International Financial Accounting Standards and Market Synchronicity

Abstract

This paper takes advantage of the unique Australian accounting environment to test for the information effects after the mandatory introduction of IFRS in 2005. We report an increase in stock synchronicity suggesting less reliance on firm specific information. This result both suggests increased comparability because of higher quality accounting, or a flight away from firm specific accounting reports to wider industry or macro cues. Subsequent tests of financial analysts show lower forecast errors after IFRS lending support towards an increased information environment.

1. Introduction

Market synchronicity is the degree to which stock prices are driven by market and industry wide information (Morck *et al*. 2000). Dasgupta *et al*. (2009) predict that synchronicity will decrease as more firm specific information becomes available to the marketplace and a firm's share price switches reliance more to firm based information. This paper investigates how the mandatory adoption in Australia from January 2005 of International Financial Reporting Standards (IFRS), affected information flow from financial accounting to share market investors.

The International Accounting Standards Board (IASB) argues that IFRS will increase information flow not only directly for firms but also on a market wide macro basis (Barth 2006, Daske 2006, Schipper 2005). That is, IFRS is claimed to increase (i) accounting quality and idiosyncratic information flow at the firm level, and (ii) comparability across firms and hence greater synchronicity of information flow. The IASB claim of increased synchronicity from IFRS is based on a higher quality more comparable argument; induced by limiting allowable alternative accounting rules and by the use of contemporary fair values that reflect fundamental value (Shridar 2004, Ding *et al*. 2007, Barth et al. 2008, Beuselinck et al. 2009).[1] As a result, individual firm reports become more reliable and understandable and more able to be extrapolated across industry and the market. However, the broad claim of increased information flow to a wide set of users may be tentative. Whittington (2008) argues that, whilst having a high level of firm relevance,

[1] Fair value measurement was introduced with an explicit reference to a clearly stated reporting objective: the provision of information to investors to enable them to assess the amounts, timing and uncertainty of future cash flows from an investment in a firm's shares or debt securities (SFAC No. 1, para. 37; IASB Framework, para. 15).

fair value has lower macro comparability because of its subjective and specific nature. Further, Laux and Leuz (2009) ask whether IFRS fair value accounting has contagion effects, causing overreaction of market participants to increased fair values that, in turn, reduces the market wide reliability of financial accounting (Plantin *et al*., 2008; Carletti and Allen, 2008).[2] Others argue that it significantly reduced the firm specific information content compared to prior financial accounting reports (Matolcsy and Wyatt, 2006; Ritter and Wells, 2006). In essence, is there a trade-off between economy wide comparability and increased firm specific information induced by IFRS?

Our study makes several contributions. First, we concentrate on the dynamic changes in the synchronicity of information flows from IFRS in contrast with prior studies that concentrate on *firm specific* information flow effects of IFRS in Europe. We directly examine the market wide comparability claims of the IASB for IFRS. Second, we analyze Australian data that provides a unique research setting. Australia was considered a leader in adopting variants of fair value accounting and had already established a system of accounting aimed at investor decision making (Collett *et al.*, 2001) prior to IFRS. In addition, Australia was an early leader in harmonization, had strong institutions and low manipulation incentives (Leuz *et al*., 2003; Bushman and Piotroski, 2006), and strong enforcement[3] (Jones and Wolnizer, 2003). This contrasts with the EU where there was a

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[2] Even exacerbating the severity of the recent financial crises in the US and around the world (Laux and Leuz, 2009).

[3] To ensure consistent application of IASB standards, CLERP 9 (p. 105) recommended that Australia adopt, from January 2005, official interpretations of IASB standards issued by the IASB's International Financial Reporting Interpretations Committee (IFRIC). This in contrast to other countries where IFRS enforcement is less pronounced (e.g. Sweden), making it more difficult to examine the effect of the change in accounting standards (Jeanjean and Stolowy, 2008).

wider variety of accounting practice, the opportunity to voluntarily adopt IFRS at an early stage and inconsistent applications across systems (Soderstrom *et al*. 2007). Thus, by maintaining the institutional and geographical environment context constant, we remove any sample selection bias of pre-IFRS voluntarily adopters and the confounding effects of differential regulatory and accounting regimes (JeanJean and Stolowy, 2008).

We first outline three hypotheses that are related to synchronistic information: the firm specific hypothesis that predicts a permanent drop in synchronistic information; the synchronistic hypothesis that predicts a permanent increase; and the IFRS hypothesis that predicts an initial decrease followed by an increase in synchronicity. We document a higher level of market synchronicity after IFRS in a pooled sample and similar results across a sample decomposed by industry. We then question whether this is caused by more comparable and higher quality firm reports under IFRS or possibly by lower quality firm reports because of greater subjectivity. A subsequent analysis shows that analyst forecast errors have decreased after IFRS indicating a richer information environment.

The paper now progresses as follows. Section two contains a background to the study and outlines three hypotheses with relation to the impact of IFRS on the information environment. Section three outlines the data and model used, section four reports the results and section five contains the conclusion.

2. Background and research hypotheses

2.1 Background

In Australia, listed companies are obligated to prepare their consolidated accounts in conformity with IFRS as at the balance sheet date for financial years starting on or after the

first of January 2005. The introduction of a uniform IFRS accounting regime was expected to increase comparability, quality and transparency of financial reporting around the world (Daske, 2006; Schipper, 2005). IFRS as a principle-based system means that principles, such as investor relevance, would provide guidance to accounting choice but also offer the accountant flexibility to adapt reporting to their unique economic settings (Lundqvist, 2008; Schipper, 2005). In theory, this should lead to a higher association between stock prices and financial reports and a 'truer' estimate of fundamental value. In Australia, the transition to IFRS has been labeled as one of the most important events in financial accounting (Kent and Stewart, 2008).

Australia provides an interesting and unique research environment to examine the information effects of IFRS for several reasons. First, the early adoption of IFRS prior to 2005 was not allowed when compared to the EU experience, thus mitigating the problem of a layered introduction with differential incentives and impacts. Second, Australia has common institutional factors, and compared to the EU, defuses the need to control for numerous regulatory and accounting settings. Third, there is debate that IFRS had little or no impact in Australia. Pre-IFRS Australia arguably had a higher harmonization with International Accounting Standards than any other country with an established standard setting regime (Collet *et al*., 2001) and, as a common law country, has strong investor protection (Leuz *et al*., 2003). This resulted in an already established high quality accounting reporting regime. Christensen *et al.* (2009) argues that in countries that have well-developed, well-regulated, and are dominated by equity-based financing, a transition to IFRS is unlikely to improve the available information set. Finally, some Australian researchers even contend that the move to IFRS has significantly reduced the firm specific information content available to investors and financial analysts (Matolcsy and Wyatt,

2006; Ritter and Wells, 2006). We now outline several possible information impact hypotheses.

2.2 Hypotheses development

The relative mix and source of information disclosure can have important implications for investor and analyst search activities, the information efficiency of markets, and the extent of market regulation. Stock price determination depends on information obtained from several sources including firm specific or more widely from industry or macro sources (Roll, 1988). There are several theories as to how the relative information mix will affect firm stock price. For example, given an opaque firm environment, price setting will tend to rely more on industry and market wide sources (that is on a higher level of stock synchronicity).[4] On the other hand, if a firm is relatively transparent then more reliance may be placed on firm specific information. Financial accounting, as a major source of firm specific information, plays a strategic role in the relative reliance on information.

2.2.1 The firm transparency hypothesis: According to Barth (2006) the adoption of IFRS results in the recognition of estimates of future cash flows in current financial reports, which then leads to a higher firm specific price informativeness. Further, Dye and Shridar (2004) contend that a move to an accounting regime that allows for the recognition of estimates of future cash flows lead to an increase in the weight given to that information in

[4] The extent to which total stock return volatility is explained by variation in industry-level or market-level return is referred to as systematic volatility, and the remaining volatility is referred to as idiosyncratic volatility. Given this definition, greater idiosyncratic volatility also implies lesser synchronicity (Beuselinck *et al*, 2009).

setting prices. In addition, according to Daske *et al*. (2008) and Barth *et al*., (2008), IFRS reports reduce the amount of reporting discretion relative to local GAAP's, hence reducing the amount of discretion and improving information quality. Before the adoption of IFRS, there would be a relatively high level of stock synchronicity caused by the low quality of 'rules' based financial accounting that results in investors placing higher reliance on industry and macro based 'other' information.[5] After adopting IFRS, the higher firm quality information will result in reduced opacity and a notion that more complete revelation of firm specific information will reduce reliance on industry and market wide information (Hutton et al. 2009).

Past research on the firm specific hypothesis reveals mixed results. Certainly for voluntary adopters pre-IFRS in the EU results are consistent with a boost in firm specific information. Leuz and Verrecchia (2000) first showed that German firms that voluntarily switched from local GAAP to US-GAAP or to IFRS, face less information asymmetry because IFRS or US-GAAP have more detailed disclosure. Barth *et al*. (2008) report firms that voluntarily adopted IAS experienced higher value relevance of accounting numbers when compared to a matched sample of firms which did not.[6] Jermakowicz *et al*. (2007) also reported an increase in value relevance of all firms in the early adoption period. Hung and Subramanyam (2007) indicate that book values are considered more value relevant by investors than net income under IFRS.[7]

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[5] This implies that when stock synchronicity is higher less firm-specific information is produced.

[6] By limiting allowable alternative accounting practices and providing a more consistent approach to accounting measurement.

[7] Even though the volatility of book values and net income under IFRS were higher than German GAAP.

On the other hand, Van der Meulen *et al*. (2007) compared the value relevance of German new market firms which had the option to adopt either IAS or US-GAAP and found no significant difference between the value relevance of earnings reported under these two regimes. Daske (2006) building on the work of Leuz and Verrechia (2000) did not find that the cost of capital decreases as a result of the implemention of IFRS. Further, Leuz (2003) reports there is "…little consequence for information asymmetry and market liquidity" for firms adopting either US-GAAP or IFRS standards in German new market firms. Finally, Daske *et al*. (2008) in a follow up study of the voluntary adoption of IFRS in the pre-2005 period, found only firms with a serious commitment to transparent experienced higher market liquidity and a lower cost of capital. When all firms were taken into account "…the average effects of voluntary IFRS reporting on these proxies are generally modest, especially when compared to other forms of commitment such as cross-listing in the U.S.".

2.2.2 The IFRS hypothesis: Under IFRS the cost and transaction based model is to be replaced by the fair value paradigm driven by the presumed decision relevance of market based measures. Both FASB and IASB stress the capacity of *market* based values to efficiently incorporate expectations of a firm's future cash flows into prices. IFRS, however, takes this a step further by arguing that IFRS improves both *firm* financial transparency and *inter-firm* (industry) comparability. The premise is that, as prices become increasingly aligned to fundamental value, investors become more able to extract consensus expectations from individual firm prices concerning the industry wide cash flow patterns of assets or liabilities; in turn, increasing comparability between firms (Dye and Shridar 2004, Hitz 2007, Dusgapta et al. 2009). Then, as market prices increasingly are

aligned to economic performance, investors are increasingly able to extract consensus expectations from market prices concerning the cash flow patterns of assets or liabilities (Hitz, 2007).[8] Also the comparability between firms increases, resulting in a decrease in the variance of firms specific information. Dye and Shridar (2004) shows that this leads to the substitution of the weight investors put on the firm specific information of future cash flows, in this case to of systemic information on expected future cash flows. As a result, the use of firm specific information for the setting of security prices will be reduced.

The temporal impact on stock synchronicity is more subtle. As the information environment surrounding individual firms improves, stock return synchronicity first decreases. But as market participants are better able to improve their predictions about the occurrence of future firm-specific events from the disclosure of time-invariant information about firm characteristics, stock return synchronicity will subsequently increase. That is, stock return synchronicity will decrease around the time of mandatory IFRS adoption and increase in the latter post-IFRS adoption period by subsequently lowering the surprise of future disclosures. In summary, financial accounting numbers act as economic signals to reflect specific information about a firm, but also have spillover information about the state of industry or the general market.

Research in this area is limited but Morck *et al.* (2000) examined the higher rates of stock synchronicity in emerging markets and reported that the sophistication of a country's accounting standards does not explain the synchronicity in stock price

[8] This information aggregation hypothesis is based on SFAC No.7, para. 26 of the FASB: "An observed market price encompasses the consensus view of all marketplace participants about an asset or liability's utility, future cash flows, the uncertainties surrounding those cash flows, and the amount that marketplace participants demand for bearing those uncertainties". See Hitz (2007) for a more elaborate discussion.

movement. In a more recent study, Beuselinck *et al* (2009) examined the effect of mandatory IFRS adoption in the EU on stock synchronicity.[9] Controlling for different in institutional factors they report, consistent with IASB arguments, stock return synchronicity decreased around the time of mandatory IFRS adoption and increased in the post-IFRS adoption period.[10]

2.2.3 The synchronicity hypothesis: The fair value working principle encompasses both mark-to-market accounting and mark-to-model accounting with both forms raising several concerns. Assets and liabilities may be situation specific in that, whilst having a market price, only have that level of value when based in a specific firm or under specialised management. Further, mark-to-model accounting introduces the possibility of introduced management subjectivity. This has lead Whittington (2008) to argue that, whilst having a high level of firm relevance, fair value has lower macro comparability because of its subjective and specific nature. Mark-to-market/model accounting has even been described

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[9] Beuselinck et al (2009) examine stock return synchronicity in the EU, and control for differences in institutional factors. Since mandatory IFRS adoption in Australia closely follows the EU timeline of IFRS adoption, it is interesting to extend Beuslinck et al. to Australia, allowing researchers to examine the effect of mandatory IFRS adoption on stock return synchronicity, while keeping institutional factors constant.

[10] They base their predictions on the Dusgapta et al. (2009) framework. Dasgupta et al. (2009) show that when the information environment surrounding a firm improves as more firm-specific information is disclosed, stock return synchronicity will first decrease. However, to the extent market participants are able to improve their predictions about the occurrence of future firm-specific events from the disclosure of time-varying firm specific information (or disclosure of time-invariant information about firm characteristics), stock return synchronicity will increase subsequently (Beuselinck et al. 2009). They predict stock return synchronicity to decrease around the time of mandatory IFRS adoption, and to increase in the post-IFRS adoption period. They argue that this pattern in synchronicity around IFRS adoption is be consistent with IFRS disclosures revealing new firm-specific information in the adoption period (i.e., a reduction of synchronicity) and subsequently lowering the surprise of future disclosures (i.e., an increase in synchronicity).

as hypothetical future value accounting because, in some circumstances, it enables firms to book future profits to current account.[11]

If the possibility of subjectivity occurs then the dependability of the accounting system is reduced and the price setting regime will revert to less reliance on firm financial accounting reports and more on industry/macro based other information. Laux and Leuz (2009) even ask whether IFRS fair value accounting has contagion effects that caused overreaction of market participants in the recent credit crisis to continual increased fair values that, in turn, reduced the market wide reliability of financial accounting (Plantin *et al*., 2008; Carletti and Allen, 2008). Others argue that the introduction of IFRS significantly reduced the firm specific information content in Australia compared to prior financial accounting reports that allowed the recognition of certain intangibles (Matolcsy and Wyatt, 2006; Ritter and Wells, 2006). In essence, under this hypothesis there is a trade-off between economy wide comparability and increased firm specific information induced by IFRS.

Figure 1 visually shows the hypothesized relations between firm specific information and the adoption of IFRS. The firm specific hypothesis shows a permanent jump in the use of firm specific information and a lower use of synchronistic sources; the IFRS hypothesis shows an initial jump in firm specific information followed by the use of more synchronistic sources as comparability increases; with the synchronicity hypothesis

[11] An extreme case is the actions of Ken Lay, CEO of ENRON, who was an ardent supporter of fair value accounting and who accelerated the recognition of future profits. This lead Bethany Mclean of Fortune magazine to brand ENRON as overpriced and an "...emporer without any clothes".

showing a permanent increase in synchronistic sources and a decrease in firm specific information.

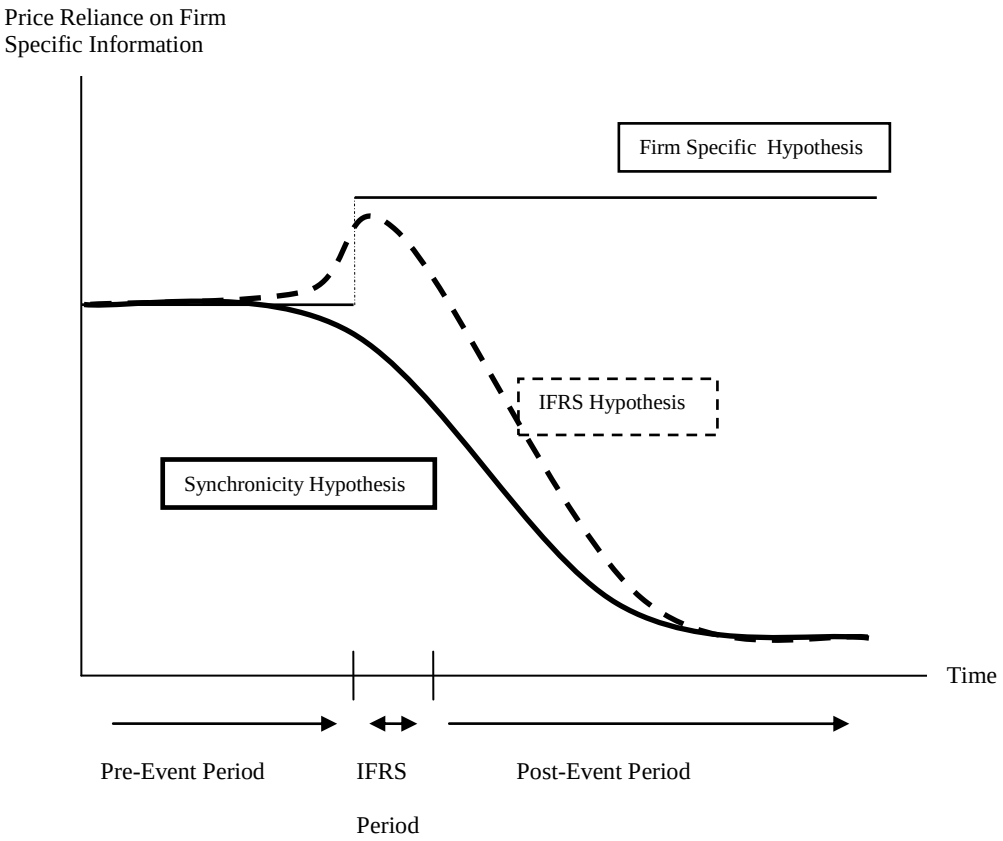

Figure 1. Information flow and the use of firm specific information in the price process by market participants.

2.2.4 Analyst forecast errors

The synchronicity and IFRS hypotheses both show post-event increases in the use synchronistic information but it is unclear whether this results from poorer or improved information environment. For example, if stock prices increasingly move together after

IFRS reporting does this suggest that less firm-specific information is produced under IFRS or more? Piotroski and Roulstone (2004) argue that security analysts rely on private information search combined with macro based information when estimating stock prices.

To the extent that mandatory adoption of IFRS enhances the comparability of financial reports among firms, there is a potential for greater disclosure under IFRS to reduce the reliance on private information collection. This would increase analysts ability to interpret and disseminate common industry information in the post-IFRS years. Ashbaugh and Pincus (2001) and Horton et al. (2008) find analysts' absolute forecast error decreased after switching to IFRS and Hodgdon et al. (2008) document that forecast error is negatively related to IFRS compliance. They suggest that compliance with the disclosure requirements of IFRS reduces information asymmetry and enhances the ability of financial analysts to provide more accurate forecasts.

Hence, as a test of the relative quality of IFRS on the quality of information, we use analyst forecast errors as a proxy for the amount of information asymmetry in financial reporting. Analysts are sophisticated market participants, and therefore if earnings are more value relevant under IFRS, this should be reflected in lower earnings forecast errors. Thus, if analysts benefit from the reduction of information asymmetry, we should observe a negative association between the analyst forecast error and the compliance with IFRS reporting standards.

3. Data and Method

3.1 Sample and descriptive statistics

The sample consists of all Australian firms with available data for the years 1999 to 2008 obtained from Datastream. Weekly returns that included dividends were first calculated and annual returns were compounded from weekly returns. If required, annual returns were then corrected for the market wide return by subtracting the Australian Stock Exchange (ASX) index. Earnings, cash flow and price returns were winsorized at 1% to ameliorate the influence of extreme observations. The final sample consists of 7661 firm-year observations with Table 1 providing descriptive information.

Panel A shows the yearly firm sample increasing from 343 firm observations in 1999 to 783 firms in 2008, with about 55% of the observations from the period before the mandatory adoption if IFRS in 2005. Panel B describes the industry composition of the sample included because the effect of IFRS on the use of firm-specific accounting information may differ across industries (Francis and Schipper, 1999). For most industry groups the percentage composition is relatively stable. The exceptions are the Oil and Gas industry, which grew from over 6 percent in 1995 to almost 16 percent in 2008, and the Financial industry, which have decreased from almost 24 percent in 1995 to 15 percent in 2008. Panel C reports descriptive statistics for the full dataset. The descriptive statistics indicate a relative normal distribution for stock synchronicity, with the means approximating the 50 percentile range and spread evenly across the percentiles. The distribution of earnings is left skewed, whereas the distribution of prices and market value are right skewed. The remaining variables all appear to be evenly distributed.

3.2 Stock Return Synchronicity

To calculate stock synchronization, we follow prior research (Durnev et al., 2003, Piotroski and Roulstone 2004) and compute the stock return synchronicity SYNCH for each sample

firm and calendar year. For each firm-year, we regress the firm-level weekly return ($RET_{i,w}$) on the current and prior week's market-wide return ($MRET_{i,w}$) and on the current and prior week's equally-weighted industry-level return ($INDRET_{i,w}$) based on two-digit industry codes. Specifically, we estimate the following model:

$$RET_{i,w} = \alpha + \beta_1 MRET_{i,w} + \beta_2 MRET_{i,w-1} + \beta_3 INDRET_{i,w} + \beta_4 INDRET_{i,w-1} + \varepsilon \qquad (1)$$

where MRET equals the market-wide return based on the ASX-index for the week *w*, and INDRET equals the equally-weighted industry-level return for week *i* using all firms in the market and industry (excluding firm *i*), respectively, and where industry is defined based on the same two-digit industry code as firm *i*. Industry returns, INDRET, are calculated as follows.

$$r_{i,w,t} = \frac{\sum_{k \in i} r_{k,w,t} - r_{j,w,t}}{J_i - 1} \qquad (2)$$

Where $r_{k,w,t}$ is the return of firm *k* in industry *i* in week *w* and J_i is the number of firms in industry *i* in the same week. Model (1) is estimated for each sample firm using weekly data over the entire calendar year. We follow Piotroski and Roulstone (2004) and require for each firm a minimum of 45 weekly observations in each year. Following Morck et al. (2000), we define stock return synchronicity as follows:

$$SYNCH = \log\left(\frac{R^2}{1-R^2}\right) \qquad (3)$$

where R^2 is the coefficient of determination obtained from estimating model (1). The log transformation changes the R^2 variable, bound by zero and one, into a continuous variable with a more normal distribution. By construction, higher values of this variable reflect higher stock return synchronicity and lower firm-specific informativeness of stock prices. Table 2 provides the temporal distribution of stock return synchronicity SYNCH. There appears to be a decline in synchronicity in the period leading up to the introduction of IFRS, and a subsequent increase in synchronicity after the adoption of IFRS.

3.3 Analyst Forecast Errors

We analyze the effect of IFRS on analyst forecast errors in two different ways. First, we examine the effects of IFRS adoption on the magnitude of the forecast error using a univariate analysis. Then, we control for differences in the information environment in a multivariate analysis. We include control variables the may affect the use of firm-specific information in decision making by market participants. For instance, we include firm size as a control variable, since Lang and Lundholm (1996) and Gleason and Lee (2003) suggest that the amount of information available in the market about the firm is related to accurateness the analysts' earnings forecasts. We include all control variables also used in the stock synchronicity analysis.

To calculate analyst forecast errors annual analyst forecasts are obtained from I/B/E/S. The forecast error is defined as the absolute value of the actual earnings per share (EPS) minus the consensus forecast of EPS, scaled by beginning of period stock price. We also obtain actual EPS figures from I/B/E/S to make them comparable to forecasted EPS. Furthermore, historical values of forecasted and actual EPS are used to avoid problems that

arise from using split-adjusted data and to mitigate stale forecasts on the accuracy of the forecast error, we use the final consensus forecast outstanding for a firm before the release of the annual report. Sample selection procedures result in 2,641 annual forecast errors with table 3 reporting descriptive statistics on the temporal variation in the mean consensus earnings forecast. Table 3 reveals an increasing trend in the number of forecasts over the years, suggesting an increase in the information available to market participants.

4. Results

4.1 Stock Synchronicity

Panel A of table 4 shows the mean SYNCH per *aggregated* period with standard deviations. over the two distinct periods of the adoption of IFRS. Period 1 is the period preceding the mandatory adoption of IFRS in 2005. Period 1 refers to calendar years 1999-2004. Period 2 refers to the full IFRS complaint years of 2006-2008. The univariate analysis indicates that the level of stock synchronicity exhibits a rising pattern from period 1 to period 2. *SYNCH* increased from -2.163 in the pre-IFRS period 1 to -1.698 in mandatory IFRS adoption period 2 (p-value is 0.000). This result suggests that stock synchronicity went up and therefore the use of firm-specific information for the setting of stock prices went down. Inconsistent with the firm specific and IFRS hypotheses, which predict that the weight placed on firm specific accounting information will increase and stock return synchronicity will decrease at the time of mandatory IFRS adoption.

When we partition the post-IFRS period (2) in the adoption year (3), and the post-adoption year period (4), there is again an increase of stock synchronicity from the

pre-IFRS period to 2005. However, this increase (of -0.082, p=0.031) is much smaller than the increase (of 0.490, p= 0.000) post-adoption year period (4). Also, we don't find a decrease in synchronicity in the adoption year, as predicted by Dasgupta et al. (2009). The increase in *SYNCH* in the post-IFRS (4) is significantly higher compared to the both the pre-IFRS period (1) (p=0.000) and the IFRS adoption period (3) (p=0.000), consistent with the synchronicity hypothesis that predicts an increase of SYNCH in the post-IFRS adoption period. This result indicates that firm level stock returns are explained to higher degree by the co-movement with the market and industry, and therefore has a lower degree of firm-specific information. To some extent this results is also consistent with the stated goal of the IASB to increase the comparativeness of financial statements.

Table 5 reports multivariate regression results for the analysis of the effects of IFRS adoption on stock synchronicity, after controlling for size, stock ownership concentration, number of firms, stock volatility and industry concentration. Reported t-statistics are based on standard errors that are clustered by firm, fixed industry effects are included in the model but not reported for brevity. Regression 1 is the base model that examines the association between *SYNCH* and the control variables. The explanatory power of the model is 23%. All control variables are significantly associated with *SYNCH* except for stock volatility. Size, the number of firms in the industry and industry concentration are positively associated with *SYNCH*, while stock ownership concentration is negatively associated with *SYNCH*.

Regression 2 includes the variables of interest *IFRS* to the base model. In Table 5, the coefficient on *IFRS* is positive at 0.169 and statistically significant at the 0.01 level, indicating that stock return synchronicity increase on average in the period after the mandatory adoption of IFRS. This result should be interpreted as follows. Compared to

the pre-IFRS period, the mandatory switch to IFRS after 2005 increased stock return synchronicity by approximately 3.54% (the coefficient of -0.169 on the IFRS variable divided by the coefficient of -4.772 on the intercept in column (2)). Even though this effect is small in magnitude, it is economically significant. This result indicates that the use of firm-specific information in the setting of stock prices decreased after IFRS adoption. This result in itself is consistent with the goal of the IASB to make financial reporting more comparable between firms. As comparability has increased, investors rely less on firm-specific information, and more on systematic information, as suggested by the increase in stock synchronicity.

The model by Dasgupta et al. (2009) suggests that the year of the adoption should be accompanied by an increase in the use of firm-specific information. This is tested in regression 3, where the IFRS period is portioned in the adoption year and the post-adoption period. Regression 3 includes the variables of interest to the base model. In Table 5, the coefficient on *IFRSyr* is negative at -0.035, indicating that stock return synchronicity increased with the mandatory adoption of IFRS, but not statistically significant at the 0.01 level,. This result is contrary to the expectations of the framework by Dasgupta *et al.* (2009), but is consistent with the effect of AASB 1047, which disclosed the effect of IFRS adoption for Australian firms. Because this effect was disclosed prior to the adoption year, there was no "new" information in the mandatory IFRS adoption, and hence, investors did not require more firm-specific information in the setting of security prices. In contrast, the coefficient on *POST_IFRSyr* is positive and statistically significant at the 0.01 level, indicating that stock return synchronicity increased in the years after the mandatory adoption of IFRS. Compared to the pre-IFRS period, this represents an approximate increase of 4.2% (0.199 / -4.732). Hence, in the

period after the mandatory IFRS adoption, the use of firm-specific information in the setting of stock prices decreased.

The results from the multivariate regression analysis are consistent with the hypothesis that post-IFRS investors place more weight on macro information. One argument is that as comparability increases the variance in the relevant information decreases, thus improving reliability. This results in a larger valuation weight on systematic information as investors now rely on industry and economy wide information rather than firm-specific information. Our results are also consistent with the Dasgupta et al. (2009) framework and the results of Beuselinck et al. (2009) that because IFRS results in higher transparency in financial reporting, it should result in a lower amount of firm-specific information being capitalized into stock prices.

However, Morck *et al.* (2000) shows that the high stock synchronicity in emerging markets is not related to the sophistication of a country's accounting standards, but to the lack there-off. Other researchers suggest that the level of synchronicity is industry specific. We further examine these issues in the next two sections.

4.2 Industry analysis

Table 6 reports the change in stock synchronicity at the industry level. Prior research on the value relevance of accounting information (Francis and Schipper, 1999) argue that the pre-IFRS reporting model does not appropriately recognize and measure the economic assets deployed to create shareholder value, and that this is associated with the rate of change in the business environment (Lev and Zarowin, 1999).

Furthermore, fair value accounting is especially relevant for financial assets but not so much for operating assets. Since the change of the business environment is not

constant across industries, there could also be inter-industry variation in the results reported in table 4. Panel A and panel B of Table 6 reports the intertemporal variation in *SYNCH* among 12 major industries per year and per period. Panel C reports differences in stock synchronicity for the three periods per industry. There appears to be some differences in the adoption of IFRS among industries. For instance, for Retail firms, there is a significant change in *SYNCH* from period 1 to period 2 (p=0.002), however, adoption-year *SYNCH* is not different from prost-adoption year period *SYNCH* (p=0.272). The difference between pre-adoption *SYNCH* and post-adoption *SYNCH* is significant for 9 of the 12 industry groups at the 10% level, representing about 86 percent of the total sample. Overall, the industry results are consistent with the pooled sample results in table 4 and we conclude that results are not to a great deal driven by industry factors.

4.3 Analyst Forecast Errors

Table 7 reports the effect of IFRS on analyst forecast errors. Model (1) suggest that there is a negative relation between IFRS and the magnitude of the analyst forecast error. The absolute forecast error is lower for firms that adopted IFRS. The interaction term is negative and significant at the 5% test-level, indicating that IFRS on average reduces the magnitude of analyst forecast errors by 17% (-0.013/0.075). This result is consistent with the previous findings in this paper, which show that market participants are less reliant on firm-specific information after the adoption of IFRS. Since IFRS increases the comparability of financial reporting among firms, it is likely that analysts are now more reliant of systematic information, for instance industry level information.

Model 2 partitions the effect of IFRS adoption on the association between IFRS and analyst forecast errors in the adoption year 2005 effect and the post-adoption period effect. The results show that the association between reported earnings and analysts forecast error decrease in both periods. As analyst get more information on expected future cash flows in IFRS reports, it is expected that earnings are now less positively associated with forecast errors, consistent with prior research. The effect is biggest in the adoption year 2005, consistent with AASB 1047 disclosing the effects of IFRS. This improves the ability of analysts to predict future performance in the adoption year. A F-test shows that the two coefficients do not differ significantly (p=0.320). Models 3 and 4 control for additional explanatory variables but show very similar results. Overall, the results in table 7 show that synchronicity has become a greater factor in the decision making process of market participants since the introduction of IFRS.

5. Conclusion

This study provides new evidence on the market wide information effects of the mandatory adoption of the new IFRS accounting regime. We exploit the unique setting provided by Australia, where voluntary adoption was prohibited prior to the mandatory adoption, and where other economic determinants that potentially could affect our results are held constant. The focus is on stock synchronization as one dimension of information that predicts future cash flows and report, on average for a pooled sample, stock synchronization increases after the adoption of IFRS. Results from the decomposed industry sample support the pooled results.

There are two possible explanations. First, this result is consistent with the 'comparative' goal of the IASB framework to increase the quality of financial reports. That is, the higher relevance of the new accounting regime increases stock synchronization, as comparability amongst firms increases and investors substitute the weight placed on firm-specific information. The other explanation is that IFRS reports are subjective and/or highly firm specific thus lowering reliability and comparability and investors turn to other macro factors (rather than accounting reports) to estimate value.

We provide evidence on these conflicting arguments by examining financial analyst outcomes and report that analyst forecast errors are lower after the mandatory adoption of IFRS. This result supports an increased information environment after IFRS and we lean towards such an explanation. However, the consistent result of greater synchronicity also suggests less reliance on firm specific information and our results may mask a greater risk of value contagion per the arguments of Laux and Leuz (2009). Issues for further research.

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Table 1

Descriptive statistics

Panel A: Sample distribution per year

year	Number of firms	% of Total	Cumulative %
1999	343	4.72	4.72
2000	404	5.56	10.28
2001	797	10.97	21.25
2002	806	11.09	32.34
2003	812	11.18	43.52
2004	824	11.34	54.86
2005	844	11.62	66.47
2006	835	11.49	77.97
2007	818	11.26	89.22
2008	783	10.78	100.00
Total	7,266	100	

Panel B: Industry membership of sample firms per year

	Oil & Gas	Basic Mat	Mach & Eq	Cons Good	Hlth Care	Cons Serv	Retail	Util	Fin	Trans	Dur Man	Other
year	%	%	%	%	%	%	%	%	%	%	%	%
1999	7.58	19.24	7.58	6.71	3.79	7.00	4.08	3.21	18.95	2.04	5.25	14.58
2000	12.13	17.82	7.18	6.44	3.71	6.19	3.96	3.96	15.59	1.73	6.19	15.10
2001	13.43	17.69	7.40	4.77	3.39	5.40	2.76	3.89	11.54	1.63	9.54	18.57
2002	13.77	16.87	7.69	4.71	3.85	5.58	2.98	3.97	11.66	1.61	9.18	18.11
2003	13.67	17.61	7.27	4.31	3.94	5.67	2.46	3.94	12.44	1.60	8.74	18.35
2004	13.96	17.84	7.40	4.13	4.25	4.73	2.55	3.88	13.35	1.70	8.25	17.96
2005	14.45	17.65	7.82	4.03	4.38	4.27	2.84	3.67	13.86	1.54	8.18	17.30
2006	14.97	17.13	8.14	3.59	4.55	4.07	2.63	3.83	13.65	1.56	8.86	17.01
2007	14.55	16.63	8.80	3.67	4.28	3.79	2.57	4.28	14.79	1.34	8.56	16.75
2008	14.69	15.71	8.30	3.96	3.96	4.09	2.68	3.96	15.58	1.53	8.05	17.50
Total	13.76	17.29	7.80	4.39	4.05	4.89	2.82	3.89	13.75	1.60	8.37	17.40

(Table 1 continued)

Panel C: Descriptive statistics

variable	Mean	Standard Deviation	Percentiles 25	50	75
SYNCH	-1.990	1.039	-2.655	-1.963	-1.298
SIZE	11.467	2.158	9.890	11.346	12.851
CLOSE	38.201	26.217	15.460	36.865	57.300
INDOBS	152.337	97.804	56.000	172.000	226.000
STOCKVOL	0.094	0.594	0.040	0.065	0.101
HERF	0.228	0.165	0.096	0.210	0.294
FE	-0.066	0.156	0.002	0.005	0.016

Sample consists of observations selected from Datastream from 1999 to 2008. SYNCH is the logarithmic transformation of R^2, defined as:

$$SYNCH = \log\left(\frac{R^2}{1-R^2}\right)$$

where R^2 is the coefficient of determination from the firm-year estimation of the following market model:

$$RET_{i,t} = a + b_1 \; MRET_{i,t-1} + b_2 \; MRET_{i,t} + b_3 \; INDRET_{i,t-1} + b_4 \; INDRET_{i,t} + e_{i,t}$$

MRET is the equally weighted market market return and INDRET is the equally-weighted industry return for week t using all firms with the same industry code. Return is defined as the cum-dividend stock return for the period; SIZE is the natural logarithm of market value; CLOSE is the percentage of closely held shares per firm; INDOBS is the amount of observation per industry; STOCKVOL is the stock volatility; HERF is a revenue based Herfindahl-index; FE is the analyst forecast error, measured as the absolute value of the difference between actual earnings per share (EPS) and consensus forecast earnings per share , scaled by opening price. Actual and forecasted EPS taken from I/B/E/S. Industry membership is determined by Worldscope industry code (WC06011) as follows Oil and Gas (5800 - 5890). Basic materials (2500–2550; 5200–5292; 6100–6140). Machinery and Equipment (2800–2893; 3700–3750; 4900–4992). Consumers Goods (1600–164; 2200–2230; 4600–4690;7300-7340;7600-7630). Healthcare (3400-3440). Consumer Services (6400-6450; 6700-6780). Retail (7000-7091). Utilities (8200-8280). Financials (4300-4395). Transportation (7900-7970). Durable Manufacturers (1300–1350; 1900–1940; 4000–4090;5500-5570). Other (3100-3110;8500-8592).

Table 2

Descriptive Statistics of Stock Synchronicity

year	Number of Firms	Mean	Standard Deviation	25th percentile	Median	75th percentile
1999	343	-2.199	0.982	-2.851	-2.218	-1.585
2000	404	-2.153	0.899	-2.715	-2.127	-1.547
2001	797	-1.844	1.022	-2.474	-1.768	-1.127
2002	806	-2.365	0.998	-2.940	-2.283	-1.686
2003	812	-2.206	0.901	-2.767	-2.138	-1.623
2004	824	-2.231	0.935	-2.813	-2.145	-1.606
2005	844	-2.081	0.960	-2.713	-2.034	-1.399
2006	835	-2.059	0.990	-2.672	-2.031	-1.371
2007	818	-1.760	1.084	-2.477	-1.716	-0.977
2008	783	-1.170	1.015	-1.810	-1.086	-0.439
Total	7,266	-1.990	1.039	-2.655	-1.963	-1.298

Correlation Matrix

	SYNCH	IFRS	IFRSyr	POST IFRSyrs	SIZE	CLOSE	INDOBS	STOCK VOL	HERF
Synch		0.1998	-0.0298	0.2126	0.4075	-0.1590	0.1366	-0.0650	0.0409
		0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0005
IFRS	0.2014		-0.1610	0.9397	0.1814	-0.0360	0.2906	0.0700	-0.0028
	0.0000	.	0.0000	0.0000	0.0000	0.0021	0.0000	0.0000	0.8084
IFRSyr	-0.0318	-0.1610		-0.2575	-0.0012	0.0111	0.0506	-0.0799	-0.0151
	0.0068	0.0000	.	0.0000	0.9208	0.3449	0.0000	0.0000	0.1987
POST-IFRSyr	0.2169	0.9397	-0.2575		0.1787	-0.0474	0.3005	0.0929	-0.0065
	0.0000	0.0000	0.0000	.	0.0000	0.0001	0.0000	0.0000	0.5804
SIZE	0.4239	0.1725	0.0018	0.1697		-0.1330	-0.0355	-0.6065	0.0325
	0.0000	0.0000	0.8775	0.0000	.	0.0000	0.0025	0.0000	0.0056
Close	-0.1565	-0.0376	0.0080	-0.0487	-0.1354		-0.0793	0.0602	-0.0582
	0.0000	0.0014	0.4941	0.0000	0.0000	.	0.0000	0.0000	0.0000
IND-OBS	0.1502	0.2383	0.0200	0.2535	-0.0333	-0.0950		0.1899	-0.3801
	0.0000	0.0000	0.0878	0.0000	0.0045	0.0000	.	0.0000	0.0000
Stock-Vol	-0.0168	0.0261	-0.0116	0.0251	-0.0761	0.0042	0.0268		0.0862
	0.1529	0.0261	0.3245	0.0325	0.0000	0.7221	0.0222	.	0.0000
HERF	0.0063	-0.0484	-0.0243	-0.0510	0.0231	-0.0204	-0.3810	0.0071	
	0.5919	0.0000	0.0385	0.0000	0.0492	0.0827	0.0000	0.5460	.

Spearman and Pearson correlations are above and below the diagonal, respectively. Two-tailed p-values are reported below the correlation coefficients. Variables are defined in table 1.

Table 3

Descriptive Statistics of Analyst Forecast

Year	Number of Forecasts	Mean	Standard Deviation	25th percentile	Median	75th percentile
1999	176	0.018	0.053	0.001	0.003	0.003
2000	157	0.023	0.070	0.002	0.005	0.005
2001	228	0.066	0.196	0.003	0.011	0.003
2002	258	0.059	0.158	0.002	0.008	0.004
2003	232	0.034	0.124	0.001	0.006	0.005
2004	250	0.019	0.043	0.001	0.005	0.008
2005	288	0.016	0.041	0.002	0.005	0.004
2006	317	0.020	0.054	0.002	0.005	0.005
2007	358	0.038	0.338	0.001	0.004	0.004
2008	377	0.014	0.040	0.001	0.004	0.003
All	2,641	0.030	0.156	0.002	0.005	0.004

Sample consist of observations selected from I/B/E/S/. The analyst forecast error is measured as the absolute value of the difference between actual earnings per share (EPS) and consensus forecast earnings per share , scaled by opening price. Actual and forecasted EPS taken from I/B/E/S.

Table 4

Change in Stock Synchronicity in Australia in 2000-2008

Panel A: Stock Synchronicity over time

period	1	2	3	4
mean	-2.163	-1.698	-2.081	-1.673
std	0.983	1.089	0.960	1.086

Panel B: test for differences in mean Stock Synchronicity over periods

t-test	difference	p-value	difference	p-value
[2]-[1]	-0.465	0.000		
[3]-[1]	-0.082	0.031		
[4]-[1]			-0.490	0.000
[4]-[3]			-0.409	0.000

Table 4 reports average synchronicity scores over time.. Period 1 refers to fiscal years 1999- 2004 when IFRS adoption was not mandatory. Period refers to the IFRS adoption period. Period 3 refers to fiscal years of 2005 when IFRS adoption became mandatory. Period 4 covers fiscal years after the first year of mandatory IFRS adoption, fiscal years 2006-2008. Synchronicity is defined in table 1. P-value based on two-tailed tests.

Table 5

The effects of IFRS on Stock Synchronicity

Model 1:

$$SYNCH = \alpha + \sum_{1}^{12} INDUSTRY + \beta_{13}SIZE + \beta_{14}CLOSE + \beta_{15}INDOBS + \beta_{16}STOCKVOL + \beta_{17}HERF + \varepsilon$$

Model 2:

$$SYNCH = \alpha + \sum_{1}^{12} INDUSTRY + \beta_{13}SIZE + \beta_{14}CLOSE + \beta_{15}INDOBS + \beta_{16}STOCKVOL + \beta_{17}HERF + \beta_{17}IFRS + \varepsilon$$

Model 3:

$$SYNCH = \alpha + \sum_{1}^{12} INDUSTRY + \beta_{13}SIZE + \beta_{14}CLOSE + \beta_{15}INDOBS + \beta_{16}STOCKVOL + \beta_{17}HERF + \beta_{18}IFRSyr +$$

	(1)	(2)	(3)
Intercept	-4.919***	-4.772***	-4.732***
	(-48.69)	(-46.44)	(-46.30)
SIZE	0.204***	0.198***	0.197***
	(30.63)	(29.34)	(29.36)
CLOSE	-0.003***	-0.003***	-0.003***
	(-6.48)	(-6.44)	(-6.35)
INDOBS	0.003***	0.002***	0.002***
	(13.47)	(10.76)	(10.10)
STOCKVOL	0.011	0.008	0.007
	(0.63)	(0.46)	(0.43)
HERF	0.520***	0.510***	0.494***
	(3.84)	(3.96)	(3.87)
IFRS		0.169***	
		(6.61)	
IFRSyr			-0.035
			(-1.09)
POST_IFRSyr			0.199***
			(7.29)
Industry fixed effects	included	included	included
R^2	0.230	0.235	0.237
Number of observations	7,266	7,266	7,266

Sample consists of obervations selected from Datastream from 1999 to 2008. IFRS is an indicator variable for the year of IFRS adoption, that takes the value of 1 if the year is 2005, and 0 otherwise. POST_IFRS is an indicator variable, that takes the value of 1 in the years after the adoption year of IFRS, and 0 otherwise. CLOSE is the percentage of closely held shares per firm; INDOBS is the amount of observation per industry; STOCKVOL is the stock volatility; HERF is a revenue based Herfindahl-index; T-statistics in paratheses are based on standard error clustered by firm.*,**,*** represent statistical significance at the 10, 5 and 1% level.

Table 6

Stock Synchronisation by Industry

Panel A: descriptive statistics by year and industry

year	Oil and Gas	Basic Materials	Machinery and Equipment	Consumers Goods	Healthcare	Consumer Services	Retail	Utilities	Financials	Transportation	Durable Manufacturers	Other
1999	-2.159	-1.855	-2.500	-2.542	-2.465	-1.959	-2.582	-2.836	-1.947	-2.284	-2.323	-2.428
2000	-2.258	-2.260	-2.177	-2.679	-2.098	-1.902	-2.431	-1.466	-2.259	-2.006	-1.536	-2.090
2001	-2.016	-1.813	-1.995	-1.894	-1.662	-1.667	-2.053	-1.826	-1.664	-1.684	-1.796	-1.884
2002	-2.681	-2.446	-2.328	-2.154	-1.870	-2.011	-2.423	-2.422	-2.272	-2.079	-2.457	-2.354
2003	-2.308	-2.375	-2.332	-2.156	-2.123	-2.101	-2.273	-2.491	-1.956	-2.054	-2.146	-2.124
2004	-2.112	-1.717	-2.391	-2.571	-2.475	-2.424	-2.658	-2.582	-2.127	-2.338	-2.467	-2.402
2005	-2.154	-1.959	-1.962	-2.067	-2.154	-1.871	-1.835	-2.534	-1.931	-1.679	-2.474	-2.152
2006	-1.844	-1.519	-2.236	-2.408	-2.280	-2.129	-2.168	-2.391	-1.882	-2.591	-2.515	-2.321
2007	-1.645	-1.476	-2.040	-2.148	-1.882	-1.689	-1.457	-2.175	-1.299	-2.090	-2.106	-2.040
2008	-0.724	-0.964	-1.163	-1.573	-1.294	-1.443	-1.159	-1.638	-0.929	-1.076	-1.511	-1.511
Total	-1.951	-1.826	-2.077	-2.196	-2.018	-1.933	-2.080	-2.237	-1.780	-1.981	-2.168	-2.115

Panel B: descriptive statistics by IFRS perdiode and industry

Periode	Oil and Gas	Basic Materials	Machinery and Equipment	Consumers Goods	Healthcare	Consumer Services	Retail	Utilities	Financials	Transportation	Durable Manufacturers	Other
1	-2.280	-2.081	-2.254	-2.184	-2.059	-2.042	-2.360	-2.334	-2.010	-2.044	-2.209	-2.190
2	-1.479	-1.361	-1.862	-2.014	-1.851	-1.756	-1.633	-2.112	-1.387	-1.933	-2.112	-1.969

3	-2.154	-1.959	-1.962	-2.067	-2.154	-1.871	-1.835	-2.534	-1.931	-1.679	-2.474	-2.152
4	-1.419	-1.334	-1.827	-2.038	-1.852	-1.762	-1.603	-2.076	-1.359	-1.933	-2.071	-1.962

Panel C: test for differences in means of stock synchronisation per periode

t-test	Oil and Gas	Basic Materials	Machinery and Equipment	Consumers Goods	Healthcare	Consumer Services	Retail	Utilities	Financials	Transportation	Durable Manufacturers	Other
[2]-[1]	0.800	0.720	0.402	0.170	0.208	0.287	0.719	0.223	0.624	0.112	0.097	0,222
p-value	0.000	0.000	0.000	0.168	0.083	0.031	0.002	0.084	0.000	0.618	0.292	0,000
[3]-[1]	0.125	0.123	0.301	0.117	-0.094	0.172	0.517	-0.200	0.080	0.365	-0.264	0,038
p-value	0.203	0.187	0.030	0.498	0.558	0.374	0.015	0.300	0.463	0.209	0.046	0,654
[4]-[1]	0.860	0.747	0.437	0.146	0.207	0.280	0.748	0.258	0.651	0.112	0.138	0,228
p-value	0.000	0.000	0.000	0.240	0.084	0.036	0.001	0.050	0.000	0.618	0.132	0,000
[4]-[3]	0.735	0.624	0.135	0.029	0.302	0.109	0.231	0.458	0.572	-0.253	0.403	0,190
p-value	0.000	0.000	0.386	0.869	0.096	0.580	0.272	0.016	0.003	0.448	0.004	0,052

Sample consists of observations selected from Datastream from 1999 to 2008. SYNCH is the logarithmic transformation of R^2, defined as:

$$SYNCH = \log\left(\frac{R^2}{1-R^2}\right)$$

where R^2 is the coefficient of determination from the firm-year estimation of the following market model:

$$RET_{i,t} = a + b_1\ MRET_{i,t-1} + b_2 MRET_{i,t} + b_3\ INDRET_{i,t-1} + b_4\ INDRET_{i,t} + e_{i,t}$$

MRET is the equally weighted market market return and INDRET is the equally-weighted industry return for week t using all firms with the same industry code. Return is defined as the cum-dividend stock return for the period; Industry membership is determined by Worldscope industry code (WC06011) as follows Oil and Gas (5800 - 5890). Basic materials (2500–2550; 5200–5292; 6100–6140). Machinery and Equipment (2800–2893; 3700–3750; 4900–4992). Consumers Goods (1600–164; 2200–2230; 4600–4690;7300-7340;7600-7630). Healthcare (3400-3440). Consumer Services (6400-6450; 6700-6780). Retail (7000-7091). Utilities (8200-8280). Financials (4300-4395). Transportation (7900-7970). Durable Manufacturers (1300–1350; 1900–1940; 4000–4090;5500-5570). Other (3100-3110;8500-8592). Period 1 refers to fiscal years 1999- 2004 when IFRS adoption was not mandatory. Period refers to the IFRS adoption period. Period 3 refers to fiscal years of 2005 when IFRS adoption became mandatory. Period 4 covers fiscal years after the first year of mandatory IFRS adoption, fiscal years 2006-2008). P-values are based on two-sided tests.

Table 7
The effect of IFRS on the informativeness of analyst forecast errors
Model 1:

$$FE = \alpha + \sum_{1}^{12} INDUSTRY + \beta_{13} IFRS + \varepsilon$$

Model 2:

$$FE = \alpha + \sum_{1}^{12} INDUSTRY + \beta_{13} IFRSyr + \beta_{14} POST_IFRSyr + \varepsilon$$

Model 3:

$$FE = \alpha + \sum_{1}^{12} INDUSTRY + \beta_{13} IFRS + \beta_{14} SIZE + \beta_{15} CLOSE + \beta_{16} INDOBS + \beta_{17} STOCKVOL + \beta_{18} HERF + \varepsilon$$

Model 4:

$$FE = \alpha + \sum_{1}^{12} INDUSTRY + \beta_{13} IFRSyr + \beta_{14} POST_IFRSyr + \beta_{15} SIZE + \beta_{16} CLOSE + \beta_{17} INDOBS + \beta_{18} STOCKVOL + \beta_{19} HERF + \varepsilon$$

	(1)	(2)	(3)	(4)
Intercept	0.075**	0.080**	0.144***	0.146***
	(2.15)	(2.29)	(5.49)	(5.56)
IFRS	-0.013**		-0.019***	
	(-2.14)		(-2.78)	
IFRSyr		-0.024***		-0.021***
		(-5.16)		(-4.49)
POST_IFRSyr		-0.018***		-0.024***
		(-2.73)		(-3.14)
SIZE			-0.008***	-0.008***
			(-4.66)	(-4.59)
CLOSE			-0.000	-0.000
			(-1.04)	(-1.01)
INDOBS			0.000	0.000
			(0.35)	(0.51)
STOCKVOL			0.362***	0.355***
			(3.37)	(3.33)
HERF			0.007	0.001
			(0.23)	(0.04)
Industry fixed effects	included	included	included	included
R^2	0.004	0.006	0.024	0.025
Number of observations	2,641	2,641	2,641	2,641

Sample consist of observations selected from I/B/E/S/. FE is the analyst forecast error, measured as the absolute value of the difference between actual earnings per share (EPS) and consensus forecast earnings per share , scaled by opening price. Actual and forecasted EPS taken from I/B/E/S. SIZE is the natural logarithm of market value; CLOSE is the percentage of closely held shares per firm; INDOBS is the amount of observation per industry; STOCKVOL is the stock volatility; HERF is a revenue based Herfindahl-index;. Industry membership is determined by Worldscope industry code (WC06011) as follows Oil and Gas (5800 - 5890). Basic materials (2500–2550; 5200–5292; 6100– 6140). Machinery and Equipment (2800–2893; 3700–3750; 4900–4992). Consumers Goods (1600–164; 2200–2230; 4600–4690;7300-7340;7600-7630). Healthcare (3400-3440). Consumer Services (6400-6450; 6700-6780). Retail (7000-7091). Utilities (8200-8280). Financials (4300-4395). Transportation (7900-7970). Durable Manufacturers (1300–1350; 1900–1940; 4000–4090;5500-5570). Other (3100-3110;8500-8592).