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Compatibility of Accounting Practices of UK
Companies with US GAAP**

by

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A Closer Look at the Compatibility
of UK Accounting Practices
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Increased Disharmony or Twin Accounting? A Closer Look at the Compatibility of UK Accounting Practices with US GAAP

Abstract

Financial accounting practices in the UK and the US have often been assumed to be highly compatible. The similarity of the institutional and business context, as well as of the professional environment reinforced this commonly shared perception. In general, the US and the UK are perceived as belonging to the 'Anglo-Saxon' part of the accounting world, where standards are driven by the market and have a micro-economic, and possibly user-friendly, orientation (Nobes, 1992). However, a number of studies have also pointed out that a number of technical differences still exist in the rules (Nobes, 1988; Ghosh and Elwell, 1992; Pereira *et al.*, 1994; Price Waterhouse, 1997) and that at a deeper analysis UK and US financial results do not appear as close as one would expect (Weetman and Gray, 1990, 1991; Weetman *et al.*, 1993). Within a larger research project on the measurement of European company accounts conservatism, this empirical study aims at shedding some further light on the proximity of the UK and the US financial reporting, drawing on the most recent available data (1994-96). To this end the entire population of UK companies listed on American official stock exchanges has been considered. These companies are bound to produce a statement reconciling their UK net profit and shareholders' equity with US GAAP. This reconciliation then permits a detailed and reliable evaluation of the claim that UK and US accounting practices are highly compatible. Some interesting insights seem to emerge as to the respective degree of conservatism and the relative impact of the expected major qualitative differences between the two accounting systems.

Increased Disharmony or Twin Accounting? A Closer Look at the Compatibility of UK Accounting Practices with US GAAP

1. Introduction

Financial accounting practices in the UK and the US have often been assumed to be highly compatible. The similarity of the institutional and business context (dominance of financial markets, common law systems, stress on private sector-generated standards), as well as of the professional environment has reinforced this commonly shared view. In the literature the US and the UK are perceived as belonging to the 'Anglo-Saxon' part of the accounting world, where rules are driven by the market and have a micro-economic orientation (Nobes, 1992). It is probably no surprise that US GAAP are divergent from accounting practices in the non-English speaking countries of the industrialised world (cf. Choi *et al.*, 1983; Cooke, 1993; Hellman, 1993; Larserström, 1997; Zambon and Dick, 1997). What might be surprising however is the existence of a significant divergence between UK and US financial reporting. A number of studies have pointed out that technical differences still exist in the standards (Nobes, 1988; Ghosh and Elwell, 1992; Pereira *et al.*, 1994; Price Waterhouse, 1997) and that a deeper analysis would reveal that UK and US financial results do not appear as close as one would expect (Weetman and Gray, 1990, 1991; Weetman *et al.*, 1993; Weetman *et al.*, 1998).

Within a larger research project on the measurement of European company conservatism, this empirical study aims to shed some further light on the proximity of accounting practices in the UK and the US. There have been used some of the most recent data - 1994-1996 - made available by the UK companies quoted on official US markets (New York Stock Exchange -

NYSE; National Association of Securities Dealers Automated Quotations - NASDAQ; American Stock Exchange - AMEX). In this respect, the study could also be seen as an update of the previous research on this topic.

As other studies before, this analysis will be based on the reconciliation statement which is imposed by the SEC - the controlling body of US financial markets, on all foreign registrants sponsoring an ADR (American Depositary Receipt) officially traded in the US and through which fund raising is searched for. This statement - which is included in the 'Form 20-F' - reconciles the profit and shareholders' equity expressed according to local rules with US GAAP. Accordingly, also UK companies are requested by the SEC to produce a reconciliation statement. This reconciliation permits then a detailed and reliable examination of the claim that UK and US financial accounting practices are highly compatible.

The paper will develop as follows. In the next section the research data and the methodology employed will be briefly described. In subsequent sections the results will be presented: first, we discuss the overall conservatism indexes of the UK vs. US results, and second, the major causes of dissimilarity ('qualitative differences') between these two accounting systems will be highlighted with their associated average quantitative impact. Finally, a simulation will be run under the realistic hypothesis that in the short term the major reason for difference between UK and US accounting practice (i.e., the treatment of consolidation goodwill) will disappear. Some concluding remarks will then be drawn.

2. Research data and methodology

The study concentrates on a three year period in order to average out possible peaks and anomalies in conservative behaviour by UK companies. In this way evaluations on the consistency and permanence of such accounting practices become easier and more robust.

Over the period 1994-1996, 79 companies produced either a reconciliation statement between UK and US GAAP or, more seldom, two full sets of accounts - one according the UK GAAP, the other according to US GAAP¹ (see Tables 1 and 2).

Insert Tables 1 and 2

It should also be noted that, unlike previous studies (Weetman and Gray, 1990, 1991; Weetman *et al.*, 1993), banks and insurance companies are included our data. These are nonetheless limited in number (6).

In methodological terms, the approach employed could be amenable to the so-called users' perspective. The data here considered for analytical purposes are those reported in the relevant documents, without any reclassifications or readjustments, very much the same as an ordinary user would get them. Following some of the warnings expressed in the literature (Weetman and Gray, 1990), attention has been paid to the mutual consistency of the data, comparing net profit and shareholders' equity with the corresponding US figures (in particular, net income after extraordinary items).

The analysis has been developed using a well-known indicator, generally called the conservatism index or Gray index, after the name of the author who has introduced it to the ends here investigated (see Gray, 1980; Radebaugh and Gray, 1997). Despite some reservations about the statistical properties of this indicator (cf. Rees, 1993), it allows us to draw a comparison with other similar studies that have been conducted in the past (for a similar position, Norton, 1995).

The common formulation of the index is the following:

¹ This second approach is characteristic of quite a number of UK companies listed on NASDAQ.

$$\text{'Conservatism index'} = 1 - \frac{\text{U.S. value} - \text{non-U.S. value}}{|\text{U.S. value}|}$$

This relatively simple indicator expresses a normalisation process of the distance between two values. When it is above 1, it will mean that the UK figure is less conservative than the US one, and viceversa.

So far this index has been frequently applied to net income, since the conservatism idea seems to be more easily associated with this accounting measure. In contrast to previous analyses (for a partial exception see Weetman *et al.*, 1993), the calculation of such an index has been extended in this study also to shareholders' equity, since it can offer some further insights into the level of conservatism characterising a company's accounting behaviour (cf. Lagerström, 1997 for a similar case). In fact, apart from the existence of distinct aspects of conservative behaviour producing an effect only on shareholders' equity, a further rationale for the application of the conservatism index to this variable is that it permits an evaluation of the outcomes of a conservative attitude over the long term perspective.

The conservatism index has also been applied to the return on equity ratio (R.O.E. - cf. Hellman, 1993), since it is believed that this is a useful expression of the synthesis between the two 'faces' of conservatism (net income and equity), allowing one to put in relative terms the magnitude of this phenomenon. Moreover, this extension could also convey a general feeling as to how financial statement analysis is affected by using different accounting regimes and numbers concerning the same company in its periodic performance.

In addition to this threefold application of the 'conservatism index', the usual mean and median values have been calculated with reference to both individual years and to the overall relevant period. When the resulting conservatism indexes were higher than +4 or lower than -2, they

were considered as being outliers. A further statistical elaboration has been added to the above, that is the non-parametric Wilcoxon test of signed ranks (see Siegel and Castellan, 1988; Landenna and Marasini, 1990), which is quite frequently used in this strain of literature (Gray, 1980; Weetman and Gray, 1990, 1991; Radebaugh and Gray, 1997). The null hypothesis (H_0) that the median value is 1, is often seen as corresponding to the hypothesis of neutrality between the two accounting regulatory systems under investigation. Student t-form tests have also been run when feasible given the size of the considered population. In all the tests the α is equal to 0.01.

In the qualitative section of the data analysis, the individual differences existing between the US and the UK accounting regimes are singled out. The examination of the qualitative differences from U.S. GAAP has been further deepened by identifying the directional effect and the quantitative impact of each of these differences on net income and shareholders' equity. To highlight this impact, we have used a partial configuration of the Gray or conservatism index as follows:

$$\textit{'Partial Conservatism index'} = 1 - \frac{\text{value of partial adjustment}}{|\text{U.S. value}|}$$

The partial index of conservatism is a means for analysing the causes of differences between financial results expressed according to dissimilar accounting standards. This is because it permits one to infer some considerations about the relative importance of each of the differences empirically found.

3. UK vs. US GAAP: a general evaluation in conservatism terms

The overall conservatism indexes for net income, shareholders' equity and ROE of the inter-listed UK companies are shown in Table 3.

Insert Table 3

The average conservatism index for the period 1994-96 is 1.27 (without outliers). This is a result which seems to be fairly consistent with previous research. Weetman and Gray (1990) found that in the period 1985-87 the average conservatism indexes varied between 1.091 and 1.252. Comparable results have been also obtained by Weetman and Gray (1991) and Weetman *et al.* (1993) for the 1986-88 period. The breakdown by year shows similar results, i.e. that in 1994 the average conservatism index was 1.235, in 1995 1.341 and in 1996 1.237. It is interesting to note that the UK profit appears in all the studies, including this one, consistently higher than the US results by at least +10% (more likely around +25%). The statistical tests confirm this lack of comparability between UK and US earnings.

In terms of shareholders' equity, a similar conclusion can be reached. The overall conservatism index for the period 1994-96 is 0.81, indicating that on average UK equity is lower by 19% than the US GAAP-based one (see Table 3). This result is very much in line with the findings by Weetman *et al.* (1993) with reference to the period 1987-88. Also the statistical tests confirm this lack of proximity between UK GAAP and US GAAP shareholders' equity.

With regard to ROE, there is a +29% difference on average in favour of British results in the period considered, thus reaffirming the problematic comparability of the UK financial results vis-à-vis the US ones. The tests confirm the statistical significance of the problematic absence of comparability.

It is perhaps worthwhile to observe that a similar analysis of French, German and Italian companies revealed a far greater compatibility of their results to US GAAP than that emerging in this sample of UK companies (Zambon and Dick, 1997). Although the companies considered in that study are of course not necessarily representative of the typical accounting behaviour in those countries - it is clear the existence of a sample selection bias, it seems nonetheless interesting that the net profit, shareholders' equity and ROE of UK companies, far from being close to those of their US counterparts, are largely more distant from their US GAAP-based expression than continental European companies. This could perhaps be seen also as the result of the simultaneous listing of the UK companies in US and on a domestic market, and of their need for showing in the latter market the best possible performance allowed by the flexibility inherent in the UK accounting rules.

4. Major causes of difference and an assessment of their individual impact

The individual qualitative differences which emerged in the analysis were largely expected in terms of both their nature and frequency (see Tables 4 and 5 for 1994-96 differences impacting on net income and shareholders' equity, respectively)². Consolidation goodwill, deferred taxes, pension accounting, the treatment of intangible assets and the implementation of business combinations are those most recurrent causes of divergence between British and US profits. The treatment of dividends and the ACT and the revaluation of fixed assets should also be added to the list explaining the most frequent differences between the two regimes.

Insert Tables 4, 4.a., 4.b. and 4.c.,

² These individual causes of differences have also been analysed for each of the three years here considered. See Tables 4.a, 4.b and 4.c as to net income, and Tables 5.a, 5.b and 5.c as to shareholders' equity.

and Tables 5, 5.a., 5.b. and 5.c..

Correspondingly, the major impacts on earnings and shareholders' equity are those linked to these differences. In particular, the amortisation of consolidation goodwill has on average a +25.7% impact on British profits vis-à-vis the US one (see Table 6). This impact is quite larger than that found by Weetman and Gray (1991) for the period 1986-88, this being a probable consequence of the merger wave. An even larger influence of the treatment of goodwill on equity has been found. In general, this has an impact of -40.1% on UK equity when it is re-expressed according to US GAAP (see Table 7). The statistical tests have consistently led to rejection of the compatibility hypothesis as for consolidation goodwill.

Insert Tables 6 and 7

As to deferred taxes, their average impact on British profits, when compared to US GAAP, is nil, while for shareholders' equity it is +6.6% (see Tables 6 and 7). These results are not perfectly consistent with previous research (Weetman and Gray, 1991), which found an average impact of only +1/+4%. In statistical terms, there seems to be the emergence of a compatibility between the UK and the US treatment of deferred taxes for income, while this is not the case for equity, where such a compatibility appears far more problematic.

For comparative purposes, it is worth noting that the average impact of revaluation of fixed assets on shareholders' equity (+9.7%) is slightly higher than the findings by Weetman *et al.* (1993) - which were around +9/9.5%.

4. Eliminating the consolidation goodwill issue: a simulation of the emerging UK/US GAAP compatibility

It is well-known for some time that the accounting treatment of the goodwill on consolidation is a major source of differences in financial reporting across companies and countries (e.g., Brunovs and Kirsch, 1991). In particular, it has been shown that consolidation goodwill is the most frequent and the most relevant cause of divergence between UK and US financial accounting practices. However, it seems to be likely that this qualitative difference could very soon disappear owing to the recent approval in December 1997 of the new UK standard dealing with the issue. The required treatment will be now to capitalise consolidation goodwill and amortise it over a maximum of twenty years (unless certain specific reasons would suggest not to amortise it at all).

Therefore, such an accounting behaviour by British companies will probably be considered as legitimate under US GAAP (capitalisation and amortisation up to 40 years) and no reconciliation would be required on this matter.

Bearing this in mind, we considered it useful to re-perform the procedures for 1995 and 1996 assuming that there was no divergence in the treatment of goodwill between the UK financial results and US GAAP ones.

The usual Wilcoxon and Student t-form tests have then been carried out. The results are shown in Table 8.

Insert Table 8

As it emerges quite clearly, the average distance between UK and US financial results should drastically diminish with the introduction of the revised standard on goodwill, so that the compatibility between the relative accounting practices - at least those expressed by UK companies listed on US official markets - should increase to a large extent, though remaining

problematic for earnings and, as a consequence, R.O.E.. As a consequence, the materiality of the reconciliations should also be decreasing to the effect that it may become difficult in the near future for the SEC to justify the obligation - and the associated costs - posed on non-US registrants to reconcile their accounting figures with US GAAP.

6. Concluding remarks

Some interesting insights seem to emerge as to the respective degree of conservatism and the impact of the major causes of divergence between the two systems. UK companies appear at present far less conservative than their US counterparts because of some relevant differences in the accounting treatment of certain items. Compared with previous results concerning continental European companies (Zambon and Dick, 1997), which have shown much more proximity to US GAAP, the result of this study is to some extent surprising.

It is also to be noted that the major qualitative difference explaining this wide gap between UK and US results, i.e. the consolidation goodwill, is likely to disappear or at least to largely reduce its influence owing to the recent innovation in UK standards. In this respect, a simulation has been conducted about what can be the prospective impact of this change. The results show a sort of 'realignment' between UK and US GAAP, which should produce greater mutual compatibility between financial accounting practices and, probably, reinforce the perception of a quite cohesive 'Anglo-Saxon' accounting world.

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