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Mandatory IFRS adoption and analyst forecast accuracy: the role of financial statement-based forecasts and analyst characteristics

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Abstract

This study examines whether the improvement in analyst forecast accuracy around mandatory IFRS adoption is associated with the improvement in the accuracy of financial statement-based forecasts. We find significant out-of-sample improvement in financial statement-based forecast accuracy around mandatory IFRS adoption and significant improvement in analyst forecast accuracy only in countries that made concurrent improvements to financial reporting enforcement. We show that the improvement in analyst forecast accuracy is associated with the improvement in financial statement-based forecast accuracy around IFRS adoption. We also show that analyst forecasts, particularly for firms whose analysts forecast under favorable conditions (i.e., analysts who are less busy with more experience and resources), have a greater association with financial statement-based forecasts, after mandatory IFRS adoption in countries with concurrent changes in enforcement.

Keywords Financial statement analysis · Mandatory IFRS adoption · Analyst forecasts · Profitability forecasts

JEL classification M41 · G17

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1 Introduction

The mandatory adoption of IFRS in the European Union and around the world is the most influential accounting system change in recent history and has been extensively investigated in academic research. For the most part, the research documents positive capital market consequences (De George et al. 2016), including increased liquidity, decreased cost of capital (Daske et al. 2008), and greater information content of accounting information (Landsman et al. 2012).

The research also suggests that mandatory IFRS adoption is associated with improved analyst forecast accuracy (Byard et al. 2011; Houqe et al. 2014), which is at least partially attributable to increased disclosure quality (Hope 2003a; Hope 2003b; Ball 2006; Barth et al. 2008; Glaum et al. 2013) and comparability (Bae et al. 2008; Tan et al. 2011; Horton et al. 2013). In this study, we examine whether improved disclosures, comparability, recognition and measurement standards, or a combination of these factors led to greater predictive ability of financial statements, which contributed to more accurate analyst forecasts around mandatory IFRS adoption. Understanding whether the improved accuracy of these forecasts is associated with improved predictive ability of financial statements provides insight into the mechanisms that led to improved forecast accuracy.

We hypothesize that the improved accuracy of financial statement-based forecasts contributes to the documented improvement in analyst forecast accuracy around mandatory IFRS adoption. We also hypothesize that analysts recognize the importance of enforcement and therefore only place greater weight on financial statement-based forecasts around IFRS adoption for firms in countries that concurrently made substantial improvements to financial reporting enforcement. However, we argue that the greater association between analyst forecasts and financial statement-based forecasts around mandatory IFRS adoption is more pronounced for firms whose analysts forecast under favorable conditions (i.e., less busy analysts with more experience and resources) than for firms whose analysts forecast under unfavorable conditions (i.e., busier analysts with less experience and fewer resources). Finally, we posit that analyst forecasts for firms whose analysts forecast under unfavorable conditions do not fully incorporate the information in financial statement-based forecasts after mandatory IFRS adoption.

Our empirical tests are based on an international sample of firms from 16 countries before and after IFRS adoption. We also include firms in the United States for the same periods as a control sample. We construct two financial statement-based forecasts of earnings per share: (1) a summary model in which current EPS is a function of lagged EPS and book value and (2) a disaggregated model that follows recommendations from financial statement analysis textbooks (Penman 2012; Lundholm and Sloan 2017) and research (Fairfield et al. 1996; Fairfield and Yohn 2001) for forecasting EPS. The forecasting models are estimated by country, within industry, and separately for each year.

Using the parameter estimates, we develop out-of-sample forecasts of EPS. We then calculate analysts' median consensus forecast errors and the forecast errors from the financial statement-based models as the difference between forecasted and actual EPS at the firm level. We use principal component analysis to extract the underlying dimensions of *busyness*, *experience*, and *resources* from analyst characteristics

(Bratten et al. 2018). We define the subsample of firms whose analysts forecast under favorable (unfavorable) conditions as those firms for which the level of analyst busyness is below (above) the median and the levels of analyst experience and analyst resources are above (below) the median.

We find significant improvement in the accuracy of the financial statement-based forecasts around IFRS adoption. We also find significant improvement in the accuracy of analysts' median consensus forecasts around IFRS adoption but only for firms in countries with concurrent changes in enforcement. We show that analysts' median consensus forecast accuracy has a greater association with financial statement-based forecast accuracy after IFRS adoption only for firms in countries with concurrent changes in enforcement, and that this association is more pronounced for firms whose analysts forecast under favorable conditions. Finally, we document that analysts do not fully incorporate the information in financial statement-based forecasts into their year-ahead EPS forecasts after IFRS adoption for firms in countries without concurrent changes in enforcement, and that this underreliance is more pronounced for firms whose analysts forecast under unfavorable conditions. We also find that the analyst underreliance on financial-statement based forecasts is associated with year-ahead stock returns.

This study contributes to the financial statement analysis and analyst forecast literatures by documenting the relation between analyst forecast accuracy and the predictive ability of financial statements upon mandatory IFRS adoption. The findings provide insight into how mandatory IFRS adoption affected analyst forecast accuracy and into the predictive ability of financial statements, which the FASB has defined as an important factor for improving the relevance of financial reporting (FASB 2010). Future research could extend our insights by, for example, examining the dimensions of enforcement and the specific analyst characteristics and conditions that determine the degree of analyst reliance on financial statements and the resulting impact on forecast accuracy.

The remainder of this paper is organized as follows. Section 2 reviews the literature and develops hypotheses. Section 3 describes the forecasting approach as well as the research design. Section 4 presents the empirical analyses, and section 5 provides several robustness tests. Section 6 concludes.

2 Hypotheses development

Research has investigated the consequences of mandatory IFRS adoption on analyst forecasts. Byard et al. (2011) find that analyst forecast errors and dispersion are significantly reduced around mandatory IFRS adoption. Tan et al. (2011) find that foreign analyst forecast errors decrease around IFRS adoption, and Horton et al. (2013) find a general decrease in analyst forecast errors around IFRS adoption. While this research suggests improvements in analyst forecast accuracy around IFRS adoption, it does not identify the mechanisms for this improvement (Bae et al. 2008). Some research suggests that the improved accuracy is at least partially attributable to the increase in the quantity of financial information that accompanies IFRS adoption (Hope 2003a, 2003b; Ball 2006; Barth et al. 2008; Tan et al. 2011). Other research suggests that it is attributable to increased cross-firm comparability from IFRS adoption (Bae et al. 2008; Tan et al. 2011; Horton et al. 2013; Cascino and Gassen 2014).

We argue that the increase in analyst forecast accuracy may be associated with improved predictive ability of financial statements around IFRS adoption, which could be attributable to better disclosure, greater comparability, improved recognition and measurement, or a combination of these from IFRS adoption. Research shows that analysts perform some form of financial statement analysis when issuing recommendations or forecasting profitability (Bouwman et al. 1987; Fogarty and Rogers 2005; Mira and Taylor 2011) and that their forecasts are associated with financial-statement based forecasts of profitability and growth (Fairfield, et al. 2009). Research also suggests that the predictive ability of financial statements likely improved around mandatory IFRS adoption (Neel 2017; Ahmed et al. 2013) and that IFRS adoption restricted a firm's accounting measurement and recognition choices, relative to domestic GAAP (Ashbaugh and Pincus 2001), which decreased the volatility of earnings and led to increased predictive ability of future earnings (Ewert and Wagenhofer 2005; Dichev and Tang 2009).[1] Based on this notion, we predict that the improvement in analyst forecast accuracy around mandatory IFRS adoption is associated with the improvement in the accuracy of financial statement-based forecasts.

H1: *The improvement in analyst forecast accuracy is positively associated with the improvement in the accuracy of financial statement-based forecasts of profitability around mandatory IFRS adoption.*

We also hypothesize that analysts rely more on financial statement-based forecasts after mandatory IFRS adoption. We argue that, if IFRS adoption leads to improved accuracy of financial statement-based forecasts, then analysts should place greater weight on these forecasts after mandatory IFRS adoption than they did beforehand. However, research also suggests that, due to the significant discretion in financial reporting practice, some of the benefits of mandatory IFRS adoption are confined to firms in countries with concurrent changes in financial reporting enforcement (Daske et al. 2008). Following this argument, Christensen et al. (2013) find that liquidity benefits from IFRS adoption are limited to the EU countries that made substantive changes to their enforcement of financial reporting upon mandatory IFRS adoption. We therefore predict that, while analyst forecasts of profitability have a greater association with financial statement-based forecasts of profitability after mandatory IFRS adoption, this stronger relation is restricted to countries that concurrently changed enforcement.

H2: *Analyst forecasts are more positively associated with financial statement-based forecasts after mandatory IFRS adoption in countries with concurrent enforcement changes.*

Research (e.g., Mikhail et al. 1997) finds that analyst forecasts become more accurate with increased analyst experience. Experience is associated with greater cognitive skills (Chi et al. 1981), greater weight on more relevant and important information (Chiesi et al. 1979; Brucks 1985; Shelton 1999), and a greater understanding of the underlying

[1] We note that IFRS is associated with a greater fair-value orientation, which is likely to make earnings more volatile and less predictable (Mensah et al. 2004; Peek 2005). However, IFRS requires only a few fair value measures that impact the income statement (Ernstberger 2008).

uncertainties and consequences associated with the task (Beach 1975). The positive effect of experience is particularly present in the case of analyst forecasts, as forecasting provides feedback, is repetitive, and can be objectively evaluated (Bonner and Walker 1994). Clement (1999) also attributes the positive relation between general and firm-specific experience and forecast accuracy to an improvement in analysts' ability to access private information through stronger relationships with firm management.

Research (e.g., Clement 1999; Jacob et al. 1999) also finds that analysts' access to resources, such as high-quality training, evaluation procedures, additional databases, administrative support, and industry-specific as well as private information in larger brokerage houses, improves analyst forecasts. Thus analysts who work for larger brokerage houses may place greater weight on relevant information, thereby improving their forecasts of profitability (Drake and Myers 2011).

Lastly, research (e.g., Clement and Tse 2003) finds that forecast accuracy declines as analysts follow more firms and industries. As the number of firms and industries followed by the analyst grows, the analyst can devote less attention and time to individual firms and industries.

We argue that analysts who operate under favorable conditions are more likely to recognize and exploit the benefits of mandatory IFRS adoption, in terms of forecast-relevant information, than analysts who operate under unfavorable conditions. We therefore predict that the positive relation between the improvement in analyst forecast accuracy and the improvement in financial statement-based forecast accuracy from the pre- to the post-IFRS adoption period is more pronounced for firms whose analysts forecast under favorable conditions.

H3: *The positive association between the improvement in analyst forecast accuracy and the improvement in the accuracy of financial statement-based forecasts of profitability around mandatory IFRS adoption is more pronounced for firms whose analysts forecast under favorable conditions.*

Finally, following the argument that analysts who forecast under unfavorable conditions are less able to identify forecast-relevant information in IFRS financial statements, we hypothesize that analyst forecasts of firms whose analysts forecast under unfavorable conditions could be improved by placing greater weight on financial statement-based forecasts after mandatory IFRS adoption.

H4: *Analyst forecasts of firms whose analysts forecast under unfavorable conditions can be improved by incorporating the information provided by the financial statement-based forecasts after mandatory IFRS adoption.*

3 Method

3.1 Forecasting approach

We construct forecasts of year-ahead earnings per share ($EPS_{i,t}$) using two models: a summary financial statement-based forecast (SFSF) model and a disaggregated

financial statement-based forecast (DFSF) model. The variable definitions as well as the data sources are presented in Table 1, Panel A. The SFSF model is based on lagged values of earnings per share ($EPS_{i,t-1}$) and book value per share ($BVPS_{i,t-1}$) and thus links the year-ahead EPS with summary measures from the financial statements. Due to the transitory nature of negative earnings (e.g., Jenkins 2003), we allow the coefficient on EPS to differ across negative and positive values ($LOSS_{i,t-1}$). Our SFSF model for forecasting EPS is estimated as follows.

$$EPS_{i,t} = \alpha_0 + \alpha_1 EPS_{i,t-1} + \alpha_2 LOSS_{i,t-1} + \alpha_3 LOSS_{i,t-1} \times EPS_{i,t-1} + \alpha_4 BVPS_{i,t-1} + \varepsilon_{i,t}. \quad (1)$$

The DFSF model follows recommendations from financial statement analysis research (Fairfield et al. 1996; Nissim and Penman 2001; Fairfield and Yohn 2001; Fairfield et al. 2003) and textbooks (Penman 2012; Lundholm and Sloan 2017). That is, Fairfield et al. (1996) demonstrate that both extraordinary items ($XI_{i,t-1}$) and special items ($SPI_{i,t-1}$) are less likely to recur and should therefore be separated from net income for forecasting.[2] Thus we include earnings per share from extraordinary items ($EPSXI_{i,t-1}$) and earnings per share from special items ($EPSSPI_{i,t-1}$) as separate predictors of year-ahead profitability ($EPS_{i,t}$). Correspondingly, lagged EPS is adjusted for extraordinary and special items to calculate lagged EPS before extraordinary and special items ($EPSBXISPI_{i,t-1}$). Following Nissim and Penman (2001), we include leverage ($LEV_{i,t-1}$) and the net borrowing ratio ($NBR_{i,t-1}$) as important drivers of year-ahead profitability. Further, Fairfield et al. (2003) show that the change in net operating assets is informative about year-ahead profitability. Therefore we include growth in net operating assets ($\Delta NOA_{i,t-1}$) as a predictor in the model. Finally, Fairfield and Yohn (2001) provide evidence that the change in asset turnover and the change in profit margin are incrementally useful for forecasting. Accordingly, we include the change in asset turnover ($\Delta ATO_{i,t-1}$) and the change in profit margin ($\Delta PM_{i,t-1}$) as predictors in the forecasting model. Our DFSF model for forecasting EPS is estimated as follows.

$$EPS_{i,t} = \alpha_0 + \alpha_1 EPSBXISPI_{i,t-1} + \alpha_2 EPSXI_{i,t-1} + \alpha_3 EPSSPI_{i,t-1} + \alpha_4 LEV_{i,t-1} + \alpha_5 NBR_{i,t-1} + \alpha_6 \Delta NOA_{i,t-1} + \alpha_7 \Delta ATO_{i,t-1} + \alpha_8 \Delta PM_{i,t-1} + \varepsilon_{i,t} \quad (2)$$

The regressions are estimated country by country, within each two-digit GICS industry, and separately for each financial year.[3] We require data to be available for both models and estimate a total of 899 yearly regressions for each model. Table 1, Panel B,

[2] While the IASB eliminated the separate presentation of extraordinary items in the income statement in 2005, financial databases commonly used by analysts continue to present extraordinary and special items separately.

[3] To estimate our yearly regressions, we align all financial variables that are reported by the sample firms between January and December of the respective year. For example, if Company A's financial year 2010 ends in March of 2010 while Company B's financial year 2010 ends in December of 2010, the regression parameters are estimated by regressing EPS for both companies for the year ended 2010 on the independent variables of the SFSF (DFSF) model for the year ended 2009.

Table 1 Variable definitions, sample selection procedures, parameter estimates, and PCA

Panel A: Variable definitions

	Description	Source
Dependent Variables		
$AF_{i,t}$	Analysts' median consensus forecast EPS for firm i and year ended t.	I/B/E/S
$AFE_{i,t}$	Analysts' forecast error, defined as the absolute difference between firm i's median consensus forecast EPS for the year ended t and firm i's actual EPS for the year ended t, divided by firm i's actual EPS for the year ended t.	I/B/E/S
$CAR_{i,t}$	Cumulative abnormal return for firm i and year ended t, defined as the size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t. We adjust the firm's 12-month stock return by its corresponding country-specific size quintile return from the respective IFRS adopting country. We use the corresponding size decile return for the control sample of U.S.firms.	COMPUSTAT (Security Daily File) and delisting return of -55% following Shumway and Warther (1999).
$DFSF_{i,t}$	Forecast of EPS for firm i and year ended t from the disaggregated financial statement-based (DFSF) model in equation (2).	Own calculation (see Equation 2)
$DFSFE_{i,t}$	Forecast error from the disaggregated financial statement-based (DFSF) model in equation (2), defined as the absolute difference between firm i's forecasted EPS for the year ended t and firm i's actual EPS for the year ended t, divided by firm i's actual EPS for the year ended t.	Own calculation (see Equation 2)
$EPS_{i,t}$	Earnings per share for firm i and year ended t, calculated as (pre-tax income - income taxes) / average common shares outstanding.	COMPUSTAT (I/B/E/S for Table 7)
$SFSF_{i,t}$	Forecast of EPS for firm i and year ended t from the summary financial statement-based (SFSF) model in equation (1).	Own calculation (see Equation 1)
$SFSFE_{i,t}$	Forecast error from the summary financial statement-based (SFSF) model in equation (1), defined as the absolute difference between firm i's forecasted EPS for the year ended t and firm i's actual EPS for the year ended t, divided by firm i's actual EPS for the year ended t.	Own calculation (see Equation 1)

Table 1 (continued)
Variable definitions, sample selection procedures, parameter estimates, and PCA

Forecasting Model Variables	Description	Source
$BVPS_{i,t-1}$	Book value per share for firm i and year ended t-1.	COMPUSTAT
$EPSXI_{i,t-1}$	Earnings per share from extraordinary items for firm i and year ended t-1.	COMPUSTAT
$EPSBXISPI_{i,t-1}$	Earnings per share before extraordinary and special items for firm i and year ended t-1.	COMPUSTAT
$EPSSPI_{i,t-1}$	Earnings per share from special items for firm i and year ended t-1.	COMPUSTAT
$LEV_{i,t-1}$	Leverage, defined as the net financial obligations over the book value of equity for firm i and year ended t-1.	COMPUSTAT
$LOSS_{i,t-1}$	Indicator variable that equals 1 for firm i and year ended t-1 if the firm generated a loss in year t-1.	COMPUSTAT
$NBR_{i,t-1}$	Net borrowing rate, defined as net financial expenses (interest income - interest expense - dividends preferred) over average net financial obligations for firm i and year t-1.	COMPUSTAT
$\Delta NOA_{i,t-1}$	Change in net operating assets for firm i and year ended t-1.	COMPUSTAT
$\Delta ATO_{i,t-1}$	Change in asset turnover, defined as revenue over average net operating assets for firm i and year ended t-1.	COMPUSTAT
$\Delta PM_{i,t-1}$	Change in profit margin, defined as net operating income over revenue for firm i and year ended t-1.	COMPUSTAT

Table 1 (continued)
Variable definitions, sample selection procedures, parameter estimates, and PCA

Variables of Interest	Description	Source
$IFRS_{i,t}$	Indicator variable that equals 1 for firm i and year t if the firm prepares its financial statements according to IFRS after IFRS has become mandatory; 0 otherwise.	COMPUSTAT and Daske et al. (2013)
$IFRS\_ENF_{i,t}$	Indicator variable that equals 1 for firm i and year t if the firm prepares its financial statements according to IFRS after IFRS has become mandatory and is from a country that bundled mandatory IFRS adoption with concurrent enforcement changes; 0 otherwise.	COMPUSTAT and Christensen et al. (2013)
$IFRS\_nonENF_{i,t}$	Indicator variable that equals 1 for firm i if the firm prepares its financial statements according to IFRS after IFRS has become mandatory and is from a country that did not bundle mandatory IFRS adoption with concurrent enforcement changes; 0 otherwise.	COMPUSTAT and Christensen et al. (2013)
$POST_{i,t}$	Indicator variable that equals 1 for firm i and year t if the respective firm-year observation is in the post-IFRS period (i.e., after the year 2005).	COMPUSTAT
$U.S.GAAP_{i,t}$	Indicator variable that equals 1 for firm i and year t if the firm prepares its financial statements according to U.S. GAAP.	COMPUSTAT and Daske et al. (2013)

Table 1 (continued)
Variable definitions, sample selection procedures, parameter estimates, and PCA

Control Variables	Description	Source	Rationale for Inclusion
$BRSIZE_{i,t}$	Analysts' brokerage size, calculated as the average number of analysts employed by the brokerage following firm i in year t.	I/B/E/S	Used in the principal component analysis of analyst characteristics to extract the underlying dimensions of BUSYNESS, EXPERIENCE, and RESOURCES (please refer to Table 1, Panel D).
$BUSYNESS_{i,t}$	Analyst busyness, estimated from principal component analysis of the following analyst characteristics variables: BRSIZE, COMPANIES, FEXP, FOLLOWING, GENEXP, HORIZON, INDUSTRIES. We characterize component 3 as BUSYNESS because it meaningfully loads (with loadings > 0.50) on COMPANIES and INDUSTRIES.	Own calculation (see Table 1, Panel E)	Controls for the average level of busyness of the group of analysts following the firm to capture the extent to which analysts with a higher level of busyness are less able to predict EPS.
$COMPACCT4_{i,t}$	The level of financial statement *comparability,* defined as De Franco et al.'s (2011) computed average of the four firms with the highest predicted earnings comparability scores for every combination of two firms in each year. Thereby, the earnings comparability scores are calculated as the absolute value of the difference of the predicted value of a regression of firm i's earnings on firm i's return using the estimated coefficients for firms i and j, respectively; calculated for each firm i - firm j pair, ($i \neq j$), j = 1 to J firms in the same two-digit SIC industry as firm i.	COMPUSTAT (Returns from the Security Daily File) and De Franco et al. (2011)	Controls for the similarity of a firm's accounting function to translate economic transactions into accounting data, to capture the extent to which accounting similarity is associated with EPS predictability.
$COMPANIES_{i,t}$	Average number of companies the analysts follow in year t in addition to following firm i in year t.	I/B/E/S	Used in the principal component analysis of analyst characteristics to extract the underlying dimensions of BUSYNESS, EXPERIENCE, and RESOURCES (please refer to Table 1, Panel D).
$DQ_{i,t}$	Disclosure quality, defined as Chen et al.'s (2015) measure of disaggregation of accounting data through a count of nonmissing Compustat line items for firm i and year ended t. The counting procedure employs the nesting feature of the Balance Sheet and Income Statement using the guidance in Chen et al.'s (2015) "Internet Appendix A and B" *(Linking Tables for the Balance Sheet and Income Statement*).	COMPUSTAT and Chen et al. (2015)	Controls for the level of disaggregation of accounting line items in firms' financial statements to capture the extent to which the detail of disclosure is associated with EPS predictability.
$EXPERIENCE_{i,t}$	Analyst experience, estimated from principal component analysis of the following analyst characteristics variables: BRSIZE, COMPANIES, FEXP, FOLLOWING, GENEXP, HORIZON, INDUSTRIES. We characterize component 2 as BUSYNESS because it meaningfully loads (with loadings > 0.50) on FEXP and GENEXP.	Own calculation (see Table 1, Panel E)	Controls for the average level of experience of the group of analysts following the firm to capture the extent to which analysts with more experience are better able to predict EPS.
$FEXP_{i,t}$	Analysts' firm-specific experience, calculated as the average number of years of firm-specific experience for the analysts following firm i in year t.	I/B/E/S	Used in the principal component analysis of analyst characteristics to extract the underlying dimensions of BUSYNESS, EXPERIENCE, and RESOURCES (please refer to Table 1, Panel D).
$FOLLOWING_{i,t}$	The number of analysts following firm i in year t.	I/B/E/S	Used in the principal component analysis of analyst characteristics to extract the underlying dimensions of BUSYNESS, EXPERIENCE, and RESOURCES (please refer to Table 1, Panel D).

Table 1 (continued)
Variable definitions, sample selection procedures, parameter estimates, and PCA

Control Variables	Description	Source	Rationale for Inclusion
$GAAP_{i,t}$	Bae et al.'s (2008) country-specific measure for accounting differences between IFRS and pre-existing GAAP based on a list of 21 accounting items extracted from *GAAP 2001: Survey of National Accounting Rules Benchmarked Against International Accounting Standards (IFAD 2001).* The country in which the firm is located is derived from its current ISO country code of incorporation.	COMPUSTAT and Bae et al. (2008)	Controls for the extent to which the mandatory adoption of IFRS produces more comparable reporting for firms in each country, and captures the number of differences between local GAAP and IFRS.
$GDP_{i,t}$	A country's gross domestic product in billion USD for the year t. The GDP information is extracted from Worldbank's DataBank (https://data.worldbank.org/).	WORLDBANK	Controls for growth in the country's equity markets to capture the extent to which growth is associated with EPS predictability.
$GENEXP_{i,t}$	Analysts' general experience, calculated as the average number of years of experience for the analysts following firm i in year t.	I/B/E/S	Used in the principal component analysis of analyst characteristics to extract the underlying dimensions of BUSYNESS, EXPERIENCE, and RESOURCES (please refer to Table 1, Panel D).
$GOV_{i,t}$	The average of four indicators presented in Kaufman et al. (2009) which capture the public's perception about a country for the year ended t with respect to the rule of law, control of corruption, government effectiveness, and regulatory quality. The Kaufmann et al. study reports worldwide governance indicators for 212 countries. The indicators are aggregates of hundreds of specific and disaggregated individual variables measuring various dimensions of governance, taken from 35 data sources provided by 33 different organizations.	WORLDBANK	Controls for the governance quality and investor protection in a country to capture the extent to which governance is associated with EPS predictability.
$HORIZON_{i,t}$	Average number of days between the analysts' median consensus forecast issue date and the fiscal year end for firm i and year t.	I/B/E/S	Used in the principal component analysis of analyst characteristics to extract the underlying dimensions of BUSYNESS, EXPERIENCE, and RESOURCES (please refer to Table 1, Panel D).
$INDUSTRIES_{i,t}$	A measure of the average number of industries the analysts follow in year ended t, in addition to following firm i in year t.	I/B/E/S	Used in the principal component analysis of analyst characteristics to extract the underlying dimensions of BUSYNESS, EXPERIENCE, and RESOURCES (please refer to Table 1, Panel D).
$LEV_{i,t}$	Leverage, defined as the net financial obligations over the book value of equity for firm i and year t.	COMPUSTAT	Controls for leverage to capture the extent to which leverage is associated with EPS predictability.
$LOSS_{i,t}$	Indicator variable that equals 1 for firm i and year t if the firm generated a loss for the year.	COMPUSTAT	Controls for losses to capture the extent to which losses are associated with EPS predictability.
$RESOURCES_{i,t}$	Analyst resources, estimated from principal component analysis of the following analyst characteristics variables: BRSIZE, COMPANIES, FEXP, FOLLOWING, GENEXP, HORIZON, INDUSTRIES. We characterize component 1 as RESOURCES because it meaningfully loads (with loadings > 0.50) on BRSIZE, FOLLOWING, and HORIZON.	Own calculation (see Table 1, Panel E)	Controls for the average level of resources of the group of analysts following the firm to capture the extent to which analysts with more resources are better able to predict EPS.
$SIZE_{i,t}$	Natural log of total assets for firm i and year t.	COMPUSTAT	Controls for firm size to capture the extent to which firm size is associated with EPS predictability.

Table 1 (continued)
Variable definitions, sample selection procedures, parameter estimates, and PCA
Panel B: Construction of sample used to estimate in-sample coefficients

		IFRS sample	*Control sample*
Firm-year observations between 1998 and 2012 with sufficient data to estimate the in-sample coefficients from the SFSF model and the DFSF model	93,957	*57,472*	*36,485*
less Exclusions of firm-year observations characterized by:			
Financial industry classification (two-digit GICS sector #40)	963	*703*	*260*
Average net operating assets (*ANOA*) for year ended t-1 is less than $10 million	20,805	*11,117*	*9,688*
Average common shareholders' equity (*BVE*) for year ended t-1 is less than $1 million	1,836	*557*	*1,279*
Net borrowing rate (*NBR*) for year ended *t* -1 is less than 0 or greater than 1	1,393	*877*	*516*
Percentage of ΔNOA_{t-1}, ΔBVE_{t-1}, or $\Delta SALES_{t-1}$ greater than 1	5,660	*3,617*	*2,043*
Country-industry-specific observations for a fiscal year below 25	851	*851*	*0*
Firm-year observations used to estimate in-sample coefficients	62,449	39,750	22,699
Unique firms used to estimate in-sample coefficients	*11,034*	*6,983*	*4,051*

Table 1 (continued)
Variable definitions, sample selection procedures, parameter estimates, and PCA
Panel C: Estimation of in-sample coefficients

Column No.	***1***		***2***		***3***	
(Sub-)Sample	***FULL SAMPLE***		***Pre-IFRS Period***	***vs.***	***Post-IFRS Period***	
Dependent Variable	***$EPS_{i,t}$***		***$EPS_{i,t}$***		***$EPS_{i,t}$***	
Forecast Model	***SFSF***		***SFSF***		***SFSF***	
Independent Variables	Coefficient	t-statistic *(Fama-MacBeth)*	Coefficient	t-statistic *(Fama-MacBeth)*	Coefficient	t-statistic *(Fama-MacBeth)*
Intercept	0.9876 ***	6.36	1.8713 ***	6.05	0.1517 ***	2.87
$EPS_{i,t-1}$	0.7208 ***	32.10	0.6773 ***	20.61	0.7620 ***	24.88
$LOSS_{i,t-1}$	-1.9461 **	-2.54	-3.7229 **	-2.38	-0.2655	-1.63
$LOSS_{i,t-1}$ * $EPS_{i,t-1}$	-0.6010 ***	-5.21	-0.8509 ***	-4.24	-0.3646 ***	-3.06
$BVPS_{i,t-1}$	0.0778 ***	3.12	0.0704 *	1.84	0.0847 ***	2.64
# of observations	62,449		31,769		30,680	
Average R^2	0.6436		0.6036		0.6814	

Column No.	***4***		***5***		***6***	
(Sub-)Sample	***FULL SAMPLE***		***Pre-IFRS Period***	***vs.***	***Post-IFRS Period***	
Dependent Variable	***$EPS_{i,t}$***		***$EPS_{i,t}$***		***$EPS_{i,t}$***	
Forecast Model	***DFSF***		***DFSF***		***DFSF***	
Independent Variables	Coefficient	t-statistic *(Fama-MacBeth)*	Coefficient	t-statistic *(Fama-MacBeth)*	Coefficient	t-statistic *(Fama-MacBeth)*
Intercept	1.2956 ***	6.66	2.3173 ***	5.97	0.3291 ***	4.91
$EPSBXISPI_{i,t-1}$	0.7300 ***	37.05	0.6741 ***	23.49	0.7829 ***	29.12
$EPSXI_{i,t-1}$	1.7074	1.51	0.4467	0.43	2.9000	1.47
$EPSSPI_{i,t-1}$	-0.0872	-0.24	0.1711	0.46	-0.3316	-0.55
$LEV_{i,t-1}$	-0.0225	-0.27	-0.0682	-0.44	0.0208	0.33
$NBR_{i,t-1}$	-1.0867 **	-1.99	-1.7435 *	-1.73	-0.4654	-1.00
$\Delta NOA_{i,t-1}$	-0.2509	-1.00	-0.7989	-1.62	0.2674 *	1.80
$\Delta ATO_{i,t-1}$	0.2518 ***	2.82	0.3126 *	1.94	0.1944 *	2.31
$\Delta PM_{i,t-1}$	-2.8436 **	-2.60	-4.7782 *	-2.16	-1.0137 ***	-2.76
# of observations	62,449		31,769		30,680	
Average R^2	0.5886		0.5378		0.6367	

Table 1 (continued)
Variable definitions, sample selection procedures, parameter estimates, and PCA

Panel D: Construction of sample used for main analyses

		thereof:	*IFRS sample*	*Control sample*
Number of out-of-sample forecasts of EPS (firm-year observations)	47,822		*26,622*	*21,200*
less Exclusion of firm-year observations characterized by:				
Missing data coverage by I/B/E/S	12,546		*7,847*	*4,699*
IFRS transition years 2005 and 2006	5,242		*3,096*	*2,146*
Voluntary IFRS adopters	879		*879*	*0*
Missing data for control variables	6,851		*3,457*	*3,394*
Firm-year observations used in main analyses	22,304		*11,343*	*10,961*
Unique firms used in main analyses	*5,274*		*2,805*	*2,469*

Table 1 (continued)
Variable definitions, sample selection procedures, parameter estimates, and PCA
Panel E: Principal component analysis (PCA) to extract the underlying dimensions of analyst characteristics

	Eigenvalue	*Variance Explained*	$BRSIZE_{i,t}$	$COMPANIES_{i,t}$	$FEXP_{i,t}$	$FOLLOWING_{i,t}$	$GENEXP_{i,t}$	$HORIZON_{i,t}$	$INDUSTRIES_{i,t}$
RESOURCES	***1.4964***	***21.38%***	**0.5793**	-0.0177	0.0192	**0.5756**	-0.0501	**0.5761**	-0.0176
EXPERIENCE	***1.2346***	***17.64%***	0.3572	-0.3459	**0.5906**	-0.0433	**0.6030**	-0.0154	-0.1847
BUSYNESS	***1.2124***	***17.32%***	0.3623	**0.5209**	-0.1536	-0.0069	0.3910	0.0047	**0.6487**
Component 4	*0.8456*	*12.08%*	0.5617	-0.0400	0.4861	0.0287	-0.2569	0.0164	0.6160
Component 5	*0.8363*	*11.95%*	-0.4137	-0.5366	0.5813	-0.0009	0.4444	-0.0260	0.0697
Component 6	*0.8205*	*11.72%*	0.4159	0.4781	0.3606	-0.0081	0.5546	-0.0200	-0.4005
Component 7	*0.5543*	*7.92%*	-0.0050	-0.0011	0.0291	-0.7066	-0.0032	0.7070	-0.0058
Total variance explained		*100%*							

Notes:
Panel A presents the variable definitions. Panel B presents the sample selection procedure, based on the criteria employed by Esplin et al. (2014) to estimate the in-sample coefficients from the SFSF model, expressed in equation (1), and the DFSF model, expressed in equation (2). Panel C tabulates the respective parameter estimates for the full sample (columns 1 and 4) as well as separately for the pre- and the post-IFRS period (columns 2, 3, 5, and 6). Panel D presents the sample selection for our analyses of out-of-sample forecasts of EPS. Panel E presents the principal component analysis (PCA) to extract the underlying dimensions from analyst characteristics variables (i.e., *BRSIZE*, *COMPANIES*, *FEXP*, *FOLLOWING*, *GENEXP*, *HORIZON*, and *INDUSTRIES*). The first column reports the eigenvalues of the correlation matrix, ordered from largest to smallest. The second column reports the percentage of variance explained by the principal components. The third column reports the respective eigenvectors.

describes the sample selection procedure for our estimation of in-sample coefficients. Our initial sample is drawn from all 22 countries that mandatorily adopted IFRS in 2005 as well as the United States as a control country. We begin with 93,957 firm-year observations from 1998 through 2012 for which relevant financial information is available from the Compustat Global database. We exclude 963 firm-year observations that are classified as financial firms (two-digit GICS sector #40). Further, we eliminate firms using the criteria employed by Esplin et al. (2014) to avoid introducing measurement error and the effect of small denominators into the forecasting models. We also exclude 851 firm-year observations with less than 25 country-specific observations within a two-digit GICS industry sector in a fiscal year. These procedures result in a sample of 62,449 firm-year observations (11,034 firms) to derive our in-sample coefficient estimates.

For the SFSF model in Eq. (1), the average coefficient estimates are 0.99 for α_0, 0.72 for α_1, −1.95 for α_2, −0.60 for α_3, and 0.08 for α_4, while the average R^2 of the SFSF model is 64.36%. For the DFSF model in Eq. (2), the average coefficient estimates are 1.30 for α_0, 0.73 for α_1, 1.7 for α_2, −0.09 for α_3, −0.02 for α_4, −1.09 for α_5, −0.25 for α_6, 0.25 for α_7, and − 2.84 for α_8, while the average R^2 of the DFSF model is 58.86%. Table 1, Panel C, presents the parameter estimates separately for the pre- and the post-IFRS period.

Using the parameter estimates from model (1), we calculate out-of-sample forecasts of EPS for the pre- and the post-IFRS adoption years. The forecasts are computed by applying coefficients derived from regression analyses for the year *t-1* to data from year *t* to compute out-of-sample forecasts of EPS in *t* + *1*.[4] From the coefficient estimates, we predict EPS out-of-sample. For the out-of-sample analyses, our pre-IFRS adoption period includes 1999 through 2004, while the post-IFRS adoption period consists of 2007 through 2012. We calculate the financial statement-based forecast error as the absolute difference between the forecasted EPS and the actual EPS for the respective year, divided by the absolute value of actual EPS.

3.2 Regression models

To examine the effect of mandatory IFRS adoption on EPS forecasts, we first examine the change in analyst forecast errors and the change in the summary and disaggregated financial statement-based forecast errors around mandatory IFRS adoption. To control for confounding effects, we use firms from the United States that used U.S. GAAP throughout the sample period as a benchmark sample (Ahmed et al. 2013). Accordingly, we combine the variables into the following regression models estimated at the firm-year level.

[4] We restrict the out-of-sample EPS forecasts to 1999 through 2004 and 2007 through 2012 to have the same number of pre- and post-IFRS forecast years, respectively. If we exclude the recession related to the financial crisis in 2008 and 2009, the average coefficient estimates for the SFSF model are 1.17 for α_0, 0.74 for α_1, −2.29 for α_2, −0.71 for α_3, and 0.08 for α_4, while the average coefficient estimates for the DFSF model are 1.51 for α_0, 0.74 for α_1, 2.03 for α_2, −0.09 for α_3, 0.002 for α_4, −1.14 for α_5, −0.36 for α_6, 0.26 for α_7, and − 3.17 for α_8. Here, the average R^2 of the SFSF model is 64.88%, while the average R^2 of the DFSF model is 59.37%. We note that the inclusion of the recessionary period after 2008 is likely to bias against finding an improvement in financial statement-based forecasts after IFRS adoption.

$$AFE_{i,t} = \beta_0 + \beta_1 POST_{i,t} + \beta_2 IFRS\_ENF_{i,t} + \beta_3 IFRS\_nonENF_{i,t} + \beta_4 POST_{i,t} * IFRS\_ENF_{i,t} + \beta_5 POST_{i,t} * IFRS\_nonENF_{i,t} + \sum_{k=6}^{n} \beta_k CONTROLS_{i,t} + \varepsilon_{i,t} \quad (3)$$

$$FSFE_{i,t} = \beta_0 + \beta_1 POST_{i,t} + \beta_2 IFRS_{ENF\,i,t} + \beta_3 IFRS_{nonENF\,i,t} + \beta_4 POST_{i,t} * IFRS_{ENF\,i,t} + \beta_5 POST_{i,t} * IFRS_{nonENF\,i,t} + \sum_{k=6}^{n} \beta_k CONTROLS_{i,t} + \varepsilon_{i,t} \quad (4)$$

$AFE_{i,t}$ is the analysts' median consensus forecast error, calculated at the firm-level, or the absolute difference between the median analyst consensus forecasted EPS and the actual EPS, divided by the absolute value of actual EPS for firm i and year ended t. To mitigate analysts' timing advantage (Brown 1987) from acquiring information between the initiation date of the financial statement-based model and the analyst forecast date, which is likely to reduce the association between analyst forecast errors and the financial statement-based forecast errors, we use the earliest analyst median consensus forecast provided by I/B/E/S after the prior year's earnings announcement as the analyst forecast. $FSFE_{i,t}$ is defined as either $SFSFE_{i,t}$, the forecast error using forecasts from the SFSF model expressed in Eq. (1), or $DFSFE_{i,t}$, the forecast error using forecasts from the DFSF model expressed in Eq. (2). $POST_{i,t}$ is an indicator variable that takes the value of one if the firm-year observation is in the post-IFRS period (i.e., after 2005). $IFRS\_ENF_{i,t}$ ($IFRS\_nonENF_{i,t}$) is an indicator variable that takes the value of one if the firm is from a country that bundled (did not bundle) mandatory IFRS adoption with concurrent changes in enforcement.[5]

The regression models in Eqs. (3) and (4) control for other important factors that are likely to affect the accuracy of financial statement-based and analyst forecasts of EPS. We include controls for disclosure quality (Hope 2003a; Hope 2003b; Ball 2006; Barth et al. 2008; Glaum et al. 2013); comparability (Bae et al. 2008; Tan et al. 2011; Horton et al. 2013); firm characteristics, such as size, leverage, and the reporting of a loss (Fairfield and Yohn 2001; Jenkins 2003; Mensah et al. 2004); country characteristics, such as governance quality; the difference between IFRS and local GAAP, and GDP (Bae et al. 2008); and the characteristics of the analysts following the firm (Clement 1999; Clement and Tse 2005; Drake and Myers 2011). Variable definitions for these control variables ($CONTROLS_{i,t}$), explanations for their inclusion, and the data sources are provided in Table 1, Panel A. All financial data are translated into U.S. dollar amounts.[6] Finally, we include year fixed effects and country-industry fixed effects using two-digit GICS sectors.[7] Standard errors are clustered by country.

[5] The classification for IFRS adoption and concurrent enforcement changes follows Christensen et al. (2013) and Daske et al. (2013).

[6] Balance sheet items are translated using spot exchange rates, while income statement items are translated using the average exchange rates over the fiscal year. The introduction of the euro in the European Union in 2001 is unlikely to lead to distortions in our out-of-sample forecasts, as the underlying prediction model mainly relies on financial ratios, rather than on amounts stated in local currencies.

[7] Our results remain qualitatively similar after including a separate fixed effect for each country and each industry and when country characteristics are excluded.

Our model to test whether analysts' median consensus forecast errors are associated with financial statement-based forecast errors after mandatory IFRS adoption and whether this relation changed around mandatory IFRS adoption in countries with and without concurrent changes in enforcement is specified as follows.

$$\begin{aligned} AFE_{i,t} = {} & \beta_0 + \beta_1 POST_{i,t} + \beta_2 FSFE_{i,t} + \beta_3 IFRS\_ENF_{i,t} + \beta_4 IFRS\_nonENF_{i,t} \\ & + \beta_5 FSFE_{i,t} * POST_{i,t} + \beta_6 FSFE_{i,t} * IFRS_{ENF\,i,t} \\ & + \beta_7 FSFE_{i,t} * IFRS_{nonENF\,i,t} + \beta_8 POST_{i,t} * IFRS_{ENF\,i,t} \\ & + \beta_9 POST_{i,t} * IFRS_{nonENF\,i,t} + \beta_{10} FSFE_{i,t} * POST_{i,t} * IFRS_{ENF\,i,t} \\ & + \beta_{11} FSFE_{i,t} * POST_{i,t} * IFRS_{nonENF\,i,t} + \sum_{k=12}^{n} \beta_k CONTROLS_{i,t} + \varepsilon_{i,t} \quad (5) \end{aligned}$$

In Eq. (5), the analysts' median consensus forecast error ($AFE_{i,t}$) is regressed on the forecast error from the financial statement-based model, $FSFE_{i,t}$, which is either $SFSFE_{i,t}$ or $DFSFE_{i,t}$, for countries that switched to IFRS and concurrently implemented substantive enforcement changes ($IFRS\_ENF_{i,t}$) and countries that switched to IFRS with no concurrent enforcement changes ($IFRS\_nonENF_{i,t}$). We include the same control variables as in the previous analysis.

Finally, we address whether analyst forecasts could be improved, using the information in the financial statement-based forecasts by formulating the following regression model, which is based on the work of Dreman and Berry (1995).

$$\begin{aligned} EPS_{i,t} = {} & \beta_0 + \beta_1 AF_{i,t} + \beta_2 \left(FSF_{i,t} - AF_{i,t}\right) + \beta_3 POST_{i,t} + \beta_4 IFRS_{ENF\,i,t} \\ & + \beta_5 IFRS_{nonENF\,i,t} + \beta_6 \left(FSF_{i,t} - AF_{i,t}\right) * POST_{i,t} \\ & + \beta_7 \left(\left(FSF_{i,t} - AF_{i,t}\right) * IFRS\_ENF_{i,t}\right) \\ & + \beta_8 \left(\left(FSF_{i,t} - AF_{i,t}\right) * IFRS\_nonENF_{i,t}\right) + \beta_9 POST_{i,t} * IFRS_{ENF\,i,t} \\ & + \beta_{10} POST_{i,t} * IFRS_{nonENF\,i,t} \\ & + \beta_{11} \Big(\left(FSF_{i,t} - AF_{i,t}\right) * POST_{i,t} * IFRS\_ENF_{i,t} \\ & + \beta_{12} \Big(\left(FSF_{i,t} - AF_{i,t}\right) * POST_{i,t} * IFRS\_nonENF_{i,t} \\ & + \sum_{k=13}^{n} \beta_k CONTROLS_{i,t} + \varepsilon_{i,t} \quad (6) \end{aligned}$$

This model regresses actual profitability, as measured by $EPS_{i,t}$, on the analysts' median consensus forecast. We include the difference between the summary and financial statement-based forecast of EPS and the analysts' median consensus forecast of EPS, $(FSF_{i,t} - AF_{i,t})$, where $FSF_{i,t}$ is either $SFSF_{i,t}$ or $DFSF_{i,t}$, to examine whether financial statement-based forecasts provide incremental information over analyst forecasts for explaining actual profitability. Further, we interact the difference between the financial statement-based forecasts and the analysts' median consensus forecast of EPS with the mandatory IFRS adoption in the post period, conditioned upon concurrent changes in

enforcement. The control variables are those included in the previous analyses. Table 1, Panel D, presents the combination of our out-of-sample forecasts of EPS with data on analyst forecasts and control variables data. We require firms to have data available for all subsequent analyses to have a constant sample of firms (firm-year observations). We eliminate observations with no I/B/E/S coverage and with missing data for the control variables. We also eliminate all firms that voluntarily adopted IFRS before 2005 (879 firm-year observations). All continuous data is winsorized at the 1% and 99% levels. The sample selection procedure described above yields 22,304 firm-year observations 5,274 firms.

In each of the analyses, we use seemingly unrelated estimation (SUEST) to compare the regression coefficients from a subsample of firms followed by analysts who forecast under favorable conditions with a subsample of firms followed by analysts who forecast under unfavorable conditions. We identify firms that are followed by analysts who forecast under favorable (unfavorable) conditions by using principal component analysis, based on Bratten et al. (2018), to extract the underlying dimensions of the following firm-specific analyst characteristics, all provided by I/B/E/S (e.g., Clement 1999; Clement and Tse et al. 2005; Drake and Myers 2011; Tan et al. 2011): (1) the average number of analysts employed by the brokerage following firm i in year t (BRSIZE), (2) the average number of companies the analysts follow in year t in addition to following firm i in year t (COMPANIES), (3) the average number of years of firm-specific experience for the analysts following firm i in year t (FEXP), (4) the number of analysts following the firm i in year t (FOLLOWING), (5) the average number of years of experience for the analysts following firm i in year t (GENEXP), (6) the number of days between the analysts' median consensus forecast issue date and the fiscal year end (HORIZON), and (7) the average number of industries the analysts follow in year t, in addition to following firm i in year t (INDUSTRIES). Our principal component analysis estimation retains three components with an eigenvalue factor of greater than 1. We characterize component 1 as *RESOURCES*, because it loads (with loadings >0.50) on BRSIZE, FOLLOWING, and HORIZON; component 2 as *EXPERIENCE*, because it loads on FEXP and GENXP; and component 3 as *BUSYNESS*, because it loads on COMPANIES and INDUSTRIES. Using these three firm-specific components, we define the subsample of firms followed by analysts who forecast under *favorable conditions* (*unfavorable conditions*) as those firms that are covered by analysts with a below (above) median level of *BUSYNESS* and above (below) median levels of *EXPERIENCE* and *RESOURCES*. Table 1, Panel E, provides the results.

4 Empirical analyses

4.1 Sample and descriptive statistics

Table 2 presents the sample size based on country-based IFRS adoption and on whether the country implemented concurrent enforcement changes. We also report the proportion of a country's firm-years in terms of total assets, relative to the sum of total assets for our entire sample. Our final sample includes 2,805 IFRS adopting firms (11,343

firm-year observations) from 16 countries and 2,469 firms (10,961 firm-year observations) from the United States as the non-IFRS adopting control country. 1,451 firms (5,731 firm-year observations) are in countries that bundled mandatory IFRS adoption with concurrent changes in enforcement, while 1,354 firms (5,612 firm-year observations) are in IFRS adopting countries with no concurrent enforcement changes. The United Kingdom and Germany represent the greatest proportion of firms (16.5% from the former and 7.1% from the latter) and total assets (6.7% from the former and 6.4% from the latter) from countries that bundled IFRS adoption with concurrent changes in enforcement, while France represents the greatest proportion of firms (6.4%) and total assets (9.5%) from countries that did not bundle IFRS adoption with concurrent changes in enforcement. The sample composition of mandatory IFRS adopters is consistent with those of Daske et al. (2008) and Horton et al. (2013).

Table 3 shows the descriptive statistics for our entire sample period and separately for the pre- and post-IFRS periods. We also report tests of differences in means between those two subsamples, using a bootstrapping approach in which we randomly select, with replacement, observations from each of the subsamples.[8] With respect to our main variables of interest, the mean (median) $AFE_{i,t}$ is 0.367 (0.2078), while the mean (median) $SFSFE_{i,t}$ is 0.8293 (0.3204), and the mean (median) $DFSFE_{i,t}$ is 0.8241 (0.2147). Pearson (Spearman) correlations (untabulated) reveal that $AFE_{i,t}$ is positively and significantly correlated with $SFSFE_{i,t}$ and $DFSFE_{i,t}$. We note that the means of $AFE_{i,t}$, $SFSFE_{i,t}$, and $DFSFE_{i,t}$ significantly declined from the pre- to the post-IFRS period. We also note that the means of $DQ_{i,t}$, $GOV_{i,t}$, $HORIZON_{i,t}$, $RESOURCES_{i,t}$, and $SIZE_{i,t}$ significantly increased from the pre- to the post-IFRS period, while the means of $EXPERIENCE_{i,t}$, $GAAP_{i,t}$, and $LEV_{i,t}$ significantly decreased during the same time frame.

4.2 Difference-in-differences analysis

We first investigate whether the adoption of IFRS is associated with a change in analyst forecast accuracy, a change in the accuracy of the SFSF model, or a change in the accuracy of the DFSF model for the firms in our sample. Table 4 reports univariate comparisons of the mean $AFE_{i,t}$, mean $SFSFE_{i,t}$, and mean $DFSFE_{i,t}$ from the pre- to the post-IFRS adoption period, using a difference-in-differences design. We calculate the difference in the mean forecast errors between mandatory IFRS adopters and the U.S. control group and compare the relative changes over time. Tests of means are computed using a bootstrapping approach in which we randomly select, with replacement, observations from each of the subsamples and calculate the difference in forecast errors between periods or the difference-in-differences between the IFRS sample(s) and the U.S. control sample.[9]

[8] This procedure is repeated 1000 times to obtain the empirical distributions of the differences between the two subsamples that are approximately normal, with means not significantly different from zero. We compute *t-statistics* using the standard errors derived from these empirical distributions.

[9] This procedure is repeated 1000 times to obtain the empirical distributions of the differences between periods and the difference-in-differences between the IFRS sample(s) and the U.S. control sample that are approximately normal. Again, we compute *t-statistics* using the standard errors derived from the empirical distributions.

The upper panel of Table 4 reports the mean values of $AFE_{i,t}$, $SFSFE_{i,t}$, and $DFSFE_{i,t}$ (in the first, second, and third columns, respectively). The rows of each table report the forecast errors for the mandatory IFRS adopters ($IFRS_{i,t}$) and the U.S. control group ($U.S.\ GAAP_{i,t}$), respectively, and the columns report the forecast errors for the pre-IFRS and the post-IFRS periods, respectively. The mean $AFE_{i,t}$ decreases (10%) for the mandatory IFRS adopters but does not change significantly for the U.S. control firms. The significant difference in the analysts' median consensus forecast error between the IFRS/non-IFRS adopting firms in the pre-IFRS adoption period remains in the post-IFRS adoption period. We also find that the pre-IFRS adoption mean $SFSFE_{i,t}$ and mean $DFSFE_{i,t}$ decrease significantly (36% and 43%, respectively) from the pre-IFRS to the post-IFRS period for the mandatory IFRS adopters but do not change significantly for the U.S. control firms. This evidence is consistent with improved accuracy of both analyst and financial statement-based forecasts around IFRS adoption.

The lower panel of Table 4 presents the mean values of $AFE_{i,t}$, $SFSFE_{i,t}$, and $DFSFE_{i,t}$, in the pre-IFRS and the post-IFRS periods separately for firms in countries that bundled ($IFRS\_ENF_{i,t}$) and firms in countries that did not bundle ($IFRS\_nonENF_{i,t}$) mandatory IFRS adoption with changes in enforcement. The panel also includes the mean $AFE_{i,t}$, $SFSFE_{i,t}$, and $DFSFE_{i,t}$ for firms from the U.S. control group ($U.S.\ GAAP_{i,t}$). The univariate comparisons of the mean $AFE_{i,t}$ show that the analysts' median consensus forecast error significantly decreased for mandatory IFRS adopters in countries with concurrent changes in enforcement (22%) but not for mandatory IFRS adopters in countries without concurrent changes in enforcement. This decrease in analysts' forecast errors for mandatory IFRS adopters with changes in enforcement is significantly larger than the change in the mean $AFE_{i,t}$ for the U.S. control firms.

The univariate comparisons of the mean $SFSFE_{i,t}$ and mean $DFSFE_{i,t}$ show that the financial statement-based forecast errors significantly decrease for mandatory IFRS adopters in countries with (22% and 25%, respectively) and without (47% and 54%, respectively) concurrent changes in enforcement. In contrast, there is no corresponding decrease in forecast errors from the SFSF model or the DFSF model for the U.S. control firms around the same period. In addition, the decreases in the mean $SFSFE_{i,t}$ and mean $DFSFE_{i,t}$ for both mandatory IFRS adopters with and without concurrent changes in enforcement are significantly larger than the respective changes for the U.S. control firms. We investigate whether these findings hold when controlling for firm, year, GICS sectors, and country characteristics in the regression analyses below.

4.3 Analysis of improvements in forecast accuracy

Table 5 presents the results for our regression models in Eqs. (3) and (4) in which we examine the effect of mandatory IFRS adoption on analyst forecast errors and financial statement-based forecast errors. In the first column, which reports the results for $AFE_{i,t}$, we find positive and significant coefficients on $IFRS\_ENF_{i,t}$ and $IFRS\_nonENF_{i,t}$, suggesting lower analyst forecast accuracy in IFRS adopting countries prior to mandatory IFRS adoption and relative to the control sample of U.S. firms. The findings for the control variables suggest greater analyst forecast accuracy for larger firms, firms with greater financial statement comparability, firms from countries with higher GDP, and firms whose analyst have greater resources. They also suggest lower analyst

Table 2 Sample composition by country, IFRS adoption and concurrent enforcement changes

	Firm-year observations	Unique firms	% of total unique firms	% of sum of total assets
IFRS Adopting Countries				
with concurrent changes to enforcement				
Finland	595	106	2.0%	1.4%
Germany	1,446	373	7.1%	6.4%
Netherlands	418	103	2.0%	1.3%
United Kingdom	3,272	869	16.5%	6.7%
Subtotal	5,731	1,451	27.5%	15.8%
without concurrent changes to enforcement				
Austria	153	40	0.8%	1.0%
Belgium	371	74	1.4%	1.1%
Denmark	375	90	1.7%	1.0%
France	1,332	336	6.4%	9.5%
Greece	289	74	1.4%	0.7%
Hong Kong	433	114	2.2%	2.3%
Ireland	56	21	0.4%	0.1%
Italy	824	187	3.5%	3.5%
Poland	250	91	1.7%	0.6%
Portugal	138	30	0.6%	0.7%
Sweden	814	191	3.6%	1.6%
Spain	577	106	2.0%	4.6%
Subtotal	5,612	1,354	25.7%	26.7%
Total - IFRS firms	11,343	2,805	53.2%	42.5%
Control Country				
United States	10,961	2,469	46.8%	57.5%
Total - All firms	22,304	5,274	100%	100%

The sample comprises firm-year observations from up to 17 countries. We split the sample into (1) a treatment group (16 countries) that includes countries that mandate the adoption of IFRS reporting in 2005 and (2) a benchmark group that comprises firms reporting under U.S. GAAP (U.S. firms only). We further subdivide the treatment group into countries that either experienced or did not experience a concurrent change in enforcement around the mandatory IFRS adoption. The column "*% of sum of total assets*" refers to the proportion of total assets for each country (all firm-years), relative to the sum of total assets for our entire sample

forecast accuracy for firms with higher leverage, that report losses, and that are followed by busier analysts.

Most important to our study, we find a significant improvement in analyst median consensus forecast accuracy for the U.S. control sample from the pre- to the post-period. (The coefficient on $POST_{i,t}$ is negative and significant.) We also find that the improvement in analyst consensus forecast accuracy is more pronounced for firms in countries that adopted IFRS with concurrent changes in enforcement (the coefficient on $IFRS\_ENF_{i,t} * POST_{i,t}$ is negative and significant) but not for firms in countries that adopted IFRS without enforcement changes. In countries with contemporaneous changes in enforcement, the analysts' forecast error decreases by an economically

significant 30% in comparison to the overall average pre-IFRS analysts' forecast error in our sample (−0.1137 divided by the pre-IFRS mean $AFE_{i,t}$ of 0.3825). The finding of greater analyst forecast accuracy after IFRS adoption is consistent with the findings of Byard et al. (2011) and Horton et al. (2013).

The second column provides the results for the subsample of firms followed by analysts who forecast under *favorable conditions*, while the third column presents the subsample results for firms followed by analysts who forecast under *unfavorable conditions*. The results suggest improved analyst forecast accuracy for firms in countries that adopted IFRS with concurrent changes in enforcement for both subsamples. The fourth column compares the regression coefficients of the two subsamples using SUEST to determine whether the change in analysts' median consensus forecast errors around mandatory IFRS adoption differs for firms whose analysts forecast under favorable versus unfavorable conditions. The coefficient on $IFRS\_ENF_{i,t} * POST_{i,t}$ is significantly more negative in the favorable analyst conditions subsample, compared to the unfavorable one, suggesting that the IFRS adoption effect for countries with contemporaneous changes in enforcement is stronger for firms whose analysts forecast under favorable conditions.[10]

In the fifth (sixth) column, we find a positive and significant coefficient on $IFRS\_nonENF_{i,t}$, suggesting lower financial statement-based forecast accuracy in IFRS adopting countries prior to mandatory IFRS adoption and relative to the control sample of U.S. firms. We also find that the forecast accuracy of the SFSF and DFSF models significantly improve around IFRS adoption (the coefficients on $IFRS\_ENF_{i,t} * POST_{i,t}$ and $IFRS\_nonENF_{i,t} * POST_{i,t}$ are negative and significant), suggesting improvement in financial statement-based forecasts for firms in countries that adopted IFRS, whether or not they incorporated concurrent changes in enforcement.[11]

4.4 Analysis of analysts' reliance on financial statement-based forecasts

Table 6 reports the results for our regression model in Eq. (5) to test whether analyst forecast accuracy is more highly associated with the accuracy of the financial statement-based models after mandatory IFRS adoption and conditioned upon concurrent changes in reporting enforcement (tests of *H1* and *H2*). We also compare the regression coefficients from the subsample of firms whose analysts forecast under *favorable conditions* versus under *unfavorable conditions* (test of *H3*).

Columns 1 through 4 report the results for the SFSF model. We find a positive and significant coefficient on $FSFE_{i,t}$, suggesting a positive association between analyst

[10] We also estimate the regression models in equations (3) and (4) for the subsample of firms whose analysts forecast under neither favorable nor unfavorable conditions (i.e., the excluded subsample of observations). Again, the results suggest that the improvement in analyst forecast accuracy is more pronounced for firms in countries that adopted IFRS with concurrent changes in enforcement (the coefficient on $IFRS\_ENF_{i,t} * POST_{i,t}$ amounts to 0.0669 and is significant at the 1% level) but not for firms in countries that adopted IFRS without enforcement changes.

[11] In supplemental analyses, we test for the difference in coefficients and find that the improvement in forecast accuracy is significantly greater for firms from IFRS-adopting countries that did not incorporate concurrent changes in enforcement, in comparison to those from countries that made concurrent enforcement changes. However, we note that the absolute value of the financial statement-based forecast errors after IFRS adoption is significantly greater for firms from IFRS-adopting countries that did not incorporate concurrent enforcement changes than for firms from countries that did incorporate concurrent enforcement changes (see Table 4).

Table 3 Descriptive statistics by IFRS periods

	Mean	Median	Std. Dev.	First Quartile	Third Quartile	Min.	Max.	Pre-IFRS Mean	Post-IFRS Mean	Sig. Difference
AFE i,t	0.3670	0.2078	0.3455	0.0717	0.6452	0.0337	1.0000	0.3825	0.3588	*t* = 4.09 ***
BUSYNESS i,t	0.0000	−0.0249	1.0062	−0.7142	0.7044	−2.9138	3.1844	−0.0001	0.0000	*t* = −0.01
COMPACCT4 i,t	−0.7357	−0.6396	0.7571	−0.9800	−0.2900	−18.0600	−0.0100	−0.7412	−0.7255	*t* = −1.24
DQi,t	0.5219	0.5167	0.1226	0.4342	0.6052	0.0722	1.0231	0.5156	0.5339	*t* = −8.92 ***
DFSFE i,t	0.8241	0.2147	1.2764	0.0758	1.1511	0.0100	7.4438	0.9980	0.7314	*t* = 12.53 ***
EXPERIENCE i,t	0.0000	−0.0058	1.0171	−0.6964	0.7099	−3.4415	2.8704	0.0196	−0.0104	*t* = 1.76 *
GAAPi,t	2.2772	3.0000	2.1908	0.0000	3.0000	0.0000	10.0000	3.8786	1.4236	*t* = 79.10 ***
GDPi,t	4.3121	0.3947	6.0976	0.0000	10.9802	0.0000	16.2446	4.4002	4.2651	*t* = 1.32
GOVi,t	1.4805	1.5403	0.4374	1.4416	1.6932	0.0000	2.2014	1.4669	1.4878	*t* = −2.85 ***
HORIZONi,t	338.4209	349.0000	40.4238	340.0000	357.0000	34.0000	365.0000	286.6634	288.6738	*t* = −3.95 ***
IFRS_ENFi,t	0.2438	0.0000	0.4294	0.0000	0.0000	0.0000	1.0000			*n/a*
IFRS_nonENFi,t	0.2539	0.0000	0.4352	0.0000	1.0000	0.0000	1.0000			*n/a*
LEVi,t	0.4898	0.3085	1.0196	−0.1431	0.7936	−0.8786	5.7034	0.5636	0.4504	*t* = 6.63 ***
LOSS i,t	0.1734	0.0000	0.3786	0.0000	0.0000	0.0000	1.0000	0.1799	0.1699	*t* = 1.59
RESOURCES i,t	0.0000	0.0455	1.1386	−0.7023	0.7477	−2.2606	4.5392	−0.1412	0.0753	*t* = −11.40 ***
SFSFE i,t	0.8293	0.3204	1.0261	0.1373	1.2550	0.0401	5.1621	0.9601	0.7595	*t* = 11.72 ***
SIZE i,t	6.9075	6.8036	1.6507	5.7004	7.9834	1.9694	12.7183	6.5774	7.0835	*t* = −18.50 ***

This table reports descriptive statistics for the entire sample period as well as separately for the pre- and post-IFRS periods. This table also reports tests of means between those two subsamples, using a bootstrapping approach in which we randomly select, with replacement, observations from each of the subsamples. See Table 1 Panel A, for variable definitions. Number of firm-year observations is 22,304 (5,274 unique firms). *, **, *** indicate statistical significance of differences in means at the 10%, 5%, and 1% levels, respectively, from two-tailed t-tests based on bootstrap distributions derived following the procedures described in the paper

Table 4. Difference-in-differences analysis of changes in forecast accuracy around mandatory IFRS adoption

		mean AFE$_{i,t}$ (pre-IFRS) (a)	*mean AFE$_{i,t}$ (post-IFRS)* (b)	(a) - (b)		*mean SFSFE$_{i,t}$ (pre-IFRS)* (a)	*mean SFSFE$_{i,t}$ (post-IFRS)* (b)	(a) - (b)		*mean DFSFE$_{i,t}$ (pre-IFRS)* (a)	*mean DFSFE$_{i,t}$ (post-IFRS)* (b)	(a) - (b)
IFRS$_{i,t}$	(i)	0.4159	0.3736	0.0423 ***	(i)	1.2295	0.7869	0.4426 ***	(i)	1.3306	0.7632	0.5674 ***
U.S.GAAP$_{i,t}$	(ii)	0.3556	0.3425	0.0131	(ii)	0.7436	0.7292	0.0144	(ii)	0.7306	0.6963	0.0344
	(i) - (ii)	0.0603 ***	0.0311 ***	0.0292 **	(i) - (ii)	0.4858 ***	0.0576 ***	0.4282 ***	(i) - (ii)	0.6000 ***	0.0670 ***	0.5331 ***

		mean AFE$_{i,t}$ (pre-IFRS) (a)	*mean AFE$_{i,t}$ (post-IFRS)* (b)	(a) - (b)		*mean SFSFE$_{i,t}$ (pre-IFRS)* (a)	*mean SFSFE$_{i,t}$ (post-IFRS)* (b)	(a) - (b)		*mean DFSFE$_{i,t}$ (pre-IFRS)* (a)	*mean DFSFE$_{i,t}$ (post-IFRS)* (b)	(a) - (b)
IFRS_ENF$_{i,t}$	(i)	0.4160	0.3258	0.0902 ***	(i)	0.9417	0.7482	0.1934 ***	(i)	0.9790	0.7298	0.2492 ***
IFRS_nonENF$_{i,t}$	(ii)	0.4158	0.4166	-0.0008	(ii)	1.5487	0.8216	0.7271 ***	(ii)	1.7207	0.7933	0.9274 ***
U.S.GAAP$_{i,t}$	(iii)	0.3556	0.3425	0.0131	(iii)	0.7436	0.7292	0.0144	(iii)	0.7306	0.6963	0.0344
	(i) - (ii)	0.0002	-0.0909 ***	0.0911 ***	(i) - (ii)	-0.6071 ***	-0.0734 **	-0.5336 ***	(i) - (ii)	-0.7418 ***	-0.0636	-0.6782 ***
	(i) - (iii)	0.0604 ***	-0.0167 **	0.0771 ***	(i) - (iii)	0.1980 ***	0.0190	0.1790 ***	(i) - (iii)	0.2483 ***	0.0335	0.2148 ***
	(ii) - (iii)	0.0602 ***	0.0742 ***	-0.0140	(ii) - (iii)	0.8051 ***	0.0924 ***	0.7127 ***	(ii) - (iii)	0.9901 ***	0.0971 ***	0.8931 ***

The difference-in-differences analysis compares the treatment group of mandatory IFRS adopters against the benchmark group that reports under U.S. GAAP during the entire sample period by presenting mean values of analysts' absolute forecast errors – *mean AFE$_{i,t}$*, forecast errors from the summary financial statement-based model – *mean SFSFE$_{i,t}$*, and forecast errors from the disaggregated financial statement-based model – *mean DFSFE$_{i,t}$*. (See Table 1 Panel A for variable definitions.) The first difference-in-differences analysis splits forecast errors for the variables of interest (*AFE$_{i,t}$*, *SFSFE$_{i,t}$*, and *DFSFE$_{i,t}$*) into IFRS adopters (2,805 unique firms) versus non-adopters (2,469 unique firms). The second difference-in-difference analysis further partitions IFRS adopters into countries where either changes in enforcement occurred (1,451 unique firms) or did not (1,354 unique firms) during the IFRS-adoption period. *, **, *** indicate statistical significance of differences in means at the 10%, 5%, and 1% levels, respectively, from two-tailed t-tests based on bootstrap distributions derived following the procedures described in the paper

Table 5 Analysis of improvements in forecast accuracy around mandatory IFRS adoption

Column No.	1		2		3		4	5		6	
(Sub-)Sample	FULL SAMPLE		Favorable Analyst Conditions		Unfavorable Analyst Conditions		SUEST	FULL SAMPLE		FULL SAMPLE	
Dependent Variable	$AFE_{i,t}$		$AFE_{i,t}$		$AFE_{i,t}$			$SFSFE_{i,t}$		$DFSFE_{i,t}$	
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Sig. Difference	Coefficient	t-statistic	Coefficient	t-statistic
POST i,t	−0.0474 **	-2.18	−0.0372	−0.88	−0.0123	−0.37		−0.4895	−1.42	−0.7505	−1.46
$IFRS\_ENF_{i,t}$	0.0963 **	2.50	0.2046 ***	7.23	0.0537 *	1.90		0.0397	0.16	0.0049	0.02
$IFRS\_nonENF_{i,t}$	0.1308 ***	6.17	0.2429 ***	3.33	0.2797 ***	4.94		0.4709 **	2.37	0.9268 ***	3.48
$IFRS\_ENF_{i,t}$ * POST $_{i,t}$	**−0.1137** ***	**−4.94**	**−0.2513** ***	**−4.81**	**−0.1183** ***	**−4.30**	χ^2 = *11.18* ***	**−0.2130** **	**−2.18**	**−0.2740** **	**−2.13**
$IFRS\_nonENF_{i,t}$ * POST $_{i,t}$	**−0.0264**	**−0.53**	**−0.0475**	**−0.41**	**−0.1406**	**−0.77**	χ^2 = *1.64*	**−0.5803** **	**-2.67**	**−0.9339** **	**−2.00**
$DQ_{i,t}$	−0.0060	−0.44	−0.0633	−1.29	−0.0265	−0.31		−0.0994	−1.12	−0.0850	−0.55
$COMPACCT4_{i,t}$	−0.0365 ***	−21.79	−0.0347 ***	−17.70	−0.0396 ***	−9.57		−0.0371 ***	−2.53	−0.0161	−0.91
$GAAP_{i,t}$	−0.0039	−0.72	0.0008	0.06	−0.0119	−1.17		0.0176	0.50	0.0049 ***	0.09
$SIZE_{i,t}$	−0.0249 ***	−4.52	−0.0128	−1.13	−0.0402 ***	−4.38		−0.0461 ***	−2.99	−0.0453 **	−2.97
$LEV_{i,t}$	0.0004 ***	4.89	0.0019	0.63	−0.0002	−0.27		0.0007 ***	3.20	0.0007 *	1.85
$LOSS_{i,t}$	0.2556 ***	35.91	0.2452 ***	13.58	0.2516 ***	12.11		0.2638 *	1.90	0.3775 **	2.62
$GOV_{i,t}$	−0.0201	−1.45	−0.0345	−1.03	−0.0468 *	−1.80		0.3240	1.36	0.4910	1.40
$GDP_{i,t}$	−0.0034 ***	−5.52	−0.0065 ***	−11.07	−0.0073 ***	−5.97		−0.0126 ***	−4.79	−0.0094 **	−2.31
$BUSYNESS_{i,t}$	0.0033 *	1.91									
$EXPERIENCE_{i,t}$	−0.0012	−0.73									
$RESOURCES_{i,t}$	−0.0275***	-3.84									

Table 5 (continued)

Column No.	1		2		3		4	5		6	
(Sub-)Sample	FULL SAMPLE		Favorable Analyst Conditions		Unfavorable Analyst Conditions		SUEST	FULL SAMPLE		FULL SAMPLE	
Dependent Variable	$AFE_{i,t}$		$AFE_{i,t}$		$AFE_{i,t}$			$SFSFE_{i,t}$		$DFSFE_{i,t}$	
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Sig. Difference	Coefficient	t-statistic	Coefficient	t-statistic
Country-industry fixed effects	yes		yes		yes			yes		yes	
Year fixed effects	yes		yes		yes			yes		yes	
# of observations	22,304		3,126		2,943			22,304		22,304	
Adjusted R^2	0.2125		0.2614		0.1852			0.2687		0.2904	

Column 1 presents the analysis of determinants of improvements in forecast accuracy of analysts around mandatory IFRS adoption. Column 2 and 3 provides results for the subsample of firms followed by analysts who forecast under *favorable conditions* and *unfavorable conditions*, respectively. Column 4 compares the regression coefficients of the two subsamples using seemingly unrelated estimation (SUEST) to determine whether the change in analysts' median consensus forecast errors around mandatory IFRS adoption is more pronounced for firms followed by analysts under *favorable* versus *unfavorable conditions*. The results for the SFSF model expressed in Eq. (1) are presented in Column 5, and the results for the DFSF model expressed in Eq. (2) are presented in Column 6. See Table 1, Panel A, for variable definitions. The regressions are estimated with an intercept included but the intercept is not reported. Country-industry fixed effects are based on the sample countries and the two-digit GICS sectors (#10 energy, #15 materials, #20 industrials, #25 consumer discretionary, #30 consumer staples, #35 health care, #45 information technology, #50 telecommunication services, and #55 utilities). We report t-statistics based on heteroscedasticity-robust standard errors clustered by country. *, **, and *** indicate significance at the 10, 5, and 1% levels, respectively

forecast accuracy and the model's accuracy. Consistent with the findings in Table 5, we find positive and significant coefficients on $IFRS\_ENF_{i,t}$ and $IFRS\_nonENF_{i,t}$, suggesting lower analyst forecast accuracy in IFRS-adopting countries prior to mandatory IFRS adoption and relative to the control sample of U.S. firms. We also find more pronounced improvement in analyst forecast accuracy for firms in countries that adopted IFRS with concurrent changes in enforcement (the coefficient on $POST_{i,t}$ * $IFRS\_ENF_{i,t}$ is negative and significant) but not for firms in countries that adopted IFRS without enforcement changes. The findings for the control variables are consistent with those in Table 5. We also find a positive and significant coefficient on $FSFE_{i,t}$ * $POST_{i,t}$, suggesting greater analyst reliance on financial statement-based forecasts in the post-period, relative to the pre-period, for the control sample of U.S. firms. We find a positive and significant coefficient on $FSFE_{i,t}$ * $IFRS\_ENF_{i,t}$, suggesting greater analyst reliance on financial statement-based forecasts for firms that adopted IFRS with enforcement changes in the pre-period.

Most important to our study, the results suggest that the association between analyst forecast accuracy and the SFSF model accuracy is significantly more positive for mandatory IFRS adopters that incorporated concurrent changes in enforcement but not for mandatory adopters that did not do so. The coefficient on $FSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_ENF_{i,t}$ of 0.0814 is significant and represents an increased association of approximately 164% of the unconditional association of $AFE_{i,t}$ to $FSFE_{i,t}$ in the pre-IFRS adoption period. (The untabulated coefficient on $FSFE_{i,t}$ amounts to 0.0495.) Thus the evidence is consistent with an economically significant increase in the association of analyst forecast accuracy and the SFSF model accuracy. In addition, we find that the more positive association between analyst forecast accuracy and the FSF model accuracy for mandatory IFRS adopters that incorporated concurrent enforcement changes is stronger for firms whose analysts forecast under favorable conditions.

Columns 5 through 8 report the results for the DFSF model. The results resemble those for the SFSF model. That is, we find a general positive association between analyst forecast accuracy and the model's accuracy. In addition, we find that the association between analyst forecast accuracy and the model's accuracy is significantly more positive for mandatory IFRS adopters that incorporated concurrent changes in enforcement but not for mandatory adopters that did not do so. The coefficient on $FSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_ENF_{i,t}$ of 0.0467 represents an increased association of approximately 152% of the unconditional association of $AFE_{i,t}$ to $FSFE_{i,t}$ in the pre-IFRS adoption period. (The untabulated coefficient on $FSFE_{i,t}$ is 0.0308.) Lastly, we document that the more positive association between analyst forecast accuracy and the DFSF model accuracy around mandatory IFRS adoption is stronger for firms whose analysts forecast under favorable conditions.[12]

[12] We estimate the regression model in equations (5) for the subsample of firms whose analysts forecast under neither favorable nor unfavorable conditions. We find a positive and significant coefficient of 0.051 on $SFSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_ENF_{i,t}$ (0.0212 on $DFSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_ENF_{i,t}$,) and an insignificant coefficient of 0.0046 on $SFSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_nonENF_{i,t}$ (0.0041 on $DFSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_nonENF_{i,t}$).

Table 6 Analysis of analysts' reliance on financial statement-based forecasts around mandatory IFRS adoption

Column No.	1		2		3		4	5		6		7		8
(Sub-)Sample	FULL SAMPLE		Favorable Analyst Conditions		Unfavorable Analyst Conditions			FULL SAMPLE		Favorable Analyst Conditions		Unfavorable Analyst Conditions		
Dependent Variable	$AFE_{i,t}$		$AFE_{i,t}$		$AFE_{i,t}$			$AFE_{i,t}$		$AFE_{i,t}$		$AFE_{i,t}$		
FSFE definition	$SFSFE_{i,t}$		$SFSFE_{i,t}$		$SFSFE_{i,t}$		SUEST	$DFSFE_{i,t}$		$DFSFE_{i,t}$		$DFSFE_{i,t}$		SUEST
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Sig. Difference	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Sig. Difference
$FSFE_{i,t}$	**0.0380** ***	**19.93**	**0.0342** ***	**15.70**	**0.0502** ***	**16.52**	***$\chi^2 = 12.48$*** ***	**0.0503** ***	**26.33**	**0.0756** ***	**23.22**	**0.0694** ***	**24.49**	***$\chi^2 = 3.41$*** *
$POST_{i,t}$	−0.0442	−1.67	−0.0468	−0.82	0.0200	0.48		−0.0300	−1.16	−0.0108	−0.20	0.0418	1.08	
$IFRS\_ENF_{i,t}$	0.0566 ***	3.07	0.0503	0.97	−0.0095	−0.35		0.1193 ***	6.70	0.1229 ***	2.69	0.0845 ***	2.85	
$IFRS\_nonENF_{i,t}$	0.1205 **	3.24	0.3505 ***	3.19	0.3034 ***	4.93		0.1527 ***	3.97	0.2645 **	2.21	0.3565 ***	5.28	
$FSFE_{i,t} * POST_{i,t}$	0.0135 ***	9.27	0.0081 ***	4.21	−0.0302 ***	−4.21		−0.0101 ***	−8.48	−0.0324	−20.39	−0.0549 ***	−12.75	
$FSFE_{i,t} * IFRS\_ENF_{i,t}$	0.1074 ***	8.45	0.1610 *	1.77	0.0844 ***	5.66		0.0348 ***	4.68	0.0392	0.99	−0.0032	−0.29	
$FSFE_{i,t} * IFRS\_nonENF_{i,t}$	−0.0031	−0.36	−0.0372 ***	−2.62	−0.0169 **	−2.41		−0.0335 ***	−5.62	−0.0854 ***	−8.63	−0.0553 ***	−5.87	
$IFRS\_ENF_{i,t} * POST_{i,t}$	−0.0663 **	−2.47	−0.0304	−0.47	−0.1525 ***	−5.01		−0.1154 ***	−5.29	−0.0811	−1.31	−0.2184 ***	−5.94	
$IFRS\_nonENF_{i,t} * POST_{i,t}$	−0.0594	−1.25	0.0396	0.23	−0.2184 **	−2.37		−0.0491	−0.95	0.0521	0.29	−0.2185 **	−2.23	
$FSFE_{i,t} * POST_{i,t} * IFRS\_ENF_{i,t}$	**0.0814** ***	**7.51**	**0.1517** ***	**9.66**	**0.0763** ***	**4.94**	***$\chi^2 = 15.35$*** ***	**0.0467** ***	**5.70**	**0.1120** ***	**12.21**	**0.0677** ***	**4.85**	***$\chi^2 = 10.71$*** ***
$FSFE_{i,t} * POST_{i,t} * IFRS\_nonENF_{i,t}$	**0.0032**	**0.09**	**0.0018**	**0.16**	**0.0061**	**1.08**	***$\chi^2 = 0.63$***	**0.0058**	**1.56**	**0.0092**	**1.53**	**0.0128**	**0.87**	***$\chi^2 = 0.29$***
$DQ_{i,t}$	−0.0066	−0.46	−0.0631	−1.20	−0.0287	−0.39		−0.0008	−0.05	−0.0618	−1.16	−0.0327	−0.48	
$COMPACCT4_{i,t}$	−0.0404 ***	−27.71	−0.0457 ***	−6.98	−0.0475 ***	−10.69		−0.0380 ***	−28.00	−0.0415 ***	−7.57	−0.0443 ***	−12.74	
$GAAP_{i,t}$	−0.0031	−0.62	0.0043	0.24	−0.0114	−0.98		−0.0047 **	−0.85	0.0061	0.31	−0.0127	1.08	
$SIZE_{i,t}$	−0.0215 ***	−3.02	−0.0344 ***	−7.72	−0.0403 ***	−3.76		−0.0225 ***	−3.36	−0.0369 ***	−6.05	−0.0397 ***	−3.83	
$LEV_{i,t}$	0.0003 ***	5.07	0.0058 **	2.07	−0.0003 ***	−0.47		0.0003 ***	3.66	0.0059	1.47	−0.0003	−0.41	
$LOSS_{i,t}$	0.2244 ***	15.57	0.1658 ***	3.42	0.2121 ***	12.05		0.2316 ***	29.32	0.1897 ***	5.58	0.2197 ***	14.97	
$GOV_{i,t}$	−0.0298 *	−1.90	−0.0614	−1.53	0.0292	0.96		−0.0250	−1.55	−0.0536	−1.46	0.0323	1.02	

Table 6 (continued)

Column No.	1		2		3		4	5		6		7		8
(Sub-)Sample	FULL SAMPLE		Favorable Analyst Conditions		Unfavorable Analyst Conditions			FULL SAMPLE		Favorable Analyst Conditions		Unfavorable Analyst Conditions		
Dependent Variable	$AFE_{i,t}$		$AFE_{i,t}$		$AFE_{i,t}$			$AFE_{i,t}$		$AFE_{i,t}$		$AFE_{i,t}$		
FSFE definition	$SFSFE_{i,t}$		$SFSFE_{i,t}$		$SFSFE_{i,t}$		SUEST	$DFSFE_{i,t}$		$DFSFE_{i,t}$		$DFSFE_{i,t}$		SUEST
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Sig. Difference	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Sig. Difference
$GDP_{i,t}$	−0.0027 ***	−4.45	−0.0023 ***	−2.91	−0.0059 ***	−5.16		−0.0030 ***	−5.19	−0.0030 ***	−3.66	−0.0063 ***	−5.24	
$BUSYNESS_{i,t}$	0.0028 *	1.71						0.0034 *	1.92					
$EXPERIENCE_{i,t}$	−0.0012	−0.66						−0.0008	−0.48					
$RESOURCES_{i,t}$	−0.0246 ***	−4.14						−0.0260 ***	−3.71					
Country-industry fixed effects	yes		yes		yes			yes		yes		yes		
Year fixed effects	yes		yes		yes			yes		yes		yes		
# of observations	22,304		3,126		2,943			22,304		3,126		2,943		
Adjusted R^2	0.2615		0.2919		0.2218			0.2372		0.2131		0.2014		

Column 1 presents regression analyses explaining analysts' median consensus forecast errors ($AFE_{i,t}$), using forecast errors from the SFSF model ($SFSFE_{i,t}$) expressed in Eq. (1). Column 2 (3) provides the results for the subsample of firms followed by analysts who forecast under *favorable conditions* (*unfavorable conditions*). Column 4 compares the regression coefficients of the two subsamples, using seemingly unrelated estimation (SUEST) to determine whether the association of $AFE_{i,t}$ and $SFSFE_{i,t}$ around mandatory IFRS adoption is more pronounced for firms followed by analysts under *favorable* versus *unfavorable conditions*. Column 5 presents regression analyses explaining analysts' median consensus forecast errors ($AFE_{i,t}$), using forecast errors from the DFSF model ($DFSFE_{i,t}$) expressed in Eq. (2). Column 6 (7) provides the results for the subsample of firms followed by analysts who forecast under *favorable conditions* (*unfavorable conditions*). Column 8 compares the regression coefficients of the two subsamples using SUEST to determine whether the association of $AFE_{i,t}$ and $SFSFE_{i,t}$ around mandatory IFRS adoption is more pronounced for firms followed by analysts under *favorable* versus *unfavorable conditions*. See Table 1, Panel A, for variable definitions. The regressions are estimated with an intercept included but the intercept is not reported. Country-industry fixed effects are based on the sample countries and the two-digit GICS sectors (#10 energy, #15 materials, #20 industrials, #25 consumer discretionary, #30 consumer staples, #35 health care, #45 information technology, #50 telecommunication services, and #55 utilities). We report t-statistics based on heteroscedasticity-robust standard errors clustered by country. *, **, and *** indicate significance at the 10, 5, and 1% levels, respectively

4.5 Analysis of the incremental informativeness of financial statement-based forecasts

Table 7 presents the results for whether analyst forecasts for firms whose analysts forecast under unfavorable conditions could be improved with the information from the financial statement-based forecasts (test of *H4*).[13] Columns 1 through 4 report the results for the SFSF forecast model. We find that the coefficient on $AF_{i,t}$ is 0.7989, which is significantly less than one (untabulated). We also find a positive and significant coefficient on $(FSF_{i,t} - AF_{i,t})$, which suggests that SFSF forecasts are incrementally informative over analyst forecasts for explaining year-ahead EPS forecasts overall. We find a negative and significant coefficient on $(FSF_{i,t} - AF_{i,t}) * POST_{i,t}$, suggesting the SFSF forecasts have less incremental information content for explaining year-ahead EPS in the post-period for the control sample of U.S. firms. We find a positive and signifcant coefficient on $(FSF_{i,t} - AF_{i,t}) * IFRS\_ENF_{i,t}$, suggesting the SFSF forecasts of firms that adopt IFRS with changes in enforcement have greater incremental information content for explaining year-ahead EPS in the pre-period than other firms. We find a positive and significant coefficient on $POST_{i,t} * IFRS\_ENF_{i,t}$, suggesting that firms that adopt IFRS with changes in enforcement experienced higher EPS in the post-period. We find that larger, profitable firms with greater financial statement comparability and greater differences between local GAAP and IFRS experience higher year-ahead EPS.

Most relevant to our study, we find that the incremental information content of financial statement-based forecasts over analyst forecasts is more pronounced for firms in countries that mandatorily adopted IFRS but did not incorporate concurrent changes in enforcement. The coefficient on $(FSF_{i,t} - AF_{i,t}) * POST_{i,t} * IFRS\_nonENF_{i,t}$ of 0.1086 is significant and represents an increased association of approximately 248% of the unconditional association of $EPS_{i,t}$ to $AF_{i,t}$ in the pre-IFRS adoption period. (The untabulated coefficient on $(FSF_{i,t} - AF_{i,t})$ is 0.0437.) When we separately examine firms whose analysts forecast under favorable versus unfavorable conditions, we find significant coefficients on $(FSF_{i,t} - AF_{i,t}) * POST_{i,t} * IFRS\_nonENF_{i,t}$ for both subsamples but find a significantly greater coefficient for firms whose analysts forecast under unfavorable conditions.

Column 2 reports the results for the DFSF forecast model. The results resemble those reported for the SFSF model. In particular, we find a positive and significant coefficient on $(FSF_{i,t} - AF_{i,t})$, which suggests that the DFSF forecasts are incrementally informative over analyst forecasts for explaining year-ahead EPS. We also find that the incremental information in DFSF forecasts over analyst forecasts is more pronounced for firms in countries that mandatorily adopted IFRS but did not incorporate concurrent changes in enforcement. The coefficient on $(FSF_{i,t} - AF_{i,t}) * POST_{i,t} * IFRS\_nonENF_{i,t}$ of 0.0467 is significant and represents an increased association of approximately 155% of the unconditional association of $AFE_{i,t}$ to $FSFE_{i,t}$ in the pre-IFRS adoption period.

[13] For this part of our analysis, *EPS* is taken from the I/B/E/S database as opposed to the Compustat Global database. This should bias against finding incremental improvement to analyst forecasts by incorporating the information provided by the financial statement-based forecasts, due to the fact that I/B/E/S does not provide detailed explanations with respect to which items are eliminated from the actual as well as the median consensus earnings per share number. Our results remain qualitatively similar using the mean consensus forecasted EPS.

Table 7 Analysis of the incremental informativeness of financial statement-based forecasts over analysts' forecasts to explain actual EPS

Column No.	1		2		3		4	5		6		7		8
(Sub-)Sample	FULL SAMPLE		Favorable Analyst Conditions		Unfavorable Analyst Conditions			FULL SAMPLE		Favorable Analyst Conditions		Unfavorable Analyst Conditions		
Dependent Variable	$EPS_{i,t}$		$EPS_{i,t}$		$EPS_{i,t}$			$EPS_{i,t}$		$EPS_{i,t}$		$EPS_{i,t}$		
FSFE definition	$SFSF_{i,t}$		$SFSF_{i,t}$		$SFSF_{i,t}$		SUEST	$DFSF_{i,t}$		$DFSF_{i,t}$		$DFSF_{i,t}$		SUEST
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Sig. Difference	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Sig. Difference
$AF_{i,t}$	**0.7989** ***	**11.30**	**0.8238** ***	**8.00**	**0.5502** ***	**4.21**	***χ2 = 1.96***	**0.7906** ***	**10.72**	**0.8066** ***	**7.58**	**0.6152** ***	**6.74**	***χ2 = 1.58***
($FSF_{i,t}$ - $AF_{i,t}$)	**0.0628** ***	**3.82**	**0.0223**	**0.93**	**0.1612** ***	**3.86**	***χ2 = 6.78*** ***	**0.2350** ***	**3.59**	**−0.0034**	**−0.17**	**0.3991** ***	**4.93**	***χ2 = 19.63*** ***
$POST_{i,t}$	0.2165 *	2.13	0.1790	1.51	0.5966	0.62		0.2068 *	2.05	0.1613	1.35	0.1177	1.40	
$IFRS\_ENF_{i,t}$	−0.1291	−0.84	0.0782	0.22	−0.2500	−1.62		−0.0332	−0.18	0.1949	0.72	−0.2413 *	−1.65	
$IFRS\_nonENF_{i,t}$	−0.0300	−0.13	−0.0800	−0.21	−0.1275	−0.86		0.0063	0.03	0.3914	0.81	−0.1512	−0.97	
*($FSF_{i,t}$ - $AF_{i,t}$) * $POST_{i,t}$*	−0.0507 ***	−3.55	−0.0323	−1.54	−0.1353 ***	−3.90		−0.2056 ***	−3.39	0.0602 ***	3.00	−0.3492 **	−5.10	
*($FSF_{i,t}$ - $AF_{i,t}$) * $IFRS\_ENF_{i,t}$*	0.2038 **	2.40	0.2557 **	2.24	0.3849 ***	4.19		0.2223 ***	2.66	0.2696 **	2.28	0.3492 ***	4.59	
*($FSF_{i,t}$ - $AF_{i,t}$) * $IFRS\_nonENF_{i,t}$*	0.0290	1.42	0.4363 **	2.19	−0.8768	−1.04		−0.1423	−1.32	0.5203	0.93	−0.3997 ***	−4.80	
*$IFRS\_ENF_{i,t}$ * $POST_{i,t}$*	0.1048 **	2.76	0.1009	0.38	0.4078 **	2.11		0.1128 **	2.81	0.0124	0.43	0.3924 **	2.19	
*$IFRS\_nonENF_{i,t}$ * $POST_{i,t}$*	0.6609	1.52	0.0170	0.05	0.1884	1.03		0.5889	1.45	−0.0623	−0.92	0.2580	1.40	
($FSF_{i,t}$ - $AF_{i,t}$) * $POST_{i,t}$ * $IFRS\_ENF_{i,t}$	**−0.1861**	**−0.61**	**−0.0590**	**−1.52**	**−0.1145**	**−1.29**	***χ2 = 1.30***	**−0.2294**	**−0.73**	**−0.0539**	**−0.90**	**−0.1114**	**−1.53**	***χ2 = 3.01*** *
($FSF_{i,t}$ - $AF_{i,t}$) * $POST_{i,t}$ * $IFRS\_nonENF_{i,t}$	**0.1086** **	**2.37**	**0.0283** **	**2.05**	**0.1388** ***	**2.62**	***χ2 = 2.76*** *	**0.0724** **	**2.58**	**0.0140** **	**2.10**	**0.1591** ***	**6.22**	***χ2 = 3.78*** *

Table 7 (continued)

Column No.	1		2		3		4	5		6		7		8
(Sub-)Sample	FULL SAMPLE		Favorable Analyst Conditions		Unfavorable Analyst Conditions			FULL SAMPLE		Favorable Analyst Conditions		Unfavorable Analyst Conditions		
Dependent Variable	EPS $_{i,t}$		EPS $_{i,t}$		EPS $_{i,t}$			EPS $_{i,t}$		EPS $_{i,t}$		EPS $_{i,t}$		
FSFE definition	$SFSF_{i,t}$		$SFSF_{i,t}$		$SFSF_{i,t}$		SUEST	$DFSF_{i,t}$		$DFSF_{i,t}$		$DFSF_{i,t}$		SUEST
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Sig. Difference	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Sig. Difference
$DQ_{i,t}$	−0.0760	−0.26	0.1232	1.59	−0.4422	−0.63		−0.1104	−0.37	0.1170 *	1.77	−0.4507	−0.62	
$COMPACCT4_{i,t}$	0.1659 ***	8.89	0.0205 ***	0.36	0.5439 ***	11.04		0.1659 ***	8.94	0.0164	0.28	0.5416 ***	22.16	
$GAAP_{i,t}$	0.1461 **	2.22	−0.0004	−0.01	0.4264 *	1.80		0.1375 **	2.21	−0.0096	−0.11	0.4069 *	1.84	
$SIZE_{i,t}$	0.1192 **	2.29	0.1788 ***	3.37	0.1348	1.55		0.1298 **	2.44	0.1670 ***	2.82	0.1305	1.61	
$LEV_{i,t}$	0.0007	0.77	0.0003	0.04	−0.0670 **	−2.05		0.0005 ***	0.54	−0.0014	−0.13	−0.0677 **	−2.33	
$LOSS_{i,t}$	−0.8141 ***	−3.68	−0.6847 *	−1.94	−0.6341 ***	−3.20		−0.8246 ***	−3.97	−0.6925 **	−2.03	−0.6510 ***	−3.03	
$GOV_{i,t}$	−1.0011	−1.72	−0.8584	−1.40	0.5690	0.78		−0.9361	−1.63	−0.8887	−1.39	0.1835	0.29	
$GDP_{i,t}$	−0.0174	−0.84	−0.0256	−1.23	−0.0131	−0.70		−0.0168	−0.80	−0.0212	−0.95	−0.0227 ***	−0.78	
$BUSYNESS_{i,t}$	0.0441	1.34						0.0404	1.24					
$EXPERIENCE_{i,t}$	−0.0403	−1.43						−0.0358	−1.30					
$RESOURCES_{i,t}$	0.0008	0.02						−0.0169	−0.33					
Country-industry fixed effects	yes		yes		yes			yes		yes		yes		
Year fixed effects	yes		yes		yes			yes		yes		yes		
# of observations	22,304		3,126		2,943			22,304		3,126		2,943		
Adjusted R^2	0.8814		0.8753		0.8790			0.8817		0.8760		0.8842		

Column 1 presents regression analyses explaining firms' actual EPS ($EPS_{i,t}$), using forecasts from the SFSF model ($SFSF_{i,t}$) expressed in Eq. (1). Column 2 (3) of this table provides the results for the subsample of firms followed by analysts who forecast under *favorable conditions* (*unfavorable conditions*). Column 4 compares the regression coefficients of the two subsamples, using seemingly unrelated estimation (SUEST) to determine whether the association of $EPS_{i,t}$ and $SFSF_{i,t}$ around mandatory IFRS adoption is more pronounced for firms followed by analysts under *favorable* versus *unfavorable conditions*. Column 5 presents regression analyses explaining firms' actual EPS ($EPS_{i,t}$), using forecasts from the DFSF model ($DFSF_{i,t}$) expressed in Eq. (2). Column 6 (7) provides the results for the subsample of firms followed by analysts who forecast under *favorable conditions* (*unfavorable conditions*). Column 8 compares the regression coefficients of the two subsamples, using SUEST to determine whether the association of $EPS_{i,t}$ and $DFSF_{i,t}$ around mandatory IFRS adoption is more pronounced for firms followed by analysts under *favorable* versus *unfavorable conditions*. See Table 1, Panel A, for variable definitions. The regressions are estimated with an intercept included but not reported. Country-industry fixed effects are based on the sample countries and the two-digit GICS sectors (#10 energy, #15 materials, #20 industrials, #25 consumer discretionary, #30 consumer staples, #35 health care, #45 information technology, #50 telecommunication services, and #55 utilities). We report t-statistics based on heteroscedasticity-robust standard errors clustered by country. *, **, and *** indicate significance at the 10, 5, and 1% levels, respectively

(The untabulated coefficient on $(FSF_{i,t} - AF_{i,t})$ is 0.0468.) We also find that the results are more pronounced for firms whose analysts forecast under unfavorable conditions.[14] These findings suggest that analyst forecasts for firms whose analysts forecast under unfavorable conditions do not fully incorporate the predictive ability of financial statements and that this relation is more pronounced for firms after IFRS adoption in countries without concurrent enforcement changes.

Given our finding that analyst forecasts do not fully incorporate the predictive ability of financial statement-based forecasts after IFRS adoption in countries without concurrent changes in enforcement, we investigate whether this underreliance on financial statement information has implications for stock returns. Specifically, we examine whether year-ahead stock returns are associated with the difference between the summary and financial statement-based forecast of EPS and the analysts' median consensus forecast of EPS, $(FSF_{i,t} - AF_{i,t})$. The year-ahead stock return for firm i $(CAR_{i,t})$ is calculated as the cumulative size-adjusted 12-month buy-and-hold stock return starting the fourth month after the end of fiscal year t-1. Following the literature (e.g., Hui et al. 2016), we adjust the firm's 12-month stock return by its corresponding country-specific size quintile return from the respective IFRS adopting country. We use the corresponding size decile return for the control sample of U.S. firms.[15] As presented in Table 8, the coefficients on $(FSF_{i,t} - AF_{i,t})$ and $(FSF_{i,t} - AF_{i,t}) * POST_{i,t} * IFRS\_nonENF_{i,t}$ are positive and statistically significant. These results suggest that financial statement-based forecasts provide incremental information over analyst forecasts for explaining year-ahead abnormal returns, particularly in countries without concurrent enforcement changes. We interpret this finding as initial evidence of stock mispricing associated with analyst underreliance on financial statement-based forecasts that warrants future research.[16]

5 Robustness tests and additional analyses

First, we examine the effect of forecast horizon on the results in Table 9, Panel A. Specifically, we use the most recent median consensus forecast before the forecasted year's fiscal year-end, as opposed to the earliest analysts' median consensus forecast after the prior year's earnings announcement. We find that the results are robust to this horizon; however, we note a reduction in the magnitude of the coefficients of interest. The attenuation of the relations is consistent with a timing advantage for analyst forecasts issued after the previous fiscal year-end, given that the analyst forecast date extends further from the date of the financial statements on which the financial statement-based model is based.

[14] We also estimate the regression model in equations (6) for the subsample of firms whose analysts forecast under neither favorable nor unfavorable conditions. The corresponding results for the SFSF model (DFSF model) show a positive and significant coefficient of 0.0579 (0.2479) on $(FSF_{i,t} - AF_{i,t})$ and of 0.0248 (0.02857) on $(FSF_{i,t} - AF_{i,t}) * POST_{i,t} * IFRS\_nonENF_{i,t}$.

[15] For firms that are delisted during the future period, we use a − 55% delisting return (Shumway and Warther 1999).

[16] In untabulated results, we find no difference in the incremental effect for the subsample of firms followed by analysts who forecast under favorable conditions and the subsample of firms followed by analysts who forecast under unfavorable conditions.

Table 8 Analysis of the incremental informativeness of financial statement-based forecasts over analysts' forecasts to explain year-ahead cumulative abnormal returns

Column No.	1		2	
Dependent Variable	CAR_{it}		CAR_{it}	
FSF definition	$SFSF_{i,t}$		$DFSF_{i,t}$	
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic
$AF_{i,t}$	**−0.0004**	**−0.51**	**−0.0005**	**−0.60**
$(FSF_{i,t} - AF_{i,t})$	**0.0004 ****	**2.31**	**0.0028 ****	**2.62**
$POST_{i,t}$	−0.0055	−0.23	−0.0117	−0.48
$IFRS\_ENF_{i,t}$	−0.0218	−1.39	−0.0183	−1.04
$IFRS\_nonENF_{i,t}$	0.0294	1.68	0.0356 *	1.99
$(FSF_{i,t} - AF_{i,t}) * POST_{i,t}$	−0.0011 ***	−4.29	−0.0010	−0.97
$(FSF_{i,t} - AF_{i,t}) * IFRS\_ENF_{i,t}$	0.0214 **	2.52	0.2000	1.55
$(FSF_{i,t} - AF_{i,t}) * IFRS\_nonENF_{i,t}$	0.0040 ***	4.03	−0.0039	−1.36
$IFRS\_ENF_{i,t} * POST_{i,t}$	−0.0064 ***	−3.33	−0.0065 ***	−3.27
$IFRS\_nonENF_{i,t} * POST_{i,t}$	−0.0101 ***	−4.47	−0.0106 ***	−4.88
$(FSF_{i,t} - AF_{i,t}) * POST_{i,t} * IFRS\_ENF_{i,t}$	**−0.0033**	**−0.82**	**−0.0101**	**−0.16**
$(FSF_{i,t} - AF_{i,t}) * POST_{i,t} * IFRS\_nonENF_{i,t}$	**0.0340 ****	**2.33**	**0.0255 ****	**2.38**
$DQ_{i,t}$	−0.0418	−1.61	−0.0431	−1.64
$COMPACCT4_{i,t}$	0.0153 ***	7.10	0.0153 ***	7.29
$GAAP_{i,t}$	0.0099 **	2.57	0.0104 **	2.81
$SIZE_{i,t}$	−0.0006	−0.11	−0.0005 **	−0.11
$LEV_{i,t}$	0.0000	0.04	0.0000	0.04
$LOSS_{i,t}$	−0.0796 ***	−6.16	−0.0793 ***	−6.15
$GOV_{i,t}$	−0.0342 **	−2.67	−0.0325 **	−2.54
$GDP_{i,t}$	−0.0005	−0.39	−0.0003	−0.22
$BUSYNESS_{i,t}$	0.0013	0.31	0.0012	0.29
$EXPERIENCE_{i,t}$	0.0004	0.15	0.0004	0.18
$RESOURCES_{i,t}$	0.0023	0.29	0.0019	0.25
Country-industry fixed effects	yes		yes	
Year fixed effects	yes		yes	
# of observations	22,304		22,304	
Adjusted R^2	0.0363		0.0360	

Column 1 presents regression analyses explaining firms' cumulative abnormal returns ($CAR_{i,t}$) using forecasts from the SFSF model ($SFSF_{i,t}$) expressed in Eq. (1). Column 2 presents regression analyses explaining firms' cumulative abnormal returns ($CAR_{i,t}$), using forecasts from the DFSF model ($DFSF_{i,t}$) expressed in Eq. (2). See Table 1, Panel A, for variable definitions. The regressions are estimated with an intercept included but not reported. Country-industry fixed effects are based on the sample countries and the two-digit GICS sectors (#10 energy, #15 materials, #20 industrials, #25 consumer discretionary, #30 consumer staples, #35 health care, #45 information technology, #50 telecommunication services, and #55 utilities). We report t-statistics based on heteroscedasticity-robust standard errors clustered by country. *, **, and *** indicate significance at the 10, 5, and 1% levels, respectively

Table 9 Additional analysis of analyst forecast accuracy improvements and financial statement-based forecasts' incremental informativeness around mandatory IFRS adoption

Panel A: Re-estimation of Tables 5 through 7 using the most recent analyst forecasts before forecasted year's fiscal year-end

Re-Estimation of Table 5	*Column 1*	
Dependent Variable	$AFE_{i,t}$	
Independent Variables	Coefficient	t-statistic
$POST_{i,t}$	-0.0199 ***	-3.21
$IFRS\_ENF_{i,t}$	0.0949 ***	6.28
$IFRS\_nonENF_{i,t}$	0.1187 ***	23.93
$IFRS\_ENF_{i,t}$ * $POST_{i,t}$	**-0.0893** ***	**-9.14**
$IFRS\_nonENF_{i,t}$ * $POST_{i,t}$	**-0.0598**	**-0.75**
$CONTROLS_{i,t}$	yes	
Country-industry fixed effects	yes	
Year fixed effects	yes	
# of observations	22,304	
Adjusted R^2	0.3000	

Re-Estimation of Table 6	*Column 1*		*Column 5*	
Dependent Variable	$AFE_{i,t}$		$AFE_{i,t}$	
FSFE definition	$SFSFE_{i,t}$		$DFSFE_{i,t}$	
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic
$FSFE_{i,t}$	**0.0049** ***	**9.31**	**0.0050** ***	**4.59**
$POST_{i,t}$	-0.0250	-0.76	-0.0279	-1.18
$IFRS\_ENF_{i,t}$	0.0840 ***	15.76	0.0992 ***	15.95
$IFRS\_nonENF_{i,t}$	0.1039 ***	5.32	0.1092 ***	5.33
$FSFE_{i,t}$ * $POST_{i,t}$	0.0043 ***	16.47	0.0000	-0.14
$FSFE_{i,t}$ * $IFRS\_ENF_{i,t}$	0.0520 ***	9.66	0.0315 ***	4.55
$FSFE_{i,t}$ * $IFRS\_nonENF_{i,t}$	0.0072 **	2.43	0.0015	0.67
$POST_{i,t}$ * $IFRS\_ENF_{i,t}$	-0.0790 ***	-6.85	-0.0940 ***	-8.46
$POST_{i,t}$ * $IFRS\_nonENF_{i,t}$	-0.0886	-1.29	-0.0834	-0.88
$FSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_ENF_{i,t}$	**0.0322** ***	**11.20**	**0.0157** ***	**9.92**
$FSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_nonENF_{i,t}$	**-0.0062**	**-0.43**	**0.0088**	**0.51**
$CONTROLS_{i,t}$	yes		yes	
Country-industry fixed effects	yes		yes	
Year fixed effects	yes		yes	
# of observations	22,304		22,304	
Adjusted R^2	0.3498		0.3274	

Re-Estimation of Table 7	*Column 1*		*Column 5*	
Dependent Variable	$EPS_{i,t}$		$EPS_{i,t}$	
FSFE definition	$SFSF_{i,t}$		$DFSF_{i,t}$	
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic
$AF_{i,t}$	**0.9587** ***	**26.37**	**0.9588** ***	**22.84**
($FSF_{i,t}$ - $AF_{i,t}$)	**0.0216** ***	**4.25**	**0.0737** *	**1.94**
$POST_{i,t}$	0.0977 *	8.14	0.1014	1.67
$IFRS\_ENF_{i,t}$	0.0175	0.08	0.0021	0.01
$IFRS\_nonENF_{i,t}$	0.0271	0.09	-0.0164	-0.20
($FSF_{i,t}$ - $AF_{i,t}$) * $POST_{i,t}$	-0.0199 ***	-3.27	-0.0675 *	-1.82
($FSF_{i,t}$ - $AF_{i,t}$) * $IFRS\_ENF_{i,t}$	0.0929 ***	14.99	0.0103 **	2.54
($FSF_{i,t}$ - $AF_{i,t}$) * $IFRS\_nonENF_{i,t}$	0.0132	1.40	-0.0345	-0.79
$POST_{i,t}$ * $IFRS\_ENF_{i,t}$	0.0285 *	1.93	0.0444 ***	3.92
$POST_{i,t}$ * $IFRS\_nonENF_{i,t}$	0.0013	0.01	0.0881	0.76
($FSF_{i,t}$ - $AF_{i,t}$) * $POST_{i,t}$ * $IFRS\_ENF_{i,t}$	**-0.0292**	**-1.14**	**-0.0349**	**-1.24**
($FSF_{i,t}$ - $AF_{i,t}$) * $POST_{i,t}$ * $IFRS\_nonENF_{i,t}$	**0.0254** **	**2.49**	**0.0214** **	**2.62**
$CONTROLS_{i,t}$	yes		yes	
Country-industry fixed effects	yes		yes	
Year fixed effects	yes		yes	
# of observations	22,304		22,304	
Adjusted R^2	0.9570		0.9571	

Table 9 (continued)

Panel B: Re-estimation of Tables 5 through 7 using the pre-existing level of a country's governance quality

Re-Estimation of Table 5	*Column 1*	
Dependent Variable	$AFE_{i,t}$	
Independent Variables	Coefficient	t-statistic
$POST_{i,t}$	-0.0582 **	-2.63
$IFRS\_ENF_{highGOV,i,t}$	0.1119 ***	7.02
$IFRS\_ENF_{lowGOV,i,t}$	0.1555 ***	7.61
$IFRS\_nonENF_{highGOV,i,t}$	0.0757 **	2.24
$IFRS\_nonENF_{lowGOV,i,t}$	0.1580 ***	3.44
$IFRS\_ENF_{highGOV,i,t}$ * $POST_{i,t}$	**-0.0761** ***	**-5.33**
$IFRS\_ENF_{lowGOV,i,t}$ * $POST_{i,t}$	**-0.0789** ***	**-2.31**
$IFRS\_nonENF_{highGOV,i,t}$ * $POST_{i,t}$	**0.0072**	**0.15**
$IFRS\_nonENF_{lowGOV,i,t}$ * $POST_{i,t}$	**0.0181**	**0.31**
$CONTROLS_{i,t}$	yes	
Country-industry fixed effects	yes	
Year fixed effects	yes	
# of observations	22,304	
Adjusted R^2	0.2112	

Re-Estimation of Table 6	*Column 1*		*Column 5*	
Dependent Variable	$AFE_{i,t}$		$AFE_{i,t}$	
FSFE definition	$SFSFE_{i,t}$		$DFSFE_{i,t}$	
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic
$FSFE_{i,t}$	**0.0380** ***	**24.50**	**0.0503** ***	**27.70**
$POST_{i,t}$	-0.0439	-1.62	-0.0303	-1.14
$IFRS\_ENF_{highGOV,i,t}$	0.0538 **	2.39	0.1183 ***	5.85
$IFRS\_ENF_{lowGOV,i,t}$	0.0831 ***	3.42	0.1406 ***	5.38
$IFRS\_nonENF_{highGOV,i,t}$	0.1180 **	2.34	0.1496 **	2.83
$IFRS\_nonENF_{lowGOV,i,t}$	0.1548 ***	3.41	0.2117 ***	4.21
$FSFE_{i,t}$ * $POST_{i,t}$	0.0134 ***	9.47	-0.0101 ***	-8.39
$FSFE_{i,t}$ * $IFRS\_ENF_{highGOV,i,t}$	0.1187 ***	7.81	0.0399 ***	4.91
$FSFE_{i,t}$ * $IFRS\_ENF_{lowGOV,i,t}$	0.0711 ***	22.41	0.0209 ***	17.28
$FSFE_{i,t}$ * $IFRS\_nonENF_{highGOV,i,t}$	-0.0014	-0.10	-0.0317 ***	-3.03
$FSFE_{i,t}$ * $IFRS\_nonENF_{lowGOV,i,t}$	-0.0033	-0.35	-0.0340 ***	-5.22
$IFRS\_ENF_{highGOV,i,t}$ * $POST_{i,t}$	-0.0385 **	-2.27	-0.0961 ***	-4.95
$IFRS\_ENF_{lowGOV,i,t}$ * $POST_{i,t}$	-0.0940 **	-2.41	-0.1405 ***	-3.23
$IFRS\_nonENF_{highGOV,i,t}$ * $POST_{i,t}$	-0.0432	-0.71	-0.0414	-0.62
$IFRS\_nonENF_{lowGOV,i,t}$ * $POST_{i,t}$	-0.0151	-0.26	-0.0259	-0.39
$FSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_ENF_{highGOV,i,t}$	**0.0764** ***	**5.57**	**0.0473** ***	**5.08**
$FSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_ENF_{lowGOV,i,t}$	**0.0844** ***	**6.61**	**0.0457** ***	**4.43**
$FSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_nonENF_{highGOV,i,t}$	**0.0084**	**1.55**	**0.0110**	**1.61**
$FSFE_{i,t}$ * $POST_{i,t}$ * $IFRS\_nonENF_{lowGOV,i,t}$	**-0.0028**	**-1.39**	**0.0033**	**1.24**
$CONTROLS_{i,t}$	yes		yes	
Country-industry fixed effects	yes		yes	
Year fixed effects	yes		yes	
# of observations	22,304		22,304	
Adjusted R^2	0.2620		0.2374	

Re-Estimation of Table 7	*Column 1*		*Column 5*	
Dependent Variable	$EPS_{i,t}$		$EPS_{i,t}$	
FSFE definition	$SFSF_{i,t}$		$DFSF_{i,t}$	
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic
$AF_{i,t}$	**0.7913** ***	**11.02**	**0.7808** ***	**10.42**
($FSF_{i,t}$ - $AF_{i,t}$)	**0.0645** ***	**3.87**	**0.2435** ***	**3.67**
$POST_{i,t}$	0.2157 *	2.11	0.2097 *	2.08
$IFRS\_ENF_{highGOV,i,t}$	-0.2116	-1.02	-0.0520	-0.24
$IFRS\_ENF_{lowGOV,i,t}$	-0.0343	-0.11	-0.1929	-0.65
$IFRS\_nonENF_{highGOV,i,t}$	0.0649	0.19	0.1262	0.41
$IFRS\_nonENF_{lowGOV,i,t}$	-0.1185 *	-1.89	-0.1162 *	-1.83
($FSF_{i,t}$ - $AF_{i,t}$) * $POST_{i,t}$	-0.0519 ***	-3.61	-0.2133 ***	-3.47
($FSF_{i,t}$ - $AF_{i,t}$) * $IFRS\_ENF_{highGOV,i,t}$	0.2235 **	2.81	0.2402 **	2.94
($FSF_{i,t}$ - $AF_{i,t}$) * $IFRS\_ENF_{lowGOV,i,t}$	0.3820 ***	11.13	0.1002 ***	17.11
($FSF_{i,t}$ - $AF_{i,t}$) * $IFRS\_nonENF_{highGOV,i,t}$	0.0500 ***	4.06	-0.1722	-1.62
($FSF_{i,t}$ - $AF_{i,t}$) * $IFRS\_nonENF_{lowGOV,i,t}$	-0.0054	-0.32	0.0995	0.81
$IFRS\_ENF_{highGOV,i,t}$ * $POST_{i,t}$	0.1283 ***	3.91	0.1311 ***	3.41
$IFRS\_ENF_{lowGOV,i,t}$ * $POST_{i,t}$	0.0963 **	2.45	0.1107 ***	3.04
$IFRS\_nonENF_{highGOV,i,t}$ * $POST_{i,t}$	0.6619	1.47	0.5790	1.37
$IFRS\_nonENF_{lowGOV,i,t}$ * $POST_{i,t}$	0.1068 *	1.96	0.1034 *	2.04
($FSF_{i,t}$ - $AF_{i,t}$) * $POST_{i,t}$ * $IFRS\_ENF_{highGOV,i,t}$	**-0.3205**	**-1.36**	**-0.3284**	**-1.15**
($FSF_{i,t}$ - $AF_{i,t}$) * $POST_{i,t}$ * $IFRS\_ENF_{lowGOV,i,t}$	**-0.1121**	**-0.97**	**0.0654**	**1.17**
($FSF_{i,t}$ - $AF_{i,t}$) * $POST_{i,t}$ * $IFRS\_nonENF_{highGOV,i,t}$	**0.0827** ***	**4.13**	**0.0728** ***	**3.02**
($FSF_{i,t}$ - $AF_{i,t}$) * $POST_{i,t}$ * $IFRS\_nonENF_{lowGOV,i,t}$	**0.4269** ***	**7.50**	**0.0753** ***	**3.58**
$CONTROLS_{i,t}$	yes		yes	
Country-industry fixed effects	yes		yes	
Year fixed effects	yes		yes	
# of observations	22,304		22,304	
Adjusted R^2	0.8816		0.8821	

Table 9 (continued)

Panel C: Re-estimation of Tables 5 and 6 using placebo IFRS adoption years

Re-Estimation of Table 5	*Column 1*		*Column 1*	
Dependent Variable	***AFE*** $_{i,t}$		***AFE*** $_{i,t}$	
IFRS Placebo	***2002 (vs. 2000)***		***2012 (vs. 2010)***	
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic
POST $_{i,t}$	-0.1196	-1.61	0.2499	0.74
IFRS_ENF $_{i,t}$	-0.4109 ***	-4.11	-0.2965	-0.78
IFRS_nonENF $_{i,t}$	0.1454 **	2.75	-0.2789	-0.75
IFRS_ENF $_{i,t}$ **** POST*** $_{i,t}$	**0.1108**	**1.59**	**-0.1061**	**-0.34**
IFRS_nonENF $_{i,t}$ **** POST*** $_{i,t}$	**0.1114**	**1.72**	**-0.3256**	**-1.03**
CONTROLS $_{i,t}$	yes		yes	
Country-industry fixed effects	yes		yes	
Year fixed effects	no		no	
# of observations	2,694		4,808	
Adjusted R^2	0.1617		0.2816	

Re-Estimation of Table 6	*Column 1*		*Column 1*		*Column 5*		*Column 5*	
Dependent Variable	***AFE*** $_{i,t}$		***AFE*** $_{i,t}$		***AFE*** $_{i,t}$		***AFE*** $_{i,t}$	
FSFE definition	***SFSFE*** $_{i,t}$		***SFSFE*** $_{i,t}$		***DFSFE*** $_{i,t}$		***DFSFE*** $_{i,t}$	
IFRS Placebo	***2002 (vs. 2000)***		***2012 (vs. 2010)***		***2002 (vs. 2000)***		***2012 (vs. 2010)***	
Independent Variables	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
FSFE $_{i,t}$	**0.2106** ***	**6.42**	**0.0303** *	**1.75**	**0.0901** ***	**3.35**	**0.0688** ***	**4.14**
POST $_{i,t}$	-0.1209	-1.54	0.1880	0.59	-0.1250	-1.42	0.3377	0.97
IFRS_ENF $_{i,t}$	-0.4431 *	-2.59	-0.2353	-0.65	-0.4505 ***	-3.80	-0.3413	-0.87
IFRS_nonENF $_{i,t}$	0.0553	0.82	-0.2249	-0.63	0.1107 *	1.85	-0.3300	-0.86
FSFE $_{i,t}$ * *POST* $_{i,t}$	0.0023	0.96	0.0184	0.66	0.0399	1.57	-0.0378	-1.31
FSFE $_{i,t}$ * *IFRS_ENF* $_{i,t}$	-0.0270	-0.34	0.0764	1.29	0.0218	0.44	0.0244	1.04
FSFE $_{i,t}$ * *IFRS_nonENF* $_{i,t}$	-0.1931 ***	-5.24	0.0413	1.14	-0.0915 ***	-6.34	-0.0326	-1.58
POST $_{t}$ * *IFRS_ENF* $_{i,t}$	0.1120	1.57	-0.1989	-0.72	0.1111	1.33	-0.3673	-1.15
POST $_{t}$ * *IFRS_nonENF* $_{i,t}$	0.1111	1.51	-0.0612	-0.22	0.1166	1.39	-0.2019	-0.60
FSFE $_{i,t}$ **** POST*** $_{i,t}$ **** IFRS_ENF*** $_{i,t}$	**-0.0062**	**-0.19**	**0.0001**	**0.00**	**-0.0396**	**-1.21**	**0.0446**	**1.17**
FSFE $_{i,t}$ **** POST*** $_{i,t}$ **** IFRS_nonENF*** $_{i,t}$	**-0.0341**	**-0.42**	**-0.0808**	**-0.97**	**-0.0212**	**-0.33**	**-0.0208**	**-0.94**
CONTROLS $_{i,t}$	yes		yes		yes		yes	
Country-industry fixed effects	yes		yes		yes		yes	
Year fixed effects	no		no		no		no	
# of observations	2,694		4,808		2,694		4,808	
Adjusted R^2	0.2342		0.2979		0.2006		0.2987	

Panel A presents the main results for the re-estimation of Tables 5 through 7, using the most recent analyst median consensus forecasts before the forecasted year's fiscal year-end. Panel B presents the main results for the re-estimation of Tables 5 through 7, using the pre-existing level of a country's governance quality to disentangle enforcement changes into (1) countries with high levels of governance quality and concurrent changes in enforcement ($IFRS\_ENF_{highGOV,i,t}$), (2) countries with high levels of governance quality but without concurrent changes in enforcement ($IFRS\_\ nonENF_{highGOV,i,t}$), (3) countries with low levels of governance quality and concurrent changes in enforcement ($IFRS\_ENF_{lowGOV,i,t}$), and (4) countries with low levels of governance quality but without concurrent changes in enforcement ($IFRS\_\ nonENF_{lowGOV,i,t}$). Panel C tabulates the respective main results for the re-estimation of Tables 5 through 6, using 2002 (versus 2000) and 2012 (versus 2010) as placebo IFRS adoption years. The re-estimations of Table 5, Column 1, present the analysis of determinants of improvements in forecast accuracy of analysts around mandatory IFRS adoption. The re-estimations of Table 6, Column 1, present regression analyses explaining analysts' median consensus forecast errors ($AFE_{i,t}$), using forecast errors from the SFSF model ($SFSFE_{i,t}$) expressed in Eq. (1), while the re-estimations of Table 6, Column 5, present regression analyses explaining analysts' median consensus forecast errors ($AFE_{i,t}$), using forecast errors from the DFSF model ($DFSFE_{i,t}$) expressed in Eq. (2). The re-estimations of Table 7, Column 1, present regression analyses explaining firms' actual EPS ($EPS_{i,t}$), using forecasts from the SFSF model ($SFSF_{i,t}$) expressed in Eq. (1), while the re-estimations of Table 7, Column 5, present regression analyses explaining firms' actual EPS ($EPS_{i,t}$), using forecasts from the DFSF model ($DFSF_{i,t}$) expressed in Eq. (2). See Table 1, Panel A, for variable definitions. The regressions are estimated with an intercept and with all control variables included, but the respective coefficients are not reported. Country-industry fixed effects are based on the sample countries and the two-digit GICS sectors (#10 energy, #15 materials, #20 industrials, #25 consumer discretionary, #30 consumer staples, #35 health care, #45 information technology, #50 telecommunication services, and #55 utilities). We report t-statistics based on heteroscedasticity-robust standard errors clustered by country. *, **, and *** indicate significance at the 10, 5, and 1% levels, respectively

Second, we investigate whether our results are driven by the level of governance quality of a country's institutional environment before mandatory IFRS adoption. We disentangle enforcement changes and the pre-existing level of a country's governance quality by splitting all mandatory IFRS adopting countries into (1) countries with high levels of governance quality and concurrent changes in enforcement ($IFRS\_ENF_{highGOV,i,t}$), (2) countries with high levels of governance quality but without concurrent changes in enforcement ($IFRS\_\ nonENF_{highGOV,i,t}$), (3) countries with low levels of governance quality and concurrent changes in enforcement ($IFRS\_ENF_{lowGOV,i,t}$), and (4) countries with low levels of governance quality but without concurrent changes in enforcement ($IFRS\_\ nonENF_{lowGOV,i,t}$). As can be seen in Tabel 9, Panel B, we find that the effects of mandatory IFRS adoption depend on whether the adopting country bundled the adoption of IFRS with concurrent changes in enforcement but not on the governance quality of a country's institutions before mandatory IFRS adoption.[17]

Third, we perform a placebo test in which we examine the changes in forecast accuracy in the years before (after) mandatory IFRS adoption. If the documented improvements in forecast accuracy are attributable to something other than IFRS, then we should observe improvements in forecast accuracy for IFRS adopters in the years before (after) IFRS adoption. We run this test separately for 2000 versus 2002 (placebo) and 2010 versus 2012 (placebo). Our results are presented in Table 9, Panel C, and show that the placebo IFRS adopters do not experience improvements in forecast accuracy.

We perform additional untabulated robustness tests. We first re-run our analyses excluding, one at a time, each of the pre- and the post-IFRS adoption years and excluding, one at a time, each of the mandatory IFRS adopting countries. In addition, we add firms from China, India, Japan, Taiwan, and Thailand to our control sample. We also investigate the relations between financial statement-based forecasts and analysts' median consensus forecasts across different firm (i.e., size and leverage) and institutional (i.e., differences between domestic GAAP and IFRS and GDP) dimensions. The results suggest that our findings are not driven by a particular year or subset of firms. We repeat our analyses using a constant sample across the pre- and post-IFRS periods. This reduces our sample to 8,724 firm-year observations (727 firms), but the results remain qualitatively similar. We repeat our analyses defining forecast accuracy as the difference between forecasted and actual EPS deflated by price and by using the mean instead of the median consensus forecasted EPS. Our results hold for these alternative definitions of forecast accuracy. Finally, we investigate the effect of mandatory IFRS adoption on the standard deviation of financial statement-based forecasts errors. We find that forecast error dispersion of both the SFSF and DFSF models decreased significantly around mandatory IFRS adoption in countries with and without concurrent changes in enforcement but not for firms in the U.S. Therefore the changes in forecast error dispersion results are consistent with the improvement in financial statement-based forecast accuracy around IFRS adoption.

[17] We repeat this robustness test, using alternative proxies for the pre-existing level of quality of a country's institutions, such as the common versus code law distinction, the difference between IFRS and domestic GAAP according to Bae et al. (2008), and the anti-self-dealing index of Djankov et al. (2008). For all of these additional specifications, our results remain qualitatively similar.

6 Conclusion

We find significant improvement in the accuracy of financial statement-based forecasts around IFRS adoption and in the accuracy of analyst forecasts for firms in countries with concurrent improvements in enforcement. We also find that this improvement in accuracy is associated with the improvement in the financial statement-based forecast accuracy. Further, we show that analysts place more weight on financial statement-based forecasts after mandatory IFRS adoption in countries with concurrent improvements in financial reporting enforcement and, particularly, if they forecast under favorable conditions. Finally, we document that financial statement-based forecasts provide incremental information for explaining year-ahead EPS over analyst forecasts after mandatory IFRS adoption for firms in countries without concurrent changes in enforcement, particularly for those whose analysts forecast under unfavorable conditions.

Our study provides insights into the factors through which mandatory IFRS adoption led to improved analyst forecast accuracy and into the drivers of analyst forecast accuracy. Our results suggest that the improvement in analyst forecast accuracy is not only attributable to improved disclosure quality and comparability but also to improved fundamental analysis from IFRS adoption. Our findings also suggest that analyst forecasts could be improved by placing greater weight on financial statement-based forecasts in countries without concurrent changes in enforcement with IFRS adoption. These insights provide opportunities for future research to enhance the understanding of the relation between financial analysis and analyst forecasting and, especially, the relation between the two based on the quality of enforcement and analyst characteristics.

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