling process revealed problems in the domain of practice. The most obvious of these is the abject failure of almost seven in ten firms required to make growth rate disclosures to do so. This is a powerful example of the extreme deviation from required practice which can occur even

²³ In violation of the intent of the standard.

²⁴ For a detailed discussion of this issue specifically, see Carlin & Finch (2009).

²⁵ Of 264 sample companies, 234 used the method of value in use and 7 applied the mixed method (combination of the value in use and fair value).

where strong legal duties and other enforcement and quality assurance overlays might ostensibly conspire to drive compliance.

In effect, the void in growth rate disclosure encountered amongst sample firms is so profound as to obviate any meaningful systematic analysis of patterns in assumed growth rates amongst firms with goodwill. This very substantially detracts from any attempt to independently reason towards a view on the robustness of valuation judgements made in relation to goodwill by firms.

While disclosures in relation to assumed growth rates were strikingly poor in their quality, firms exhibited comparatively better practice in relation to their disclosures of cash flow forecast time horizons. Table 8 shows that a substantial majority (approximately 85%) made disclosures amenable to generating at least some useful insights into the time horizons over which cash flow forecasts were prepared by sample firms. The main compliance concern raised by this data was the mean forecast interval length approaching 7 years, longer than the 5 years suggested by the standard without the benefit of justification and further amplification.²⁶

Table 7: Growth Rate Disclosures (Value in Use and Mixed Method Used Only) – 2007

Sectors	Multiple Growth Rates (no. of firms)	Single Growth Rate (no. of firms)	Range of Growth Rates (no. of firms)	No Effective Disclosure (no. of firms)	Min Growth Rate (%)	Max Growth Rate (%)	Average Growth Rate (%)
Consumer Goods & Conglomerate (n=72)	5	18	2	47	0.00	21.00	3.48
Financials (n=23)	4	9	0	10	0.00	8.00	3.46
Telecommunication & Services (n=54)	5	15	2	32	0.00	15.60	3.73
Materials & Industrial Goods (n=36)	0	10	0	26	0.00	8.00	3.22
Utilities, Energy & Construction (n=56)	1	4	4	47	0.00	26.76	7.45
TOTAL (n=241)	15	56	8	162	0.00	26.76	3.99
<i>Percentage</i>	<i>6.2%</i>	<i>23.2%</i>	<i>3.3%</i>	<i>67.2%</i>			

²⁶ This was invariably not present where more extended timelines were adopted.

Table 8: Disclosure of Forecast Period by Sectors - 2007

Sectors	Multiple Forecast Period (no. of firms)	Single of Forecast Period (no. of firms)	Range of Forecast Period (no. of firms)	No Effective Disclosure (no. of firms)	Min Forecast Period (years)	Max Forecast Period (years)	Average Forecast Period (years)
Consumer Goods & Conglomerate (n=72)	3	59	4	6	1	21	5.77
Financials (n=23)	2	16	1	4	1	24	6.33
Telecommunication & Services (n=54)	-	49	-	5	1	24	5.53
Materials & Industrial Goods (n=36)	-	34	-	2	1	25	7.03
Utilities, Energy & Construction (n=56)	3	41	3	9	1	29	7.57
TOTAL (n=241)	8	199	8	26	1	29	6.36
<i>Percentage</i>	<i>3.3%</i>	<i>82.6%</i>	<i>3.3%</i>	<i>10.8%</i>			

5. CONCLUSION

We posit that the results set out in this paper should give a range of stakeholders interested in financial reporting considerable pause for thought about the important, though substantially overlooked dimension of compliance.

The results of analysis provide strong evidence of substantial deviation from required practice amongst a large sample of listed firms in a sophisticated economic jurisdiction. Further, given that the study examines practice several years after the implementation of IFRS in that jurisdiction, it is difficult to reconcile the results with an “inexperience” or “implementation teething troubles” explanation.

The results set out above send a clear reminder that the spread of a consistent blanket of rules does not serve to guarantee the spread of a consistent blanket of practice, even in jurisdictions with strong institutional and regulatory frameworks which would generally be anticipated to promote compliance with promulgated mandatory rules.

Evidence of poor compliance with explicit disclosure requirements embedded in mandatory reporting rules suggests a greater fragility to the global financial reporting edifice than may be apparent where the gaze of focus lies on bodies of rules rather than bodies of practice against rules. It also suggests harmonisation to be a far more complex and difficult construct than many have assumed. It is to be hoped that policy makers take greater account of this in future, as they work towards an improved global reporting framework.

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APPENDIX 1

Company Code	Company Name	Market Capitalisation (\$ million)	Total Goodwill (\$ million)
Consumer Goods & Conglomerate			
WHARF HOLDINGS	The Wharf (Holdings) Limited	112,495.23	297.00
HUTCHISON	Hutchison Whamboa Limited	377,095.15	31,520.00
NEW WORLD DEV	New World Development Co., Ltd	102,689.32	696.80
SWIRE PACIFIC A	Swire Pacific Limited 'A'	160,595.35	825.00
EGANAGOLDFEIL	EganaGoldfeil (Holdings) Ltd.	8,622.96	136.32
SHELL ELECTRIC	Shell Electric Mfg. (Holdings) Company Limited	4,466.62	106.17
KINGWAY BREW	Kingway Brewery Holdings Limited	3,720.55	9.38
TAK SING ALLI	Tak Sing Alliance Holdings Ltd.	1,709.80	8.72
FIRST PACIFIC	First Pacific Company Limited	19,506.05	2,709.86
LIPPO CHINA RES	Lippo China Resources Limited	2,300.27	23.37
NATURAL BEAUTY	Natural Beauty Bio-Technology Limited	4,960.00	24.56
TSINGTAO BREW	Tsingtao Brewery Company Limited	17,162.81	131.41
GRANDE HOLDINGS	Grande Holdings Ltd.	1,656.82	660.00
HENG TAI	Heng Tai Consumables Group Ltd.	2,394.22	168.09
DENWAY MOTORS	Denway Motors Limited	37,668.67	959.15
PRIME SUCCESS	Prime Success International Group Limited	9,483.40	25.69
MY MEDICARE	Mingyuan Medicare Development Co. Ltd.	3,303.82	104.24
SHUN TAK HOLD	Shun Tak Holdings Limited	28,545.07	362.45
CHINA EB INT'L	China Everbright International Limited	12,194.06	46.13
SOUTH CHINA H	South China Holdings Limited	1,786.93	9.88
CITIC PACIFIC	CITIC Pacific Limited	96,333.78	1,121.00
CHINA RESOURCES	China Resources Enterprise, Limited	79,880.82	6,133.00
PEACE MARK	Peace Mark (Holdings) Ltd.	8,490.84	186.66
COMPUTIME	Computime Group Ltd.	2,108.20	1.74
ESPRIT HOLDINGS	Espirit Holdings Ltd.	143,608.63	42.00
HUABAO INTL	Huabao International Holdings Ltd.	23,910.36	3.75
SHANGHAI IND H	Shanghai Industrial Holdings Limited	36,422.85	1,378.26
KIU HUNG INT'L	Kiu Hung International Holdings Limited	4,087.91	303.59
BEIJING ENT	Beijing Enterprises Holdings Limited	42,191.43	7,044.32
GLORIOUS SUN	Glorious Sun Enterprises Limited	5,032.21	38.61

Company Code	Company Name	Market Capitalisation (\$ million)	Total Goodwill (\$ million)
SOUTH CHINA CHI	South China (China) Limited	1,697.24	3.38
MINTH GROUP	Minth Group Limited	10,995.84	16.35
HUNG HING PRINT	Hung Hing Printing Group Ltd.	2,655.45	3.04
JLF INVESTMENT	JLF Investment Co., Ltd.	2,182.48	10.92
STARLIGHT INT'L	Starlight International Holdings Ltd.	1,992.65	25.49
DONGFENG GROUP	Dongfeng Motor Group Company Limited	15,706.53	510.39
LI & FUNG	Li & Fung Limited	108,682.07	10,489.26
CHINA FOODS	China Foods Limited	16,217.92	1,332.86
SAMSON HOLDING	Samson Holding Ltd	4,498.80	89.56
VICTORY CITY	Victory City International Holdings Ltd.	2,148.03	6.19
YUE YUEN IND	Yue Yuen Industrial (Holdings) Ltd.	46,581.61	1,482.39
HUA HAN	Hua Han Bio-Pharmaceutical Holdings Ltd.	2,245.87	18.87
CHINA AGR	China Agri-Industries Holdings Ltd.	18,760.18	620.44
PLAYMATES	Playmates Holdings Ltd.	1,846.94	5.98
CHINA RENJI	China Renji Medical Group Ltd.	1,824.37	578.95
FOSUN INTL	Fosun International Ltd.	46,983.39	115.72
TECHTRONIC IND	Techtronic Industries Company Limited	11,693.11	4,164.13
UNI-BIO GROUP	Uni-Bio Science Group Ltd.	2,911.60	557.54
HUTCH HARB RING	Hutchison Harbour Ring Limited	5,190.68	362.56
C P NEW ENERGY	China Power New Energy Development Co., Ltd.	3,059.97	85.23
GLOBAL BIO-CHEM	Global Bio-Chem Technology Group Co. Ltd	5,472.48	360.89
DYNASTY WINES	Dynasty Fine Wines Group Limited	3,859.50	9.42
XINYU GLASS	Xinyi Glass Holdings Limited	13,063.68	55.88
TIANJIN DEV	Tianjin Development Holdings Limited	9,631.27	510.85
CKI HOLDINGS	Cheung Kong Infrastructure Holdings Ltd	65,710.22	209.00
HENGAN INT'L	Hengan International Group Company Ltd	39,956.86	452.03
TCL MULTIMEDIA	TCL Multimedia Technology Holdings Limited	3,093.99	119.64
CHINA PHARMA	China Pharmaceutical Group Limited	4,475.94	100.72
BRILLIANCE CHI	Brilliance China Automotive Holdings Limited	6,385.39	316.22
PACIFIC ANDES	Pacific Andes International Holdings Ltd.	2,595.73	498.76
SINO BIOPHARM	Sino Biopharmaceutical Limited	3,350.67	44.32
C C LAND	C C Land Holdings Limited	24,598.74	39.26
SUPERB SUMMIT	Superb Summit International Timber Co. Ltd	1,780.62	25.72
DCH HOLIDNGS	Dah Chong Hong Holdings Ltd.	6,300.00	169.00
BELLE INT'L	Belle International Holdings Ltd.	99,438.90	541.34
HUIYUAN JUICE	China Huiyuan Juice Group Ltd.	11,985.54	177.69
LIJUN INT'L	Lijun Inter Pharmaceutical (Holding) Co., Ltd.	2,726.53	429.90
AMVIG HOLDINGS	AMVIG Holdings Limited	10,752.19	2,751.77
MENGNIU DAIRY	China Mengniu Dairy Company Limited	40,787.04	213.08
GREAT WALL			
MOTOR	Great Wall Motor Company Limited	4,636.91	2.32
NORSTAR	Norstar Founders Group Ltd.	4,378.50	30.00
SHINEWAY PHARM	China Shineway Pharmaceutical Group Limited	4,672.55	62.57
WIN HANVERKY	Win Hanverky Holdings Ltd.	2,536.24	48.97
VINDA INT'L	Vinda International Holdings Ltd.	3,813.38	2.21
XINYU HENGDELI	Xinyu Hengdeli Holdings Limited	10,857.27	228.09
CHINA TING	China Ting Group Holdings Limited	4,068.55	22.25
UNITED LAB	United Laboratories Inter Holdings Ltd., The	5,568.00	3.23
	Subtotal (n=77)	2,058,795.55	82,981.52
Financials			
HSBC HOLDINGS	HSBC Holdings plc	1,557,820.72	267,341.24
HANG SENG BANK	Hang Seng Bank Limited	307,615.50	329.00
BANK OF E ASIA	The Bank of East Asia, Limited	83,974.35	2,656.72
GUOCO GROUP	Guoco Group Ltd.	34,352.96	228.19
ALLIED PPT (HK)	Allied Properties (H.K.) Limited	16,261.30	2,603.38

Company Code	Company Name	Market Capitalisation (\$ million)	Total Goodwill (\$ million)
SUN HUNG KAI CO	Sun Hung Kai & Co. Limited	17,568.73	2,504.77
SILVER GRANT	Silver Grant International Industries Limited	3,095.21	7.00
CIFH	CITIC International Financial Holdings Limited	28,037.30	1,007.75
SHENYIN WANGUO	Shenyin Wanguo (H.K.) Limited	4,139.92	57.63
LIPPO	Lippo Limited	3,144.58	94.86
FIRST SHANGHAI	First Shanghai Investments Limited	3,325.59	2.99
WING HANG BANK	Wing Hang Bank, Limited	34,420.59	1,306.43
ICBC (ASIA)	Industrial & Commercial Bank Of China (Asia) Ltd	24,141.87	974.81
ALLIED GROUP	Allied Group Limited	10,465.51	229.22
DAH SING	Dah Sing Financial Holdings Limited	19,281.81	950.99
PUBLIC FIN HOLD	Public Financial Holdings Limited	5,480.42	2,774.40
HK CHINESE LTD	Hongkong Chinese Limited	2,235.74	71.49
TAIFOOK SEC	Taifook Securities Group Limited	3,335.15	9.85
CCB	China Construction Bank Corporation	1,485,194.85	1,737.68
CHINA INSURANCE	China Insurance International Holdings Co. Ltd	30,286.83	228.19
CHONG HING BANK	Chong Hing Bank Limited	8,064.90	80.61
PING AN	Ping An Insurance (Group) Co., of China Ltd.	214,158.48	652.70
DAH SING BANKING	Dah Sing Banking Group Limited	16,858.64	811.69
STANCHART	Standard Chartered Plc	408,206.60	45,198.18
BANKCOMM	Bank of Communications Co., Ltd.	250,941.41	214.00
	Subtotal (n=25)	4,572,408.95	332,073.75
	Telecommunication & Services		
PCCW	PCCW Limited	31,384.84	3,016.00
GALAXY ENT	Galaxy Entertainment Group Limited	28,839.69	33.01
TRANSPORT INT'L	Transport International Holdings Limited	14,853.93	51.58
SHANGRI-LA ASIA	Shangri-La Asia Limited	70,532.76	591.54
VODONE	Vodone Ltd.	3,255.27	231.79
CHAMPION TECH	Champion Technology Holdings Ltd.	2,806.34	36.80
DICKSON CONCEPT	Dickson Concepts (International) Ltd.	2,792.80	13.90
JINHUI HOLDINGS	Jinhui Holdings Company Limited	2,968.98	39.04
CHINA MER HOLD	China Merchants Holdings (International) Co. Ltd	116,632.57	3,750.00
BEIJING DEV (HK)	Beijing Development (Hong Kong) Limited	2,548.74	68.63
MELCO INT'L DEV	Melco International Development Limited	14,397.72	8.56
CHINA ENERGY	China Energy Development Holdings Ltd.	2,026.01	284.27
SINO-I TECH	Sino-i Technology Limited	2,290.17	57.52
WING ON CO	Wing On Company International Limited	4,229.07	1.18
CATHAY PAC AIR	Cathay Pacific Airways Limited	80,376.51	7,666.00
SINOCOM SOFT	SinoCom Software Group Ltd.	1,707.43	8.54
CHINA TRAVEL HK	China Travel International Investment HK Ltd	29,274.13	1,244.77
VONGROUP	Vongroup Ltd.	4,022.92	8.99
CAFE DE CORAL H	Café de Coral Holdings Ltd.	10,564.54	103.55
CENTURY C INT'L	Century City International Holdings Limited	2,755.53	202.00
ASIAN UNION	Asian Union New Media (Group) Limited	2,384.08	496.38
MACAU SUCCESS	Macau Success Ltd.	2,397.42	1.31
GOME	GOME Electrical Appliances Holding Limited	65,725.86	3,577.02
TVB	Television Broadcasts Limited	20,520.30	163.03
GUANGSHEN RAIL	Guangshen Railway Company Limited	8,101.16	300.94
AJISEN (CHINA)	Ajisen (China) Holdings Ltd.	14,504.60	39.73
REX FINANCIAL H	REXCAPITAL Financial Holdings Limited	10,635.62	595.36
ESUN HOLDINGS	eSun Holdings Limited	4,135.77	35.20
TAO HEUNG HLDGS	Tao Heung Holdings Ltd.	2,698.46	16.83
ZHEJIANGEXPRESS	Zhejiang Expressway Co., Ltd.	17,894.50	92.95
IMAGI INT'L	Imagi International Holdings Ltd.	6,124.81	3.23
SINOTRANS	Sinotrans Limited	6,148.68	50.94
WAI KEE HOLD	Wai Kee Holdings Limited	2,323.85	35.47
YUE DA MINING	Yue Da Mining Holdings Limited	2,059.64	7.81

Company Code	Company Name	Market Capitalisation (\$ million)	Total Goodwill (\$ million)
CHINA EAST AIR	China Eastern Airlines Corporation Limited	12,081.18	1,062.66
STAR CRUISES	Star Cruises Ltd.	20,050.83	2,873.01
TENCENT	Tencent Holdings Limited	105,495.45	37.66
PICO FAR EAST	Pico Far East Holdings Ltd.	2,904.84	3.61
CHINA UNICOM	China Unicom Limited	243,992.25	3,364.06
HI SUN TECH	Hi Sun Technology (China) Ltd.	5,624.57	95.91
TPV TECHNOLOGY	TPV Technology Limited	11,119.06	2,802.72
CHINA MOBILE	China Mobile Limited	2,761,215.31	39,476.58
LIANHUA	Lianhua Supermarket Holdings Co., Ltd.	2,173.50	154.13
LENOVO GROUP	Lenovo Group Ltd.	62,739.95	10,186.85
GZI TRANSPORT	GZI Transport Limited	8,733.90	119.19
KANTONE HOLDING	Kantone Holdings Ltd.	2,431.95	36.80
ASIA SATELLITE	Asia Satellite Telecommunications Holdings Ltd	6,063.52	38.68
FU JI CATERING	Fu Ji Food and Catering Services Holdings Ltd.	9,743.34	10.42
INTIME	Intime Department Store (Group) Co., Ltd.	16,632.00	178.62
CITIC1616 HOLD	CITIC 1616 Holdings Ltd.	4,272.62	9.46
SIM TECH	SIM Technology Group Ltd.	2,713.43	58.93
AAC ACOUSTIC	AAC Acoustic Technologies Holdings Inc.	12,999.00	3.91
FIH	Foxconn International Holdings Limited	123,318.43	492.29
HUTCH TELECOM	Hutchison Telecommunications International Ltd	56,046.93	6,070.00
COMBA	Comba Telecom Systems Holdings Limited	2,220.12	30.11
PACIFIC BASIN	Pacific Basin Shipping Limited	19,925.21	284.30
TOM GROUP	TOM Group Limited	2,452.76	3,663.06
IDS	Integrated Distribution Services Group Limited	7,508.61	374.67
CSCL	China Shipping Container Lines Company Limited	17,217.09	60.94
GOLDEN EAGLE	Golden Eagle Retail Group Ltd.	14,790.98	27.86
JU TENG INTL	Ju Teng International Holdings Limited	2,370.00	1.07
PARKSON GROUP	Parkson Retail Group Limited	52,316.05	1,670.16
	Subtotal (n=62)	4,183,067.57	96,021.53
	Materials & Industrial Goods		
FIRST TRACTOR	First Tractor Co., Ltd.	3,340.57	56.70
CHEN HSONG HOLD	Chen Hsong Holdings Ltd.	3,183.31	94.93
KINGBOARD CHEM	Kingboard Chemical Holdings Limited	38,887.79	2,005.66
CHINA SOLAR	China Solar Energy Holdings Ltd.	3,022.42	140.58
JOHNSON ELEC H	Johnson Electric Holdings Ltd.	15,723.82	3,133.53
SINOFERT	Sinofert Holdings Limited	45,213.33	356.50
KUNMING			
MACHINE	Sheji Group Kunming Machine Tool Co., Ltd.	4,630.01	6.25
SHANGHAI PECHEM	Sinopec Shanghai Petrochemical Co. Ltd	11,207.30	23.98
CHINA MINING	China Mining Resources Group Limited	3,857.05	8.20
C ZENITH CHEM	China Zenith Chemical Group Ltd.	2,229.37	83.29
YIP'S CHEMICAL	Yip's Chemical Holdings Ltd.	1,916.94	30.49
GST HOLDINGS	GST Holdings Limited	1,984.00	7.00
COSCO INTL HOLD	COSCO International Holdings Limited	11,262.59	79.62
REGENT PACIFIC	Regent Pacific Group Ltd.	1,823.34	14.66
SHOUGANG INT'L	Shougang Concord Inter Enterprises Co. Ltd	22,340.19	283.12
SINGAMAS CONT	Singamas Container Holdings Limited	2,382.87	41.21
TRULY INT'L	Truly International Holdings Limited	8,462.13	0.41
CHINA RAREEARTH	China Rare Earth Holdings Limited	2,543.85	206.71
TIANGONG INT'L	Tiangong International Co., Ltd.	2,684.21	23.50
COSLIGHT TECH	Coslight Technology International Group Ltd	1,732.32	6.95
CHINA RES LOGIC	China Resources Logic Limited	3,908.90	24.06
CITIC RESOURCES	CITIC Resources Holdings Limited	24,234.24	341.51
BYD COMPANY	BYD Company Limited	7,714.20	62.71
KB LAMINATES	Kingboard Laminates Holdings Ltd.	15,780.00	0.24
SUNSHINE PAPER	China Sunshine Paper Holdings Co., Ltd.	2,759.39	20.59

Company Code	Company Name	Market Capitalisation (\$ million)	Total Goodwill (\$ million)
WEICHAJ POWER	Weichai Power Co., Ltd.	7,197.84	575.68
SHANGHAI PRIME	Shanghai Prime Machinery Co., Ltd.	3,868.14	9.44
SUNNY OPTICAL	Sunny Optical Technology (Group) Co., Ltd.	2,999.34	12.92
CHALCO	Aluminum Corporation Of China Limited	63,497.85	2,494.11
ND PAPER	Nine Dragons Paper (Holdings) Ltd.	84,678.37	150.79
SH ELECTRIC	Shanghai Electric Group Company Limited	19,621.22	225.96
CNR HOLDINGS	China Nickel Resources Holdings Co. Ltd.	6,780.88	69.61
ZIJIN MINING	Zijin Mining Group Co., Ltd.	48,465.82	362.87
CHINA GLASS	China Glass Holdings Ltd.	1,664.00	15.10
MEADVILLE	Meadville Holdings Ltd.	4,299.05	122.23
LINGBAO GOLD	Lingbao Gold Co., Ltd.	3,704.08	41.60
WASION GROUP	Wasion Meters Group Limited	3,839.56	60.81
	Subtotal (n=37)	493,440.28	11,193.51
Utilities, Energy & Construction			
CLP HOLDINGS	CLP Holdings Limited	128,239.00	6,648.00
HK & CHINA GAS	The Hong Kong and China Gas Company Ltd	144,825.30	185.10
CHEVALIER INT'L	Chevalier International Holdings Ltd.	2,231.44	210.33
TIAN AN	Tian An China Investments Company Limited	16,561.90	0.64
SKYFAME REALITY	Skyfame Realty (Holdings) Limited	2,565.23	118.09
GUANGZHOU INV	Guangzhou Investment Company Limited	16,308.55	119.19
ASIA STANDARD	Asia Standard International Group Ltd.	1,715.49	8.65
EMPEROR IHL	Emperor International Holdings Ltd.	2,501.32	1.94
HKC (HOLDINGS)	HKC (Holdings) Limited	18,319.68	6.30
POLYTEC ASSET	Polytec Asset Holdings Limited	10,298.40	16.99
MINMETALS LAND	Minmetals Land Ltd.	1,973.27	8.52
CATIC INT'L	CATIC International Holdings Ltd.	2,033.75	38.12
TST PROPERTIES	Tsim Sha Tsui Properties Ltd.	41,658.91	564.21
TOMSON GROUP	Tomson Group Limited	3,952.42	33.29
GUANGDONG INV	Guangdong Investment Limited	27,162.51	256.12
G-PROP (HOLD)	G-Prop (Holdings) Ltd.	1,967.41	10.46
LUKS GROUP (VN)	Luks Group (Vietnam Holdings) Co. Ltd.	5,505.46	15.84
CHINA GAS HOLD	China Gas Holdings Ltd.	5,418.35	299.97
SINOPEC CORP	China Petroleum & Chemical Corporation	197,674.15	16,574.30
PCPD	Pacific Century Premium Developments Ltd.	6,187.17	93.00
HKR INT'L	HKR International Ltd.	10,073.05	8.00
LAI SUN DEV	Lai Sun Development Co., Ltd.	4,248.61	152.70
PYI CORP	PYI Corporation Ltd.	5,176.25	61.65
SHANDONG			
MOLONG	Shandong Molong Petroleum Machinery Co., Ltd.	5,064.33	157.41
CHINA OIL & GAS	China Oil and Gas Group Ltd.	2,824.76	558.31
SHENZHEN INVEST	Shenzhen Investment Limited	18,006.67	322.02
ENERCHINA HOLD	Enerchina Holdings Ltd.	1,749.48	316.58
FUSHAN ENERGY	Fushan International Energy Group Limited	12,184.61	15.70
NWS HOLDINGS	NWS Holdings Ltd.	50,167.56	339.70
ZHONGAN REALEST	Zhong An Real Estate Ltd.	9,157.99	68.40
NAN HAI CORP	Nan Hai Corporation Limited	6,795.86	200.64
CHI PEOPLE HOLD	Chinese People Holdings Co., Ltd.	1,918.64	225.05
KERRY PPT	Kerry Properties Limited	89,138.17	306.15
CHINA OVERSEAS	China Overseas Land & Investment Limited	124,821.23	109.02
HOPSON DEV HOLD	Hopson Development Holdings Limited	31,729.54	111.82
SHANGHAI ZENDAI	Shanghai Zendai Property Limited	2,521.35	172.28
SHIMAO PROPERTY	Shimao Property Holdings Ltd.	65,625.20	445.11
CHINA RES POWER	China Resources Power Holdings Co. Ltd	111,389.53	2,319.56
CHINA WATER	China Water Affairs Group Ltd.	4,235.80	80.35
HUANENG POWER	Huaneng Power International, Inc.	25,084.36	594.13

Company Code	Company Name	Market Capitalisation (\$ million)	Total Goodwill (\$ million)
ANHUI CONCH	Anhui Conch Cement Company Limited	29,392.62	17.25
NEW WORLD CHINA	New world China Land Ltd.	26,830.47	48.10
DATANG POWER	Datang International Power Generation Co., Ltd	22,718.65	159.12
WINSOR PPT HOLD	Winsor Properties Holdings Ltd.	3,427.85	61.09
SAC CEMENT	Shanghai Allied Cement Ltd.	1,969.37	69.48
HUADIAN POWER	Huadian Power International Corporation Ltd	5,666.87	47.54
TOWNGAS CHINA	Towngas China Company Limited	8,118.85	2,180.29
CHINA RES LAND	China Resources Land Limited	64,726.90	50.47
COASTAL GL	Coastal Greenland Ltd.	2,547.07	67.64
LAI FUNG HOLD	Lai Fung Holdings Ltd.	3,742.30	4.56
YANZHOU COAL	Yanzhou Coal Mining Company Limited	30,276.86	319.56
TITAN PETROCHEM	Titan Petrochemicals Group Limited	3,366.29	1,018.12
SRE GROUP	SRE Group Ltd (Real Estate Development)	5,420.93	422.63
WANG ON GROUP	Wang On Group Ltd.	2,059.25	2.32
FORTE	Shanghai Forte Land Co., Ltd.	4,507.14	29.34
BAOYE GROUP	Baoye Group Co., Ltd.	5,169.98	17.69
CHINA POWER	China Power International Development Limited	13,196.53	178.62
XINAO GAS	XinAo Gas Holdings Limited	15,631.07	164.38
R&F PROPERTIES	Guangzhou R&F Properties Co., Ltd	28,224.18	577.40
CNBM	China National Building Material Co., Ltd.	66,350.46	1,209.69
ANTON OILFIELD	Anton Oilfield Services Group	5,931.70	82.27
SINO-OCEAN LAND	Sino-Ocean Land Holdings Ltd.	43,224.16	809.77
GCL-POLY ENERGY	GCL-Poly Energy Holdings Ltd.	3,636.85	124.64
	Subtotal (n=63)	1,615,149.04	39,435.60
	GRAND TOTAL (n=264)	12,922,861.39	561,705.91

Source: Hong Kong Stock Exchange at the year end of December 2007.