

**Second Quantitative Accounting Research Symposium**  
**28 May 2010**

Venue: QB3, Massey University, Albany Campus

Paper 2: 11.10-12.00

**Evidence on the Impact of International Financial Reporting Standards in New Zealand**

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## Evidence on the Impact of International Financial Reporting Standards in New Zealand

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*JEL Classification: M41, G14*

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The authors thank Carol Hart, Shane Moriarity, Wolfgang Schultze, and conference participants at the 2007 and 2008 AFAANZ Conferences for their comments.

## **Evidence on the Impact of International Financial Reporting Standards in New Zealand**

### **Abstract**

**Purpose** – This paper examines the financial impact from the adoption of international financial reporting standards (IFRS) on New Zealand (NZ) companies. It analyses the effects of IFRS on the accounting numbers reported in financial statements. It also compares the association of NZ IFRS versus NZ GAAP book value of equity and earnings with market values with particular emphasis on smaller listed companies.

**Design/methodology/approach** – The paper examines a sample of New Zealand listed companies that adopted NZ IFRS between 2005 and 2007. Financial statement data under NZ IFRS and the previous generally accepted accounting practice were hand collected from annual reports. The data is analysed using descriptive statistics and linear regression.

**Findings** – The adoption of IFRS resulted in statistically significant increases in earnings, assets and liabilities. The IFRS adjustments were largely as anticipated, but IFRS adoption did not improve the value relevance of the accounting numbers. The value relevance of IFRS accounting numbers was marginally lower than that of NZ GAAP. For small listed companies, and early adopters, IFRS equity adjustments reduced value relevance.

**Originality/value** – The study examines the impact of a major regulatory change in financial reporting by documenting New Zealand's experience with the changeover. The findings are of relevance to the accounting profession and regulators as they debate whether IFRS should be required for the preparation of external financial statements for small to medium-sized enterprises.

**Keywords** International financial reporting standards, value relevance, earnings, equity, New Zealand.

## **1. Introduction**

In 2002, the New Zealand Accounting Standards Review Board (ASRB) announced that New Zealand listed companies would be required to adopt International Financial Reporting Standards (IFRS) by 1 January 2007[1]. However, firms were allowed to adopt the standards as early as 1 January 2005. Not long after the mandatory adoption date, the government deferred the adoption of IFRS for smaller entities and announced a review of the statutory framework for financial reporting (ASRB, 2007). A key objective of the review was to weigh the benefits of financial reporting against compliance costs.

This paper examines the New Zealand experience with the changeover to NZ IFRS. We report on: 1) the nature and materiality of the financial effects of NZ IFRS reported in published financial statements; 2) the extent to which NZ IFRS financial statements reflect information which is useful to the sharemarket beyond that provided by New Zealand generally accepted accounting practice (NZ GAAP); and 3) the value relevance of NZ IFRS earnings and book values for smaller listed companies.

The results of the study confirm that the nature of the financial effects resulting from the change to IFRS were generally as anticipated. The results also show that the value relevance of IFRS earnings and book value of equity reported by New Zealand listed companies differ only marginally from those obtained using the prior New Zealand standards. Finally, the results show that for smaller entities the IFRS equity adjustment impaired value relevance. This also held true for early adopters.

The paper is structured as follows. Section 2 provides a brief historical review of the adoption of IFRS in New Zealand and the potential financial impacts arising from the change to IFRS. Section 3 summarises research on the impact of IFRS adoption observed in other countries and our hypotheses for New Zealand. Section 4 extends the analysis of value relevance to consider the effect of firm size in order to evaluate the wisdom of exempting most small and medium-sized entities in New Zealand from the requirement to adopt IFRS. The details describing the data and sample used in this study are given in Section 5. The results from the study are provided in Section 6, and Section 7 provides our conclusions.

## **2. Adopting IFRS in New Zealand**

### ***2.1 Background to New Zealand Harmonisation***

New Zealand's focus on harmonising with international standards began in 1974 when the New Zealand Society of Accountants became a member of the International Accounting Standards Committee (IASC) (Bradbury and van Zijl, 2005). In the 1990s further moves to harmonise came with a legal requirement for New Zealand's ASRB to liaise with the Australian Accounting Standards Board (AASB) to harmonise New Zealand and Australian standards (Financial Reporting Act section 24(f)).

On 3 July 2002, the Australian Financial Reporting Council decided that IFRS would be adopted in Australia on or after 1 January 2005. This was the catalyst for New Zealand to adopt IFRS and a proposal for adoption was made by the ASRB in October 2002. This was followed by an extensive process of consultation with a range of interested parties<sup>[2]</sup> (Hickey *et al.*, 2003). The ASRB announced the decision to adopt IFRS in December 2002.

### ***2.2 The Transition to IFRS***

The requirements for transitioning to NZ IFRS were provided in Financial Reporting Standard 41 (FRS-41) *Disclosing the Impact of Adopting New Zealand Equivalents to International Financial Reporting Standards* (FRSB, 2005a) and NZ IFRS 1 *First-time Adoption of New Zealand Equivalents to International Financial Reporting Standards* (FRSB, 2005b). The purpose of FRS-41 was to inform users of how the transition to NZ IFRS was being managed and to provide the expected date of adoption. Entities also had to explain the key differences in accounting policies that were expected to arise from adopting NZ IFRS and the potential impact of the change on their financial reports (FRSB, 2005a).

NZ IFRS 1 set out the disclosure requirements for companies on transition to NZ IFRS. IFRS companies in the year of adoption were required to provide reconciliations of equity and earnings as reported under the previous NZ GAAP and NZ IFRS at both the date of transition and the reporting

date. Sufficient detail was required to enable users to understand the material adjustments to the balance sheet and to the profit and loss (FRSB 2005 a and 2005b).

### ***2.3 Potential Financial Reporting Impacts***

It was understood that the adoption of IFRS would change the structure and content of financial statements. It was also anticipated that the adoption of a new set of financial reporting standards might change the reported results and financial position of reporting entities (Hickey *et al.*, 2003).

Although the financial impact from the adoption of IFRS would vary for each entity, commentators highlighted the areas where the effects were likely to be significant. Teixeira (2004) and Bradbury and van Zijl (2005) identified the following reporting areas where the impact on a number of entities was expected to be major: (a) employee benefits, revenue recognition and intangibles because there were no equivalent New Zealand standards; (b) business combinations, because of the change in accounting treatment for goodwill on consolidation; (c) financial instruments, for which derivative financial instruments must be recognised at fair value and detailed rules applied to account for hedges; (d) property, plant and equipment, where offsetting revaluation decreases and increases could no longer occur within an asset class; (e) income tax, because of fundamental changes in the concepts and method for recognising deferred tax assets and liabilities; (f) agricultural assets, where fair value accounting was required; and (g) share-based payment transactions which were required to be recognised in the financial statements.

There was also speculation about the potential financial impact for specific entities (Vaughan (2004 and 2005) and Kwong *et al.* (2005)).

Although there were a number of anticipated differences between IFRS and NZ GAAP there were also a number of areas where treatment was expected to be similar; for example, in the measurement and recognition of inventories, as well as the depreciation on property, plant and equipment.

The first part of the current study examines the actual differences experienced in New Zealand arising from the change to IFRS. It addresses whether the anticipated effects occurred and whether there were any surprises. The second part examines value relevance.

### 3. Value Relevance of IFRS Adoption

One of the key objectives of the International Accounting Standards Board (IASB) is to develop a set of globally accepted standards which provide high quality, transparent and comparable information to capital markets and other users (IASB 2002). The move to international adoption of IFRS began in 2002 when the Parliament for the European Union (EU) became the first regulatory body in the world to require the use of IFRS. It mandated the use of IFRS for all EU listed companies from 1 January 2005. The aim was for listed companies to have a single set of high-quality standards that would ensure a 'high degree of transparency and comparability of financial statements' (European Parliament, 2002: Article 1).

IFRS adoption is envisaged as a move that will improve accounting quality and provide a better reflection of economic reality, but the expectations from the academic community are mixed. Ball (2006) argues that accounting quality will depend on how well the standards are applied – which will depend on the financial reporting incentives within the institutional environment and on the enforcement of standards. Daske *et al.* (2008) also argue that capital market effects from IFRS adoption will vary depending on the enforcement of standards and the financial reporting incentives for more transparent earnings. In addition, they argue that the effects of IFRS adoption will be smaller for countries where there are fewer differences between local GAAP and IFRS because of a previous convergence strategy.

#### 3.31 Value Relevance of Prior GAAP/IFRS and Hypotheses

Value relevance is based on the explanatory power of net income (per share) and equity book value (per share) on market value (share price). The approach is based on Ohlson's (1995) model that the market value of a firm's equity is a function of earnings and book value (Collins, *et al.*, 1997) as shown in the following equation:

$$MV_{it} = \alpha_0 + \alpha_1 BV_{it} + \alpha_2 NPAT_{it} + \varepsilon_t$$

The extent to which book value ( $BV_{it}$  of firm  $i$  in year  $t$ ) and net income ( $NPAT_{it}$  of firm  $i$  in year  $t$ ) is reflected in the economic value of the firm as measured by the market value of the firm ( $MV_{it}$  of firm  $i$  in year  $t$  measured three months after year end) is referred to as value relevance, i.e., the extent to which the accounting information is incorporated into share prices. (Hung and Subramanyam 2007). Barth *et al.*, (2001) argue that value relevance can inform standard setters on the relevance and reliability of an accounting item. An accounting amount that has a significant association with share prices indicates that the information is relevant and reliable enough to be of value to investors.

This model can then be used to compare the explanatory power of alternative measures of book value and net income such as comparing local GAAP and IFRS. Another approach is to test the incremental explanatory power of the IFRS adjustments made to equity and net income. This tests if the IFRS adjustments provide information above and beyond that provided by book value and income measured in local GAAP (Hung and Subramanyam 2007).

The following sections summarise existing value relevance research on the impact of IFRS adoption in various countries.

#### *Nordic Studies*

Schadewitz and Vieru (2007) examined 86 Finnish first-time IFRS adopters in 2004. Incremental value relevance showed that IFRS equity adjustments impair value relevance while earnings adjustments improve value relevance. Gjerde *et al.* (2007) also found no significant improvement in value relevance for 145 firms listed on the Oslo stock exchange. In incremental analysis they report a marginal increase in the value relevance for equity adjustments but not for earnings adjustments.

#### *European Union*

All listed EU companies have been required to use IFRS since 2005. Capkun, *et al.* (2008) analysed the impact of IFRS adoption for 1,722 firms that transitioned in 2004–2005. The association of the accounting numbers with market prices was higher under IFRS than for local GAAP but no test of significance was given. In incremental analysis, IFRS equity adjustments were not value relevant

while IFRS earnings adjustments were positive and strongly significant. Unfortunately Capkun *et al.* (2008) did not provide value relevance results by country.

The Institute of Chartered Accountants in England and Wales (ICAEW) (2007) on behalf of the European Union (EU) undertook a major investigation of the impact of IFRS for a number of EU countries including tests of value relevance. The overall results show that IFRS earnings adjustments are value relevant but not IFRS equity adjustments. In a breakdown by country, IFRS earnings adjustments are value relevant for listed companies in France, Italy and the United Kingdom (UK) but not in Spain. IFRS equity adjustments are not value relevant for any of the countries except for Spain where the adjustments impair value relevance.

In a UK study, Horton and Serafeim (2008) found that changes in earnings between UK GAAP and IFRS are value relevant, especially earnings adjustments relating to share-based payments, deferred tax and goodwill amortisation. However, changes in equity are not value relevant. Tsalavoutas *et al.* (2008) found no statistically significant change in the value relevance of equity and earnings after the adoption of IFRS in Greece.

#### *Australia*

In relative analysis, Goodwin *et al.* (2008) found no evidence that IFRS earnings and equity are more value relevant than under local Australian GAAP. They also undertook incremental value relevance analysis and reported that earnings and equity adjustments are not value relevant, but in more detailed analysis they found that changes to intangibles and provisions weaken value relevance while changes to goodwill improve it.

A summary of the value relevance research results is shown in Table 1. The majority of studies have tested incremental value relevance rather than compare the explanatory power of local GAAP with IFRS. In moving from local standards to IFRS the research indicates that earnings adjustments are value relevant for countries in the European Union – Spain, Italy and the UK – but that the results for Nordic countries are mixed. Equity adjustments provide no additional information for most of the countries studied except that there are mixed results for the Nordic countries.

Take in Table 1

The findings suggest that if there is any increase in value relevance from the change to IFRS, it lies with earnings. It appears that earnings reported under IFRS are less conservative than under prior national GAAP.

The second part of the study compares the value relevance of New Zealand financial reporting standards and NZ IFRS. Given the harmonisation goals between New Zealand and Australia, it may be expected that the impact of IFRS adoption in New Zealand will be similar to Australia's experience. However, the capital markets and economies of the two countries differ markedly. The number and average market capitalisation of Australian companies are much higher than those of New Zealand companies [3]. The agricultural sector is a large part of the New Zealand economy representing 4.4% of GDP versus 2.2% for Australia and the retail sector for food, beverages and tobacco represent 5.0% of GDP in New Zealand versus 1.9% in Australia (Australian Bureau of Statistics, 2009 and Statistics New Zealand (2009). Thus New Zealand firms are more heavily concentrated in industries requiring relatively small amounts of capital whereas Australian firms are in more capital-intensive industries such as mining and finance.

Given the mixed results from IFRS adoption elsewhere and the uncertainty about the anticipated impact in New Zealand, we adopt the following null hypotheses:

H1a: There is no difference in the value relevance of the book value of equity and net income reported under NZ IFRS versus the previous NZ GAAP.

H1b: NZ IFRS adjustments to NZ GAAP earnings do not provide additional information to the market.

H1c: NZ IFRS adjustments to NZ GAAP equity do not provide additional information to the market.

#### **4. Value Relevance of IFRS to Small and Medium-Sized Entities**

There has been debate about whether the benefits of IFRS adoption outweigh the costs for small and medium-sized entities (SMEs). In September 2007 the Minister of Commerce announced a

government review of financial reporting for SMEs. This resulted in the ASRB delaying adoption of NZ IFRS for small and medium-sized entities. The government's financial reporting reform proposals have now been issued and recommend that IFRS will only be applicable to entities that have public accountability, economic significance and separation of owners and managers (ASRB, 2009). This will mean that only a small number of SMEs will be required to apply IFRS to prepare general purpose financial statements.

The third part of the study extends the analysis of the value relevance of IFRS to consider firm size. If IFRS provides more value relevance for SMEs, then the additional potential benefits might justify requiring SMEs to adopt IFRS.

## **5. Data and Sample**

The population for the study was all companies listed on the New Zealand Stock Exchange (NZX) as at August 2006[4]. Thirty listed unit trust and funds were excluded as the financial impact of IFRS would be quite different for these entities. Thirty-two overseas registered companies cross-listed on the NZX were also excluded as the date of IFRS adoption differed from the date of adoption by New Zealand registered companies. Three companies in financial difficulties and 15 companies that delisted were also excluded. Four companies that disclosed insufficient data were eliminated, resulting in a sample of 92 companies. Table 2 summarises the sample selection.

Take in Table 2

Financial statement data on earnings, assets, liabilities and equity reported under NZ GAAP and NZ IFRS were collected from annual reports. Share price data was obtained from the NZX Deep Archive.

Table 3 shows the year in which the companies produced the first IFRS annual report. Three companies produced the report for the year ending 31 December 2005. Twenty companies (21.7 %) adopted in 2006 and 17 companies (18.5 %) in 2007. The majority of companies (52 companies – 56.5 %) adopted in the financial reporting period after the mandatory date of 1 January 2007.

Take in Table 3

## 6. Results

### *6.1 Financial Statement Impacts*

Table 4, Panel A lists the differences between NZ GAAP and NZ IFRS for reported earnings. Average earnings before interest and taxation (EBIT) increased by 9.54 % while net profit after taxation (NPAT) increased by 16.95 %. The differences between the mean and median earnings are statistically significant for both NPAT and EBIT. There is considerable variation in the earnings as indicated by the large standard deviations. An analysis of the differences between NZ GAAP and NZ IFRS earnings by sector[5] were also made. There are no significant differences except in the case of the services sector. The increase in earnings under IFRS is consistent with Australia's experience. Goodwin et al (2008) report that IFRS earnings are higher compared with Australian GAAP but that the differences are not significant.

Take in Table 4

The changes reported in Table 4, Panel A are net changes, with increases and decreases offsetting one another and thus the absolute changes are understated. Table 4, Panel B records the nature of material adjustments to NPAT reported by the companies, categorised into positive and negative changes. Fifty-six companies report NPAT earnings increases, twenty-eight report earnings decreases, and eight companies report no change in earnings.

The material adjustments to earnings relate primarily to goodwill, financial instruments and property plant and equipment. These are all reporting areas anticipated in the list provided in Section 2.. The write-back of goodwill accounts for \$244.7 million (42 %) of the net increase in earnings. Thirty nine out of the 92 companies (42 % of the total sample) made goodwill adjustments – all but one had a positive impact on earnings. Adjustments to financial instruments reduced net earnings by \$83.2 million. Forty companies reported adjustments (43 % of the sample) with 23 of these companies reporting earning decreases. Adjustments to property, plant and equipment (primarily fair value adjustments to investment properties) increased earnings by \$294.1 million.

Table 5, Panel A reports the impact of NZ IFRS adoption on the balance sheet. Average total assets increased by \$21.8 million (3.5 %) and average total liabilities by \$32.7 million (9.8 %). The increases are statistically significant for both elements, with p-values less than 0.01. The net effect on equity is an average decrease of \$10 million (-3.4 %) which is not significant. The balance sheet impacts are similar to those reported in Australia by Goodwin, *et al.*, (2008).

Take in Table 5

Table 5, Panel B summarises the adjustments to equity. Changes in recognition of employee benefits and deferred taxation (both areas anticipated in the list in Section 2.3) reduced equity by a total of \$1,059 million. This was offset by goodwill increases of \$315 million. The impact of IFRS adjustments for financial instruments varied for companies, with 33 companies reporting increases in equity and 17 companies reporting decreases in equity.

Take in Table 6

Table 6 reports the means of selected financial ratios under both NZ GAAP and NZ IFRS. Under NZ IFRS the mean return on equity increased by 1.1 % as a result of the mean increase in earnings and a decrease in equity. The mean return on assets ratio decreased by 1.1%. The mean proportion of liabilities to total assets increased from 42.3 % to 44.7 %. All of these changes were statistically significant. The mean earnings per share increased by 3 cents under NZ IFRS which was significant and the ratio of market to book value of equity remained unchanged.

In summary, the adoption of NZ IFRS resulted in significant increases in reported earnings, total assets and liabilities. In addition there were significant changes in mean return on equity, assets, gearing and earnings per share for the sample of companies. Changes were observed in five of the seven reporting areas listed in Section 2.3; there were no unanticipated surprises. The next part of the study examines whether the changes provided additional information to the market.

## 6.2 Value Relevance

We apply two value relevance models used by Hung and Subramanyam (2007) to evaluate the value relevance of accounting information from IFRS adoption in New Zealand. The first model compares the value relevance under NZ GAAP with that under NZ IFRS. The second model compares the incremental value relevance of NZ IFRS adjustments to earnings and equity.

### Model 1

The first model compares the extent to which NZ GAAP and NZ IFRS financial reports reflect information incorporated into share prices three months after the end of the accounting period by comparing the adjusted  $R^2$  from the following two estimates of the model.

$$MV_{it} = \alpha_0 + \alpha_1 BV_{it-1}^{NZGAAP} + \alpha_2 NPAT_{it-1}^{NZGAAP} + \varepsilon_t \quad (1)$$

$$MV_{it} = \alpha_0 + \alpha_1 BV_{it-1}^{NZIFRS} + \alpha_2 NPAT_{it-1}^{NZIFRS} + \varepsilon_t \quad (2)$$

Where:

$MV_{it}$  = market capitalisation three months after the balance date in the year of adoption.

$BV_{it-1}^{NZGAAP}$  = carrying amount of shareholders' equity under NZGAAP at the balance date in the year prior to adoption.

$NPAT_{it-1}^{NZGAAP}$  = net profit after tax under NZGAAP in the year prior to adoption.

$BV_{it-1}^{NZIFRS}$  = carrying amount of shareholders' equity under NZIFRS at the balance date in the year prior to adoption.

$NPAT_{it-1}^{NZIFRS}$  = net profit after tax under NZIFRS in the year prior to adoption.

$\varepsilon_t$  = error term

## Model 2

The second model directly examines the additional information that IFRS adjustments provide beyond that in NZ GAAP financial reports.

$$MV_{it} = \alpha_0 + \alpha_1 BV_{it-1}^{NZGAAP} + \alpha_2 NPAT_{it-1}^{NZGAAP} + \alpha_3 BV_{it-1}^{IFRS-NZGAAP} + \alpha_4 NPAT_{it-1}^{IFRS-NZGAAP} + \varepsilon_{it} \quad (3)$$

Where:

$BV_{it-1}^{IFRS-NZGAAP}$  = the difference between the NZ IFRS and NZ GAAP carrying amount of shareholders'

equity in the year prior to adoption.

$NPAT_{it-1}^{IFRS-NZGAAP}$  = the difference between the NZ IFRS and NZ GAAP net profit after tax in the

year prior to adoption.

The models are estimated using both the gross value and scaled variables. Consistent with usage in Hung and Subramanyam (2007), the models are run using the share price three months and five months after the balance date in the year of adoption, as by this time all information from the transition to IFRS should have been in the market[6].

The value relevance of NZ GAAP and NZ IFRS equity and earnings to the market three months after the balance date is shown in the first two columns of Table 7. The models have significant F-statistics and high explanatory power. The coefficients for equity and profit are positive and highly significant for both NZ GAAP and NZ IFRS models. However, the coefficients for equity and profit are lower for NZ IFRS compared with NZ GAAP. The adjusted R<sup>2</sup> values of 90.1 % for NZ GAAP and 88 % for NZ IFRS are higher than those reported by Gjerde *et al.* (2007) for Norway (79.2% for Norwegian GAAP and 80.5% for IFRS) and Goodwin *et al.* (2008) in Australia (68% for Australian GAAP and 62% for IFRS). The Akaike Information Criterion (AIC)[7] is used to test the goodness-of-fit of each of the regression models (Akaike, 1974). Although the NZ GAAP model has the lower AIC score – 2,620 compared with the NZ IFRS AIC of 2,638 – the difference is small enough to

suggest that there is no real difference between the models. Thus the null hypothesis H1 is not rejected.

Take in Table 7

The regression for Model 2 examines the value relevance of the overall adjustments to profit and equity IFRS from adopting IFRS. The results of the incremental value relevance analysis are reported in column 3 of Table 7. The adjusted  $R^2$  of 90.10% is the same as the value estimated for the NZ GAAP model (see column 1, Table 7), indicating that the incremental variables added no explanatory power. The coefficient for equity differences between NZ GAAP and NZ IFRS is positive and weakly significant while the coefficient for the earnings difference is negative and not significant. Overall, the results of the incremental value relevance model suggest that the IFRS adjustments have not provided additional information to the market. Thus hypotheses H1b and H1c are not rejected.

The relative and incremental value relevance models are repeated using scaled data and the results (not reported) and inferences are consistent with the market value models. The introduction of industry dummy variables (not shown) does not impact the results.

### **6.3 Value relevance for SMEs and early adopters**

Prior research by Collins *et al.*, (1997) shows that for smaller firms, the value relevance of book values is relatively more important than earnings. This is due to the increased risk of failure and financial distress for smaller firms. Thus the market gives greater weight to book values as a proxy for the value of the business if the business is wound up. To measure the effect of size, the value relevance model for NZ IFRS is amended to include a control variable for small firms. The median revenue for the sample was determined and an indicator variable SMALL created, with a value of 1 if the revenue of a firm was below the median revenue for the sample, and 0 otherwise. The results reported in Table 7, column 4 show the coefficient of the interaction variable for equity (small \* equity) is negative and weakly significant while the interaction variable for profit (small \* profit) is not significant. Thus the market appears to consider the IFRS adjustments to book values as

impairments to value relevance. This gives some support for the government proposal that smaller entities should not be required to adopt NZ IFRS.

As mentioned in the introduction, New Zealand listed companies had a choice of adopting IFRS early or waiting until the mandatory adoption date of the 1 January 2007. There may be common underlying factors affecting firms that decided to adopt early so that the IFRS results provided by Model 1 may be affected by a self-selection bias. To control for this bias, an indicator variable EARLY is created, with a value of 1 for firms that adopted early, and 0 otherwise. The interaction of this variable with IFRS equity and IFRS profit are also examined. The results reported in Table 7, column 5 show the coefficient of the interaction with equity (early \* equity) is negative and significant while the interaction with profit (early \* profit) is not significant. This result suggests that the equity adjustments of early adopters did not improve information about firm value.

#### ***6.4 Value relevance of Specific IFRS Adjustments***

Returning to the discussion of the impacts from the change to IFRS, Table 7 shows that the total IFRS adjustments for equity and profit are not value relevant. We further investigate this by replacing  $BV_{it-1}^{IFRS-NZGAAP} + \alpha_4 NPAT_{it-1}^{IFRS-NZGAAP}$  with the net profit after tax and equity adjustments reported in Table 4, Panel B and Table 5, Panel B respectively. The results (not reported) show very high variance inflation factors (VIFs) signifying a high degree of multicollinearity. To overcome this problem the incremental analysis was repeated using a step-wise regression which included the individual net profit and equity adjustments but excluded 'other adjustments' that were an accumulation of a number of IFRS adjustments. The results are reported in Table 8. The model is significant and the explanatory power of 93.5% suggests that some of the IFRS adjustments provided additional information to the market. The results indicate that earnings adjustments for financial instruments and taxation and equity adjustments for goodwill are value relevant.

Take in Table 8 here

The coefficients for the earnings adjustments for financial instruments and taxation are positive and significant at the 1% level. The adoption of NZ IFRS brought major changes in accounting for

financial instruments compared with NZ GAAP. Certain financial assets and liabilities and financial derivatives (except those selected as hedging instruments) are required to be recorded at fair value and changes in fair value reported in the income statement. The positive coefficient suggests that reporting of financial instrument under IFRS provided additional information to the market.

The introduction of NZ IAS 12 Deferred Taxation changed accounting for deferred tax from recognising income statement timing differences to recognising temporary differences between the accounting and tax values of assets and liabilities including deferred taxation on revalued assets. In addition, less stringent criteria are required for the recognition of deferred tax assets. The results suggest that these tax adjustments provide information to the market.

The coefficient of the goodwill adjustment to equity is negative and significant. Prior to NZ IFRS goodwill on business combinations was recognised as an asset and written off for a period not exceeding 20 years. Under NZ IFRS goodwill is subject to impairment testing. The coefficient on goodwill is negative and not value relevant perhaps because the goodwill adjustments to equity are primarily the write-back of goodwill previously written off. The lack of value relevance may also be a signal by the market about the relevance and reliability of impairment testing.

Tables 4 and 5 show that the overall impact of the IFRS adjustments was to decrease profit or equity for a number of companies. Such impacts may be weighted by the market in different ways. We repeat the incremental model (Model 2) and include an indicator variable *Neg* if the firm reported a negative earnings adjustment. The results (not reported) show the interaction variable '*neg \* profit adjustments*' is not significant. This process is repeated for negative adjustments to equity with similar results.

### ***6.5 Additional Analysis***

The value relevance analysis is repeated using the market value at five months after the year of adoption. The results (not reported) are similar to the value relevance results at three months. The explanatory power of the NZ GAAP model is 88.7 % and is higher than the NZ IFRS of 85.7 %. The coefficients of NZ IFRS equity and earnings are lower than for NZ GAAP which is consistent with

the results at three months after the balance date. In the incremental analysis, the coefficient for the earnings adjustment is negative and weakly significant while the coefficient for the equity adjustment is not significant.

## **7.0 Conclusion**

The adoption of IFRS in New Zealand has been a significant policy change for financial reporting in New Zealand. Although the nature of the effects was accurately anticipated there is still room for the analysis of the benefits and costs. This study has used the IFRS reconciliation disclosures to analyse the value-relevance of the new reporting regime to the market. Overall we find that reporting under IFRS did not increase value relevance. The analysis of individual items suggests that the IFRS earnings adjustments relating to financial instruments and taxation are value relevant. In contrast, equity adjustments for goodwill impaired value relevance and this may suggest issues with the new impairment rules. However, for early adopters and small firms IFRS equity adjustments impaired value relevance. This finding lends support for the proposal that IFRS not be mandatory for smaller entities.

## Notes

1. The Accounting Standards Review Board is a government appointed entity charged with approving financial reporting standards in New Zealand.
2. The parties included national and local government, New Zealand Securities Commission, the New Zealand Exchange Limited, and professional organisations of bankers, finance professionals, small and large accounting firms (Hickey, *et al.*, 2003).
3. The number of equity listed companies as at 31 March 2010 was 1,996 for Australia compared with 113 for New Zealand. (These figures exclude equity trusts & funds and NZ Alternative Market). The average market capitalisation of the Australian equity listed companies was \$930 million compared with \$295 million for NZ equity listed companies (Australian Securities Exchange, 2010 and New Zealand Exchange, 2010)..
4. Listed companies were able to adopt NZ IFRS for accounting periods commencing 1 January 2005. Thus the earliest annual reporting period for adoption would have been 31 December 2006.
5. The population was analysed into four sectors: services, primary, investment and energy.
6. Under New Zealand's Financial Reporting Act 1993, section 10, reporting entities must prepare financial statements signed off by directors within five months of the balance date.
7. The AIC is used as a tool for model selection when competing models are applied to the same dataset. The lowest AIC value indicates the best model.

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**Table 1. Value Relevance Comparisons**

	Australia		European Union							Nordic	
	<b>Goodwin <i>et al</i> (2008)</b>		<b>Horton &amp; Serafeim (2008)</b>	<b>ICAEW (2007)</b>	<b>Capkun <i>et al.</i> (2008)</b>	<b>ICAEW (2007)</b>	<b>ICAEW (2007)</b>	<b>ICAEW (2007)</b>	<b>ICAEW (2007)</b>	<b>Gjerde <i>et al.</i> (2007)</b>	<b>Schadewitz &amp; Vieru (2007)</b>
Country	Australia		UK	UK	EU	France	Italy	Spain		Norway	Finland
<b>Relative Analysis (independent samples)</b>											
IFRS versus local GAAP	not sig		not tested	not tested	not tested	not tested	not tested	not tested		not sig	not tested
<b>Incremental analysis (IFRS less local GAAP)</b>											
Equity adjustments	not sig		not sig	not sig	not sig	not sig	not sig	-ve sig		+ve sig	-ve sig
Earnings adjustments	not sig		+ve sig	+ve sig	+ve sig	+ve sig	+ve sig	not sig		not sig	+ve sig
Sample size	1,020		297		1,528					145	86
Sample years	2006		2006	2004-2005	2004-2005	2004-2005	2004-2005	2004-2005		2004-2005	2004
Source/Exchange	Aus Stock Exchange		London FTSE350	EU listed	EU listed	EU listed	EU listed	EU listed		Oslo	Helinski

This table summarises the results of overseas value relevance studies for sample of firms adopting IFRS.

**Table 2. Description of Sample**

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	N
NZSX number of securities as at August 2006	176
<i>Less</i> Unit trusts, funds and warrants	30
<i>Less</i> Companies reporting under foreign GAAP	32
<i>Less</i> Companies with financial difficulties (receivership or negative equity)	3
<i>Less</i> De-listed companies	15
<i>Less</i> Companies lacking data	4
	<hr/> 92

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This table summarises how the sample was selected.

**Table 3. NZ IFRS Adopters First NZ IFRS Financial Statements**

<b>Financial Year</b>	<b>No of Companies</b>	<b>%</b>
2005	3	3.3
2006	20	21.7
2007	17	18.5
2008	52	56.5
	92	100.0

This table reports the year in which companies produced their first set of NZ IFRS financial statements

**Table 4. Financial Impacts of NZ IFRS Adoption on Earnings**

<b>Panel A. Differences between NZ GAAP and NZ IFRS earnings (n=92)</b>											
	NZ GAAP		NZ IFRS		Change		NZ GAAP			NZ IFRS	
	EBIT	EBIT	Change	Change	Sig t or z	NPAT	NPAT	Change	Change	Sig t or z	
	\$000	\$000	\$000	%	(p-value)	\$000	\$000	\$000	%	(p-value)	
Total Sum	5,826,459	6,382,485	556,026	9.54%		3,387,472	3,961,563	574,091	16.95%		
Mean	63,331	69,375	6,044	9.54%	-2.74 (0.01)	36,820	43,060	6,240	16.95%	-2.70 (0.01)	
Median	15,238	15,787	549	3.60%	-3.72 (0.00)	7,610	7,674	64	0.84%	-3.94 (0.00)	
Std Dev	185,842	193,625	7,783	4.19%		105,979	115,204	9,225	8.70%		

This table reports the differences in earnings reported under NZ GAAP and NZ IFRS. The p-values are two-tailed. Mean differences compared with paired t-test, median differences compared with Wilcoxon signed rank test. NZ GAAP NPAT, NZ GAAP EBIT = Net Profit after Taxation, Earnings before Interest and Taxation reported under generally accepted accounting principles. NZ IFRS NPAT, NZ IFRS EBIT = Net Profit after Taxation, Earnings before Interest and Taxation reported under the New Zealand equivalents of international financial reporting standards.

**Panel B. Adjustments to net profit after tax (n=92)**

	Employee Benefits	Goodwill	Financial Instruments	Property Plant & Equipment	Deferred Taxation	Other Adjustments	Total Adjustments
	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Mean	13	2,660	-905	3,197	64	1,211	6,240
Std Dev	985	12,205	13,082	18,487	5,264	12,855	22,184
Total Net Change in Profit	1,169	244,674	-83,233	294,144	5,905	111,432	574,091
Comprising:							
- Profit increases	11,816	245,390	62,141	315,386	72,965	216,452	924,150
- Profit decreases	-10,647	-716	-145,374	-21,242	-67,060	-105,020	-350,059
	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)
Entities reporting adjustment	41 (45%)	39 (42%)	40 (43%)	22 (24%)	60 (65%)	66 (72%)	84 (91%)
- Profit increases	10 (24%)	38 (97%)	17 (43%)	17 (77%)	35 (58%)	29 (44%)	56 (67%)
- Profit decreases	31 (76%)	1 (3%)	23 (57%)	5 (23%)	25 (42%)	37 (56%)	28 (33%)
- Profit unchanged	51 (55%)	53 (58%)	52 (57%)	70 (76%)	32 (35%)	26 (28%)	8 (9%)

This table reports the nature of the differences in earnings reported under NZ GAAP and NZ IFRS.



**Table 6. Key Ratios**

	<b>NZ GAAP</b>	<b>Std Dev NZ GAAP</b>	<b>NZ IFRS</b>	<b>Std Dev NZ IFRS</b>	<b>Change</b>	<b>Sig <i>t</i> (<i>p</i>-value)</b>
Mean Return on Equity	8.12%	30.54	9.25%	30.48	1.13%	0.01 (0.00)
Mean Return on Assets	9.42%	21.39	8.33%	19.16	-1.09%	0.53 (0.04)
Mean Total Liabilities to Total Assets	42.32%	23.07	44.72%	23.17	2.40%	0.00 (0.00)
Mean Earnings per Share	0.17	0.18	0.20	0.22	0.03	0.01 (0.00)
Mean Market to Book Value Equity	3.01	4.71	3.01	4.74	0.00	0.98 (0.28)

This table reports the key ratios under the NZ GAAP and NZ IFRS financial reporting regimes. The p-values are two-tailed. Mean differences compared with paired t-test. Return on Equity = NZ GAAP (IFRS) Net Profit after Taxation (NPAT) as a proportion of NZ GAAP (IFRS) Equity. Return on Assets = NZ GAAP (IFRS) Earnings before interest and taxation (EBIT) as a proportion of NZ GAAP (IFRS) Total Assets. Total Liabilities to Total Assets = NZ GAAP (IFRS) Liabilities as a proportion of = NZ GAAP (IFRS) Total Assets. Earnings per share = NZ GAAP (IFRS) Net Profit after Taxation per issued share. Market to Book Value Equity = Market price per share times number of outstanding shares as at balance date as a proportion of NZ GAAP (IFRS) Equity.

**Table 7. Relative and Incremental Value Relevance of NZ GAAP and NZ IFRS at three months Market Capitalisation (n=92)**

	Col 1	Col 2	Col 3	Col 4	Col 5
	NZ GAAP	NZ IFRS	NZIFRS	NZ IFRS	NZIFRS
	(p-value)	(p-value)	(p-value)	(p-value)	(p-value)
Intercept	21,294 (0.62)	17,643 (0.71)	-229 (1.00)	-70,211 (0.34)	-20,143 (0.67)
Equity	0.79 (0.00)	0.75 (0.00)	1.07 (0.00)	1.24 (0.00)	0.98 (0.00)
Profit	6.97 (0.00)	6.48 (0.00)	6.42 (0.00)	6.11 (0.00)	6.72 (0.00)
Equity adjustments					
$BV_{it-1}^{IFRS-NZGAAP}$			-4.31 (0.17)	1.99 (0.04)	3.15 (0.00)
Profit adjustments					
$NPAT_{it-1}^{IFRS-NZGAAP}$			1.24 (0.14)	-5.76 (0.08)	-4.03 (0.18)
Early					88,044 (0.25)
Early * equity					-3.55 (0.00)
Early * profit					0.48 (0.95)
Small				86,394 (0.34)	
Small * equity				-4.32 (0.19)	
Small * profit				13.66 (0.36)	
F statistic	415.56 (0.00)	333.92 (0.00)	209.21 (0.00)	120.10 (0.00)	151.77 (0.00)
Adjusted R <sup>2</sup> %	90.10%	88.00%	90.10%	90.20%	92.10%
VIF	1.8	2.5	2.9-9.2	1.4-12.1	1.2-10.5
AIC	2,620	2,638	2,622	2,624	2,605
Durbin-Watson	1.8	1.8	1.8	1.8	1.9

This table reports the value relevance results using share market data three months after balance date. The p-values are two tailed. NZ GAAP Equity and NZ GAAP Profit = Equity and Net Profit after Taxation (NPAT) reported under generally accepted accounting principles. NZ IFRS Equity and NZ IFRS Profit = Equity and Net Profit after Taxation (NPAT) reported under the New Zealand equivalents to international financial reporting standards.

**Table 8. Incremental Value Relevance of IFRS Adjustments (n=92)**

	Coeff.	p-value
Intercept	14,598	0.67
NZ GAAP Equity	0.95	0.00
NZ GAAP Profit	7.83	0.00
<i>Individual adjustments to NZ GAAP net profit after tax</i>		
Financial instruments	13.93	0.00
Deferred taxation	28.33	0.00
<i>Individual adjustments to NZ GAAP equity</i>		
Goodwill	-17.56	0.00
F statistic	262.32	
Adjusted R <sup>2</sup> %	93.50	
VIF	1.1-4.3	
AIC	2,585	
Durbin-Watson	1.7	

This table reports the value relevance results using share market data three months after balance date. The p-values are two tailed. NZ GAAP Equity and NZ GAAP Profit = Equity and Net Profit after Taxation (NPAT) reported under generally accepted accounting principles. Equity Adjusts = the differences between NZ IFRS Equity and NZ GAAP Equity. Profit Adjusts = the differences between NZ IFRS NPAT and NZ GAAP Net Profit after taxation.