Comparative Value-relevance of GAAP, IBES, S&P Core, Cash Earnings and Cash Flows

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ABSTRACT

This study examines the impact the global financial crisis had on the value relevance of GAAP and non-GAAP earnings. We adopt the Ohlson (1995) valuation and CAR models to test the value relevance and information content of alternative earnings measures. We use six different earnings measures comprising IBES earnings, Standard & Poor's (S&P) core earnings, cash earnings, cash flows from operations, earnings from operations adjusted to exclude special items under GAAP and income before extraordinary items under GAAP. We draw our sample from US publicly traded firms between 2002 and 2010. Our sample is partitioned into Financial and non-Financial firms, and S&P 500 and non-S&P 500 firms. The results show that investors place greater value relevance on GAAP earnings during the GFC period relative to the pre-GFC period.

1 INTRODUCTION

There is much research on the information content and value relevance of earnings measures based on generally accepted accounting principles (GAAP) relative to non-GAAP measures. Prior research (Bradshaw and Sloan, 2002; Bhattacharya *et al*., 2003; Doyle *et al*., 2003; Lougee and Marquardt, 2004) finds that non-GAAP earnings (e.g., street, pro forma or IBES earnings) are significantly more value relevant and informative relative to GAAP earnings. Much of this evidence, however, is based on samples from before 2006, i.e., before the global financial crisis (GFC). Consequently, these studies do not investigate the impact of the GFC on the value relevance or informativeness of non-GAAP earnings relative to GAAP earnings. Albring *et al*. (2010), however, covers the period 2002 to 2007 in their study, which includes the beginning of the GFC. Nevertheless, they did not investigate the impact of the GFC. To the best of our knowledge, there is no research on the value relevance of these earnings metrics post-2006 after the GFC, during which period there is increased focus on the reliability of earnings information. Further, the GFC has created a climate of volatility and uncertainty in the capital market that may impact on how investors perceive the credibility and value relevance of earnings, and the sources from which they are produced. Prior to the GFC, there had been concerns with pro forma earnings, specifically with the quality of the information and the potential for it to be biased given management's vested interests. This led to the Securities and Exchange Commission (SEC) instituting regulations limiting the use of non-GAAP earnings metrics (SEC, 2001; SEC, 2002). Nevertheless, security analysts tracking services (e.g., IBES and First Call) continue to produce their own measures of earnings and credit rating agencies also produce their own earnings measures (e.g., Moody's and Standard and Poor's). Given the greater scrutiny of non-GAAP earnings since 2002 and the impact of the GFC, an important research question is: Do investors continue to place greater value relevance on non-GAAP earnings measures relative to GAAP earnings?

Generally, pro forma earnings are produced by firms to supplement their reported GAAP earnings, while street and IBES earnings are produced by analysts. Non-GAAP earnings are generally more selective than GAAP earnings in that "other non-operating" items are excluded and these earnings are argued to better represent continuing performance. Bowen *et al*. (2005) provide evidence that firms tend to place greater relative emphasis on pro forma earnings when they have less value relevant GAAP earnings. Bhattacharya *et al*. (2003) estimate that while only a small proportion of firms report any pro forma or non-GAAP figures between 1998 and 2000, the number of firms doing so increased during this period. In a subsequent study, Bhattacharya *et al*. (2007) report an increase in pro forma reporting from 1998 until 2001 followed by a dramatic drop in the third quarter of 2002 coinciding with the enactment of SOX in July 2002. Doyle *et al*. (2003) suggest that the market may misprice stock or be misled by pro forma earnings, while Johnson and Schwartz (2005) report results that do not support this view.

These studies focus primarily on earnings measures produced either by the firm (GAAP and pro forma earnings) or security analysts (street and IBES earnings). On the other hand, credit rating agencies such as Standard & Poor's (S&P) also provide credible alternative information to capital markets. The credit ratings issued by these agencies are extremely important as they represent an independent evaluation of firms' default risks (Graham and Harvey, 2001; Gray *et al*., 2006). Credit rating agencies also produce their own alternative measures of earnings. It is conceivable that earnings measures produced by credit rating agencies are value relevant given the role of credit agencies in financial markets. Nevertheless, there have been concerns that credit rating agencies bear strong responsibility for contributing to the subprime crisis through being lax in the ratings of some structured finance products. Consequently, it is questionable whether credit rating agencies are

unbiased.[1] Measures of earnings by credit agencies, however, have received little attention in the GAAP vs Street literature.

Our study examines the impact of the GFC on the value relevance and informativeness of GAAP earnings and several measures of non-GAAP earnings. We also separately examine firms in the financial and non-financial sector, and firms included in the S&P 500 index and firms not included in the S&P 500 index. We provide evidence and insight on the impact the financial sector and firm size may have on the value relevance of these earnings measures.

Our study differs from prior studies in several aspects. The first contribution of our study is the investigation of whether the GFC had an impact on the value relevance of GAAP earnings relative to non-GAAP earnings. The GFC offers a unique opportunity to investigate how investors may manage the trade-offs between the reliability of GAAP earnings and non-GAAP earnings. Research conducted before the GFC generally finds that non-GAAP earnings are significantly more value relevant and informative relative to GAAP earnings (Bradshaw and Sloan, 2002; Bhattacharya *et al*., 2003; Doyle *et al*., 2003; Lougee and Marquardt, 2004). However, the increased uncertainty and volatility in capital markets post-GFC suggest that investors may not only be seeking better quality information but also more reliable and credible information, which are the stated advantages of GAAP reporting. As a consequence, investors may place greater emphasis on GAAP earnings in periods of uncertainty. In addition, GAAP earnings are subject to an audit, which lends reasonable assurance that they are fairly presented in accordance with the GAAP reporting framework. Therefore, we investigate whether there is a shift in investor focus from non-GAAP to GAAP

[1] The literature suggests that credit rating agencies may inflate ratings, however, under certain conditions, regulations (Stolper, 2009) and reputational effects (Mathis *et al*., 2009) may provide incentives for agencies to assign correct ratings. Interestingly, Bolton *et al*. (2012) demonstrate that a monopoly is generally more efficient than a duopoly in inducing higher ratings quality as the latter provide more opportunities for an issuer to shop for a good rating.

earnings during the post-GFC period. No prior research has investigated the value relevance of GAAP and non-GAAP earnings post-GFC relative to pre-GFC.

Second, our study adopts a more comprehensive approach to investigate the comparative value relevance of GAAP and non-GAAP earnings. Prior studies generally use a single measure of GAAP earnings to compare with street earnings, typically IBES earnings. In this study, we compare several alternative measures of earnings. These earnings measures include two alternative measures of GAAP earnings (earnings from operations adjusted to exclude special items and income before extraordinary items, which are used separately in prior literature), IBES earnings, Standard and Poor's core earnings, cash earnings and operating cash flows. We explicitly test the value relevance of these measures and provide a more comprehensive estimation of their comparative value relevance.

A further contribution of our study is the examination of the value relevance of earnings measures published by a credible third party such as a credit rating agency. A credit rating agency is in a unique position as an information provider in that it not only produces an alternative measure of earnings but it also issues credit ratings for firms. Credit rating agencies, unlike analysts, are more concerned with firms' going concern positions than analysts. These credit ratings signal firms' credit worthiness and have implications for firms' future performance and their management of debt. As such, credit rating agencies are likely to be more conservative and more risk averse than analysts (Batta and Muslu, 2010) and, therefore, are likely to measure earnings more conservatively than managers. In 2001, Standard & Poor's proposed its core earnings measure as an alternative to GAAP earnings. Their core earnings represents a measure favoured by the credit agency. Further, it allows a comparison against alternative measures of earnings as the method of measuring core earnings is defined explicitly (Blitzer *et al*., 2002).

Unlike Albring *et al*. (2010), which also investigate the value relevance of Standard & Poor's core earnings measure relative to GAAP and IBES earnings, the sample in our study is not restricted to firms in the S&P 500 index. Large firms, by virtue of size, generally have more publicly available information relative to small firms, which may impact how investors value the different measures of earnings. For example, large firms tend to have more analysts following them and more media coverage. In contrast, there may be limited alternative sources of information for smaller firms, which may impact the reliance and relevance that investors place on GAAP earnings, a mandated source of information irrespective of size. No other study investigates the impact of size on the value relevance and informativeness of GAAP and non-GAAP earnings pre-GFC and post-GFC.

Finally, a key trigger of the GFC stems from the crisis in the financial sector where the quality and reliability of financial information has since been shown to be questionable. Prior research generally excludes firms in the financial sector. Therefore, in addition to investigating the value relevance and informativeness of GAAP and non-GAAP earnings in the non-financial sector, we also investigate the impact the GFC may have had on the value relevance and informativeness of earnings of firms in the financial sector.

The remainder of the paper is as follows. Section 2 provides a review of the literature. Section 3 describes our research design, sample and data. Section 4 presents our results. Section 5 presents a summary of our findings and our conclusions.

2 BACKGROUND AND LITERATURE REVIEW

It is well documented that stock prices are closely related to earnings performance, and that earnings are generally superior in explaining stock prices relative to cash flows (Dechow, 1994; Sloan, 1996). Further, there is increasingly greater emphasis on non-transitory earnings as a more informative measure of earnings performance. In this regard, research shows that

non-GAAP earnings measures are generally more value relevant than GAAP earnings measures (Bradshaw and Sloan, 2002; Brown and Sivakumar, 2003; Bowen *et al*., 2005; Lougee and Marquardt, 2004). Defond and Hung (2003) argue that cash flows are incrementally useful and complement value relevant information contained in earnings. Their results suggest that cash flow forecasts are value relevant and provide market participants with an alternative source of information relative to earnings. Further, cash flows are potentially less subjective than earnings due to the impact of accruals on earnings.

Studies investigating the value-relevance and informativeness of alternative earnings metrics to GAAP earnings generally focus on IBES and pro forma earnings. More recently, however, researchers (Albring *et al*., 2010; Batta and Muslu, 2010) have begun to investigate measures of earnings published by credit rating agencies. Credit rating agencies, similar to stockbrokers, financial analysts and the financial press, represent alternative sources of information used by stakeholders. Prior studies show that these sources provide information that is value relevant (Best and Zhang, 1993).

The trade off between relevance and reliability, however, is an issue when a variety of information sources exist and when credible information (e.g., audited annual reports) is not available immediately. Atiase *et al*. (2005) show that while investors have a preference for reliability, it is possible that they may also seek relevant information from alternative credible sources that is not as reliable as audited financial information. Best and Zhang (1993, p. 1508) argue "that parties other than banks also perform evaluation and monitoring roles". Therefore, investors may seek information from other providers such as credit rating agencies that perform evaluation and monitoring roles (Vassalou and Xing, 2003).

Results from the few studies on the value relevance of earnings measures produced by credit rating agencies are mixed. Albring *et al*. (2010) investigate the value relevance of Standard & Poor's core earnings measure. They find that core earnings are more value relevant than

GAAP earnings. In contrast, Robinson *et al*. (2008) in Albring *et al*. (2010, p. 268) report that "S&P core earnings are not a more useful measure relative to GAAP earnings." Batta and Muslu (2010) find evidence of conservatism in the non-GAAP earnings published by the credit rating agency Moody's and that these earnings are informative about the credit risk of underlying firms.

Firms can reduce information asymmetry confronting investors through the voluntary disclosure of information. The obvious implication of this is that management has vested interests in the information disclosed and the information is likely to be biased. On the other hand, agency theory also suggests that management has incentives to provide quality information as high quality information leads to better rewards. Therefore, it is not surprising that over a period of time prior to 2002, there was a documented increase in the release of pro forma earnings by firms (Bhattacharya *et al*., 2003). However, a number of significant corporate collapses in the early 2000s raised questions about the quality of reported earnings and performance information as disclosed by firms in their pro forma earnings releases, which in 2001 led to the SEC issuing cautionary advice regarding the use of "pro forma" financial information in earnings releases (SEC, 2001) and in 2002, the SEC issued regulations on the use of non-GAAP earnings (SEC, 2002). Also, the Sarbanes-Oxley Act (SOX) regulating financial reporting and corporate governance was enacted in the wake of the Enron scandal, which required higher standards of corporate governance. These regulatory changes mean that how corporate earnings are measured and disclosed are now under greater scrutiny.

Prior studies on the information content of accounting earnings and cash flows generally cover the period before 2002. Bhattacharya *et al*. (2003) reports an increase in pro forma earnings releases from 181 in 1998 to 695 in 2000. Since the SEC imposed new regulations on the use on non-GAAP earnings in 2002 (SEC, 2002), there is a discernible shift away from pro forma earnings to a more conservative earnings metric that removes the effects of

transitory earnings. This could be due to concerns about earnings management and managerial opportunism in respect to non-GAAP earnings. As firms may provide additional disclosures via pro forma earnings, these disclosures may be a tool for firms to influence stakeholders' perceptions of firm performance. Bowen *et al*. (2005) investigate the emphasis firms place on pro forma and GAAP earnings within quarterly press releases in the period 2001-2002 and find evidence that firms tend to place greater relative emphasis on pro forma earnings when they have less value relevant GAAP earnings. Also, they observe a shift in emphasis away from pro forma earnings between 2001 and 2002. Bhattacharya *et al*. (2007) find an increase in pro forma reporting from 1998 until 2001, but it decreased after 2001. There was a dramatic drop in the third quarter of 2002 coinciding with the enactment of SOX, which requires explicit reconciliation between pro forma and GAAP earnings, in July of that year. Interestingly, Johnson and Schwartz (2005) find that investors, on average, do not appear to be misled by pro forma figures. This is consistent with Lougee and Marquardt (2004), who find that pro forma earnings have relative and incremental information content when GAAP earnings informativeness is low in their sample of firms, from 1997 to 1999, that release pro forma earnings. Unsurprisingly, they also find that firms emphasise the metric that portrays firm performance more favourably.

Interestingly, the findings of Bowen *et al*. (2005) that the level of emphasis on pro forma earnings decreased and the level of emphasis on GAAP earnings increased in 2002 relative to 2001 coincided with the greater scrutiny by the SEC following several corporate and accounting scandals. From a stock market perspective, their results show that pro forma earnings are value relevant. While there is some indication of value relevance in respect to emphasis on GAAP earnings, the results are weak.

Studies provide evidence that SOX was a pivotal moment in regulatory reform causing a reversion to more conservative reporting and greater awareness of potential earnings

management. Lobo and Zhou (2006) provide evidence that, post-SOX, firms are, on average, more conservative (using the conservatism measure of Basu, 1997) in their financial reporting, i.e., firms are quicker to incorporate losses than gains when reporting earnings. They also report a significant reduction in discretionary accruals post-SOX relative to pre-SOX periods. Lobo and Zhou, however, did not test for value relevance. Marques (2006) reports a decline in the probability of disclosing non-GAAP financial measures in 2003.

An alternative explanation for the move towards a more conservative measure of earnings and away from non-GAAP earnings measure may be that market participants are seeking more credible information (Lobo and Zhou, 2006; Marques, 2006). Credit rating agencies, with incentives to be conservative, may be this alternative source of information. The core earnings measures advocated by Standard and Poor's may be perceived to be more credible and value relevant relative to other non-GAAP earnings. It may be argued that this core earnings measure is also more conservative and more closely reflects permanent earnings as the adjustments include items that are typically included in special items as well as those that are not generally accounted for under GAAP. Further, S&P explicitly detail what these adjustments are. Blitzer *et al*. (2002) specify the adjustments to GAAP earnings when computing core earnings, which is defined as focused 'on a company's ongoing operations…(and) should include all the revenues and costs associated with those operations and exclude revenues or costs that arise in other parts of the business, such as unrealised gains or losses from hedging activities' (p. 5). Items such as employee stock option grant expense, restructuring charges from ongoing operations, and pension costs are included in computing core earnings. On the other hand, items such as goodwill impairment charges, gains/losses from asset sales, and unrealised gains/losses from hedging activities are specifically excluded from the computation. Albring *et al*. (2010) report results consistent with this in their study of firms in the S&P 500 index over the period 2002 to 2007. They find that Standard and Poor's

core earnings are significantly more value relevant than both GAAP earnings and IBES earnings.

While prior studies indicate operating cash flows are inferior to earnings in explaining stock prices, Dechow (1994) and Defond and Hung (2003) provide evidence that operating cash flows are value relevant. These findings suggest that cash flows contain information that complement the information contained in earnings. As "cash flows are potentially less subjective than accruals…(they) help market participants assess firm viability by providing information about solvency and liquidity (Defond and Hung, 2003, p. 75). Also, the complementary information in cash flows is consistent with the evidence that investors may not comprehend fully the information presented in earnings and are subsequently surprised when non-recurring items recur in subsequent years, or when pro forma earnings miss earnings benchmarks (McVay, 2006; Lougee and Marquardt, 2004). If earnings measures that are less conservative than GAAP earnings can be used to mislead investors or are susceptible to earnings management, it is conceivable that more conservative earnings measures may have information content (Basu, 1997; Givoly and Hayn, 2000; Ryan and Zarowin, 2003).

At the extreme, cash flows represent the most conservative measure of performance – it reflects objective evidence that the transaction has occurred and cash transfers completed. Nevertheless, it is possible that under an accrual accounting system, "if unrealized losses but not unrealized gains are recognized, then earnings is more conservative than cash flow" (Basu, 1997, p. 16). Additionally, an alternative performance measure such as cash flows from operations, which is not subject to accruals manipulation, may also be value relevant as there is evidence that special items adjustments are related more with accruals than cash flows (Doyle *et al*., 2003) and that managers may be manipulating real activities to meet earnings targets or to avoid reporting annual losses.

Mandatory GAAP earnings are also required to be audited and would provide greater credibility and reliability. In light of the GFC, we expect investors to seek increasingly more reliable and conservative financial information. Therefore, we expect to observe greater value relevance in earnings measures that are perceived to be more reliable and conservative in the post-GFC period relative to the pre-GFC period.

The results from the various studies on pro forma earnings are consistent in showing that pro forma earnings and IBES earnings are more value relevant when compared to GAAP earnings (Bradshaw and Sloan, 2002; Doyle *et al*., 2003). While there has been a decline in pro forma earnings releases, there is evidence that there has been an increase in the quality of other exclusions, i.e., more transitory items, and a decrease in the quality of special items (Kolev *et al*., 2008). This suggests earnings management may not necessarily have decreased, but rather managers have changed the way they manage earnings from managing accruals to managing real activities (Roychowdhury, 2006) and classification shifting (McVay, 2006). Further, with the exception of Albring *et al*. (2010), these studies typically focus on only two primary sources of information - information produced by analysts and management. Blitzer *et al*. (2002) argue that Standard and Poor's core earnings better represent permanent earnings. Whether this is so is an empirical question. While the superiority of non-GAAP earnings over GAAP earnings are well-established in the literature, there are still gaps in the literature.

3 RESEARCH DESIGN AND DATA

3.1 Empirical Models

To measure value relevance, our study adopts the Ohlson (1995; 1999) valuation model where firm value is a function of book value of equity and earnings. This model can also include factors that are considered "as 'background' information that influences value without violating the idea that accounting data provide kernel information" (Ohlson, 1999, p. 156).

We adapt the model to include a non-GAAP and a GAAP measure of earnings to test the incremental value relevance of earnings.

We investigate four non-GAAP measures of earnings. We use the earnings reported by analysts in IBES. Thomson Reuters (2009, p. 35) states that IBES earnings per share is defined as "the EPS that the contributing analyst considers to be that with which to value a security. This figure may include or exclude certain items depending on the contributing analyst's specific model." While this definition is ambiguous, the measure has been used extensively in prior studies and is understood to include adjustments to reported profits for nonrecurring items. The computation of the measure, however, may not be consistent across firms. Another earnings measure of interest is S&P's core earnings measure, which represents an alternative to GAAP earnings. Unlike IBES earnings, this measure is explicitly defined in Blitzer *et al*. (2002). The third non-GAAP measure of earnings is cash earnings, which is measured as net income before adjustments for depreciation and amortisation (i.e., long term accruals). This is a measure commonly used in the financial press. This measure, unlike cash flows from operations, does include the effects of certain accruals. Finally, we also examine cash flows from operations.

We also examine two different measures of GAAP earnings commonly used in prior studies - earnings from operations adjusted to exclude special items (GAAP1) and income before extraordinary items (GAAP2). Both earnings measures are argued to represent earnings from continuing operations. GAAP1 represents earnings adjusted to exclude the effects of special items and is a measure similar to IBES and S&P core earnings.

Additionally, we include earnings forecast as a control variable for investors' expectation of earnings. Consistent with prior studies, the general forms of the OLS regression models are:

$$P_{it} = \alpha_0 + \beta_1 BV_{it} + \beta_2 Forecast_{it} + \beta_3 NonGAAPE_{it} + \beta_4 DIFF1 + \varepsilon_{it} \quad (1)$$

$$P_{it} = \alpha_0 + \beta_1 BV_{it} + \beta_2 Forecast_{it} + \beta_3 NonGAAPE_{it} + \beta_4 DIFF2 + \varepsilon_{it} \quad (2)$$

where P_{it} is the closing share price for firm i at time t, BV_{it} is the book value per share of firm i at time t, $Forecast_{it}$ is the median consensus security analysts' forecast of earnings per share for firm i at time t, $NonGAAPE_{it}$ is the non-GAAP earnings measure of interest for firm i at time t, $DIFF1_{it}$ is GAAP1 minus the non-GAAP earnings measure of interest for firm i at time t, $DIFF2_{it}$ is GAAP2 minus non-GAAP earnings measure of interest for firm i at time t. All variables are measured on a per share basis. The model provides direct empirical evidence of whether GAAP earnings have significant incremental value relevance over non-GAAP earnings. A statistically significant β_4, which measures the difference between GAAP and non-GAAP earnings, indicates that GAAP earnings has incremental value relevance.

Also, we regress short-window cumulative abnormal returns (CAR) on earnings surprise measures based on each GAAP and non-GAAP earnings metrics to examine the information content of earnings (Brown and Sivakumar, 2003; Bhattacharya *et al*., 2003). The general forms of the OLS regression models are:

$$CAR_i = \alpha_0 + \beta_1 ESNonGAAP_i + \beta_2 ESGAAP1_i + \varepsilon_i \quad (3)$$

$$CAR_i = \alpha_0 + \beta_1 ESNonGAAP_i + \beta_2 ESGAAP2_i + \varepsilon_i \quad (4)$$

where CAR_i is the cumulative market-adjusted abnormal returns for firm i over a three-day window (*t-1* to *t+1*) centred around the earnings announcement date ($t = 0$), $ESNonGAAP_i$ is the non-GAAP earnings surprise for firm i, defined as the difference between the actual non-GAAP earnings measure of interest and the median consensus security analysts' forecast of earnings scaled by the closing share price at *t-7*, $ESGAAP1_i$ is the GAAP earnings surprise for firm i, defined as the difference between the actual GAAP1 earnings and the median

consensus security analysts' forecast of earnings scaled by the closing share price at *t-7* and $ESGAAP2_i$ is the GAAP earnings surprise for firm *i*, defined as the difference between the actual GAAP2 earnings and the median consensus security analysts' forecast of earnings scaled by the closing share price at *t-7*. All earnings are measured on a per share basis.

Ideally, earnings surprise should be measured as the difference between actual and expected earnings for a particular earnings metric. However, forecasts for earnings metrics other than analysts' earnings metric (e.g., IBES) are generally not available. Using forecasts of IBES earnings to measure earnings surprise result with noisy measures and the classic errors in variables problems (Cohen *et al*., 2007). Nevertheless, IBES forecast is a proxy of information available to the market and an indication of investors' earnings expectation. Prior studies are also subject to this limitation, which biases the results in favour of finding significance in IBES earnings relative to other earnings metrics (Bradshaw, 2011).

Our sample comprises two periods: pre-GFC and post-GFC. We consider the post-GFC period to begin from 2007. For each period, we test our models on samples that consist of firms included in the S&P 500 index (S&P 500) versus firms that are not included in order to investigate the relative impact on large and small firms. Also, as a key trigger of the GFC stems from the financial sector, we test our models on firms that are classified under this sector using GICS (code 40).

The sample is in the form of panel data and the assumptions of OLS regression may not hold. Further, there is evidence that a pooled OLS approach can lead to biased standard errors when the sample is a panel data set (Petersen, 2009; Gow *et al*., 2010). Therefore, we adopt the approach in Petersen (2009) and cluster the standard errors on two dimensions – firm and time.

We use the Bayesian Information Criterion (BIC) for model selection and to evaluate the relative performance of these models.[2] A lower value of BIC is preferable and the model with the lowest value of BIC is the best fitting model. BIC, however, does not indicate if the models are significantly different from each other. Prior studies generally rely on the approach in Vuong (1989) for model selection and test of statistical significance. However, this test is not appropriate in our study where the standard errors are clustered. Also, the value of the earnings coefficients and their significance provide direct evidence of their value relevance and information content.

3.2 Sample Selection

Our sample consists of all US publicly traded firms from Compustat and IBES for which the required data items are available over the period 2002 to 2010. We start our sample from 2002 because this is the first year that the S&P core earnings are available. We collect quarterly data for GAAP earnings, S&P core earnings, cash earnings and cash flows for firms with fiscal years ending in 2002 to 2010 from Compustat Fundamentals Quarterly file. We collect data for IBES earnings from IBES Actuals Detail History file and share price and returns data from CRSP Daily Stock file. We collect the earnings announcement date from Compustat.

The initial sample consists of 167,879 firm-quarter observations (7,116 firms) after matching data from IBES, Compustat and CRSP data files for which the earnings announcement date is not missing. We impose data requirements that firms do not have missing values for variables in the models, not have a change of fiscal year end and have a minimum number of non-

[2] The Bayesian Information Criterion (BIC) is a method for assessing model fit that accounts for the number of parameters and number of observations in the model. BIC is defined as $BIC = 2*ln(likelihood) + ln(N)*P$, where N is the number of observations and P is the number of parameters in the model. As we cluster our model on two dimensions, firm and time, there are alternative measures of N that may be used in computing BIC. The value of BIC in our reported results is calculated using the total number of observations in the model. We also recalculate BIC using the number of firm cluster as N with similar results.

missing observations of 20 firm-quarters over the sample period. Further, to ensure that our results are not driven by extreme values, we restrict our sample to observations that are within two standard deviations from the mean of our variables of interest.[3] Our final sample consists of 43,580 firm-quarter observations (1,606 firms). There are 25,912 firm-quarter observations (1,606 firms) in the pre-GFC (2002-2006) period and 17,668 firm-quarter observations (1,594 firms) in the post-GFC (2007-2010) period. Table 1 presents the distribution of our sample for the period 2002 to 2010.

<Insert Table 1 about here>

4 RESULTS

4.1 Univariate results

Table 2 provides descriptive statistics of the variables for all firms in the sample. In Panel A, across the non-GAAP measures for the financial sector sample, mean dollar earnings per share range from 0.074 (CF) to 0.651 (CE) pre-GFC. On average, pre-GFC IBES earnings (0.545) are higher than CORE (0.515) and CF (0.074) earnings. Similarly, post-GFC, mean IBES earnings (0.501) are higher than CORE (0.455) and CF (-0.119) earnings. It appears that CORE and CF are relatively more conservative measures of earnings than IBES.

<Insert Table 2 about here>

The mean difference in dollar earnings per share between GAAP and non-GAAP measures range from -0.106 (GAAP1-CE) to 0.480 (GAAP2-CF) pre-GFC and -0.117 (GAAP1-CE) to 0.574 (GAAP2-CF) post-GFC. Pre-GFC mean GAAP earnings are comparatively higher than non-GAAP earnings, with the exception of CE. Post-GFC, however, mean GAAP earnings

[3] We also relaxed this constraint to include observations that are within two and a half standard deviations from the mean of our variables of interest. These results are substantially similar to those reported in the main text.

are lower compared to IBES (GAAP2-IBES), CORE (GAAP1-CORE), and CE (GAAP1-CE and GAAP2-CE). Unsurprisingly, cash flows appears to be the most conservative measure of earnings on average in both periods.

The mean share price (Price) at earnings announcement date is 33.199 and mean CAR is 0.003 in the pre-GFC period, and 31.441 and 0.005, respectively, in the post-GFC period. Comparing the pre-GFC to the post-GFC period, mean earnings in the latter period are lower relative to the former across all measures of earnings. Also, the earnings surprise for all earnings measures is negative in the post-GFC period.

Panel B show some contrasting results for the non-financial sector compared to the financial sector. With the exception of CF, all other mean earnings are comparatively higher in the post-GFC period relative to the pre-GFC period. In both periods, however, it appears that CORE and CF are more conservative measures of earnings. When compared to GAAP earnings, IBES and CE are higher, on average, in the pre-GFC period. Post-GFC, IBES is higher than GAAP1. Mean Price is comparatively higher post-GFC relative to pre-GFC. Panels C (S&P 500) and D (non-S&P 500) show results that are generally similar to those reported in Panel B.

Generally, the results show CORE to be a relatively more conservative earnings measure than IBES or GAAP earnings. GAAP earnings are more conservative than IBES in the pre-GFC period except in the financial sector.

4.2 Multivariate OLS Regressions

4.2.1 Ohlson Model

Table 3 show the results with clustered standard errors for the financial sector sample with share price at earnings announcement date as the dependent variable for pre-GFC and post-

GFC periods. All models are statistically significant with an adjusted R^2 ranging between 0.4653 to 0.4854 in the pre-GFC period and 0.4019 to 0.4107 in the post-GFC period.[4] For pre-GFC, CORE, IBES, and DIFF1 and DIFF2 for these respective earnings measures are not statistically significant. Our results are in contrast with prior studies that consistently show IBES earnings to be more value relevant than GAAP earnings. However, IBES earnings are significant (at 0.01) post-GFC while DIFF1 and DIFF2 remain insignificant, indicating that GAAP earnings do not have incremental value relevance over IBES earnings. In relation to CORE, however, DIFF1 and DIFF2 are significant post-GFC (at 0.001 and 0.01, respectively), indicating that GAAP earnings have incremental value relevance over CORE. In relation to CE, we find GAAP earnings to be incrementally value relevant pre-GFC with both DIFF1 and DIFF2 significant at 0.01. Interestingly, the coefficients for DIFF1 and DIFF2 are negative, indicating that GAAP earnings are more conservative (lower) than CE. Post-GFC, however, CE is marginally significant (at 0.05) and DIFF1 and DIFF2 are no longer significant. CF is not significant in both the pre-and post-GFC periods, however, DIFF1 and DIFF2 become marginally significant post-GFC. The results shows some evidence of a shift in investors' focus on the different measures of earnings for financial firms Nevertheless, in both periods, the BIC ranking suggests that IBES generally ranked higher than CORE but lower than CE.

<Insert Table 3 about here>

[4] We test for multicollinearity using the variance inflation factor (VIF) and Condition Index due to the significant correlation between the independent variables in unreported correlations results. Across the samples for IBES, CORE and CE, for both pre-GFC and post-GFC periods, the highest mean VIF is 6.615 and the highest Condition Index is 12.937 suggesting that multicollinearity is not a significant problem. The highest mean VIF for CF is 55.315, however, the highest Condition Index is 24.519. While the highest Condition Index is within tolerable limit of 30 (Belsley *et al*., 1980), the VIF indicates potential multicollinearity problems. Therefore, the results for CF should be interpreted with caution.

Table 4 presents the results for the non-Financial sector. All models are statistically significant with an adjusted R^2 ranging between 0.4604 to 0.4637 in the pre-GFC period and 0.5260 to 0.5382 in the post-GFC period. Pre-GFC, IBES is statistically significant and GAAP earnings do not have incremental value relevance. Post-GFC, however, DIFF2 becomes significant and IBES becomes not significant. For the CORE models, the results are mixed but generally indicate that GAAP earnings have incremental value relevance relative to CORE. DIFF1 and CORE are statistically significant pre-GFC but DIFF1 has stronger significance. However, DIFF2 is significant in both the pre- and post-GFC periods but CORE is not significant. In relation to CE, DIFF1 is significant pre-GFC but CE has stronger statistical significance. DIFF2 is not significant in both pre- and post-GFC. In relation to CF, DIFF2 is significant (at 0.01 or stronger) both pre- and post-GFC but DIFF 1 is only significant pre-GFC. CF is only significant pre-GFC but at a weaker level relative to DIFF1. Generally, the results indicate a shift in the emphasis investors place on the different measures of earnings. While the results are mixed, there is also some evidence that GAAP earnings have incremental value relevance over non-GAAP earnings.

In respect to how each non-GAAP earnings model performs relative to each other using BIC, the results are mixed for IBES and CORE. The relative performance of the models depends on the GAAP earnings measure used. Pre-GFC, the CORE model using DIFF1 performs better (ranked 3) than the corresponding IBES model (ranked 4) based on BIC. On the other hand, the IBES model using DIFF2 (ranked 5) performs better than the corresponding CORE model (ranked 6) over this same period. For CE models, in respect to DIFF1 and DIFF2, it is clear that they rank lower (at 7 and 8) than both IBES (at 4 and 5) and CORE (at 3 and 6) in the pre-GFC period but the BIC ranking improved post-GFC, in which CE (at 3 and 3) ranked above both IBES (at 7 and 6) and CORE (at 8 and 5) models. CF received the highest ranking across both periods.

<Insert Table 4 about here>

The results for firms in the S&P 500 index are presented in Table 5. All models are statistically significant with an adjusted R^2 ranging between 0.4609 to 0.4632 in the pre-GFC period and 0.4746 to 0.4894 in the post-GFC period. Generally, GAAP earnings have incremental value relevance relative to IBES, CORE and CF in both the pre- and post-GFC periods but have incremental value relevance relative to CE only in the pre-GFC period. The results indicate moderate change in investors' focus on the various measures of earnings between pre-GFC and post-GFC. IBES becomes marginally significant (at 0.05) post-GFC relative to DIFF1 but both CORE, CE and CF become more strongly significant relative to DIFF1 during the GFC (at 0.05 or stronger). In both the pre-GFC and GFC periods, however, the results show that GAAP earnings have incremental value relevance relative to bon-GAAP earnings with only one exception. GAAP earnings do not have incremental value relevance relative to CE in the post-GFC period. In terms of model performance, the BIC ranking shows that CE models improve in performance, for both DIFF1 and DIFF2, from pre-GFC (at 8 and 6) to post-GFC (at 3 and 4). For both IBES and CORE models, the results are mixed. CORE performs better pre-GFC but both IBES and CORE models perform equally well post-GFC. CF is the highest ranked model according to BIC in both the pre- and post-GFC periods.

<Insert Table 5 about here>

For firms not included in the S&P 500 index, Table 6 shows GAAP earnings do not have incremental value relevance relative to IBES and CE. GAAP earnings have incremental value relevance relative to CORE for both the pre-GFC and GFC periods. However, GAAP earnings have incremental value relevance only for DIFF2 relative to CF. Using BIC to assess model performance, the results show that IBES ranks higher than CORE and CE in the pre-GFC, but the ranking fell during the GFC. All models are statistically significant with an

adjusted R^2 ranging between 0.4458 to 0.4473 in the pre-GFC period and 0.4492 to 0.4562 in the GFC period.

<Insert Table 6 about here>

The difference between our results and prior studies may be because we include a variable for earnings forecasts (Forecast) that controls for information available to investors and approximates investors' expectations. Forecast is highly significant across all the Ohlson models for both the pre-GFC and post-GFC periods. Our results suggest that investors find Forecast to be value relevant. As Forecast is highly correlated with IBES earnings, it biases against finding significance in IBES earnings. In untabulated results, we reestimate our Ohlson models omitting the Forecast variable. As expected, we find significance in IBES earnings across all samples. We also find IBES ranks highest, using BIC, among our models for all samples and for both pre- and post-GFC periods except for firms in the financial sector. For firms in the financial sector, IBES's mid-level ranking in the pre-GFC period increases to highest ranking in the post-GFC period. Our results suggest that investors are sensitive to earnings forecasts.

4.3 CAR Model

Table 7 show the CAR model results for financial sector firms. All models are statistically significant.[5] ESGAAP1 and ESGAAP2 are generally statistically significant except for ESGAAP2 relative to ESCORE in the pre-GFC period. Interestingly, ESIBES is significant pre-GFC but is not significant during the post-GFC period. The results for ESCORE and

[5] For the CAR model, we test for multicollinearity using variance inflation factor (VIF) due to the significant correlation between the independent variables in unreported correlations results. For IBES, CORE and CE, across all samples for both pre-GFC and GFC periods, the highest mean VIF is 7.718 and the highest Condition Index is 5.397 suggesting that multicollinearity is not a significant problem. However, the highest mean VIF for CF is 14.552 and the highest Condition Index is 7.515. As noted, the condition index is within tolerance levels, nevertheless, the VIF indicates potential multicollinearity problems.

ESCE also show a similar pattern. These results show that GAAP earnings have incremental information content over non-GAAP earnings and that this is more pronounced during the post-GFC period. On the other hand, ESCF is not significant in the pre-GFC period but becomes significant in the post-GFC period. This result is consistent with the notion that in the post-GFC period, investors are concerned about the cash flow implications of the crisis. In terms of model performance, the BIC ranking shows that the relative ranking of ESIBES fell while ESCE and ESCF improved between the pre-GFC and post-GFC periods.

<Insert Table 7 about here>

The results for non-financial firms are mixed depending on the GAAP earnings measure used. Table 8 shows ESGAAP1 is significant across all models for both the pre-GFC and GFC periods. Relative to ESGAAP1, ESIBES is significant whereas ESCORE and ESCE are not significant in either period. These results show that GAAP1 has incremental information content relative to IBES, CORE and CE. On the other hand, ESGAAP2 is only significant relative to ESCORE during the post-GFC period and marginally significant relative to ESCE in the pre-GFC period. ESCF becomes marginally significant in the post-GFC period, indicating that a shift in investor focus due to the GFC. Generally, the results show that ESGAAP1 has incremental information content over non-GAAP earnings across both the pre- and post-GFC periods. In terms of model performance, the BIC ranking indicates that ESIBES retains the highest ranking over both periods relative to ESCORE, ESCE and ESCF.

<Insert Table 8 about here>

Table 9 reports the results for firms in the S&P 500 index. All models are significant for both the pre- and post-GFC periods. Interestingly, for S&P 500 firms, ESGAAP1 is statistically significant only for the pre-GFC period relative to ESIBES, ESCORE, ESCE and ESCF, however, ESIBES, ESCORE and ESCF are not significant. Post-GFC, ESGAAP1 is not

significant across all models. On the other hand, ESGAAP 2 is only significant relative to ESCORE in the pre-GFC period and significant relative to ESCE and ESCF in the post-GFC period. While the results are mixed, there is some evidence of a shift in the informativeness of the various earnings measure between the pre and post-GFC periods. Comparatively, the BIC ranking shows that the ESIBES models outperform all other models in both periods, although the ESCORE models do improve in performance and rise in the ranking in the post-GFC period. Generally, the results show a change in the incremental information content of GAAP earnings before and after the GFC.

<Insert Table 9 about here>

Table 10 shows the results for firms not included in the S&P 500 index. All models are significant for both the pre-GFC and post-GFC periods. ESIBES is statistically significant in both the pre- and post-GFC periods. ESCORE is significant only in relation to ESGAAP2. ESCE is not significant in both periods and ESCF is only significant in the post-GFC period. ESGAAP1 is significant relative to all non-GAAP earnings for both the pre-GFC and GFC periods. These results indicate that ESGAAP1 has incremental information content relative to IBES, CORE, CE and CF measure of earnings. ESGAAP2, however, is only marginally significant relative to ESCE and ESCF in the pre-GFC period. Generally, there is evidence indicating that GAAP earnings have incremental information content relative to other non-GAAP earnings. The model performance based on the BIC ranking remains relatively stable between the pre-GFC and GFC periods.

<Insert Table 10 about here>

4.4 Discussion

Our results show mixed evidence of a shift in investors' emphasis between the alternative measures of earnings pre-GFC and during the GFC. Generally, the two different measures of

GAAP earnings have a different impact on the results. Of the two GAAP earnings measures included in the models, GAAP1 more closely resembles IBES and CORE earnings measures. We find DIFF1 (based on GAAP1) and DIFF2 (based on GAAP2) to be significantly value relevant in the S&P 500 sample in the Ohlson model. In the GFC period, the magnitude of DIFF1 and DIFF2 coefficients increased in both the IBES and CORE models. In the financial sector, non-financial sector and non-S&P 500 samples, DIFF1 and DIFF2 are generally not significant in the IBES model except for DIFF2, which is significant in the post-GFC period in the non-financial sector sample. Overall, our results show GAAP earnings to be incrementally value relevant primarily for large firms when compared to IBES. Relative to CORE, however, GAAP earnings generally have significant incremental value relevance in all samples tested. Also, it appears that investors favour CE in the post-GFC period across all samples, and while GAAP earnings may be value relevant pre-GFC relative to CE, they become insignificant post-GFC. We find a shift to CF generally in the post-GFC period in which FC becomes more significant compared to the pre-GFC period. While the results of prior studies consistently show IBES to be superior to GAAP, our results only partially support these findings.

In comparing model performance, our Ohlson model results provide weak support for the findings of prior studies. Table 11 presents a summary of model rankings using BIC for all sample and models. In contrast to prior studies, we find that IBES is not generally ranked as the best performing model in either the pre-GFC or GFC periods; which we attribute to many prior studies in this area using samples from pre-2002, (e.g., Bhattacharya *et al*., 2003; Bradshaw and Sloan, 2002). Even so, our results are not consistent with Albring *et al*. (2010), who find S&P core earnings to be more value relevant than IBES earnings in their sample of

large firms.[6] In our results for large firms, we find CORE to be generally ranked equal with IBES except for the pre-GFC period only in Model 2, where CORE is ranked higher than IBES. In our pre-GFC results, covering nearly the same period as Albring *et al*. (2010), we also find GAAP earnings to have incremental value relevance relative to both IBES and CORE earnings. While our sample includes S&P 500 firms, similar to Albring *et al*. (2010), we use quarterly data and our sample period is different. This may explain the different results. We partitioned our sample to examine the impact that firm size, as measure by the S&P 500 index, and the financial sector may have on the value relevance of the different earnings measures. We find that the GFC impacts the alternative earnings measures differently across the samples.

Our CAR models show that across all samples, GAAP earnings have incremental information content over IBES, CORE and CE. ESGAAP1 shows the stronger result of the two GAAP earnings measures. We note that all our earnings surprise measures are derived using analysts' forecast from IBES. This classic errors in variables problem biases the results in favour of IBES earnings (Bradshaw, 2011). Therefore, our results are more conservative when statistical significance is found in other earnings variables.

Our results suggest that investors place significant emphasis on GAAP earnings during the post-GFC period in the financial, non-financial, non-S&P 500 samples relative to IBES CORE and CE. Notably, however, in the S&P 500 sample, GAAP1 only has incremental information content in the pre-GFC period. It appears that investors place greater emphasis on IBES and CORE, in respect to large firms, during the GFC. Our CAR results generally support prior studies in respect to IBES - we find IBES to be ranked highest in both pre- and

[6] We adopted the model from Albring *et al*. (2010) (substituting our GAAP measures of earnings in their model) and tested it on a subsample comprising firms included in S&P 500 index for the period 2002 to 2007. Our results only partially support their findings. In order of BIC ranking, we find IBES ranked highest followed by GAAP1, CORE and GAAP2.

post-GFC periods for non-financial sector firms and for large firms. However, there is a fall in the BIC ranking for IBES in the post-GFC period for financial firms.

The results of this study are generally consistent with investors shifting their focus to more credible and conservative earnings information. We believe the GFC caused investors to be more aware and wary of voluntary or non-mandated disclosures. An explanation for our findings may be that when investors find non-GAAP earnings informativeness to be low or uncertain, they place greater relative emphasis on GAAP earnings. This is the reverse of Lougee and Marquardt (2004), who find that pro forma earnings have relative and incremental information content when GAAP earnings informativeness is low.

5 SUMMARY AND CONCLUSIONS

This study investigates the incremental value relevance of alternative measures of earnings to the US capital market. Our study is driven by what we perceive to be gaps in the literature. Much of the literature in this area focuses on GAAP vs Street earnings, however, there has been little research on comparing the value relevance of these measures with other alternative earnings measures collectively. Consequently, we focus on analyst-computed earnings (IBES), mandatory reported earnings (GAAP and operating cash flow), earnings computed by the credit agency Standard & Poor's (CORE) and a measure commonly found in the financial press based on adjusting GAAP earnings (cash earnings).

The GFC offers an opportunity to examine the impact this crisis and the associated uncertainty and volatility may have on the emphasis investors place on alternative measures of earnings in valuation decisions. In our GFC period, we find results consistent with investors shifting their emphasis and placing greater value relevance on GAAP earnings.

It is argued in the literature that IBES earnings are more value relevant than GAAP earnings because they better reflect non-transitory earnings, which is of greater interest to investors.

Our results only partly support this argument. We find that IBES earnings models do not always rank higher than other earnings models, particularly in the GFC periods. Also, we find that GAAP earnings have significant incremental value relevance relative to IBES in large firms.

One explanation for our results may be the time period covered in our sample and our sample size. Many prior studies use samples comprising earnings from fiscal years before 2005 or use a relatively small sample (Lougee and Marquardt, 2004; Batta and Muslu, 2010). Another explanation may be that the emphasis investors place on alternative earnings measures has changed over time. Note that our sample period covers the introduction of SOX and the global financial crisis. In periods of uncertainty and financial turmoil, investors may trade off relevance for reliability (Lobo and Zhou, 2006). GAAP earnings may be perceived to be more credible and reliable relative to IBES earnings.

We believe our study contributes to the literature on the value relevance of alternative earnings metrics. We address more comprehensively the relative performance of six earning measures. Our results are of interest to standard setters and regulators on the usefulness of GAAP earnings relative to other measures of earnings. This may have implications on concerns regarding the relevance of GAAP in the capital markets. Our results suggest that GAAP continue to play a role in capital markets.

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Table 1
Distribution of Sample for the Period 2002 to 2010

	Pre-GFC 2002-2006			GFC 2007-2010			Total 2002-2010		
Firm Type	**Firm quarters**	**No. of firms**	**No. of quarters**	**Firm quarters**	**No. of firms**	**No. of quarters**	**Firm quarters**	**No. of firms**	**No. of quarters**
Financial	3,743	263	20	2,895	260	16	6,638	263	36
Non-Financial	22,169	1,343	20	14,773	1,334	16	36,942	1,343	36
S&P 500	6,620	396	20	4,894	442	16	11,514	460	36
Non-S&P 500	19,292	1,271	20	12,774	1,231	16	32,066	1,294	36

Table 2
Descriptive Statistics of Variables

Panel A – Financial Sector Sample (Pre-GFC: N = 3,743; Firms = 263 | GFC: N = 2,895; Firms = 260)

	BV		Forecast		IBES		CORE		CE		CF		GAAP1-IBES		GAAP2-IBES	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
Mean	17.853	20.216	0.520	0.494	0.545	0.501	0.515	0.455	0.651	0.563	0.074	-0.119	0.000	0.436	0.009	-0.047
sd	10.714	12.410	0.392	0.470	0.504	0.653	0.538	0.653	0.624	0.796	2.530	2.581	0.252	-5.970	0.276	0.431
Minimum	-1.085	-6.448	-2.140	-1.870	-5.330	-5.550	-5.362	-5.549	-5.462	-5.521	-15.113	-14.770	-2.763	-0.030	-2.716	-5.923
25 percentile	9.796	11.125	0.270	0.200	0.270	0.180	0.229	0.154	0.312	0.219	-0.492	-0.921	-0.010	0.000	-0.005	-0.009
50 percentile	15.801	17.651	0.440	0.390	0.460	0.400	0.428	0.363	0.536	0.465	0.540	0.413	0.009	0.010	0.008	0.004
75 percentile	23.493	26.759	0.690	0.720	0.740	0.760	0.704	0.726	0.875	0.857	1.204	1.081	0.030	5.170	0.040	0.027
Maximum	75.000	80.853	2.400	2.945	3.670	6.320	5.327	6.317	6.395	9.562	12.600	13.775	5.220	0.000	5.085	5.246
	GAAP1-CORE		GAAP2-CORE		GAAP1-CE		GAAP2-CE		GAAP1-CF		GAAP2-CF		Price		ESIBES	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
Mean	0.030	-0.009	0.039	0.000	-0.106	-0.117	-0.097	-0.108	0.471	0.565	0.480	0.574	33.199	31.441	0.001	-0.002
sd	0.162	0.312	0.146	0.383	0.293	0.414	0.258	0.311	2.574	2.668	2.574	2.685	18.192	20.308	0.008	0.053
Minimum	-4.307	-4.342	-1.232	-5.241	-5.565	-8.562	-5.569	-8.556	-11.720	-14.126	-11.721	-14.524	1.300	1.410	-0.180	-1.754
25 percentile	-0.001	-0.004	0.000	-0.001	-0.126	-0.147	-0.109	-0.123	-0.671	-0.653	-0.644	-0.638	19.980	16.860	-0.001	-0.002
50 percentile	0.008	0.001	0.015	0.001	-0.050	-0.062	-0.041	-0.049	-0.124	-0.091	-0.119	-0.085	30.020	26.850	0.000	0.000
75 percentile	0.039	0.014	0.053	0.040	-0.006	-0.014	0.000	0.000	0.944	1.270	0.965	1.300	42.500	41.750	0.002	0.002
Maximum	2.415	3.843	2.567	5.065	4.298	5.157	4.301	2.326	17.324	16.298	17.480	16.299	148.360	138.640	0.119	0.800
	ESCORE		ESCE		ESCF		ESGAAP1		ESGAAP2		CAR					
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC				
Mean	-0.001	-0.003	0.004	-0.001	-0.015	-0.016	0.000	-0.004	0.001	-0.004	0.003	0.005				
sd	0.011	0.050	0.014	0.065	0.094	0.112	0.011	0.051	0.012	0.063	0.041	0.054				
Minimum	-0.223	-1.753	-0.220	-1.753	-1.072	-0.837	-0.210	-1.754	-0.206	-1.753	-0.171	-0.177				
25 percentile	-0.002	-0.003	0.001	0.000	-0.035	-0.052	-0.001	-0.003	-0.001	-0.003	-0.019	-0.027				
50 percentile	0.000	0.000	0.003	0.003	0.005	0.004	0.001	0.000	0.001	0.000	0.003	0.004				
75 percentile	0.002	0.002	0.006	0.007	0.022	0.023	0.002	0.002	0.003	0.003	0.025	0.037				
Maximum	0.122	0.799	0.197	0.803	0.743	1.202	0.121	0.794	0.193	0.802	0.178	0.177				

Panel B – Non-Financial Sector Sample (Pre-GFC: N = 22,169; Firms = 1,343 | GFC: N = 14,773; Firms = 1,334)

	BV		Forecast		IBES		CORE		CE		CF		GAAP1-IBES		GAAP2-IBES	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
Mean	10.102	13.135	0.307	0.403	0.318	0.420	0.259	0.360	0.522	0.665	0.047	-0.116	-0.002	0.245	-0.027	-0.068
sd	7.560	9.674	0.362	0.451	0.392	0.517	0.463	0.577	0.687	0.862	1.701	2.290	0.175	-6.910	0.298	0.459
Minimum	-24.031	-39.044	-1.770	-3.250	-5.700	-7.340	-5.532	-7.252	-10.232	-9.884	-14.891	-15.068	-5.690	-0.020	-10.758	-11.053
25 percentile	4.887	6.388	0.100	0.130	0.108	0.140	0.052	0.085	0.191	0.245	-0.285	-0.679	0.000	0.000	-0.019	-0.053
50 percentile	8.453	11.076	0.250	0.340	0.260	0.360	0.217	0.312	0.423	0.557	0.289	0.353	0.000	0.010	0.002	0.000
75 percentile	13.383	17.829	0.455	0.615	0.470	0.650	0.439	0.604	0.762	0.997	0.789	0.993	0.010	5.040	0.012	0.010
Maximum	67.871	87.682	3.430	3.745	5.140	4.500	5.376	6.297	9.166	9.381	13.848	14.376	5.020	0.000	4.633	5.095
	GAAP1-CORE		GAAP2-CORE		GAAP1-CE		GAAP2-CE		GAAP1-CF		GAAP2-CF		Price		ESIBES	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
Mean	0.057	0.039	0.032	-0.008	-0.206	-0.266	-0.231	-0.313	0.269	0.516	0.244	0.468	25.517	30.131	0.000	0.000
sd	0.198	0.224	0.222	0.339	0.469	0.566	0.401	0.408	1.685	2.312	1.710	2.366	16.009	20.710	0.009	0.017
Minimum	-3.367	-3.981	-10.425	-10.466	-9.066	-8.721	-9.940	-8.755	-14.028	-13.486	-14.033	-16.715	1.050	0.710	-0.773	-0.596
25 percentile	0.003	-0.003	0.000	-0.001	-0.302	-0.394	-0.309	-0.408	-0.425	-0.540	-0.451	-0.579	13.970	14.990	0.000	0.000
50 percentile	0.022	0.004	0.017	0.000	-0.139	-0.182	-0.153	-0.205	-0.095	-0.107	-0.102	-0.118	22.440	26.070	0.000	0.001
75 percentile	0.061	0.040	0.047	0.010	-0.051	-0.072	-0.063	-0.098	0.431	0.890	0.425	0.880	33.750	40.370	0.002	0.002
Maximum	5.888	4.609	5.501	5.086	10.824	10.424	7.650	5.254	15.211	16.687	16.381	16.687	160.300	167.900	0.077	0.510
	ESCORE		ESCE		ESCF		ESGAAP1		ESGAAP2		CAR					
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC				
Mean	-0.003	-0.003	0.009	0.008	-0.009	-0.014	0.000	-0.001	-0.002	-0.005	0.005	0.004				
sd	0.018	0.027	0.033	0.053	0.075	0.091	0.011	0.020	0.024	0.048	0.058	0.064				
Minimum	-0.631	-0.851	-1.108	-2.462	-1.567	-1.212	-0.340	-0.818	-1.056	-1.902	-0.178	-0.178				
25 percentile	-0.004	-0.004	0.003	0.003	-0.023	-0.043	-0.001	-0.002	-0.002	-0.003	-0.028	-0.035				
50 percentile	-0.001	0.000	0.007	0.008	0.005	0.005	0.001	0.000	0.000	0.000	0.004	0.003				
75 percentile	0.001	0.002	0.015	0.016	0.020	0.023	0.002	0.002	0.002	0.002	0.039	0.045				
Maximum	0.662	0.504	0.731	0.964	0.949	1.505	0.291	0.462	0.671	0.804	0.178	0.178				

Panel C – S&P 500 Sample (Pre-GFC: N = 6,620; Firms = 396 | GFC: N = 4,894; Firms = 442)

	BV		Forecast		IBES		CORE		CE		CF		GAAP1-IBES		GAAP2-IBES	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
Mean	13.303	16.606	0.502	0.632	0.519	0.656	0.446	0.580	0.783	0.968	0.072	-0.156	-0.003	0.287	-0.037	-0.077
sd	9.771	11.911	0.406	0.505	0.451	0.583	0.542	0.655	0.777	0.987	2.264	2.919	0.172	-3.540	0.336	0.521
Minimum	-5.838	-16.124	-1.000	-3.250	-5.700	-7.340	-5.532	-7.252	-10.232	-9.884	-14.129	-15.068	-2.920	-0.030	-10.758	-11.053
25 percentile	6.477	8.040	0.240	0.310	0.260	0.330	0.178	0.269	0.384	0.480	-0.525	-1.392	-0.010	0.000	-0.039	-0.076
50 percentile	10.761	13.570	0.425	0.550	0.440	0.578	0.386	0.506	0.658	0.831	0.542	0.620	0.002	0.020	0.003	0.001
75 percentile	17.272	22.235	0.660	0.885	0.690	0.930	0.654	0.859	1.069	1.351	1.149	1.349	0.020	5.170	0.017	0.016
Maximum	75.000	68.677	3.330	3.745	3.590	4.200	5.327	6.297	6.040	9.562	13.848	14.376	5.220	0.000	5.085	5.246

	GAAP1-CORE		GAAP2-CORE		GAAP1-CE		GAAP2-CE		GAAP1-CF		GAAP2-CF		Price		ESIBES	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
Mean	0.070	0.055	0.036	0.000	-0.267	-0.333	-0.302	-0.388	0.444	0.791	0.410	0.736	35.357	41.196	0.000	0.000
sd	0.231	0.278	0.268	0.404	0.536	0.657	0.449	0.489	2.237	2.932	2.269	2.986	18.020	23.054	0.006	0.012
Minimum	-4.307	-3.066	-10.425	-10.466	-5.790	-8.721	-5.903	-8.755	-14.028	-14.126	-14.033	-16.715	3.460	2.020	-0.250	-0.355
25 percentile	0.003	-0.003	0.000	-0.006	-0.404	-0.471	-0.417	-0.487	-0.582	-0.651	-0.618	-0.714	22.015	23.950	0.000	0.000
50 percentile	0.027	0.013	0.020	0.001	-0.186	-0.240	-0.202	-0.260	-0.157	-0.165	-0.168	-0.182	32.797	37.275	0.000	0.001
75 percentile	0.082	0.070	0.059	0.032	-0.067	-0.095	-0.087	-0.129	0.877	1.733	0.864	1.718	45.080	53.790	0.001	0.002
Maximum	4.160	4.609	4.252	5.086	10.824	10.424	5.546	5.254	15.138	16.687	15.136	16.687	148.400	162.890	0.046	0.185

	ESCORE		ESCE		ESCF		ESGAAP1		ESGAAP2		CAR	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
Mean	-0.003	-0.003	0.009	0.008	-0.013	-0.019	0.000	-0.001	-0.002	-0.004	0.004	0.003
sd	0.016	0.021	0.030	0.041	0.080	0.086	0.009	0.016	0.023	0.036	0.049	0.055
Minimum	-0.451	-0.851	-0.975	-0.884	-1.567	-1.051	-0.279	-0.584	-0.984	-0.930	-0.178	-0.178
25 percentile	-0.003	-0.003	0.003	0.003	-0.032	-0.055	-0.001	-0.001	-0.001	-0.003	-0.023	-0.029
50 percentile	-0.001	0.000	0.006	0.007	0.005	0.005	0.001	0.001	0.000	0.000	0.004	0.001
75 percentile	0.001	0.001	0.014	0.014	0.019	0.019	0.002	0.002	0.002	0.002	0.033	0.035
Maximum	0.112	0.208	0.423	0.964	0.815	1.123	0.076	0.151	0.193	0.370	0.178	0.178

Panel D – Non-S&P 500 Sample (Pre-GFC: N = 19,292; Firms = 1,271 | GFC: N = 12,774; Firms = 1,231)

	BV		Forecast		IBES		CORE		CE		CF		GAAP1-IBES		GAAP2-IBES	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
Mean	10.508	13.410	0.282	0.336	0.293	0.347	0.244	0.298	0.458	0.526	0.044	-0.102	-0.002	0.285	-0.017	-0.060
sd	7.948	9.771	0.345	0.407	0.389	0.500	0.450	0.545	0.621	0.760	1.676	2.076	0.193	-6.910	0.280	0.426
Minimum	-24.031	-39.044	-2.140	-2.340	-5.310	-6.140	-5.207	-6.684	-8.021	-9.583	-15.113	-14.618	-5.690	-0.020	-9.077	-10.522
25 percentile	4.930	6.573	0.090	0.098	0.090	0.100	0.046	0.055	0.171	0.176	-0.272	-0.573	0.000	0.000	-0.010	-0.038
50 percentile	8.704	11.502	0.230	0.280	0.240	0.290	0.206	0.254	0.377	0.443	0.262	0.283	0.000	0.010	0.003	0.001
75 percentile	14.157	18.206	0.425	0.520	0.440	0.550	0.416	0.519	0.672	0.828	0.739	0.860	0.013	5.040	0.014	0.010
Maximum	66.078	87.682	3.430	3.700	5.140	6.320	5.376	6.317	9.166	8.193	13.774	13.504	5.020	0.000	4.633	5.095
	GAAP1-CORE		GAAP2-CORE		GAAP1-CE		GAAP2-CE		GAAP1-CF		GAAP2-CF		Price		ESIBES	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
Mean	0.047	0.022	0.032	-0.010	-0.166	-0.206	-0.181	-0.238	0.248	0.422	0.233	0.390	23.631	26.189	0.000	0.000
sd	0.178	0.225	0.190	0.322	0.413	0.493	0.357	0.352	1.682	2.113	1.697	2.159	14.898	17.994	0.010	0.031
Minimum	-3.367	-4.342	-9.127	-10.390	-9.066	-8.185	-9.940	-8.000	-13.104	-13.334	-11.721	-13.306	1.050	0.710	-0.773	-1.754
25 percentile	0.002	-0.003	0.000	0.000	-0.241	-0.299	-0.246	-0.308	-0.411	-0.520	-0.428	-0.543	13.050	13.030	0.000	-0.001
50 percentile	0.018	0.002	0.016	0.000	-0.106	-0.131	-0.112	-0.144	-0.083	-0.088	-0.087	-0.094	20.900	22.825	0.000	0.001
75 percentile	0.052	0.024	0.043	0.008	-0.037	-0.049	-0.043	-0.059	0.417	0.784	0.414	0.788	30.945	35.150	0.002	0.003
Maximum	5.888	4.137	5.501	5.065	8.682	10.043	7.650	3.210	17.324	16.258	17.480	16.258	160.300	167.900	0.119	0.800
	ESCORE		ESCE		ESCF		ESGAAP1		ESGAAP2		CAR					
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC				
Mean	-0.003	-0.003	0.008	0.006	-0.009	-0.013	0.000	-0.002	-0.001	-0.005	0.005	0.005				
sd	0.018	0.035	0.031	0.060	0.078	0.098	0.011	0.031	0.023	0.056	0.058	0.065				
Minimum	-0.631	-1.753	-1.108	-2.462	-1.534	-1.212	-0.340	-1.754	-1.056	-1.902	-0.178	-0.178				
25 percentile	-0.004	-0.004	0.002	0.002	-0.023	-0.042	-0.001	-0.003	-0.002	-0.004	-0.028	-0.036				
50 percentile	-0.001	0.000	0.006	0.007	0.005	0.004	0.001	0.000	0.001	0.000	0.003	0.004				
75 percentile	0.001	0.002	0.013	0.014	0.021	0.024	0.002	0.003	0.002	0.002	0.038	0.047				
Maximum	0.662	0.799	0.731	0.804	0.949	1.505	0.291	0.794	0.671	0.804	0.178	0.178				

Notes: The variables are defined as follows: BV = Book value of common equity per share. Forecast = IBES median consensus forecasted earnings. IBES = IBES earnings per share as computed by security analysts. CORE = S&P Core earnings per share. CE = Net income per share, after adding back depreciation and amortisation expenses. CF = Operating cash flows per share. GAAP1 = Earnings per share from operations adjusted to exclude the effects of special items reported under GAAP. GAAP2 = Income

before extraordinary items per share reported under GAAP. Price = Share price at announcement date. ESIBES = IBES minus Forecast and scaled by closing share price at *t-7*. ESCORE = CORE minus Forecast and scaled by closing share price at *t-7*. ESCE = IBES minus Forecast and scaled by closing share price at *t-7*. ESCF = IBES minus Forecast and scaled by closing share price at *t-7*. ESGAAP1 = GAAP1 minus Forecast and scaled by closing share price at *t-7*. ESGAAP2 = GAAP2 minus Forecast and scaled by closing share price at *t-7*. CAR = Cumulative market-adjusted abnormal returns over a three-day window centred around the earnings announcement date.

Table 3
Ohlson Model: Financial Sector Sample
Multivariate OLS Regression Results at Earnings Announcement Date
(Pre-GFC: Firm cluster = 263 and Time cluster = 20; Post-GFC: Firm cluster = 260 and Time cluster = 16)

Model 1: $P_{it} = \alpha_0 + \beta_1 BV_{it} + \beta_2 Forecast_{it} + \beta_3 NonGAAPE_{it} + \beta_4 DIFF1 + \varepsilon_{it}$

Model 2: $P_{it} = \alpha_0 + \beta_1 BV_{it} + \beta_2 Forecast_{it} + \beta_3 NonGAAPE_{it} + \beta_4 DIFF2 + \varepsilon_{it}$

	IBES				**CORE**				**CE**				**CF**			
	Model 1		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**	
	Pre-GFC	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**
BV	0.688***	0.484***	0.683***	0.484***	0.681***	0.483***	0.663***	0.481***	0.633***	0.461***	0.633***	0.455***	0.678***	0.480***	0.676***	0.480***
	(5.86)	(5.13)	(5.80)	(5.14)	(5.85)	(5.18)	(5.72)	(5.16)	(5.87)	(5.10)	(5.86)	(5.08)	(5.91)	(5.20)	(5.87)	(5.19)
Forecast	13.473***	13.396***	13.036***	13.593***	15.958***	15.895***	16.027***	16.006***	15.675***	14.960***	14.517***	15.409***	16.022***	15.006***	14.847***	15.280***
	(3.63)	(4.39)	(3.45)	(4.38)	(4.65)	(5.79)	(4.75)	(5.83)	(4.76)	(5.62)	(4.55)	(5.68)	(4.76)	(5.58)	(4.57)	(5.58)
IBES	1.991	3.946**	2.427	3.673**												
	(1.06)	(2.76)	(1.25)	(2.67)												
CORE					-0.209	1.765	-0.077	1.508								
					(0.13)	(1.32)	(0.05)	(1.11)								
CE									0.407	2.772*	1.395	2.386*				
									(0.26)	(2.47)	(1.04)	(2.12)				
CF													-0.065	2.138	1.031	1.789
													(0.04)	(1.80)	(0.74)	(1.54)
DIFF1	-2.860	1.262			-0.695	4.789***			-8.532**	-1.278			-0.262	2.611*		
	(0.99)	(0.87)			(0.27)	(3.56)			(2.97)	(0.77)			(0.17)	(2.34)		
DIFF2			-0.610	0.820			5.670	3.435**			-8.226**	-4.065			0.835	2.260*
			(0.29)	(0.52)			(1.56)	(2.96)			(2.78)	(1.37)			(0.62)	(2.04)
Intercept	12.829***	13.138***	12.905***	13.128***	12.868***	13.069***	12.844***	13.118***	12.588***	13.015***	12.644***	12.842***	12.892***	13.098***	12.941***	13.111***
	(9.60)	(8.69)	(9.59)	(8.65)	(9.60)	(8.72)	(9.55)	(8.73)	(9.72)	(8.81)	(9.70)	(8.58)	(9.61)	(8.79)	(9.59)	(8.80)
Adj R^2	0.4681	0.4034	0.4667	0.4031	0.4653	0.403	0.4673	0.4019	0.4854	0.408	0.4836	0.4107	0.466	0.4049	0.4663	0.4046
BIC	30012	24189	30022	24191	30032	24191	30018	24196	29888	24166	29901	24154	30026	24182	30025	24183
BIC Rank																
- Pre-GFC	3		5		8		4		1		2		7		6	
- Post-GFC		5		6		7		8		2		1		3		4

t statistics in parentheses and calculated with standard errors clustered on firm and time. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The dependent variable, *P*, is closing share price at earnings announcement date. The independent variables are defined as follows: BV = Book value of common equity per share. Forecast = IBES median consensus forecasted earnings. IBES = IBES earnings per share as computed by security analysts. CORE = S&P Core earnings per share. CE = Net income per share, after adding back depreciation and amortisation expenses. CF = Operating cash flows per share. DIFF1 = GAAP1 minus the relevant non-GAAP earnings, where GAAP1 is earnings per share from operations adjusted to exclude the effects of special items reported under GAAP. DIFF2 = GAAP2 minus the relevant non-GAAP earnings, where GAAP2 is income before extraordinary items per share reported under GAAP.

Table 4
Ohlson Model: Non-Financial Sector Sample
Multivariate OLS Regression Results at Earnings Announcement Date
(Pre-GFC: Firm cluster = 1,343 and Time cluster = 20; Post-GFC: Firm cluster = 1,334 and Time cluster = 16)

Model 1: $P_{it} = \alpha_0 + \beta_1 BV_{it} + \beta_2 Forecast_{it} + \beta_3 NonGAAPE_{it} + \beta_4 DIFF1 + \varepsilon_{it}$

Model 2: $P_{it} = \alpha_0 + \beta_1 BV_{it} + \beta_2 Forecast_{it} + \beta_3 NonGAAPE_{it} + \beta_4 DIFF2 + \varepsilon_{it}$

	IBES				**CORE**				**CE**				**CF**			
	Model 1		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**	
	Pre-GFC	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**
BV	0.600***	0.468***	0.603***	0.470***	0.587***	0.467***	0.595***	0.468***	0.594***	0.438***	0.599***	0.442***	0.587***	0.450***	0.590***	0.453***
	(11.31)	(8.90)	(11.35)	(8.95)	(11.53)	(8.89)	(11.62)	(8.88)	(11.08)	(8.68)	(11.03)	(8.76)	(11.22)	(8.22)	(11.31)	(8.27)
Forecast	15.441***	23.994***	16.183***	24.585***	18.409***	24.623***	20.988***	25.718***	18.100***	24.535***	19.880***	24.842***	18.677***	25.337***	20.479***	25.808***
	(6.76)	(8.51)	(6.87)	(9.00)	(11.62)	(10.84)	(14.47)	(11.33)	(11.53)	(11.21)	(14.10)	(12.39)	(11.89)	(11.50)	(14.50)	(13.05)
IBES	5.579**	2.889	4.826*	2.285												
	(2.74)	(1.63)	(2.37)	(1.46)												
CORE					2.873**	2.303	0.228	1.19								
					(2.77)	(1.80)	(0.27)	(1.24)								
CE									2.998**	2.247	1.227**	1.960***				
									(2.87)	(1.84)	(3.00)	(3.60)				
CF													2.486*	1.286	0.68	0.796
													(2.36)	(1.03)	(1.45)	(1.26)
DIFF1	2.024	1.964			5.566***	2.328			2.807*	0.568			2.988**	2.255		
	(1.92)	(1.51)			(3.50)	(1.78)			(2.55)	(0.52)			(2.91)	(1.92)		
DIFF2			0.628	1.851***			2.715**	2.667***			1.121	0.483			1.179**	1.752***
			(1.60)	(3.50)			(2.85)	(6.51)			(1.62)	(0.55)			(2.88)	(3.39)
Intercept	12.938***	13.135***	12.938***	13.203***	12.870***	13.146***	12.911***	13.206***	12.965***	13.142***	12.977***	13.154***	12.929***	12.994***	12.941***	13.050***
	(19.62)	(16.58)	(19.66)	(16.87)	(19.37)	(16.63)	(19.36)	(16.86)	(19.74)	(16.86)	(19.85)	(16.68)	(19.64)	(17.37)	(19.67)	(17.65)
Adj R^2	0.4616	0.526	0.4612	0.5272	0.462	0.526	0.4612	0.5275	0.461	0.5278	0.4604	0.5278	0.4637	0.5373	0.4631	0.5382
BIC	172191	120480	172204	120443	172171	120482	172207	120435	172214	120423	172240	120423	172103	120124	172129	120095
BIC Rank																
- Pre-GFC	4		5		3		6		7		8		1		2	
- Post-GFC		7		6		8		5		3		3		2		1

t statistics in parentheses and calculated with standard errors clustered on firm and time. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The dependent variable, *P*, is closing share price at earnings announcement date. The independent variables are defined as follows:

BV = Book value of common equity per share. Forecast = IBES median consensus forecasted earnings. IBES = IBES earnings per share as computed by security analysts. CORE = S&P Core earnings per share. CE = Net income per share, after adding back depreciation and amortisation expenses. CF = Operating cash flows per share. DIFF1 = GAAP1 minus the relevant non-GAAP earnings, where GAAP1 is earnings per share from operations adjusted to exclude the effects of special items reported under GAAP. DIFF2 = GAAP2 minus the relevant non-GAAP earnings, where GAAP2 is income before extraordinary items per share reported under GAAP.

Table 5
Ohlson Model: S&P 500 Sample
Multivariate OLS Regression Results at Earnings Announcement Date
(Pre-GFC: Firm cluster = 396 and Time cluster = 20; Post-GFC: Firm cluster = 442 and Time cluster = 16)

Model 1: $P_{it} = \alpha_0 + \beta_1 BV_{it} + \beta_2 Forecast_{it} + \beta_3 NonGAAPE_{it} + \beta_4 DIFF1 + \varepsilon_{it}$

Model 2: $P_{it} = \alpha_0 + \beta_1 BV_{it} + \beta_2 Forecast_{it} + \beta_3 NonGAAPE_{it} + \beta_4 DIFF2 + \varepsilon_{it}$

	IBES				**CORE**				**CE**				**CF**			
	Model 1		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**	
	Pre-GFC	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**
BV	0.351***	0.344***	0.351***	0.342***	0.349***	0.343***	0.345***	0.340***	0.354***	0.314***	0.360***	0.317***	0.346***	0.332***	0.344***	0.330***
	(4.53)	(4.36)	(4.50)	(4.35)	(4.55)	(4.38)	(4.51)	(4.34)	(4.57)	(4.14)	(4.75)	(4.06)	(4.33)	(4.21)	(4.31)	(4.18)
Forecast	22.535***	20.569***	23.370***	21.878***	20.941***	20.966***	23.189***	23.411***	20.793***	20.966***	22.243***	22.887***	21.280***	21.636***	22.736***	23.832***
	(10.35)	(5.56)	(9.97)	(5.44)	(8.23)	(7.90)	(9.45)	(8.15)	(8.18)	(8.64)	(10.33)	(9.84)	(8.12)	(8.90)	(10.30)	(10.37)
IBES	1.599	5.477*	0.822	4.218												
	(0.94)	(2.50)	(0.39)	(1.73)												
CORE					3.249*	5.101**	1.12	2.768								
					(2.28)	(2.93)	(0.82)	(1.83)								
CE									3.290*	5.015**	1.930**	3.216***				
									(2.31)	(3.08)	(3.00)	(4.32)				
CF													2.919	4.187**	1.530*	2.103**
													(1.93)	(2.80)	(2.16)	(2.90)
DIFF1	4.791*	4.982*			4.983*	5.491*			3.306*	3.123			3.304*	5.144***		
	(2.05)	(2.11)			(2.14)	(2.49)			(1.96)	(1.83)			(2.26)	(3.48)		
DIFF2			2.244**	2.989***			3.224**	3.582***			2.566*	1.617			1.904**	3.043***
			(2.99)	(3.54)			(2.76)	(4.05)			(1.97)	(1.05)			(2.89)	(4.53)
Intercept	18.549***	19.002***	18.614***	19.144***	18.401***	18.992***	18.510***	19.149***	18.508***	18.917***	18.656***	18.982***	18.391***	18.595***	18.470***	18.745***
	(17.15)	(13.33)	(17.34)	(13.58)	(17.07)	(13.34)	(17.34)	(13.57)	(17.18)	(13.46)	(17.31)	(13.17)	(17.09)	(13.55)	(17.26)	(13.82)
Adj R^2	0.4614	0.4746	0.4611	0.4755	0.4614	0.4746	0.4617	0.4755	0.4609	0.4772	0.4612	0.4764	0.4632	0.4891	0.4631	0.4894
BIC	53013	41489	53016	41481	53013	41489	53010	41481	53019	41465	53015	41473	52991	41353	52992	41350
BIC Rank																
- Pre-GFC	4		7		4		3		8		6		1		2	
- Post-GFC		7		5		7		5		3		4		2		1

t statistics in parentheses and calculated with standard errors clustered on firm and time. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The dependent variable, *P*, is closing share price at earnings announcement date. The independent variables are defined as follows:

BV = Book value of common equity per share. Forecast = IBES median consensus forecasted earnings. IBES = IBES earnings per share as computed by security analysts. CORE = S&P Core earnings per share. CE = Net income per share, after adding back depreciation and amortisation expenses. CF = Operating cash flows per share. DIFF1 = GAAP1 minus the relevant non-GAAP earnings, where GAAP1 is earnings per share from operations adjusted to exclude the effects of special items reported under GAAP. DIFF2 = GAAP2 minus the relevant non-GAAP earnings, where GAAP2 is income before extraordinary items per share reported under GAAP.

Table 6
Ohlson Model: Non-S&P 500 Sample
Multivariate OLS Regression Results at Earnings Announcement Date
(Pre-GFC: Firm cluster = 1,271 and Time cluster = 20; Post-GFC: Firm cluster = 1,231 and Time cluster = 16)

Model 1: $P_{it} = \alpha_0 + \beta_1 BV_{it} + \beta_2 Forecast_{it} + \beta_3 NonGAAPE_{it} + \beta_4 DIFF1 + \varepsilon_{it}$

Model 2: $P_{it} = \alpha_0 + \beta_1 BV_{it} + \beta_2 Forecast_{it} + \beta_3 NonGAAPE_{it} + \beta_4 DIFF2 + \varepsilon_{it}$

	IBES				**CORE**				**CE**				**CF**			
	Model 1		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**	
	Pre-GFC	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**
BV	0.713***	0.459***	0.712***	0.460***	0.706***	0.457***	0.710***	0.459***	0.700***	0.434***	0.700***	0.421***	0.708***	0.446***	0.710***	0.448***
	(13.56)	(8.83)	(13.70)	(8.87)	(13.56)	(8.75)	(13.92)	(8.84)	(13.30)	(8.37)	(13.24)	(7.88)	(13.51)	(8.94)	(13.70)	(8.97)
Forecast	11.257***	19.210***	11.018***	19.410***	15.068***	20.640***	15.786***	21.396***	14.615***	20.288***	14.537***	20.406***	14.982***	20.914***	14.810***	21.172***
	(5.62)	(8.82)	(5.50)	(9.23)	(9.48)	(9.64)	(10.37)	(10.18)	(9.31)	(10.06)	(9.66)	(10.36)	(9.48)	(10.11)	(9.81)	(10.62)
IBES	4.417**	3.026*	4.647**	2.804*												
	(2.74)	(2.47)	(2.97)	(2.56)												
CORE					0.893	1.741	0.077	0.898								
					(1.00)	(1.72)	(0.10)	(1.17)								
CE									1.143	1.870*	1.219*	1.744**				
									(1.31)	(2.16)	(2.32)	(3.15)				
CF													0.843	1.15	0.937	0.832
													(0.91)	(1.06)	(1.58)	(1.15)
DIFF1	-0.565	0.954			2.503	2.686*			-0.058	-0.732			1.027	1.855		
	(-0.61)	(0.89)			(1.85)	(2.24)			(-0.06)	(-0.70)			(1.18)	(1.91)		
DIFF2			0.242	1.19			3.200**	2.502***			0.053	-2.031			1.121*	1.527**
			(0.43)	(1.75)			(2.94)	(5.11)			(0.07)	(-1.72)			(2.12)	(2.59)
Intercept	11.671***	12.545***	11.683***	12.587***	11.633***	12.543***	11.603***	12.601***	11.626***	12.412***	11.629***	12.278***	11.680***	12.504***	11.692***	12.549***
	(18.09)	(16.13)	(18.11)	(16.31)	(17.80)	(16.16)	(17.66)	(16.33)	(18.33)	(16.57)	(18.46)	(16.27)	(18.12)	(16.58)	(18.13)	(16.76)
Adj R^2	0.4473	0.4497	0.4473	0.4503	0.4458	0.4492	0.4468	0.4503	0.4464	0.4539	0.4464	0.4548	0.4458	0.4556	0.4461	0.4562
BIC	147578	102498	147579	102485	147632	102510	147595	102484	147608	102400	147608	102379	147630	102360	147619	102345
BIC Rank																
- Pre-GFC	1		2		8		3		4		4		7		6	
- Post-GFC		7		6		8		5		4		3		2		1

t statistics in parentheses and calculated with standard errors clustered on firm and time. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The dependent variable, *P,* is closing share price at earnings announcement date. The independent variables are defined as follows: BV = Book value of common equity per share. Forecast = IBES median consensus forecasted earnings. IBES = IBES earnings per share as computed by security analysts. CORE = S&P Core earnings per share. CE = Net income per share, after adding back depreciation and amortisation expenses. CF = Operating cash flows per share. DIFF1 = GAAP1 minus the relevant non-GAAP earnings, where GAAP1 is earnings per share from operations adjusted to exclude the effects of special items reported under GAAP. DIFF2 = GAAP2 minus the relevant non-GAAP earnings, where GAAP2 is income before extraordinary items per share reported under GAAP.

Table 7
CAR Model: Financial Sector Sample
Multivariate OLS Regression Results - 3-Day Window Centred around Earnings Announcement Date
(Pre-GFC: Firm cluster = 263 and Time cluster = 20; Post-GFC: Firm cluster = 260 and Time cluster = 16)

Model 3: $CAR_i = \alpha_0 + \beta_1 ESNonGAAP_i + \beta_2 ESGAAP1_i + \varepsilon_i$

Model 4: $CAR_i = \alpha_0 + \beta_1 ESNonGAAP_i + \beta_2 ESGAAP2_i + \varepsilon_i$

	ESIBES				**ESCORE**				**ESCE**				**ESCF**			
	Model 3		**Model 4**		**Model 3**		**Model 4**		**Model 3**		**Model 4**		**Model 3**		**Model 4**	
	Pre-GFC	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**
ESIBES	0.495*	0.018	0.567**	-0.018												
	(2.31)	(1.05)	(2.59)	(-0.82)												
ESCORE					0.173	0.017	0.357*	0.064								
					(1.44)	(0.33)	(2.06)	(1.51)								
ESCE									0.149*	0.021	0.191*	-0.121				
									(2.37)	(0.60)	(2.44)	(-1.59)				
ESCF													0.009	0.024*	0.009	0.023*
													(0.58)	(2.41)	(0.55)	(2.27)
ESGAAP1	0.327**	0.124***			0.405***	0.122*			0.416***	0.116**			0.550***	0.140***		
	(2.88)	(4.90)			(3.39)	(2.30)			(4.70)	(2.58)			(6.10)	(5.69)		
ESGAAP2			0.222*	0.123***			0.165	0.068*			0.268*	0.232***			0.446***	0.111***
			(2.01)	(4.58)			(0.94)	(2.04)			(2.42)	(3.43)			(5.40)	(6.02)
Intercept	0.003	0.005**	0.003	0.005**	0.003	0.005**	0.003*	0.005**	0.002	0.005**	0.002	0.005***	0.003	0.005***	0.003	0.005***
	(1.73)	(2.90)	(1.70)	(2.90)	(1.95)	(2.91)	(1.98)	(2.88)	(1.52)	(2.90)	(1.47)	(3.34)	(1.87)	(3.53)	(1.83)	(3.50)
Adj R^2	0.0284	0.0168	0.0263	0.0158	0.0228	0.0167	0.0200	0.0167	0.0234	0.0169	0.0193	0.0172	0.0226	0.0191	0.0184	0.0181
BIC	-13413	-8733	-13405	-8730	-13392	-8732	-13381	-8733	-13394	-8733	-13379	-8734	-13391	-8740	-13375	-8737
BIC Rank																
- Pre-GFC	1		2		4		6		3		7		5		8	
- Post-GFC		4		8		7		4		4		3		1		2

t statistics in parentheses and calculated with standard errors clustered on firm and time. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The dependent variable, *CAR*, is the cumulative market-adjusted abnormal returns over a three-day window centred around the earnings announcement date. Other variables are defined as follows: ESIBES = IBES minus Forecast. ESCORE = CORE minus Forecast. ESCE = IBES minus Forecast. ESCF = IBES minus Forecast.

ESGAAP1 = GAAP1 minus Forecast, where GAAP1 is earnings per share from operations adjusted to exclude the effects of special items reported under GAAP. ESGAAP2 = GAAP2 minus Forecast, where GAAP2 is income before extraordinary items per share reported under GAAP. All earnings minus forecast variables are scaled by share price at *t*-7

Table 8
CAR Model: Non-Financial Sector Sample
Multivariate OLS Regression Results - 3-Day Window Centred on Earnings Announcement Date
(Pre-GFC: Firm cluster = 1,343 and Time cluster = 20; Post-GFC: Firm cluster = 1,334 and Time cluster = 16)

Model 3: $CAR_i = \alpha_0 + \beta_1 ESNonGAAP_i + \beta_2 ESGAAP1_i + \varepsilon_i$

Model 4: $CAR_i = \alpha_0 + \beta_1 ESNonGAAP_i + \beta_2 ESGAAP2_i + \varepsilon_i$

	ESIBES				**ESCORE**				**ESCE**				**ESCF**			
	Model 3		**Model 4**		**Model 3**		**Model 4**		**Model 3**		**Model 4**		**Model 3**		**Model 4**	
	Pre-GFC	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**	**Pre-GFC**	**Post-GFC**
ESIBES	0.556**	0.277**	0.695***	0.353**												
	(3.10)	(3.06)	(3.48)	(3.28)												
ESCORE					-0.031	0.054	0.194***	0.257***								
					(-0.84)	(1.07)	(4.37)	(5.22)								
ESCE									-0.008	-0.022	0.004	0.014				
									(-0.45)	(-1.19)	(0.25)	(0.55)				
ESCF													0.006	0.019*	0.007	0.020**
													(0.64)	(2.22)	(0.80)	(2.60)
ESGAAP1	0.354***	0.182**			0.542***	0.222**			0.516***	0.311***			0.507***	0.280**		
	(3.59)	(3.27)			(4.82)	(2.61)			(4.59)	(3.70)			(4.46)	(3.13)		
ESGAAP2			-0.003	0.009			-0.010	-0.055**			0.093*	0.043			0.098*	0.059
			(-0.12)	(0.44)			(-0.31)	(-2.61)			(2.37)	(0.77)			(2.57)	(1.44)
Intercept	0.005***	0.004***	0.005***	0.004***	0.005***	0.005***	0.006***	0.005***	0.005***	0.005***	0.005***	0.004***	0.005***	0.005***	0.005***	0.005***
	(5.97)	(4.83)	(5.89)	(4.44)	(6.10)	(5.23)	(6.37)	(5.32)	(6.04)	(5.77)	(6.31)	(4.88)	(6.04)	(5.08)	(6.08)	(5.00)
Adj R^2	0.0159	0.0120	0.0120	0.0094	0.0090	0.0077	0.0032	0.0063	0.0090	0.0077	0.0015	0.0017	0.0090	0.0082	0.0016	0.0025
BIC	-63542	-39307	-63454	-39267	-63387	-39242	-63259	-39222	-63387	-39242	-63220	-39154	-63387	-39250	-63222	-39165
BIC Rank																
- Pre-GFC	1		2		3		6		3		8		3		7	
- Post-GFC		1		2		4		6		4		8		3		7

t statistics in parentheses and calculated with standard errors clustered on firm and time. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The dependent variable, *CAR*, is the cumulative market-adjusted abnormal returns over a three-day window centred around the earnings announcement date. Other variables are defined as follows: ESIBES = IBES minus Forecast. ESCORE = CORE minus Forecast. ESCE = IBES minus Forecast. ESCF = IBES minus Forecast.

ESGAAP1 = GAAP1 minus Forecast, where GAAP1 is earnings per share from operations adjusted to exclude the effects of special items reported under GAAP. ESGAAP2 = GAAP2 minus Forecast, where GAAP2 is income before extraordinary items per share reported under GAAP. All earnings minus forecast variables are scaled by share price at *t*-7

Table 9
CAR Model: S&P 500 Sample
Multivariate OLS Regression Results - 3-Day Window Centred on Earnings Announcement Date
(Pre-GFC: Firm cluster = 396 and Time cluster = 20; Post-GFC: Firm cluster = 442 and Time cluster = 16)

Model 3: $CAR_i = \alpha_0 + \beta_1 ESNonGAAP_i + \beta_2 ESGAAP1_i + \varepsilon_i$

Model 4: $CAR_i = \alpha_0 + \beta_1 ESNonGAAP_i + \beta_2 ESGAAP2_i + \varepsilon_i$

	ESIBES				ESCORE				ESCE				ESCF			
	Model 3		Model 4		Model 3		Model 4		Model 3		Model 4		Model 3		Model 4	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
ESIBES	0.632	0.334***	0.979*	0.400**												
	(1.42)	(3.33)	(2.35)	(2.79)												
ESCORE					0.019	0.144**	0.362***	0.271***								
					(0.19)	(2.70)	(4.97)	(3.56)								
ESCE									-0.056*	-0.012	-0.026	-0.036				
									(-2.22)	(-1.08)	(-0.69)	(-0.89)				
ESCF													0.007	0.016	0.011	0.016
													(0.55)	(1.41)	(0.77)	(1.38)
ESGAAP1	0.360**	0.102			0.567***	0.138			0.652***	0.264			0.586***	0.251		
	(2.63)	(0.63)			(3.46)	(0.89)			(6.10)	(1.74)			(5.54)	(1.66)		
ESGAAP2			-0.029	0.012			-0.128***	-0.056			0.080	0.093*			0.057	0.058*
			(-0.48)	(0.52)			(-4.30)	(-1.24)			(0.90)	(2.43)			(0.73)	(2.20)
Intercept	0.004***	0.002*	0.004***	0.002*	0.004***	0.003**	0.005***	0.003**	0.005***	0.003**	0.005***	0.003**	0.004***	0.003**	0.005***	0.003**
	(3.84)	(2.19)	(3.61)	(2.09)	(3.98)	(2.72)	(4.50)	(2.71)	(4.67)	(2.59)	(4.55)	(2.86)	(4.13)	(2.61)	(4.22)	(2.60)
Adj R^2	0.0167	0.0083	0.0136	0.0077	0.0125	0.0069	0.0074	0.0065	0.0135	0.0048	0.0005	0.0013	0.0126	0.0054	0.0007	0.0017
BIC	-21250	-14472	-21229	-14470	-21222	-14465	-21188	-14463	-21229	-14455	-21142	-14438	-21222	-14458	-21143	-14440
BIC Rank																
- Pre-GFC	1		2		4		6		2		8		4		7	
- Post-GFC		1		2		3		4		6		8		5		7

t statistics in parentheses and calculated with standard errors clustered on firm and time. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The dependent variable, *CAR*, is the cumulative market-adjusted abnormal returns over a three-day window centred around the earnings announcement date. Other variables are defined as follows: ESIBES = IBES minus Forecast. ESCORE = CORE minus Forecast. ESCE = IBES minus Forecast. ESCF = IBES minus Forecast.

ESGAAP1 = GAAP1 minus Forecast, where GAAP1 is earnings per share from operations adjusted to exclude the effects of special items reported under GAAP. ESGAAP2 = GAAP2 minus Forecast, where GAAP2 is income before extraordinary items per share reported under GAAP. All earnings minus forecast variables are scaled by share price at *t*-7

Table 10
CAR Model: Non-S&P 500 Sample
Multivariate OLS Regression Results - 3-Day Window Centred on Earnings Announcement Date
(Pre-GFC: Firm cluster = 1,271 and Time cluster = 20; Post-GFC: Firm cluster = 1,231 and Time cluster = 16)

Model 3: $CAR_i = \alpha_0 + \beta_1 ESNonGAAP_i + \beta_2 ESGAAP1_i + \varepsilon_i$

Model 4: $CAR_i = \alpha_0 + \beta_1 ESNonGAAP_i + \beta_2 ESGAAP2_i + \varepsilon_i$

	ESIBES				ESCORE				ESCE				ESCF			
	Model 3		Model 4		Model 3		Model 4		Model 3		Model 4		Model 3		Model 4	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
ESIBES	0.539***	0.098**	0.658***	0.159***												
	(3.29)	(2.78)	(3.64)	(3.97)												
ESCORE					-0.045	0.030	0.155***	0.181***								
					(-0.90)	(0.48)	(3.45)	(5.40)								
ESCE									0.012	-0.005	0.023	0.017				
									(0.56)	(-0.22)	(1.08)	(0.51)				
ESCF													0.006	0.021**	0.007	0.022***
													(0.69)	(3.11)	(0.78)	(3.48)
ESGAAP1	0.340***	0.136***			0.543***	0.166**			0.485***	0.201***			0.496***	0.197***		
	(3.65)	(4.00)			(5.74)	(2.98)			(4.64)	(5.60)			(4.63)	(5.27)		
ESGAAP2			0.013	0.023			0.040	-0.019			0.110*	0.055			0.131**	0.075
			(0.53)	(0.86)			(1.32)	(-0.71)			(2.51)	(0.91)			(2.80)	(1.91)
Intercept	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.006***
	(6.07)	(6.12)	(6.03)	(5.83)	(6.12)	(6.11)	(6.39)	(6.22)	(5.80)	(6.28)	(6.05)	(5.99)	(6.04)	(6.26)	(6.11)	(6.29)
Adj R^2	0.0169	0.0098	0.0129	0.0074	0.0095	0.0086	0.0034	0.0071	0.0094	0.0085	0.0025	0.0037	0.0094	0.0095	0.0026	0.0047
BIC	-55277	-33556	-55200	-33525	-55132	-33540	-55016	-33520	-55131	-33539	-54998	-33477	-55132	-33551	-54998	-33490
BIC Rank																
- Pre-GFC	1		2		3		6		5		7		3		7	
- Post-GFC		1		5		3		6		4		8		2		7

t statistics in parentheses and calculated with standard errors clustered on firm and time. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The dependent variable, *CAR*, is the cumulative market-adjusted abnormal returns over a three-day window centred around the earnings announcement date. Other variables are defined as follows: ESIBES = IBES minus Forecast. ESCORE = CORE minus Forecast. ESCE = IBES minus Forecast. ESCF = IBES minus Forecast. ESGAAP1 = GAAP1 minus Forecast, where GAAP1 is earnings per share from operations adjusted to exclude the effects of special items reported under GAAP. ESGAAP2 = GAAP2 minus Forecast, where GAAP2 is income before extraordinary items per share reported under GAAP. All earnings minus forecast variables are scaled by share price at *t*-7

Table 11
Summary of BIC Ranking by Model and Sample

Panel A - Ohlson Model

Earnings Measure	Financial				Non-Financial				S&P 500				Non-S&P 500			
	DIFF1		DIFF2		DIFF1		DIFF2		DIFF1		DIFF2		DIFF1		DIFF2	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
IBES	3	5	5	6	4	7	5	6	4	7	7	5	1	7	2	6
CORE	8	6	4	8	3	8	6	5	4	7	3	5	8	8	3	5
CE	1	2	2	1	7	3	8	3	8	3	6	4	4	4	4	3
CF	7	3	6	4	1	2	2	1	1	2	2	1	7	2	6	1

Panel B - CAR Model

Earnings Measure	Financial				Non-Financial				S&P 500				Non-S&P 500			
	ESGAAP1		ESGAAP2		ESGAAP1		ESGAAP2		ESGAAP1		ESGAAP2		ESGAAP1		ESGAAP2	
	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC	Pre-GFC	Post-GFC
ESIBES	1	4	2	8	1	1	2	2	1	1	2	2	1	1	2	5
ESCORE	4	7	6	4	3	4	6	6	4	3	6	4	3	3	6	6
ESCE	3	4	7	3	3	4	8	8	2	6	8	8	5	4	7	8
ESCF	5	1	8	2	3	3	7	7	4	5	7	7	3	2	7	7

IBES = IBES earnings per share as computed by security analysts. CORE = S&P Core earnings per share. CE = Net income per share, after adding back depreciation and amortisation expenses. CF = Operating cash flows per share. DIFF1 = GAAP1 minus the relevant non-GAAP earnings, where GAAP1 is earnings per share from operations adjusted to exclude the effects of special items reported under GAAP. DIFF2 = GAAP2 minus the relevant non-GAAP earnings, where GAAP2 is income before extraordinary items per share reported under GAAP. ESIBES = IBES minus Forecast. ESCORE = CORE minus Forecast. ESCE = IBES minus Forecast. ESCF = IBES minus Forecast. ESGAAP1 = GAAP1 minus Forecast. ESGAAP2 = GAAP2 minus Forecast. Forecast = IBES median consensus forecasted earnings. All earnings minus forecast variables are scaled by share price at t-7