The value relevance of IAS reconciliation components: empirical evidence from Finland

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Abstract

This paper examines the value relevance of Local Accounting Standards (LAS) earnings and their voluntarily disclosed reconciliations to the International Accounting Standards (IAS). The empirical evidence is from Finland where, as discussed in our paper, restricted shares (available only to domestic investors) and unrestricted shares (available to both foreign and domestic investors) were listed separately during 1984–1992. The findings suggest that LAS earnings have significant value relevance to both domestic and foreign investors. After controlling for LAS earnings, the aggregate reconciliation of LAS to IAS earnings does not provide significant value relevance to either investor group. Tests of the individual reconciling items suggest that adjustments relating to untaxed reserves and consolidation differences have significant value relevance to both domestic and foreign investors. Overall, our findings indicate little difference between these investor groups with respect to the value relevance of LAS earnings and their reconciliations to IAS. © 2000 Elsevier Science Ltd. All rights reserved.

1. Introduction

In this study, we examine the value relevance of Local Accounting Standards (LAS) earnings and their reconciliations to the International Accounting Standards (IAS). The empirical evidence is from Finland during 1984–1992. As discussed below, the partially segmented stock market where restricted shares (available only to domestic investors) and unrestricted shares (available to both...
foreign and domestic investors) were listed separately makes it possible to distinguish between foreign and domestic investors’ perceptions of the value relevance of earnings information. Our findings suggest that LAS earnings are value relevant to both domestic and foreign investors. However, after controlling for LAS earnings, the aggregate reconciliation of LAS earnings to IAS does not provide significant value relevance to either investor group. Nevertheless, tests of the individual components of the aggregate reconciliation suggest that items relating to untaxed reserves and consolidation differences have significant value relevance to both domestic and foreign investors. Overall, our findings indicate little difference between the investor groups regarding the value relevance of LAS earnings and their reconciliation to the IAS.

In the last few years, several studies have examined the value relevance of earnings numbers reported under two or more different generally accepted accounting principles (GAAPs). The general findings from these prior studies are mixed. Pope and Rees (1992, pp. 210–213) provide evidence that, after controlling for United States (US) GAAP earnings, United Kingdom (UK) GAAP earnings have incremental value relevance to investors at the London Stock Exchange. Alford et al. (1993, p. 184) used a sample from 17 countries and reported significant differences in the value relevance of accounting earnings across the sampled countries when compared to their US counterparts.

Amir et al. (1993) examined the value relevance of Form 20-F reconciliation of non-US GAAP to US GAAP earnings. They (1993, p. 231) reported that the reconciliation is value relevant both in the aggregate and for some specific components. Rees (1995) used an event study approach and reported (pp. 301, 309) a significant positive correlation between the change in the aggregate reconciliation and the stock price reaction within a short window surrounding the United States Securities and Exchange Commission (SEC) filing of the firm’s Form 20-F. Rees and Elgers (1997) extended Amir et al. (1993) study by using retrospective reconciliations in the initial registrations with the SEC. Their (1997, p. 126) findings suggest that some of the information content in the SEC-mandated disclosures comes from sources other than Form 20-F filings.

Harris et al. (1994, p. 207) compared the value relevance of German and US earnings and concluded that the explanatory power of earnings for returns in Germany is comparable to that in the US. Moreover, Chan and Seow (1996, pp. 147–155) reported findings consistent with the view that earnings based on foreign GAAP may have greater relative value relevance than US GAAP earnings. In contrast, Barth and Clinch (1996, pp. 162–164) suggested that the reconciliation of UK, Australian and Canadian GAAP earnings to US GAAP convey useful information to investors, and there are significant differences in the value relevance of individual reconciling items.
To date, we are aware of three studies that have examined the value relevance of local GAAP (Local Accounting Standards) and IAS earnings. Using a sample of Finnish firms listed on the Helsinki Stock Exchange, Niskanen et al. (1994, pp. 289–292) reported that simulated IAS-based earnings numbers have significant incremental information content after controlling for the effect of local GAAP earnings. Auer (1996) analyzed a sample of listed Swiss companies that have changed their accounting principles from Swiss GAAP to either EC-Directives or IAS. Auer’s (1996, p. 587) findings suggest that IAS-based earnings convey a significantly higher information content when compared with Swiss GAAP earnings, but when IAS earnings are compared with the EC-Directives-based earnings, the difference is insignificant. Finally, the recent paper by Harris and Muller (1999, p. 302) suggests that US GAAP earnings reconciliation adjustment is associated with market value and stock returns after controlling for IAS amounts. In addition, they (1999, p. 309) found evidence that US GAAP amounts are valued differently than IAS amounts and are more highly associated with security returns than IAS amounts.

Our paper differs from previous studies in two ways. First, in addition to the aggregate difference between LAS and IAS earnings, we analyzed the value relevance of individual reconciling items of local GAAP to IAS earnings. More importantly, we conducted our analysis separately for two investor groups, foreign and domestic investors, who hold equity shares in these companies. During the period 1984–1992, the HeSE (Helsinki Stock Exchange) was a partially segmented stock market because unrestricted shares (available to both foreign and domestic investors) and restricted shares (available only to domestic investors) of the same set of companies were listed separately. At the same time, a number of firms listed on the HeSE provided non-mandatory local (Finnish) GAAP earnings and their reconciliations to IAS (see Kasanen et al., 1996, p. 286). This institutional setting is unique, and it allowed us to compare directly differences in the value relevance of the two earnings measures across the two different investor groups.

The remainder of our paper is as follows. Section 2 describes our institutional setting and explains the important features of the partially segmented stock market of the HeSE and the main differences between the local (Finnish) GAAP and International Accounting Standards during the research period. Section 3 describes our data and methods, and Section 4 reports the empirical results. Section 5 concludes our paper.

2. Institutional setting

During our research period 1984–1992, the Helsinki Stock Exchange was a partially segmented stock market because unrestricted shares and restricted shares of the same set of companies were listed separately (Hietala, 1989, p. 697;
Laki ulkomaalaisten yritysostojen seurannasta 30.12.1992/1612, 17§:n 2 mo-
mentin D. Kohta [Act 1612/1992]). The only difference between the two share
classes was that restricted shares were available only to domestic investors,
while both domestic and foreign investors could hold unrestricted shares. 1
Because there were no other differences (e.g., in voting power or dividends)
between the share classes, and because Finnish investors’ possibilities to invest
abroad were negligible until 1990, 2 this setting created two investor groups for
the same underlying asset.

Due to the growing interest of foreign investors, restricted and unrestricted
stock series of Finnish firms were for the first time quoted separately in January
Finnish firms had both restricted and unrestricted shares quoted on the HeSE
(Hietala, 1989, pp. 699, 700; HeSE, 1993, p. 10). In 1993 (immediately after the
abolition of foreign investors’ ownership restrictions) international investors
accounted for approximately 50% of the turnover of the Helsinki Stock Ex-
change (Repo, 1994, p. 12). By the end of the year foreign ownership was about
20% of the market capitalization of all Finnish stocks listed on the HeSE
(Repo, 1994, p. 12).

Separate listing in 1984 brought separate prices for restricted and unre-
stricted shares. Hietala (1989, p. 700) calculates that, in June 1984, unrestricted
shares traded at an average premium of 41% relative to restricted shares, which
is the highest average premium ever paid. According to Hietala (1989, p. 705)
foreign investors required a lower risk premium than Finnish investors, whose
investment opportunities were limited to domestic stocks. Foreign investors’
lower risk premium is due to a small correlation between the returns of Finnish
stocks and a global market portfolio (available to international but not to

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1 Until 1992, the ownership of foreign investors in Finnish firms was limited by the 20%-law
stipulating that at least 80% of a Finnish firm’s shares had to be restricted (Heikkilä, 1994, p. 12).
As noted by Hietala (1989, p. 698), Finland is not the only country which has had such a statutory
restriction on foreign ownership; e.g., France and Sweden have had similar restriction in their laws.
The purpose of this law was to prohibit foreign investors from achieving control in strategically
important industries, and it was not applied to companies established by foreigners (Heikkilä, 1994,
p. 12) (e.g., many large US multinationals have subsidiaries in Finland). There are currently no
restrictions of foreign ownership due to the legislative reform which became effective in 1993. This
reform was necessary because Finland applied for membership in the European Union (Heikkilä,

2 Before 1 January 1986, Finnish investors were not allowed to buy foreign securities without the
permission of the Bank of Finland (Hietala, 1989, p. 698). Such permission was granted only a few
times to some Finnish banks and insurance companies that had foreign operations (Hietala, 1989,
p. 689). From 1 January 1986 onwards, the Bank of Finland allowed individual investors to invest
10,000 Finnish markkas (FIM) (approximately 2,200 US dollars (USD)) in foreign securities. This
limit was subsequently raised to FIM 300,000 (approximately USD 66,600) until the limit was
Finnish investors) (Hietala, 1989, p. 708). Theoretically, the lower risk premiums required by foreign investors results in a situation where *price premiums* are paid for unrestricted shares. 3 (Similar situations are discussed by, e.g., Copeland and Weston, 1988, p. 810; Brealey and Myers, 1991, pp. 873, 874.) Hietala (1989, pp. 703–705) derives an equilibrium asset pricing model for restricted and unrestricted shares and shows analytically that unrestricted shares are traded at a premium *if and only if foreign investors determine their prices*. Therefore, since unrestricted shares in fact *were* traded at a premium, their price changes can be used to measure foreign investors’ perceptions of the value relevance of accounting numbers.

At the same time that the Helsinki Stock Exchange started separate listing of restricted and unrestricted shares, many internationalized listed Finnish firms started the practice of disclosing dual financial statements, one required by the Local Accounting Standards and the other following the International Accounting Standards (Kasanen et al., 1992, p. 57). The voluntary disclosures of the IAS-based financial statements were due to the growing importance of foreign ownership and the listings of Finnish firms in foreign stock exchanges during the 1980s (Kasanen et al., 1992, p. 57). Firms realized that foreign investors could not interpret Finnish earnings numbers properly without familiarity with the Finnish accounting and tax practices (Kasanen et al., 1992, p. 57). In a broader sense, Hietala (1989, p. 710) speaks of foreign investors’ informational disadvantage relative to domestic investors.

One important aspect of the Finnish accounting system is its tie to corporate taxation (Salmi, Virkkunen and Helenius SVH – Coopers and Lybrand, 1987, p. 22; also, see Kasanen et al., 1996, p. 290). In rough principle, the taxable income of a firm is the same as earnings before taxes reported to shareholders (SVH – Coopers and Lybrand, 1987, p. 22). In particular, a firm is not allowed to deduct costs in taxation beyond the expenses it has deducted in its income statements (SVH – Coopers and Lybrand, 1987, p. 22). Since the corporate tax rate has been high until quite recently, firms have been willing to adjust their taxable income downwards (Kasanen et al., 1996, pp. 291–293). The most important tools of managing taxable (and reported) earnings include wide discretion in choosing the depreciation rate and large possibilities to form various types of untaxed reserves (Kasanen et al., 1996, pp. 306, 307). Näsi (1992) and Troberg (1992) provide additional information on Finnish Accounting Practice (see, Kasanen et al., 1996, p. 291).

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3 In other words, a price premium is due to the fact that the relevant market portfolios for foreign and domestic investors are different (Hietala, 1989, pp. 698, 699). Because the correlations (and betas) of Finnish stocks are larger with the Finnish market index (relevant for domestic investors) than with the more diversified global market index (relevant foreign investors), the required returns are higher for restricted shares (domestic investors) than for unrestricted shares (foreign investors) (Hietala, 1989, p. 708).
As shown by Gernon et al. (1990, pp. 28, 29), an IASC 1988 study of accounting in 54 nations worldwide indicates that accounting standards in Finland had the least conformance with International Accounting Standards (see Kasanen et al., 1992, p. 49; Niskanen et al., 1994, p. 284). The dissimilarities between the accounting rules made the differences between the LAS and IAS earnings significant (in our sample, the reported IAS earnings are, on average, 211% larger than LAS earnings in cases where both earnings are positive). In the following, we provide a list of the most important differences between Finnish accounting rules and International Accounting Standards during the research period 1984–1992. In the below list, only items (6) and (7) related to consolidation are briefly discussed. All other differences are described more in detail in Niskanen et al. (1994, pp. 285–286) and Kasanen et al. (1996, pp. 306–308).

5. Accounting for 20–50% owned affiliates (Niskanen et al., 1994, p. 285).
6. Consolidation. The Finnish rules for consolidation required that the minority interest in subsidiaries includes a share of untaxed reserves in the balance sheet and income statement. The IAS, however, do not allow such untaxed reserves to be included. Of course, differences in the minority interest according to the Finnish accounting rules and the IAS arise also because other (smaller) differences affecting the net income forming the basis for the minority’s share (SVH – Coopers and Lybrand, 1987, pp. 40–48).
7. Treatment of goodwill. According to the Finnish rules, a major part of goodwill could be allocated to the subsidiary’s identifiable assets and amortized with those assets. The unallocated portion of goodwill was amortized in principle in five years, or within its estimated useful life that could not exceed 20 years (SVH – Coopers and Lybrand, 1987, p. 31). The IAS, however, does not allow the allocation of goodwill to the subsidiary’s assets (Cairns, 1995, pp. 247–252).

As noted by Harris and Muller (1999, p. 290), the difficulty of restating local GAAP earnings to the IAS depends on how similar the firm’s local GAAP requirements are with the IAS. Evidence from prior studies suggests that compliance with IAS generally requires many reconciling adjustments that may significantly alter firms’ reported earnings (Harris and Muller, 1999, p. 290).

To illustrate the disclosure of LAS earnings reconciliation to the IAS, Fig. 1 shows an extract from the 1989 annual report of METSÄ-SERLA Group, which is one of the largest Finnish forest industry firms. The extract provides a typical example of earnings reconciliation starting with net income under the local (Finnish) GAAP and ending with net income under the IAS. In this
example, the reconciliation includes eight items that differ largely in size from each other and over time. By far the largest item is the adjustment for appropriations including untaxed reserves (270 and 706 million FIM (Finnish markkas) in 1989 and 1988, respectively). The aggregate reconciliations (286 and 379 million FIM) are very large in size, although there are both positive and negative individual items that partly cancel each other out. Furthermore, some items may have different signs in different years, as is the case in the adjustment for inventory valuation.

Overall, the format and quality of these voluntarily disclosed reconciliation statements varies across firms. Prior to the improvements projects in 1995 (IASC, 1995, pp. 11, 12), the IAS allowed many alternative accounting treatments. For instance, Adams et al. (1993, pp. 471, 490, 491) argue that Finnish firms gave only limited information concerning the IAS reconciliations in their published annual reports. Although not officially prescribed, the IAS-based earnings disclosures have been an integral part of the annual reports and as such they have been audited with the official Finnish financial statements (for example, see METSÄ-SERLA Annual Report 1989, p. 31). This confirms that the firms disclosing dual earnings information have followed the IAS principles. Unfortunately, it is not possible to observe in detail the accounting choices of the firms in case the IAS have allowed alternative treatments. However, the problem is largely mitigated by the fact that most differences between the local Finnish GAAP and IAS during the research period relate to items where IAS did not allow alternative treatments (see Niskanen et al., 1994, pp. 285, 286, and the discussion of the accounting differences above in this section).

3. Data and methods

Our sample is qualitatively unique, because we have observations of dual (LAS and IAS) earnings disclosures and we can measure their value relevance.
to domestic and foreign investors separately. Our earnings data were obtained from the annual reports of those listed Finnish firms that have disclosed dual financial statements prepared under the local (Finnish) GAAP and the IAS. Initially, all 148 dual disclosures by the firms listed on the Helsinki Stock Exchange in the 1980s and early 1990s were included. The major part of the disclosures are from late 1980s, the last observations being from 1992 when the separate listing of restricted and unrestricted shares ended.

The initial sample of 148 dual earnings disclosures was screened to find those cases for which the firm had both restricted and unrestricted shares listed on the HeSE. This resulted in 97 matched-pairs observations from 18 firms. In 1987, for example, the sample firms represent 43.8% of all manufacturing firms listed on the HeSE, and their market capitalization is 40.5 billion FIM (approximately 9.0 billion US dollars (HeSE, 1988, pp. 36–38)). The market value of the sample firms is 78.9% of the total market capitalization of all manufacturing companies on the HeSE (1988, pp. 36–38). As regards the number of observations (97) in our data, it is comparable to some previous studies in this area, e.g., Chan and Seow (1996, p. 145) who used 147 observations, and Harris and Muller (1999, p. 291) who used 89 observations. In a statistical sense, however, the relatively small sample size should be kept in mind in interpreting the results.

To illustrate the price differences between the restricted and unrestricted shares, we computed the percentage premiums of the unrestricted shares in our sample by deducting the price of the restricted share from the price of the unrestricted share and dividing the difference by the price of the restricted share. The lower quartile, the median, and the upper quartile of the premium are 2.7%, 9.1%, and 23.5%, respectively. The behavior of the cross-sectional quartiles of the price premium in the research period is shown in Fig. 2.

The median premium is 42.8% in 1984, the first year of separate listing of restricted and unrestricted shares on the HeSE. Thereafter the median premium decreases, being only 1.4% in 1992, the last year of separate listing of restricted and unrestricted shares. At the same time, the inter-quartile range indicates that the cross-sectional dispersion of the premium decreases. If Hietala (1989, p. 705) argument holds, the negative trend in the (median) premium is obviously explained by a decrease in the difference between the risk premiums of restricted and unrestricted shares.

Following Easton and Harris (1991, pp. 23, 29), we regressed stock returns on earnings levels and earnings changes. To measure the value relevance of the aggregate reconciliation of LAS (Finnish) to IAS earnings, we estimated the following regressions for domestic and foreign investors separately.

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where $RET_{DOM}$ is the annual raw stock return for domestic investors (restricted shares), $RET_{FOR}$ the annual raw stock return for foreign investors (unrestricted shares), $NILAS$ the Local (Finnish) Accounting Standards net income, $NIDIF$ the aggregate reconciliation of Local (Finnish) net income to International Accounting Standards net income (defined as IAS net income minus LAS net income), $DUM$ the annual dummy variable, $\varepsilon$ the regression residual, subscript $i$ denotes firm and subscript $t$ denotes fiscal year for all variables, subscripts $D$ and $F$ denote domestic and foreign investors, respectively, $\Delta$ denotes annual change, net income and reconciliation variables deflated by market value of equity at the beginning of the year.
Similar model specification testing the relationship between stock returns and reconciliations of different GAAP earnings has previously been used by Amir et al. (1993, pp. 238–240), Barth and Clinch (1996, pp. 139–140), and Rees and Elgers (1997, pp. 117–118). We estimated the models from panel data pooled across sample firms and years. To control for the potential year effect, we inserted annual dummy variables in the regressions (see, e.g., Alford et al., 1993, p. 211).

As noted by Amir et al. (1993, p. 240) and Pope (1993, p. 268), regressing stock returns on LAS earnings and on the reconciliation of LAS to IAS earnings contains the same information as a multiple regression of returns on LAS and IAS earnings variables simultaneously. For domestic investors in Eq. (1), the implied coefficient on LAS earnings level (change) is $a_1D + a_2D(a_3D - a_4D)$ and the coefficient on the IAS earnings level (change) is $a_2D(a_4D)$. Of course, corresponding relationships apply also for foreign investors in Eq. (2).

The model specification in Eqs. (1) and (2) is useful because, in addition to the aggregate reconciliation, it allows us to test the value relevance of individual reconciliation components. We perform these tests with the following regressions:

$$
\text{RET}_{it}^{\text{DOM}} = \beta_{0D} + \beta_{1D}NI_{it}^{\text{LAS}} + \sum_{k=2}^{9} \beta_{kD}ITEM_{kit} + \beta_{10D}\Delta NI_{it}^{\text{LAS}}
\sum_{k=11}^{18} \beta_{kD}\Delta ITEM_{kit} + \sum_{t=85}^{92} \beta_{Dt}\text{DUM}_t + \nu_{Dit},
\tag{3}
$$

$$
\text{RET}_{it}^{\text{FOR}} = \beta_{0F} + \beta_{1F}NI_{it}^{\text{LAS}} + \sum_{k=2}^{9} \beta_{kF}ITEM_{kit} + \beta_{10F}\Delta NI_{it}^{\text{LAS}}
\sum_{k=11}^{18} \beta_{kF}\Delta ITEM_{kit} + \sum_{t=85}^{92} \beta_{Ft}\text{DUM}_t + \nu_{Fit},
\tag{4}
$$

where $ITEM_k$ denotes the following eight reconciling items of LAS (Finnish) net income to IAS net income disclosed by the sample firms in their annual reports:

- RES: adjustment for net change in untaxed reserves;
- DEP: depreciation adjustment;
- INV: inventory accounting adjustment;
- PEN: pension expense adjustment;
- AFF: adjustment for affiliate companies’ earnings;
- CON: net adjustment for consolidation differences;
- GWI: adjustment for depreciation of goodwill;
- OTH: other (net) adjustments;
\( v \): regression residual;
(all other symbols as defined).

For the most part, these reconciling items correspond to the differences between IAS and local Finnish GAAP discussed in the previous section. In our sample, however, the firms did not close adjustments for long-term construction contracts. Furthermore, adjustments for financial lease contracts were found in only two cases. Therefore, we included these items in the group of other adjustments (OTH), which also contains those adjustments that the firms themselves disclosed under the same heading. Moreover, net adjustment for consolidation differences (CON) includes items relating to adjustment for minority interest, but also items that the sample firms disclosed under headings translation differences and consolidation differences.

4. Empirical results

The descriptive statistics for returns and earnings variables are shown in Table 1.

The mean (median) returns on restricted and unrestricted shares are 17.7\% (13.2\%) and 17.4\% (6.5\%), respectively, indicating that the returns for domestic investors have, on average, been higher than the returns for foreign investors. The Pearson product–moment correlation (not reported in the table) between the return variables is 0.891 (significance level \(<0.001\) in a two-tailed test).

The mean (median) of the LAS earnings variable is 6.5\% (5.5\%) of the market value of equity. The frequency numbers show that the sample firms have reported negative (positive) net income in 16 (81) cases. The mean (median) aggregate reconciliation is 2.0\% (3.7\%) of the market value. The frequencies indicate that in approximately two-thirds of the cases in our sample the aggregate reconciliation is positive thus increasing the reported IAS earnings relative to LAS earnings. Moreover, the statistics for the absolute values in the right-most columns indicate that the mean (median) aggregate reconciliation is 14.3\% (12\%) which is large in relation to the corresponding statistics of 8.1\% (6.1\%) for LAS earnings.

The statistics for the individual reconciling items reveal that by far the most important is the adjustment for untaxed reserves with a mean (median) of 1.4\% (1.6\%) for the signed values and 10.0\% (6.5\%) for the absolute values. The frequency numbers indicate that in each observation the aggregate reconciliation includes this adjustment. The statistics contrast with those of the other reconciling items which are generally much smaller in signed and absolute values and include more frequently zero observations.

The estimation results of Eqs. (1) and (2) appear in Table 2. The significance statistics \((t\)-value and \(\text{Prob}(t)\)) are based on heteroscedastic consistent (White-adjusted) standard errors.
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<th># Zero</th>
<th># Pos</th>
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<th>Lower Quartile</th>
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<td>97</td>
<td>0</td>
<td>57</td>
<td>0.0026</td>
<td>0.1265</td>
<td>0.0868</td>
<td>-0.0184</td>
<td>0.0593</td>
<td>0.0961</td>
<td>0.0674</td>
</tr>
<tr>
<td>(\Delta)RES</td>
<td>97</td>
<td>97</td>
<td>0</td>
<td>57</td>
<td>0.0017</td>
<td>0.0631</td>
<td>-0.0013</td>
<td>0.0000</td>
<td>0.0030</td>
<td>0.0286</td>
<td>0.0028</td>
</tr>
<tr>
<td>(\Delta)DEP</td>
<td>97</td>
<td>97</td>
<td>0</td>
<td>57</td>
<td>-0.0015</td>
<td>0.0257</td>
<td>-0.0039</td>
<td>0.0000</td>
<td>0.0003</td>
<td>0.0106</td>
<td>0.0037</td>
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<tr>
<td>(\Delta)INV</td>
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<td>97</td>
<td>0</td>
<td>57</td>
<td>0.0002</td>
<td>0.0128</td>
<td>-0.0005</td>
<td>0.0000</td>
<td>0.0000</td>
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<td>0.0005</td>
</tr>
<tr>
<td>(\Delta)PEN</td>
<td>97</td>
<td>97</td>
<td>0</td>
<td>57</td>
<td>0.0025</td>
<td>0.0491</td>
<td>-0.0063</td>
<td>0.0000</td>
<td>0.0027</td>
<td>0.0171</td>
<td>0.0053</td>
</tr>
<tr>
<td>(\Delta)AFF</td>
<td>97</td>
<td>97</td>
<td>0</td>
<td>57</td>
<td>-0.0001</td>
<td>0.0029</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0013</td>
<td>0.0000</td>
</tr>
<tr>
<td>(\Delta)CON</td>
<td>97</td>
<td>97</td>
<td>0</td>
<td>57</td>
<td>0.0000</td>
<td>0.0011</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0003</td>
<td>0.0000</td>
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<tr>
<td>(\Delta)GWI</td>
<td>97</td>
<td>97</td>
<td>0</td>
<td>57</td>
<td>0.0035</td>
<td>0.0719</td>
<td>-0.0172</td>
<td>0.0000</td>
<td>0.0160</td>
<td>0.0396</td>
<td>0.0164</td>
</tr>
</tbody>
</table>

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*a RETDOM: annual stock return for domestic investors (restricted shares); RETFOR: annual stock return for foreign investors (unrestricted shares); NILAS: Local Accounting Standards net income; NIDIF: International Accounting Standards net income minus Local Accounting Standards net income; RES: adjustment for net change in untaxed reserves; DEP: depreciation adjustment; INV: inventory accounting adjustment; PEN: pension expense adjustment; AFF: adjustment for affiliate companies’ earnings; CON: net adjustment for consolidation differences; GWI: adjustment for depreciation of goodwill; OTH: other (net) adjustments; \(\Delta\) denotes annual change; All accounting variables deflated by market value of equity.

b # Neg is the number of negative observations, # Zero the number of zero observations, and # Pos is the number of positive observations.

c Positive (negative) values indicate that IAS earnings increase (decrease) as a result of the reconciling item.
Table 2
Ordinary least squares regression results for the net difference between International and Local Accounting Standards net income ($n = 97$)

<table>
<thead>
<tr>
<th></th>
<th>Panel A: Dependent variable: RET$^{DOM}$</th>
<th>Panel B: Dependent variable: RET$^{FOR}$</th>
<th>Panel C: Dependent variable: RET$^{FOR} - RET^{DOM}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Standard error</td>
<td>$t$-value</td>
</tr>
<tr>
<td>Constant</td>
<td>$-0.2176$</td>
<td>0.1469</td>
<td>$-1.481$</td>
</tr>
<tr>
<td>NI$^{AS}$</td>
<td>1.9797</td>
<td>0.6188</td>
<td>3.199</td>
</tr>
<tr>
<td>NI$^{DIFF}$</td>
<td>$-0.1685$</td>
<td>0.3909</td>
<td>$-0.431$</td>
</tr>
<tr>
<td>ΔNI$^{AS}$</td>
<td>0.6906</td>
<td>0.3503</td>
<td>1.971</td>
</tr>
<tr>
<td>ΔNI$^{DIFF}$</td>
<td>$-0.0592$</td>
<td>0.3079</td>
<td>$-0.192$</td>
</tr>
<tr>
<td>$D_{85}$</td>
<td>0.1959</td>
<td>0.1954</td>
<td>1.003</td>
</tr>
<tr>
<td>$D_{86}$</td>
<td>0.5129</td>
<td>0.1964</td>
<td>2.612</td>
</tr>
<tr>
<td>$D_{87}$</td>
<td>0.3742</td>
<td>0.1596</td>
<td>2.345</td>
</tr>
<tr>
<td>$D_{88}$</td>
<td>0.2243</td>
<td>0.1471</td>
<td>1.525</td>
</tr>
<tr>
<td>$D_{89}$</td>
<td>0.0549</td>
<td>0.1475</td>
<td>0.372</td>
</tr>
<tr>
<td>$D_{90}$</td>
<td>$-0.2428$</td>
<td>0.1538</td>
<td>$-1.579$</td>
</tr>
<tr>
<td>$D_{91}$</td>
<td>0.3104</td>
<td>0.1788</td>
<td>1.736</td>
</tr>
<tr>
<td>$D_{92}$</td>
<td>0.7482</td>
<td>0.1886</td>
<td>3.967</td>
</tr>
<tr>
<td><strong>Adj. $R^2$</strong></td>
<td>0.5259</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>$F$-value</strong></td>
<td>9.8726</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>$\text{Prob}(F)$</strong></td>
<td>0.0000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The ordinary least squares (OLS) regression results for returns of restricted shares in Panel A indicate that the $\text{NI}^{\text{LAS}}$ variable has a statistically significant coefficient (1.98). This implies that, after controlling for aggregate reconciliation, local GAAP earnings provide value relevant information to domestic investors. However, the estimated coefficients of $\text{NI}^{\text{DIF}}$, $\Delta\text{NI}^{\text{LAS}}$ and $\Delta\text{NI}^{\text{DIF}}$ are insignificant implying that the level and the change of aggregate reconciliation and the change of local GAAP earnings are not value relevant.

The OLS regression results for returns of unrestricted shares in Panel B are largely similar to those obtained for restricted shares in Panel A. The LAS earnings are significantly associated with stock returns. More interestingly, it turns out that, after controlling for the effect of LAS earnings, the level and change of aggregate reconciliation are value irrelevant to foreign investors. This is somewhat surprising given that the dual earnings disclosures of our sample firms were primarily motivated by foreign investors’ information needs.

To see whether the regression coefficients estimated for foreign and domestic investors differ significantly from each other, we estimated an auxiliary regression where the premium return on unrestricted shares over restricted shares ($\text{RET}^{\text{FOR}} - \text{RET}^{\text{DOM}}$) is used as a dependent variable. The auxiliary regression is needed because the residual terms $e_{it}^{\text{D}}$ and $e_{it}^{\text{F}}$ in Eqs. (1) and (2) are correlated (the estimated correlation is 0.852), and hence the differences in the coefficient estimates of the primary regressions cannot be compared directly.

The $t$-values and related probabilities from this auxiliary regression are shown in Panel C. For the $\Delta\text{NI}^{\text{DIF}}$ variable, there is significant difference between foreign and domestic investors, i.e. we can reject (at the level of 3.8%) the null hypothesis that the coefficients estimated for this variable do not differ between the two investor groups. Thus, although we cannot reject the null hypothesis that the coefficient of this variable is zero when tested separately in the primary regressions, we nevertheless are able to find a significant difference between the coefficients estimated for the two investor groups.

The estimation results of Eqs. (3) and (4), where we refine our tests by using the individual components of the aggregate reconciliation, are reported in Table 3.

The regression statistics for the restricted shares in Panel A show that $\text{NI}^{\text{LAS}}$, $\text{RES}$, and $\Delta\text{CON}$ are significant explanatory variables for returns. For domestic investors, the local GAAP earnings variable thus is significant, as was the case in Table 2. Additionally, our results suggest that the level of adjustment for untaxed reserves has value relevance to domestic investors. The value relevance of this item can be expected in light of the fact that Finnish financial analysts, media and individual investors generally undo the effect of untaxed
<table>
<thead>
<tr>
<th>Panel A: Dependent variable: RET\textsuperscript{DOM}</th>
<th>Panel B: Dependent variable: RET\textsuperscript{FOR}</th>
<th>Panel C: Dependent variable: RET\textsuperscript{FOR} − RET\textsuperscript{DOM}</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coefficient</strong></td>
<td><strong>Standard error</strong></td>
<td><strong>t-value</strong></td>
</tr>
<tr>
<td>Constant</td>
<td>−0.1773</td>
<td>0.1497</td>
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<tr>
<td>NILAS</td>
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<td>0.7100</td>
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<tr>
<td>RES</td>
<td>1.1235</td>
<td>0.4536</td>
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<td>DEP</td>
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<td>2.4787</td>
<td>2.7170</td>
</tr>
<tr>
<td>PEN</td>
<td>−2.4869</td>
<td>2.6380</td>
</tr>
<tr>
<td>AFF</td>
<td>−0.0274</td>
<td>0.8655</td>
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<td>CON</td>
<td>−6.2210</td>
<td>5.0190</td>
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<tr>
<td>GWI</td>
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<td>OTH</td>
<td>1.3332</td>
<td>1.0620</td>
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<tr>
<td>ΔNILAS</td>
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<td>ARES</td>
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<td>ΔD87</td>
<td>0.3186</td>
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<td>ΔD92</td>
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<td><strong>Adj. R\textsuperscript{2}</strong></td>
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<tr>
<td><strong>F-value</strong></td>
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<td><strong>Prob(F)</strong></td>
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</table>
reserves in financial statement analysis. The positive sign of the estimated coefficient is consistent with the intuitively appealing view that stock returns are positively correlated with income increasing items. Furthermore, as was evident from Table 1, the adjustment for untaxed reserves tends to be the largest individual reconciling item. In contrast, the significance of the change in net adjustment of consolidation differences (ΔCON) is more difficult to interpret since it represents the change of a mixture of various items as explained above.

Again, the overall results for the unrestricted shares in Panel B of Table 3 are similar to those reported for restricted shares in Panel A. This implies that, in addition to the level of local GAAP earnings, the individual reconciling items RES and ΔCON have information content to foreign investors. Perhaps unexpectedly, with the exception of the adjustment for untaxed reserves (RES), none of the levels of the remaining reconciling items has significant value relevance to foreign investors.

The statistics for the auxiliary regression using the premium return as a dependent variable appear in Panel C. It shows that the differences between the coefficients estimated for foreign and domestic investors are generally insignificant. The only exception is the adjustment for affiliate companies’ earnings (AFF) for which the estimated coefficients of both levels and changes differ significantly across the two investor groups.

Finally, to check the sensitivity of our results to the selection of the dependent stock return variable we re-estimated our regressions using market-adjusted returns. These returns were computed by deducting market index return from the raw stock returns. First, for both the restricted and unrestricted shares, we used the local stock index measuring the marketwide return on the Helsinki Stock Exchange where both share classes were listed. In addition, for the unrestricted shares, we used the Morgan Stanley Capital International (MSCI) index as a proxy for a broad international market return (see Amir et al., 1993, p. 239). (In the case of restricted shares, we did not use the MSCI index because domestic investors in Finland could invest abroad only negligible amounts during our research period, as explained in footnote 2.) Overall, the results from these additional tests were very similar to those reported in Tables 2 and 3. Our findings are thus insensitive to whether raw returns or market-adjusted returns are used. 6

5 In fact, undoing the effect of untaxed reserves has since long been among the most important adjustments recommended by the Finnish Committee for Corporate Analysis (Yritystutkimusneuvottelukunta, 1987, pp. 6–8).
6 Risk-adjusted returns were not used, because that would have reduced significantly the sample size. This is because there were no market data available for beta estimation for the unrestricted shares before 1984 (Hietala, 1989, pp. 699, 700). See also Brown and Warner (1980, pp. 246–249) who suggest that information content results are rather insensitive to method of market adjustment.
5. Conclusions

In this paper, we present empirical findings on the value relevance of local GAAP (LAS) earnings and their reconciliation to the IAS. We conducted our tests separately for foreign and domestic investors. Our data come from Finland, where a number of firms listed on the Helsinki Stock Exchange started the practice of disclosing dual financial statements in the mid-1980s.

Until 1992, the Finnish law limited foreign investors’ ownership of Finnish corporate shares to a maximum of 20%. Both domestic and foreign investors could invest in unrestricted shares, whereas restricted shares were held by domestic investors. Finnish investors’ possibilities to invest abroad were negligible. Under these circumstances, the prices of unrestricted shares were determined by foreign investors and the prices of restricted shares by domestic investors. Thus, because of dual earnings disclosures and a partially segmented stock market, we are able to measure the value relevance of local GAAP and IAS based earnings to foreign and domestic investors separately.

Using a matched-pairs sample of unrestricted and restricted shares we regressed stock returns on the levels and changes of LAS earnings and on the levels and changes of aggregate reconciliation of LAS to IAS earnings. The results from these regressions show that the level of LAS earnings provides value relevant information, while the change of LAS earnings as well as the level and change of aggregate reconciliation are value irrelevant. These findings are similar to both domestic and foreign investors.

Furthermore, we regressed stock returns on LAS earnings and on the individual reconciling items. These regressions suggest that, in addition to LAS earnings, the level of adjustment for untaxed reserves and the net adjustment for consolidation differences are value relevant. Once again, the findings are similar across the two investor groups. However, these results should be interpreted with a degree of circumspection, because the sample size is limited to 97 observations.

Overall, our results give little evidence that local GAAP earnings reconciliations to IAS have different value relevance to foreign versus domestic investors. Thus, somewhat surprisingly, our paper provides little support to the view that IAS reconciliations would be particularly useful to the audience for which they are targeted, i.e. foreign investors. In fact, the findings from the tests with individual reconciling components fall in line with the view that certain items are value relevant to all investors irrespective of their domicile.

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