

# Non-GAAP Earnings Disclosures by New Zealand Companies

Elizabeth A. Rainsbury †  
Department of Accounting and Finance  
Unitec New Zealand  
Auckland  
New Zealand

Carol Hart  
Department of Accounting and Finance,  
Unitec New Zealand  
Auckland  
New Zealand

Sue Malthus  
Department of Applied Business  
Nelson Marlborough Institute of Technology  
Nelson  
New Zealand

**Corresponding author:** †Dr Elizabeth Rainsbury<sup>1</sup>

**Corresponding author's email:** [erainsbury@unitec.ac.nz](mailto:erainsbury@unitec.ac.nz).

**Article classification** Research paper

**Keywords** non-GAAP earnings, IFRS, signalling and manipulation hypothesis

---

<sup>1</sup> The authors would like to thank Shane Moriarity and Josefino San Diego for their work on this paper.

# **Non-GAAP Earnings Disclosures by New Zealand Companies**

## **Abstract**

This study examines the motivation for the increased reporting of non-GAAP earnings (NGE) by New Zealand companies following the adoption of International Financial Reporting Standards (IFRS). The study contributes to the literature on the impacts of IFRS adoption at national levels and the relationship between statutory earnings and NGE information disclosed by listed companies.

The annual reports of fifty-eight listed companies are examined for the period from 2004 to 2012. The number of companies reporting NGE figures has increased substantially over this period of time with NGE figures higher and significantly different to the audited net profit after tax (NPAT) figures in the post-IFRS period. There appears to be some merit in reporting NGE figures as they are better predictors of future earnings and contribute value to analysts' forecasts.

NGE earnings are sometimes higher than NPAT earnings which could suggest that earnings are being used to create a more favourable impression of performance. However, results indicate that NGE compared to NPAT appear to have a higher quality of earnings, conveying additional information to the market.

**Key words:** non-GAAP earnings, IFRS, signalling and manipulation hypothesis

## **1.0 Introduction**

This objective of this study is to investigate the motivation behind the increased disclosure of alternative earnings by New Zealand listed companies. While the financial information required by generally accepted accounting practice (GAAP) is present in the financial statements of listed companies, these alternative figures are often the ones emphasised in management's comments in the annual report such as in the Chairperson's Report.

The recent trend in disclosure of alternative earnings may be due to consequences of the adoption of International Financial Reporting Standards (IFRS). Deloitte (2010, 2011) note an increase in the reporting of alternative non-GAAP earnings (NGE) figures in the annual reports of New Zealand companies following the adoption of IFRS. Similar trends have been reported in Australia (KPMG, 2010).

We examine two competing motivations to explain the disclosure of NGE earnings. The first is that management have increased the use of NGE earnings post IFRS adoption as a means of communicating information about (or signalling) the impacts of IFRS adoption. With the adoption of IFRS it may be that users unaccustomed to it needed more assistance in understanding the information during the transition phase.

An alternative explanation is that managers report opportunistically, using NGE to convey a more favourable impression than that reflected in IFRS reported earnings as a way of influencing users' perceptions of managerial performance (manipulation hypothesis). We examine whether New Zealand companies are using NGE earnings measures to better explain results or to cover bad news (i.e. mask losses).

Consistent with prior research we use earning quality tests to assess the relative informativeness and persistence of NGE earnings disclosed by NZX listed companies in comparison to statutory earnings prepared under IFRS. We also provide various descriptive details including the common types of NGE adjustments, the characteristics of firms that report NGE earnings and the trend in NGE earnings disclosures post IFRS adoption.

This paper examines the reporting of NGE over the period encompassing the adoption of IFRS in New Zealand. The population of all companies listed on the NZX in 2011 is used to identify those companies reporting NGE earnings. Data is then collected from published annual reports from 2004 to 2012 for those companies reporting NGE earnings to determine whether signalling or manipulation better explains the pattern of reporting. Of the total population of 106 companies 58 (55 per cent) reported NGE earnings in one or more of the nine years.

Our analysis shows that the most common NGE adjustments are fair value adjustments. We find that overall 50 per cent of the NGE figures are higher than the reported NPAT figures. The results show that reporting of NGE is associated with the adoption of IFRS and does not appear to have significantly abated since.

The earnings quality tests show that NGE earnings are more informative to investors than NPAT earnings and contribute value to analysts' forecasts. This suggests a signalling motivation.

This paper contributes to the existing literature in two main ways. First the study provides evidence of the impact of IFRS adoption in New Zealand. Evidence on the impact of IFRS adoption is mixed as summarised in review papers by Brown (2011) and Pope and McLeay (2011). They consider that the mixed body of evidence is due to national differences associated with the implementation and enforcement of IFRS. While it is acknowledged that the size of the sample in this study is small and thus the generalisability of the results is restricted, from a local policy perspective it is important that research is undertaken in New Zealand to evaluate the impacts of IFRS adoption as they may be quite different from other jurisdictions. This study then adds to the modest pool of academic papers that have evaluated IFRS adoption in New Zealand and extends it by considering how IFRS information is communicated to users.

The paper also adds to the literature on the disclosure of non-GAAP earnings of listed companies. Research on testing the signalling and manipulation hypotheses has been concentrated on the US capital market and has provided mixed evidence. Comparisons are

also able to be made with other similar jurisdictions, such as Australia. The study contributes to the literature by providing a case study of NGE disclosures in a small capital market and policy implications for regulators.

The remainder of the paper is divided as follows. Section two provides a literature review. Hypotheses are developed in section three, and section four describes the sample and research methodology. Descriptive information is provided in section five with the results of hypothesis testing summarised and discussed in section six. The final section presents the conclusion.

## **2.0 Literature review**

This review focuses on two strands of literature. The first part considers evidence on IFRS adoption. Although the number of empirical studies in this area is vast, the review concentrates primarily on IFRS adoption in New Zealand.

The second part of the literature review focuses on research examining the motivations for firms disclosing NGE earnings.

### ***2.1 IFRS Adoption in New Zealand: Evidence and Background***

The adoption of international financial reporting standards is aimed at developing a set of globally accepted standards which provide high quality, transparent and comparable information to capital markets and other users (IASB, 2002). In 2002 a significant step towards achieving this goal occurred with the European Union (EU) adopting 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).

In 2002, the New Zealand Accounting Standards Review Board (ASRB) following Australia's move to adopt IFRS announced that New Zealand listed companies would be required to adopt by 1 January 2007 with early adoption permitted from 1 January 2005. The

move to IFRS was one of the most significant changes in New Zealand's financial reporting environment for a number of years.

The impact of IFRS adoption has been the focus of a number of research studies considering a range of areas including market reaction to IFRS numbers, the financial impacts of IFRS compared with national GAAP, the level of compliance with IFRS standards, the impact of IFRS on accounting quality, analysts' forecasts, cost of capital, and value relevance of the IFRS accounting numbers versus national GAAP.

Reviews of the research by Brown (2011), Brown and Tarca (2012), Pope and Mc Leay (2011) and Bruggemann, Hitz and Sellhorn (2012) provide summaries of the results of the research to date. The results provide mixed results of the benefits of IFRS adoption. The mixed results are due to different research designs but also to variations in how IFRS is implemented due to differences in implementation and enforcement at a cross country level.

The New Zealand experience shows that the financial impact of IFRS adoption was generally small for most listed firms. In comparison with old-GAAP, the adoption of IFRS resulted in statistically significant increases in assets, liabilities, and net profit but decreases in equity. The most common increases in assets resulted from financial instrument adjustments and for liability increases from deferred income tax and employee benefit adjustments. These changes had a significant impact on financial statement ratios; increasing leverage and returns on equity, assets and sales (Stent, Bradbury and Hooks, 2010). Similar financial impacts are reported in the public sector with both assets and liabilities increasing. Equity decreased as a result of adjustments relating to employee entitlements, financial instruments and deferred taxation for commercial firms owned by the government (Trewavas, Botica Redmayne, and Laswad, 2012).

Empirical evidence has also shown no significant improvement in accounting quality measured by alternative measures of discretionary accruals (Kabir, Laswad and Islam, 2010) and value relevance (Rainsbury and Hart, 2010). In contrast, the introduction of IFRS and the capitalisation of intangibles improved analysts' forecasts (Cheong, Kim and Zurbruegg 2010).

The adoption of IFRS increased the size of the financial statements and notes to the accounts. Morunga and Bradbury (2013) estimate that, after excluding transitional disclosures, the length of annual reports of listed companies increased by 20%; due primarily to increases in accounting policies and notes to the accounts. The additional number of pages and tables has significantly reduced the readability of annual reports as measured by Flesh, Flesh-Kincaid, Smog and Fog readability indicators (Richards and van Staden, 2011).

Under IFRS reporting, changes in fair values, which may involve judgements and estimates, can have a significant impact on earnings. Supporters of fair value accounting believe that it increases financial reporting transparency and facilitates better investment decision-making (SEC, 2008; Kim and Sung, 2012; Zabel and Morrell, 2009). However, measuring fair values can be difficult where markets are volatile, illiquid and when models are used to determine fair value which may introduce bias (Hail, 2012; Ma and MacNamara, 2009).

IFRS has also been shown to sometimes create misleading results (Beattie, Fearnley and Hines, 2008; Pawsey, 2010). For example, in Pawsey's (2010) survey of Chief Financial Officers (CFOs) of Australian listed companies IFRS was considered too complex, time consuming, and sometimes produced misleading results. Financial statements were considered less relevant and understandable to users with some CFOs predicting that financial users would rely on alternative profit measures, such as NGE, or cash flows.

In the United Kingdom, Beattie et al (2008) surveyed audit committee chairs, finance directors and audit partners of listed companies on the quality of financial reporting after the adoption of IFRS. There was a general consensus amongst the groups that IFRS adoption had undermined the quality of financial reporting integrity. IFRS accounts were "difficult to understand even for experts; are complex; have too many disclosures; and are counter-intuitive in some areas" (Beattie et al, 2008, p.8).

However, with the adoption of IFRS it is claimed that the disclosure of NGE is increasing as IFRS accounting standards do not accurately portray company performance, and that NGE figures provide a better insight into a company's underlying operational

performance (Gaynor, 2010). An Ernst & Young (2006) study on the implementation of IFRS noted an increase in the use of NGE figures in press releases and company presentations signifying “a gap between IFRS and what managers believe is necessary in order to communicate to the markets information which enables underlying performance and sustainable cash flow to be assessed” (p.3). However, that trend was considered at the time to be short term until IFRS reporting improved and analysts became more familiar with IFRS reporting. However, there is some evidence that this is not a transitional matter. For example, Wee, Tarca and Chang (2011) examine firm disclosures by 150 Australian companies following IFRS adoption and find that those with lower earnings under IFRS make additional disclosures, suggesting that preparers make the disclosures to explain adverse results.

## ***2.2 Non-GAAP Earnings (NGE)***

Non-statutory performance measures are reported by companies in audited financial statements in press releases and other documents. These non-GAAP measures are variously referred to as “proforma earnings”, “underlying profits”, “street earnings”, “normalised profits”, “core earnings”, “non-GAAP earnings” or “non-conforming financial information” (The Committee of European Securities Regulators (CESR) 2005; Christensen, Merkley, Tucker and Venkataraman, 2010; FMA, 2011). NGE can include measures such as earnings before interest and tax (EBIT) or earnings before interest, tax, depreciation and amortisation (EBITDA).

For the purposes of this paper, NGE are measures of earnings other than the profit measure (NPAT) determined in accordance with generally accepted accounting practice under the requirements of the Financial Reporting Act 1993. NGE are derived by making adjustments to the statutory NPAT figure prepared in accordance with GAAP. The adjustments can include non-recurring items such as expenses arising from major business reorganisation activities such as restructurings, business unit closures, mergers or acquisitions (Entwistle, Feltham and Mbagwu, 2005). The adjustments may also include one-off asset impairments and write-offs, gains or losses from asset sales and legal settlements, fair-value

adjustments, research and development expenses, stock-based compensation, and tax-related items (Christensen *et al.*, 2010).

### ***2.3 Regulatory Background***

Regulators and professional accounting bodies have raised concerns about the use of alternative performance measures reported outside the audited financial statements in press releases and other documents (McLaughlin, 2010; Financial Markets Authority (FMA), 2011). Regulators acknowledge that while NGE may provide useful information to users there is also the potential to mislead them (FMA, 2011; FMA, 2012). In order to maintain market confidence various regulators have introduced requirements, recommendations or guidelines for issuers to follow when disclosing non-GAAP earnings.

In the United States the Sarbanes Oxley Act 2002 required the Securities and Exchange Commission (SEC) to address non-GAAP disclosures. SEC Regulation G (SEC, 2003) requires that, when a non-GAAP measure is disclosed, the issuer must provide the directly comparable GAAP measure and a reconciliation of the non-GAAP and GAAP financial measures.

There are currently no regulations in Europe governing non-GAAP earnings but recommendations were issued by the Committee of European Securities Regulators<sup>1</sup> (CESR) in 2005. Issuers making non-GAAP disclosures are recommended to define the components of the NGE measure and explain the differences from the GAAP figure. Non-GAAP earnings should be disclosed consistently over time along with comparable figures from prior periods (CESR, 2005).

In Australia and New Zealand there are currently no regulations with respect to the disclosure of non-GAAP earnings, but both countries have guidelines. Australian listed companies are encouraged to follow guidelines issued by the Australian Institute of Company Directors and the Financial Services Institute of Australasia (2009). In addition, the Australian Securities and Investment Commission (ASIC, 2011) Consultation Paper 150

---

<sup>1</sup> Now reformed as the European Securities and Markets Authority

proposes that NGE should not be included in the statutory financial statements and only in the notes to the financial statements when it is necessary to give a true and fair view of the financial statements. NGE are permitted in other communications such as directors' reports, press releases and analyst briefings but they must not be misleading or be given greater prominence than the GAAP financial information. A reconciliation between the non-GAAP and GAAP earnings is also required along with explanations of the adjustments. Consistent with the European recommendations the measures must be prepared consistently from period to period and comparative figures provided.

In September 2012, New Zealand's FMA released a guidance note on disclosure of non-GAAP financial information for issuers, their directors and preparers of financial information. The guidelines set out expectations on the use of financial information in corporate documents and are similar to the guidelines in ASIC's Consultation Paper 150, with the additional guideline that the "non-GAAP financial information should be unbiased and not used to remove or disguise 'bad' news" (FMA, 2012, p. 7).

#### ***2.4 Motivations for Reporting non-GAAP earnings***

The first of the two competing reasons advanced for reporting NGEs is the *signalling* hypothesis which suggests that the disclosure of non-GAAP earnings conveys additional information of relevance to users of financial statements. A previous study by Bhattacharya, Black, Christensen, and Larson (2003) finds that NGE are more informative and persistent than GAAP earnings, supporting the view that NGE give a better picture of permanent earnings. Brown and Sivakumar (2003) also find that NGE provide more relevant information than GAAP measures. Other studies show that firms with less value-relevant earnings, specifically technology firms and firms with prior losses (Bowen, Davis and Matsumoto, 2005) and less informative earnings (Lougee and Marquardt, 2004), are most likely to emphasise non-GAAP earnings. These studies suggest that NGE can provide additional information to users about firm performance.

A second reason suggested for the disclosure of NGE is the *manipulation* hypothesis - that managers operate opportunistically; using NGE to manage investor perceptions. Bhattacharya, Black, Christensen and Mergenthaler (2004) find that firms that disclose NGE are more likely to be less profitable than other firms, have higher debt, higher liquidity, and higher price to earnings, and book to market ratios.

Non-GAAP reporting appears to increase when firms have share price and earnings declines (bad news) and when there are analysts' predictions to meet (Bhattacharya *et al.*, 2004). Bowen *et al.* (2005) show that in press releases firms emphasise the performance measure which portrays the better performance of the firm. NGE are disclosed first in press releases to emphasise a positive performance when GAAP earnings fall short of strategic benchmarks (Marques, 2010).

Research findings suggest that the opportunistic behaviour of managers has the potential to mislead investors. For example, the market does not appear to take into consideration expenses excluded from NGE which have a negative impact on future cash flows (Doyle, Lundholm and Soliman, 2003). Unsophisticated investors are influenced by NGE and are more likely to assess earnings and stock performance as being higher and trade on this information while sophisticated investors do not (Fredrickson and Miller 2003; Elliott, 2006; Bhattacharya, Black, Christensen and Mergenthaler, 2007).

### **3.0 Research Questions and Hypotheses**

The first research question examines the trend in the disclosure of non-GAAP earnings following the adoption of the IFRS reporting regime.

1. Have the disclosure of NGE measures by New Zealand listed companies increased under the IFRS reporting regime?

Hypothesis 1 reflects this first research question.

*Hypothesis 1: There is a positive association between the disclosure of non-GAAP earnings and the IFRS reporting regime*

The second research question tests the signalling hypothesis that managers disclose non-GAAP earnings in order to convey information to users. In this case we test if NGE earnings have higher earnings quality than statutory NPAT. Two earning quality proxies are used: earnings persistence and investors' responsiveness to earnings.

The second research question is in two parts:

2. Do NGE measures disclosed by New Zealand listed companies increase earnings quality?

Specifically:

2(a) Do NGE measures provide better prediction of future earnings than NPAT earnings?

2(b) Do NGE measures provide more value relevant information than NPAT earnings?

Hypothesis 2 reflects the research question 2(a).

*Hypothesis 2: NGE measures provide a better prediction of future earnings than NPAT earnings*

Hypothesis 3 reflects the research question 2(b).

*Hypothesis 3: NGE measures provide more value relevant information than NPAT earnings*

## **4.0 Sample and Research Methodology**

### **4.1 Sample**

In this study we examine the annual reports of fifty-eight New Zealand listed companies for the period 2004 to 2012. The population comprised all companies listed on the NZX and excluded those that did not report in all nine years, cross-listed companies, and property trusts were excluded. Table 1 summarises the sample selection.<sup>2</sup>

---

<sup>2</sup> Nine companies with a December 31 balance date are not included for the 2012 data as at the time of writing these reports had not yet been released.

### *Insert Table 1*

The time period covers pre and post IFRS adoption. New Zealand listed companies were required to adopt IFRS for financial accounting periods beginning 1 January 2007 with early adoption permitted from 1 January 2005. The fifty-eight companies in this study adopted IFRS from as early as 2006 to as late as 2008. Seventeen companies reported for the first time under IFRS in 2006 (29 per cent), 12 (21 per cent) in 2007 and the remaining 29 (50 per cent) in 2008. After 2008 all companies were reporting under IFRS.

The data, hand collected from annual reports for the period, consisted of the NPAT figure in the income statement, adjustments to NPAT and all reported NGE figures. Particular attention was given to the income statement and notes referenced from the income statement and reports of the Chairperson of the Board of Directors and the Chief Executive Officer.

#### **4.2 Research Method**

The three hypotheses are tested using regression models.

##### *Hypothesis 1: NGE and reporting under IFRS*

A logistic regression model is used to examine the association between the disclosure of NGE and reporting under IFRS, controlled by a number of identified factors.

The full model is:

$$NGE = \beta_0 + \beta_1 REPREG + \beta_2 MKTBK + \beta_3 LEV + \beta_4 GROWTH + \beta_5 \Delta PROFIT + \beta_6 \Delta SHAREPRICE + \beta_7 LOSS + \beta_8 IND + \varepsilon \quad (1)$$

where:

<i>NGE</i>	Disclosure of non-GAAP earnings - Binary (Yes (1)/No (0) )
<i>REPREG</i>	Reporting regime – Binary (IFRS (1) /Prior NZ GAAP (0))
<i>MKTBK</i>	Market-to-book value of equity
<i>GROWTH</i>	Sales growth – percentage change from prior year
<i>LEV</i>	Leverage (Total liabilities/Total assets)
<i>ΔPROFIT</i>	Percentage change in profit from prior year
<i>ΔSHAREPRICE</i>	Percentage change in year end share price from prior year

<i>LOSS</i>	Loss-reported in current year – Binary (Yes (1)/No (0))
<i>IND</i>	Industry indicator variables (Broad industry categorisation)
$\varepsilon$	Error term

The dependent variable NGE represents whether or not a company reports non-GAAP earnings. It is a binary variable coded 1 if a company reports NGE and zero otherwise.

The independent variable of interest is the reporting regime (REPREG). This is also a binary variable coded 1 if a company is reporting under IFRS and 0 if not. A positive coefficient for this variable would indicate that IFRS adoption is associated with reporting of NGE.

The regression equation is controlled by several factors that could impact on the disclosure of NGE as highlighted in the research literature.

Lougee and Marquardt (2004) suggest that high-growth companies are more likely to report non-GAAP earnings, although Epping and Wilder (2011) find that low-growth companies make more adjustments to GAAP earnings to arrive at NGE. Although different in outcome, the evidence from these studies is that growth impacts on disclosure. Similar to Lougee and Marquardt (2004) growth is measured using market-to-book (MKTBK) at the financial year end reflecting the market anticipating future growth and the percentage change in sales growth (GROWTH) over the prior year.

Leverage (LEV) is positively associated with NGE (Hodgson and Stevenson-Clarke, 2000; Bhattacharya *et al.*, 2004; Lougee and Marquardt, 2004) because companies with high leverage are perceived to have less informative earnings, so those companies are more likely to report NGEs.

Companies are more likely to report NGE if there is volatility in profit, earnings per share or share price (Bhattacharya *et al.*, 2004). Control variables are used for the percentage change in profit from the prior year ( $\Delta$ PROFIT) and the percentage change in share price ( $\Delta$ SHAREPRICE). Likewise if companies are showing a loss (LOSS) there is a greater

likelihood of use of NGE, particularly if this improves the perceived performance (Bhattacharya *et al.*, 2004; Bowen *et al.*, 2005).

Where companies are operating in fast-changing sectors, such as technology, the usefulness of financial reports is less than it is where there is more stability (Lev and Zarowin, 1999; Bowen *et al.*, 2005). This means that it is important to control for industry type (IND).

A second variation on the model incorporates a dummy variable for the period affected by the global financial crisis (GFC) (2009 – 2011). This is included on the basis that this period was likely to have adjustments resulting from the crisis, such as asset impairments, which might be excluded from a reported NGE.

The second model is:

$$NGE = \beta_0 + \beta_1 REPREG + \beta_2 MKTBK + \beta_3 LEV + \beta_4 GROWTH + \beta_5 \Delta PROFIT + \beta_6 \Delta SHAREPRICE + \beta_7 LOSS + \beta_8 IND + \beta_9 GFC + \varepsilon \quad (2)$$

where:

*GFC* Global financial crisis period (2009-2011) - Binary (Yes (1)/No (0) )

### *Hypothesis 2: NGE and Earnings Persistence*

A more persistent earnings number is considered to be of higher quality. The underlying theory is that it will be easier to predict the future cash flows of a firm that has more persistent or sustainable earnings which will make it easier for forecasting cash flows for equity valuation and reduce valuation errors (Dechow, Ge and Shrand, 2010; Penman, 2007).

Earnings persistence is measured by the slope coefficient from a regression of future earnings (year t+1) on current year earnings (year t) scaled by the number of shares. For current year earnings regressions are repeated using NPAT and NGE earnings. The models are:

$$NPAT_{t+1}^{NZGAAP} = \beta_0 + \beta_1 NPAT_t^{NZGAAP} + \varepsilon_{it}$$

$$NPAT_{t+1}^{NZGAAP} = \beta_0 + \beta_1 NGE_t + \varepsilon_{it}$$

Where:

$NPAT_{t+1/t}^{NZGAAP}$  = net profit after tax under NZ GAAP at time  $t+1$  and  $t$  scaled by the number of shares

$NGE_{t+1/t}$  = non- GAAP earnings at time  $t+1$  and  $t$  scaled by the number of shares.

$\varepsilon_{it}$  = error term

The coefficient  $\beta_1$  measures persistence with a higher coefficient considered a more persistent earnings stream (Dechow, Ge and Shrand, 2010).

### *Hypothesis 3: NGE and value relevance*

Reported earnings provide information relevant for equity valuation (Hail, 2013). Value-relevance studies (see e.g., Francis, LaFond, Olsson and Schipper, 2004; Francis and Schipper 1999) test for a correlation between accounting numbers and measures of market value. 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.

Value relevance can be operationalised in various ways (Francis and Schipper, 1999; Hail, 2012). In this paper we use an earnings and book value relation with market value. An incremental value relevance test (Hung and Subramanyam, 2007) is used to examine the additional information that NGE earnings provide above and beyond that provided by NPAT reported under NZ GAAP as shown in (3) below. All variables are scaled by the number of shares.

$$MV_t = \beta_0 + \beta_1 NPAT_t^{NZGAAP} + \beta_2 (NGE_t - NPAT_t^{NZGAAP}) + \beta_3 BV_t + \varepsilon_t \quad (3)$$

Where:

$MV_t$  = market capitalisation at balance date

$NPAT_t^{NZGAAP}$  = net profit after tax under NZ GAAP.

$NGE_t - NPAT_t^{NZGAAP}$  = the difference between the non- GAAP earnings and net profit after tax under NZGAAP.

$BV_t$  = book value of equity under NZGAAP

$\varepsilon_{it}$  = error term

The value relevance test is repeated using analysts' forecasts of earnings rather than the market valuation which reflects information other than earnings (Dechow, Ge and Schrand, 2010).

## **5.0 Descriptive Information**

### **5.1 Companies reporting adjusted profit figures**

The distribution of NGE reporting from 2004 to 2012 inclusive is given in Table 2.

*Insert Table 2*

Panel A of Table 2 shows that there are 104 cases of NGE being reported over the nine year period. The number of companies reporting NGE is low in 2004 and 2005, but begins to climb from 2006 with a significant increase from 2007. Five per cent of companies report NGE in 2004 compared to 26 per cent in 2012, with the peak in 2011.<sup>3</sup>

Companies reporting adjustments in 2010 and 2011 were affected by New Zealand tax changes which included a drop in the company tax rate from 33% to 30% and depreciation on buildings with useful lives of over 50 years no longer deductible for tax purposes (resulting in large deferred tax adjustments). The effects of these changes can be

---

<sup>3</sup> These percentages are lower than those reported by the Deloitte survey (2011) because the focus of this study is on non-GAAP earnings reported in place of the audited NPAT figure, or statutory profit. The Deloitte survey includes all alternative profit figures reported such as EBIT and EBITDA, which are commonly used by companies to report on operations. However, the findings of this study support those of the Deloitte survey (2011).

seen in Panel B of Table 2 which reports the number of NGE adjustments distinguishing between tax-related and non-tax related adjustments. Despite the large numbers of tax-related adjustments in 2010 and 2011, the number of non-related adjustments remains high. Additionally, the average number of adjustments per company remains high from 2008 to 2012, although there is a drop in 2012.

Table 3 gives a breakdown of the type of adjustments that were noted by companies in disclosing the differences in a NGE from reported NPAT.

*Insert Table 3*

The highest number of adjustments was in 2011 (46), with 2010 showing the peak in tax-related adjustments (15). The adjustments recorded most frequently were changes in fair value in financial instruments and investment properties. These adjustments became more prevalent after the introduction of IFRS. Adjustments for impairment of assets and goodwill were also frequent with the highest number in 2009, dropping back in 2010 and 2011, consistent with impairment as a consequence of the GFC. Restructuring adjustments were also highest over this time period. In some instances no explanation was given as to the type of adjustments made and so this table includes an ‘unexplained’ category.

## **5.2 *NGE compared to NPAT***

Table 4 tests for differences on means and medians between NPAT and NGE on an annual basis.

*Insert Table 4*

This testing indicates that significant differences occurred only in 2009 and 2010, possibly because of the impact of the global financial crisis in those years.

Table 5 provides the frequency and percentage of NGE figures that are higher than the corresponding statutory NPAT figures.

*Insert Table 5*

Fifty-two of the 104 NGE figures (50 per cent) are higher than the corresponding NPAT figures, with the greatest number of instances occurring in the period from 2009 to 2011. Apart from 2008, in the post-IFRS period the NGE represented an increase on the NPAT figure in more than half the companies. This dropped back in 2012 and might well have been influenced with the FMA's pending guidance on NGE reporting. So while there might be some argument for the manipulation hypothesis, this is not clear-cut.

## **6.0 Hypotheses Results**

### **6.1 NGE and IFRs Reporting Regime**

Table 6 categorises companies reporting NGE relative to the number of years a company has been reporting pre- and post-IFRS adoption.

*Insert Table 6*

Table 6 shows an increase in the numbers of NGE reporting companies from one year to three years (+1 to +3) post-IFRS adoption. In years 4 to 6 there is a drop back but despite this it indicates that NGE reporting was low prior to the introduction of IFRS and since then it has continued at a much higher level beyond what might be considered the 'settling in' period for IFRS.

Table 7 reports the results of tests on the means and medians of NGE and NPAT for periods prior to, at and post IFRS adoption.

*Insert Table 7*

The tests are conducted on both actual value (\$million) and scaled values and use t-tests for means and Wilcoxon tests for medians. The results indicate that prior to IFRS adoption there was no significant difference in NGE and NPAT. However the post-IFRS adoption period does indicate significant difference.

The result of the logistic model as described in section 4.2 testing the association between the disclosure of NGE and reporting under IFRS are presented in Tables 8 and 9.

*Insert Table 8*

The Pearson correlations reported in Table 8 show that NGE is significant and positively correlated with the reporting regime (REPREG), and the GFC.

Table 9 reports four variations of the logistic model.

*Insert Table 9*

Model 1 includes all variables except for the global financial crisis time period and reporting regime (whether or not the company is reporting under IFRS) whereas Model 2 includes the reporting regime variable (REPREG). Model 3 then excludes REPREG but introduces the global financial crisis variable (GFC) and Model 4 incorporates all the variables.

The models are significant and the pseudo  $R^2$  increase with the inclusion of the reporting regime variable (REPREG) from 10.1 per cent in Model 1 to 19 per cent in Model 2, and then from 15.7 per cent in Model 3 to 20 percent in Model 4.

All models show NGE being significantly positively associated with leverage (LEV). This confirms prior research findings that firms with higher leverage are more likely to disclose NGE (Hodgson and Stevenson-Clarke, 2000; Bhattacharya *et al.*, 2004; Lougee and Marquardt, 2004; Bowen *et al.*, 2005). Additionally all models have a negative relationship

between NGE disclosure and change in share price indicating that where share price has dropped NGE is more likely to be used. Models 2, 3 and 4 have a negative relationship between NGE disclosure and loss, surprisingly indicating that companies reporting NGEs are less likely to be loss-making.

In both Models 2 and 4 the coefficient for the test variable REPREG is positive and significant at the 0.01 level. The results support Hypothesis 1 which predicts a significant association between the use of NGE and reporting under IFRS.

When the GFC variable is introduced in Model 3 the coefficient is significant when IFRS adoption is not included in the model (Model 3), but disappears when IFRS adoption is introduced in Model 4. This could indicate that the GFC contributes to the NGE reporting.

## **6.2 *NGE and Earnings Persistence***

Table 10 examines earnings persistence.

*Insert Table 10*

The comparative models here show that the coefficient for NGEs is greater than that for NPATs, indicating that there is a more persistent earnings stream in the NGEs than in NPAT. This would indicate support for Hypothesis 2 and that NGEs do provide a better measure of future earnings than NPAT.

## **6.3 *NGE and Value Relevance***

Table 11 examines value relevance of the difference between NGE and NPAT.

*Insert Table 11*

This change is not significant with respect to market value, but does appear to be significant with respect to analyst forecasts, indicating that the additional information

provided by the NGEs adds value to those forecasts. So Hypothesis 3, stating that NGE measures provide more value relevance information than NPAT earnings is supported with respect to analyst forecasts but not with respect to investors.

## **7.0 Conclusion**

There are two competing reasons for the disclosure of alternative profit measures: either that managers provide additional information they believe is relevant to users (the signalling hypothesis) or that they seek to emphasise aspects of performance to investors which reflect well on management (the manipulation hypothesis). Past research on testing the signalling and manipulation hypotheses has been concentrated on the US capital market and has provided mixed evidence. Research in other jurisdictions with different sizes of capital market can contribute to the existing literature.

This study investigates the reporting of NGE in company annual reports for a sample of New Zealand listed companies that adopted IFRS. Our research found that there is an increasing trend over the nine-year period in the number of companies reporting NGE: increasing from five per cent in 2004 to 26 per cent in 2012 with a peak of 34 per cent in 2011. Multivariate analysis confirms that the disclosure of NGE is positively associated with the adoption of IFRS, i.e. that this increase is likely to be due, in part at least, to the introduction of IFRS. The impact of IFRS adoption provides an opportunity to test the two alternative explanations.

The results indicate that while there is some decline in the number of companies reporting NGEs in the post-IFRS period, the numbers reporting are still a lot higher than in the pre-IFRS period. Additionally, fifty per cent of NGE figures reported are higher than the corresponding NPAT figures. However, there is no evidence to suggest that this is to manipulate results.

Our results indicate that NGE is a better predictor of future earnings and that they are value relevant for analysts. These findings support NGE being used to provide more information to the market.

This study encompasses a period when there was a significant change in financial reporting and an economic crisis. It would be interesting to investigate the trend of NGE reporting once the effects of the GFC abate and the guidelines introduced by the FMA come into effect.

## References

- Australian Institute of Company Directors and Financial Services Institute of Australasia, 2009, *Underlying profits: Principles for reporting of non-statutory profit information*, Retrieved 20 December 2011, from [http://www.finsia.com/AM/Template.cfm?Section=Policy\\_publications1&Template=/CM/ContentDisplay.cfm&ContentID=13794](http://www.finsia.com/AM/Template.cfm?Section=Policy_publications1&Template=/CM/ContentDisplay.cfm&ContentID=13794)
- Australian Securities and Investment Commission, 2011, *Disclosing financial information other than in accordance with accounting standards*, Retrieved 20 December 2011, from [http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/cp150.pdf/\\$file/cp150.pdf](http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/cp150.pdf/$file/cp150.pdf)
- Beattie, V., S. Fearnley, and T. Hines, 2008, Does IFRS reporting undermine UK reporting integrity? *Accountancy*, 142(1384), 56-57.
- Bhattacharya, N., E. Black, T. Christensen, and C. Larson, 2003, Assessing the relative informativeness and permanence of pro forma earnings and GAAP operating earnings, *Journal of Accounting and Economics*, 36, 285-319.
- Bhattacharya, N., E. Black, T. Christensen, and R. Mergenthaler, 2004, Empirical evidence on recent trends in pro forma reporting, *Accounting Horizons*, 14(1), 27-43.
- Bhattacharya, N., E. Black, T. Christensen, and R. Mergenthaler, 2007, Who trades on non-GAAP earnings information? *Accounting Review*, 82(3), 581-619.
- Bowen, R., A. Davis, and D. Matsumoto, 2005, Emphasis on pro forma versus GAAP earnings in quarterly press releases: Determinants, SEC intervention, and market reactions, *The Accounting Review*, 80(4), 1011-1038.
- Brown, P. and A. Tarca, 2012, Ten years of IFRS, *Australian Accounting Review*, 63(2) 319-330.
- Brown, P., 2011, International Financial Reporting Standards: What are the benefits? *Accounting & Business Research*, 41(3): 269-285.
- Brown, L. and K. Sivakumar, 2003, Comparing the relevance of two operating income measures, *Review of Accounting Studies*, 8, 561-572.
- Brüggemann, U., J. Hitz, and T. Selhorn, 2011, Intended and unintended consequences of mandatory IFRS adoption: extant evidence and suggestions for future research. Working paper. Humboldt University of Berlin, University of Goettingen, and Otto Beisheim School of Management. In SSRN, [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1684036](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1684036).
- Cheong, C, S. Kim, and R. Zurbrugg, 2010. The impact on financial analysts' forecast accuracy the Asia-Pacific Region: The case of Australia, Hong Kong and New Zealand, *Pacific Accounting Review*, 22 (2), 124-146.
- Christensen, T., K. Merkley, J. Tucker, and S. Venkataraman, 2010, Do managers use earnings guidance to influence street earnings exclusions? *Review of Accounting Studies*, 16(3), 501-527.

- Committee of European Securities Regulators (CESR), 2005, *CESR recommendation on alternative performance measures*, Retrieved 15 June 2011, from [http://www.esma.europa.eu/system/files/05\\_178.pdf](http://www.esma.europa.eu/system/files/05_178.pdf)
- Dechow, P., W. Ge, and C. Schrand, 2010, Understanding earnings quality: A review of the proxies, their determinants and their consequences, *Journal of Accounting and Economics*, 50,344-401.
- Deloitte, 2010, *Reporting underlying profit*, Deloitte Financial Reporting Series, Retrieved 23 June 2011, from [http://www.deloitte.com/assets/Dcom-NewZealand/Local%20Assets/Documents/Financial%20Reporting%20Survey/nz\\_en\\_FinancialReportingSurvey\\_Seriesissue3\\_062010.pdf](http://www.deloitte.com/assets/Dcom-NewZealand/Local%20Assets/Documents/Financial%20Reporting%20Survey/nz_en_FinancialReportingSurvey_Seriesissue3_062010.pdf).
- Deloitte, 2011, *Underlying profit revisited*, Deloitte Financial Reporting Series, Retrieved 12 August 2011, from <http://www.deloitte.com/nz/financialreportingsurvey>
- Doyle, J., R. Lundholm, and M. Soliman, 2003, The predictive value of expenses excluded from pro forma earnings, *Review of Accounting Studies*, 8, 145-174.
- Elliott, W., 2006, Are investors influenced by pro forma emphasis and reconciliations in earnings announcements? *Accounting Review*, 81(1), 113-133.
- Entwistle, G., G. Feltham, and C. Mbagwu, 2005, The voluntary disclosure of pro forma earnings: A U.S.-Canada comparison, *Journal of International Accounting Research*, 4(2), 1-23.
- Ernst & Young, 2006, *Observations on the implementation of IFRS*, Retrieved 10 December 2011, from [http://www2.eycom.ch/publications/items/ifrs/single/200609\\_observations\\_on\\_ifrs/200609\\_EY\\_Observations\\_on\\_IFRS.pdf](http://www2.eycom.ch/publications/items/ifrs/single/200609_observations_on_ifrs/200609_EY_Observations_on_IFRS.pdf)
- Epping, L. and W. Wilder, 2011, U.S.-listed foreign firm's non-GAAP financial performance disclosure behaviour, *Journal of International Accounting Research*, 10(2), 77-96.
- European Parliament, (2002), Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of International Accounting Standards, available at: <http://europa.eu.int/eur-lex/lex/LexUriServ/LexUriServ.do?uri=CELEX:32002R1606:EN:HTML>
- Financial Markets Authority (FMA), 2011, *FMA signals its intention to provide guidance on the use of alternative performance measure*, Retrieved 15 November 2011, from <http://www.fma.govt.nz/keep-updated/reports-and-papers/fma-signals-its-intention-to-provide-guidance-on-the-use-of-alternative-performance-measures/>
- Financial Markets Authority (FMA), 2012, *Guidance Note: Disclosing non-GAAP financial information*, Retrieved 10 September 2012, from [http://www.fma.govt.nz/media/1027578/guidance\\_note\\_-\\_disclosing\\_non-gaap\\_financial\\_information.pdf](http://www.fma.govt.nz/media/1027578/guidance_note_-_disclosing_non-gaap_financial_information.pdf)
- Francis, J., R. LaFond, P. Olsson and K. Schipper, 2004, Cost of equity and earnings attributes. *The Accounting Review*, 78(4) 967-1010)
- Francis, J., and K. Schipper, 2009, Have financial statements lost their relevance? *Journal of Accounting Research*, 37(2), 319-352.

- Fredrickson, J. and J. Miller, 2003, The effects of pro forma earnings disclosure on analysts' and non-professional investors' equity valuation judgements, *The Accounting Review*, 79(3), 769-795.
- Gaynor, B., 2010, November 27, Crisis of accounting's double standards, *The New Zealand Herald*, 2.
- Hail, I., 2013, Financial reporting and firm valuation: Relevance lost or relevance regained? Available at SSRN: <http://ssrn.com/abstract=2200428>
- Hodgson, A. and P. Stevenson-Clarke, 2000, Accounting variables and stock returns: The impact of leverage, *Pacific Accounting Review*, 12(2), 37-64.
- International Accounting Standards Board. 2002. *IASC foundation constitution*, available at: <http://www.iasb.co.uk/>.
- Kabir, M, F. Laswad, and M. Islam, 2010, Impact of IFRS on accounts and earnings quality, *Australian Accounting Review*, 20(4), 343-357.
- Kim, S., and W. Sung, 2012, An empirical evaluation of fair value accounting numbers: Evidence from goodwill accounting. *Journal of Finance and Accountancy*, 10, 1-24.
- KPMG. 2010. *Underlying profits report FY10*. Retrieved from, <http://www.kpmg.com/AU/en/IssuesAndInsights/ArticlesPublications/underlying-profits-report/Documents/underlying-profits-report-2010.pdf>
- Lev, B. and P. Zarowin, 1999, The boundaries of financial reporting and how to extend them, *Journal of Accounting Research*, 37(2), 353-385.
- Lougee, B. and C. Marquardt, 2004, Earnings informativeness and strategic disclosure: An empirical examination of "non-GAAP" earnings, *The Accounting review*, 79(3), 769-795.
- Ma, C, and A. MacNamara, January 2009. When Fair Value is not Fair. *The CPA Journal*, 10-11.
- Marques, A., 2010, Disclosure strategies among S&P 500 firms: Evidence on the disclosure of non-GAAP financial measures and financial statements in earnings press releases, *British Accounting Review*, 42, 19-131.
- McLaughlin, T., 2010, December 28, Adopting IFRS made more sense than some pro formas, *The Dominion Post*, 5.
- Morunga, M. and M. Bradbury, 2013. The impact if IFRS on annual report length. *Australasian Accounting Business and Finance Journal*, 6(5), 47-62.
- Pawsey, N., 2010, Australian preparer perceptions towards quality and complexity of IFRS, Paper presented at the Asia Pacific Interdisciplinary Research in Accounting Conference, Sydney, Retrieved 20 October 2011, from [http://apira2010.econ.usyd.edu.au/conference\\_proceedings/APIRA-2010-199-Pawsey-Australian-preparer-perceptions-of-IFRS.pdf](http://apira2010.econ.usyd.edu.au/conference_proceedings/APIRA-2010-199-Pawsey-Australian-preparer-perceptions-of-IFRS.pdf)
- Penman, S., 2007. Financial reporting quality: Is fair value a plus or a minus? *Accounting and Business Research*, 37(3), 33-44.

- Pope, P. and S. McLeay, 2011, The European IFRS experiment: Objectives, research challenges and some early evidence. *Accounting and Business Research* 41(3), 233-266.
- Richards, G. and C. van Staden, 2011, The readability of financial statements. Is harmonisation having a negative impact? Presented at Accounting and Finance Association of Australia and New Zealand Conference, Darwin 2011.
- Securities and Exchange Commission, 2003, *Final Rule: Conditions for use of non-GAAP financial measures*, Retrieved 20 December 2011, from <http://www.sec.gov/rules/final/33-8176.htm>
- Securities and Exchange Commission, 2008, *Report and Recommendations Pursuant to Section 133 of the Emergency Economic Stabilization Act of 2008: Study on Mark-To-Market Accounting*, Retrieved 11 February 2013, from <http://www.sec.gov/news/studies/2008/marktomarket123008.pdf>
- Stent, W., M. Bradbury and J. Hooks, 2010, IFRS in New Zealand: effects in financial statements and ratios, *Pacific Accounting Review*, 22 (2), 92-107.
- Trewavas, K., N. Botica Redmayne, and F. Laswad, 2012. The Impact of IFRS adoption on public sector financial statements, *Australian Accounting Review*, 22(1), 86-102.
- Wee, M., A. Tarca, and M. Chang, 2011, *Disclosure incentives, mandatory standards and firm communication in the IFRS adoption setting*, Retrieved 20 December 2011, from [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1870644](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1870644)
- Zabel, R., and A. Morrell, 2009 January. SFAS 1 57: What Is Its Purpose? Robins, Kaplan, 31. Miller, and Ciresi L.L.P Newsletter, 1-4.

## Tables

**Table 1 - Sample selection**

---

NZX All Index companies	106
Less Property trusts	-5
Less companies with incomplete data from 2004-2012	-34
Less companies with 31 Dec 2012 balance dates which have not yet reported	-9
<b>Total</b>	<b>58</b>

---

**Table 2 – Frequency of reporting****Panel A - Frequency of companies reporting non-GAAP earnings (NGE)**

Year	Total companies	Companies reporting NGE	
		Number	Percentage of total companies
2012	58	15	25.9%
2011	58	20*	34.5%
2010	58	19*	32.8%
2009	58	17	29.3%
2008	58	12	20.7%
2007	58	9	15.5%
2006	58	6	10.3%
2005	58	3	5.2%
2004	58	3	5.2%
<b>Overall</b>	<b>522</b>	<b>104</b>	<b>19.9%</b>

\* Included two and six companies that only had tax-related adjustments in 2011 and 2010, respectively

**Panel B - Frequency of total profit adjustments made by NGE reporting companies**

Year	Total adjustments	Non-tax related	Tax-related	Total adjustments per company
2012	26	21	5	1.73
2011	47	34	13	2.35
2010	37	22	15	2.06
2009	37	32	5	2.18
2008	26	21	5	1.86
2007	13	11	2	1.30
2006	6	6	0	0.86
2005	4	4	0	1.33
2004	3	3	0	1.00
<b>Overall</b>	<b>199</b>	<b>155</b>	<b>45</b>	<b>1.91</b>

**Table 3 - Adjustment categories by year**

\*Some companies may have more than one adjustment so totals are larger than number of companies

<b>Year</b>	<b>2012</b> <b>n=15</b>	<b>2011</b> <b>n=20</b>	<b>2010</b> <b>n=19</b>	<b>2009</b> <b>n=17</b>	<b>2008</b> <b>n=12</b>	<b>2007</b> <b>n=9</b>	<b>2006</b> <b>n=6</b>	<b>2005</b> <b>n=3</b>	<b>2004</b> <b>n=3</b>	<b>Total</b>
Fair value adjustments:										
Financial instruments	5	6	2	4	3	1	1	1	0	23
Investment property/property for sale	2	2	3	4	2	0	0	0	0	13
Gains and losses on:										
Sales of assets	2	4	3	3	5	2	2	0	0	21
Impairment of:										
Assets	1	4	3	6	0	0	1	0	1	16
Goodwill	0	2	0	1	0	1	0	1	0	5
One-off items before tax	2	0	1	1	2	0	0	0	0	6
Other adjustments	2	3	3	4	3	1	1	1	1	19
Unexplained	5	4	3	4	3	2	1	0	0	22
Provision adjustments	0	1	0	0	1	0	0	0	0	2
Reconciling adjustments	0	5	1	0	0	2	0	1	1	10
Restructuring /relocation/redundancy costs	2	3	3	5	2	2	0	0	0	17
Sub-total	21	34	22	32	21	11	6	4	3	154
Tax related adjustments	5	13	15	5	5	2	0	0	0	45
<b>TOTAL</b>	<b>26</b>	<b>46</b>	<b>37</b>	<b>37</b>	<b>26</b>	<b>13</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>199</b>

**Table 4: Tests on differences between NPAT and NGE by year**

Year	n	\$ million		Scaled by number of shares	
		Test on means t-stat (p-value)	Test on medians Z-stat (p-value)	Test on means t-stat (p-value)	Test on medians Z-stat (p-value)
2012	15	-0.344 (0.736)	-0.734 (0.463)	0.338 (0.741)	-0.524 (0.600)
2011	20	-1.382 (0.183)	-1.720 (0.085)	-1.657 (0.114)	-1.504 (0.133)
2010	19	-2.174* (0.043)	-2.482* (0.013)	-2.691* (0.015)	-2.844** (0.004)
2009	17	-1.922 (0.073)	-2.411* (0.016)	-1.992 (0.064)	-2.481* (0.013)
2008	12	1.903 (0.084)	-1.955 (0.051)	1.246 (0.239)	-1.955 (0.051)
2007	9	0.560 (0.591)	-0.338 (0.735)	-0.339 (0.743)	-0.507 (0.612)
2006	6	-0.525 (0.622)	-0.944 (0.345)	-1.298 (0.251)	-1.214 (0.225)
2005	3	-1.252 (0.337)	-1.604 (0.109)	1.629 (0.245)	-1.604 (0.109)
2004	3	-0.979 (0.431)	-0.535 (0.593)	-0.867 (0.477)	-0.447 (0.655)

\* and \*\* indicate significance at the 0.05 and 0.01 levels where the level of significance is two-tailed

**Table 5 – Comparison of non-GAAP earnings and Net Profit After Tax (NPAT)**

Year	Total NGE reporting companies	NGE greater than NPAT	
		Number	Percentage
2012	15	6	40.0%
2011	20	11	55.0%
2010	19	12	63.2%
2009	17	10	58.8%
2008	12	1	8.3%
2007	9	4	44.4%
2006	6	4	66.7%
2005	3	2	66.7%
2004	3	2	66.7%
<b>Overall</b>	<b>104</b>	<b>52</b>	<b>50.0%</b>

**Table 6 –Frequency of NGE reporting companies for years before and after IFRS adoption**

	<b>Reporting years before (-) and after (+) IFRS adoption for individual companies</b>										
<b>Number</b>	<b>-4</b>	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>0</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>	<b>+4</b>	<b>+5</b>	<b>+6</b>
Total companies	29	41	58	58	58	58	58	58	58	29	17
NGE reporting companies	1	3	5	5	14	15	15	20	17	6	3
<b>Percentage</b>											
<b>NGE reporting companies /Total companies</b>	<b>3%</b>	<b>7%</b>	<b>9%</b>	<b>9%</b>	<b>24%</b>	<b>26%</b>	<b>26%</b>	<b>34%</b>	<b>29%</b>	<b>21%</b>	<b>18%</b>

**Table 7 - Tests on differences between NPAT and NGE before, at and after IFRS adoption**

Year	n	\$ million		Scaled by number of shares	
		Test on means t-stat ( <i>p-value</i> )	Test on medians Z-stat ( <i>p-value</i> )	Test on means t-stat ( <i>p-value</i> )	Test on medians Z-stat ( <i>p-value</i> )
<b>Before (-1 to -4)</b>	14	-1.453 (0.170)	-1.490 (0.136)	-0.981 (0.344)	-1.274 (0.203)
<b>At Transition (0)</b>	14	1.940 (0.074)	-1.423 (0.155)	0.909 (0.380)	-0.445 (0.656)
<b>After (1 to 6)</b>	76	-2.907 (0.005)*	-3.536 (0.000)**	-3.607 (0.001)**	-3.680 (0.000)**

\* and \*\* indicate significance at the 0.05 and 0.01 levels where the level of significance is two-tailed

**Table 8 - Pearson correlations**

	NGE	REPREG	MKTBK	GROWTH	LEV	ΔPROFIT	ΔSHAREPRICE	LOSS	GFC
NGE	1.000								
REPREG	0.240***	1.000							
MKTBK	0.010	0.028	1.000						
GROWTH	-0.036	-0.089**	0.005	1.000					
LEV	0.075	0.035	-0.057*	-0.002	1.000				
ΔPROFIT	-0.022	0.033	-0.008	-0.003	-0.025	1.000			
ΔSHAREPRICE	-0.068	-0.059	0.017	0.244**	0.018	-0.001	1.000		
LOSS	-0.068	0.138***	0.014	0.047	-0.227***	-0.022	0.048	1.000	
GFC	0.195***	0.539***	-0.008	-0.049	-0.025	0.062	-0.079	0.0128**	1.000
<i>NGE</i>	Disclosure of non-GAAP earnings - Binary (Yes (1)/No (0) )								
<i>REPREG</i>	Reporting regime – Binary (IFRS (1) /Prior NZ GAAP (0))								
<i>MKTBK</i>	Market-to-book value of equity								
<i>GROWTH</i>	Sales growth – percentage change from prior year								
<i>LEV</i>	Leverage (Total liabilities/Total assets)								
<i>ΔPROFIT</i>	Percentage change in profit from prior year								
<i>ΔSHAREPRICE</i>	Percentage change in year end share price from prior year								
<i>LOSS</i>	Loss-reported in current year – Binary (Yes (1)/No (0))								
<i>GFC</i>	Global financial crisis – Binary (Yes (1=2009-2011) / No (0=2012, 2004-2008))								

**Table 9 - Logistic regression results for association with disclosure of Non-GAAP Earnings**

	Model 1	Model 2	Model 3	Model 4
<i>Test Variable</i>				
REPREG		1.574 (0.000)**		1.307 (0.000)**
<i>Control Variables</i>				
MKTBK	-0.001 (0.946)	0.001 (0.938)	0.000 (0.994)	0.001 (0.936)
GROWTH	-0.003 (0.265)	-0.003 (0.261)	-0.003 (0.263)	-0.003 (0.263)
LEV	0.754 (0.040)*	0.924 (0.020)*	0.942 (0.014)*	0.996 (0.012)*
ΔPROFIT	0.000 (0.128)	0.000 (0.117)	0.000 (0.115)	0.000 (0.108)
ΔSHAREPRICE	-0.008 (0.010)*	-0.006 (0.048)*	-0.008 (0.016)*	-0.006 (0.042)*
LOSS	-0.599 (0.116)	-0.873 (0.024)*	-0.870 (0.030)*	-0.952 (0.016)*
GFC			1.061 (0.000)**	0.505 (0.055)
IND (Industry dummies)	Included	Included	Included	Included
Constant	-2.244 (0.000)	-3.442 (0.000)	-2.737 (0.000)	-3.481 (0.000)
N	522	522	522	522
Cox & Snell R <sup>2</sup>	0.064	0.121	0.100	0.127
Nagelkerke R <sup>2</sup>	0.101	0.190	0.157	0.200

\* and \*\* highlight significance at the 0.05 and 0.01 levels where the level of significance is two-tailed

<i>REPREG</i>	Reporting regime – Binary (IFRS (1) /Prior NZ GAAP (0))
<i>MKTBK</i>	Market-to-book value of equity
<i>GROWTH</i>	Sales growth – percentage change from prior year
<i>LEV</i>	Leverage (Total liabilities/Total assets)
<i>ΔPROFIT</i>	Percentage change in profit from prior year
<i>ΔSHAREPRICE</i>	Percentage change in year end share price from prior year
<i>LOSS</i>	Loss-reported in current year – Binary (Yes (1)/No (0))
<i>GFC</i>	Global financial crisis – Binary (Yes (1=2009-2011) / No (0=2012, 2004-2008))
<i>IND</i>	Industry indicator variables (Broad industry categorisation)

**Table 10 – Earnings Persistence**

	NPAT <sub>t</sub>	NPAT <sub>t</sub>
NGE <sub>(t-1)</sub>	0.521 (0.000)**	
NPAT <sub>(t-1)</sub>		0.474 (0.000)**
Constant	0.063 (0.000)	0.076 (0.000)
N	272	272
F-value	83.796 (0.000)	73.659 (0.000)
Adjusted R <sup>2</sup> %	0.237	0.211

\* and \*\* highlight significance at the 0.05 and 0.01 levels where the level of significance is two-tailed

NPAT <sub>(t)</sub>	NZ GAAP earnings in current year scaled by no. of shares
NPAT <sub>(t-1)</sub>	NZ GAAP earnings in prior year scaled by no. of shares
NGE <sub>(t-1)</sub>	Non-GAAP earnings in prior year scaled by no. of shares

**Table 11 – Value Relevance**

	<b>MV</b>	<b>ANAFCSST</b>
BV	2.421 (0.004)**	0.011 (0.000)**
NPAT	0.017 (0.998)	0.861 (0.000)**
(NGE – NPAT)	8.428 (0.581)	0.716 (0.000)**
Constant	0.071 (0.962)	0.006 (0.438)
N	272	270
F-value	4.615 (0.004)	812.976 (0.000)
Adjusted R <sup>2</sup> %	0.039	0.901

\* and \*\* highlight significance at the 0.05 and 0.01 levels where the level of significance is two-tailed

<i>MV</i>	Market value at balance date scaled by no. of shares
<i>ANAFCSST</i>	Analysts' forecast of earnings closest to balance date scaled by no. of shares
<i>NPAT</i>	NZ GAAP earnings scaled by no. of shares
<i>NGE</i>	Non-GAAP earnings scaled by no. of shares
<i>(NGE – NPAT)</i>	Difference between NGE and NPAT scaled by no. of shares