

# **ANALYSTS' IFRS KNOWLEDGE, FORECAST ERROR, AND SEC'S ELIMINATION OF THE 20-F RECONCILIATION**

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## **ABSTRACT**

*Foreign private issuers (FPI) with trading shares in the United States needed to reconcile their annual financial reports (20-F) to the U.S. Generally Accepted Accounting Principles (GAAP) if they prepare the statements with International Financial Reporting Standards (IFRS). However, in November 2007, the SEC eliminated the 20-F reconciliation requirement. Prior studies have investigated the consequences of removing the reconciliation from country-level as well as firm-level characteristics, and have found mixed results. In this paper, we test the effect of the elimination on analyst forecast error based on analyst-individual characteristics. Specifically, we examine whether the effect varies with analysts' knowledge of IFRS. If there is any information loss from removing the reconciliation, the negative impact would be stronger for analysts without IFRS expertise. Therefore, these analysts' forecast error might become larger after the elimination, relative to before the elimination. We test our conjecture with a set of hand-collected data of analysts who follow foreign IFRS filers from 2005 to 2009. Results suggest that, in general, there is no significant change in terms of analysts' forecast error before and after eliminating the reconciliation. However, for analysts who do not have knowledge of IFRS, their forecast error significantly increased in the post-elimination period, while this change is not observed in analysts with IFRS knowledge. Our results not only provide supporting evidence to prior studies and the SEC's Final Rule (2007), but also highlight the importance of analysts' individual characteristics on their forecast properties.*

**JEL:** F23, F37, G28

**KEYWORDS:** IFRS, 20-F Reconciliation Elimination, Analyst Forecast Properties

## **INTRODUCTION**

**F**oreign private issuers (FPI) who list their shares in the U.S. capital markets were required to reconcile their annual financial reports (20-F) to the U.S. Generally Accepted Accounting Principles (GAAP). However, on November 15, 2007, the Securities and Exchange Commission (SEC) issued the Final Rule of "Acceptance From Foreign Private Issuers of Financial Statements Prepared in Accordance With International Financial Reporting Standards Without Reconciliation to U.S. GAAP", which states that "the Commission is adopting rules to accept from foreign private issuers in their filings with the Commission financial statements prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") without reconciliation to generally accepted accounting principles ("GAAP") as used in the United States" (p.1).

Although the intention of the Rule is "for the protection of investors and the efficiency of capital markets" (p.1), prior studies have found controversial results for the consequences of removing the reconciliation. The proponents claim that the removal would enable managers to "better communicate firm performance without constraints" (Chiu & Lee 2013). Others are concerned that the reconciliation contains useful

information for market participants. Therefore, the elimination might result in higher information asymmetry (Chen et al. 2019). Another option is that “reconciliation information is rarely used by investors” (Kim et al. 2012), and the elimination should have no strong influence.

Analysts are important external users of firms’ financial statements. Therefore, it is necessary to examine the effect of eliminating the reconciliation on analysts’ forecast properties. Kang et al. (2012) and Kim et al. (2012) find that, in general, there is no significant change of analysts’ forecast dispersion and forecast error after the elimination requirement. However, their results vary with some country-level and firm-level characteristics, such as home countries’ shareholder protection and firms’ institutional ownership. In this paper, we extend prior studies by focusing on one vital analyst individual characteristics, the knowledge with IFRS before the elimination. We conjecture that if there is any information loss from removing the reconciliation, the effect would be stronger for analysts who do not have IFRS expertise and thus rely heavily on the reconciliation. Using a hand-collected data set, we separate analysts who follow the foreign IFRS filers between 2005 and 2009 into two categories, analysts with IFRS knowledge and analysts without IFRS knowledge (detailed criteria are provided in Data and Methodology Section). Then we compare their relative forecast error in the pre- and post-elimination periods. Results from regression analyses suggest that overall there is no significant change before and after the elimination, which is consistent with Kang et al. (2012) and Kim et al. (2012). However, for analysts who are not familiar with IFRS, their relative forecast error was significantly increased when foreign IFRS filers stopped the reconciliation information. The results are robust with a different proxy of forecast error, or with the industry-fixed effects.

Our study contributes to the international accounting field in the following ways. Firstly, the evidence provides supports to the SEC’s Final Rule (2007). We find that generally analysts’ relative forecast error is not significantly affected by the elimination, indicating that there is no observed information loss from removing the reconciliation. Secondly, our findings response to some concerns from the SEC’s comment letters which address the importance of having IFRS knowledge. For example, the Corporate Reporting User’s Forum states that “We are very familiar with IFRS and as professional investors do not see a role for the Commission in assisting our own understanding. Private US investors, however, may be less familiar with IFRS financial statements and it would make sense for the Commission to encourage the provision of information and training for such investors” (p.7). Our results suggest that for analysts with IFRS expertise, there is no significant effect of removing the reconciliation on their forecasts. However, for analysts who are not familiar with IFRS, they face the information loss after the SEC’s Rule and experience increased relative forecast error. Lastly, we highlight the importance of analysts’ individual characteristics on their forecast properties. Bradley et al. (2017) find that when analysts’ industry working experience matches with the coverage firms’ industry, these analysts outperform their peers who do not have that industry’s working experience. Our results suggest that not only the related industry experience, but also the knowledge with the firms’ accounting standards, can affect analysts’ forecast outcomes.

## LITERATURE REVIEW

Unlike U.S. domestic firms that must follow the Generally Accepted Accounting Principles (GAAP) issued by the Financial Accounting Standards Board (FASB), foreign firms with trading shares in the U.S. stock exchanges can choose among U.S. GAAP, IFRS, or local countries’ GAAPs. The Securities and Exchange Act of 1934 requires foreign firms to file their annual statements with the SEC using form 20-F, which is similar with domestic firms’ 10-K reports (<https://www.sec.gov/files/form20-f.pdf>). Prior to 2007, if foreign firms report their 20-F in IFRS or the local countries’ GAAPs, they were required to reconcile the key numbers, such as net income and stockholders’ equity, from IFRS (local countries’ GAAPs) to U.S. GAAP. This reconciliation is usually illustrated in item 17 or item 18 of the 20-F. We provide an example of a foreign firm (Tenaris) with the detailed information of the reconciliation in Table 1.

Tenaris filed its 20-F in 2006 using IFRS. Item 18, “Reconciliation of net income and shareholders’ equity to US GAAP” contains the adjustment from IFRS to U.S. GAAP.

Table 1: Tenaris S.A. Reconciliation of Net Income and Shareholders’ Equity to U.S. GAAP for the Years Ended December 31, 2006, 2005 and 2004

	Year Ended December 31,		
	2006	2005	2004
Net income attributable to equity holders of the Company in accordance with IFRS	1,945,314	1,277,547	784,703
U.S. GAAP adjustments—income (expense)			
Deferred income tax (1)	(4,486)	(5,115)	(8,682)
Equity in investments in associated companies (2)	5,858	10,531	(55,026)
Pension benefits—unrecognized prior service costs (4)	277	(415)	(74)
Changes in fair value of financial assets (5)	—	4,023	(885)
Goodwill amortization (7)	—	—	9,023
Effect of adopting IFRS 3—negative goodwill (8)	10,184	8,687	—
Cost of exchange offer—amortization (9)	—	—	1,060
Minority interest in above reconciling items	169	207	220
Net income in accordance with U.S. GAAP	1,957,316	1,295,465	730,339
	December 31,		
	2006	2005	
Shareholders’ equity in accordance with IFRS	5,338,619	3,507,802	
U.S. GAAP adjustments—increase (decrease):			
Deferred income tax (1)	49,452	52,994	
Equity in investments in associated companies (2)	(27,530)	(34,362)	
Exchange of shares and conversion of debt in investments in associated companies (3)	13,196	(3,938)	
Pension benefits—unrecognized prior service costs (4)	—	2,420	
Pension benefits—effect of adopting SFAS 158 (4)	(3,113)	—	
Goodwill impairment (6)	(21,628)	(21,628)	
Goodwill amortization (7)	23,545	23,545	
Effect of adopting IFRS 3—negative goodwill (8)	(91,728)	(98,060)	
Cost of the exchange offer—original value (9)	(15,900)	(15,900)	
Cost of the exchange offer—accumulated amortization (9)	2,066	2,066	
Minority interest in above reconciling items	(1,177)	(1,346)	
Shareholders’ equity in accordance with U.S. GAAP	5,265,802	3,413,593	

Table 1 presents an example of a firm’s reconciliation of net income and shareholders’ equity from IFRS to U.S. GAAP for the year ended December 31, 2006, 2005 and 2004. The information is retrieved from Tenaris S.A., a foreign IFRS filer. The completed financial statement can be downloaded from [https://www.sec.gov/Archives/edgar/data/1190723/000119312507147298/d20f.htm#fin28316\\_65](https://www.sec.gov/Archives/edgar/data/1190723/000119312507147298/d20f.htm#fin28316_65)

The adjustment in Tenaris's 20-F indicates that foreign firms' net income and stockholder's equity can be different in IFRS and in U.S. GAAP, resulting from the different treatment of deferred income tax, pension benefits, goodwill impairment, and other divergence between these two accounting standards. Although the reconciliation amount for Tenaris is moderate (for year 2006, the net income and shareholders' equity under IFRS and under U.S. GAAP are \$1,945,314 versus \$1,957,316 and \$5,338,619 versus \$5,265,802, respectively), the magnitude for other foreign firms can be significant. For example, Barniv and Myring (2015) mention that a French firm, TOTAL S.A. reported its year 2005's shareholders' equity as €40,645 million with IFRS, but €73,055 million with U.S. GAAP, which is almost double of the amount with IFRS. Henry et al. (2007) examine the reconciled items of 83 foreign firms reporting with IFRS. They find that for the 2004 financial statements, firms' net income under U.S. GAAP, on average, was 59% lower than the net income under IFRS.

The American Institute of Certified Public Accountants (AICPA) summarizes the main differences between IFRS and U.S. GAAP into five parts (more details can be found in AICPA website <https://www.ifrs.com/overview/General/differences.html>): the model of the consolidation, the format of income statement, the treatment of inventory, the calculation of earnings-per-share, and the treatment of development costs. Many accounting firms and financial institutions have provided detailed description regarding the similarities and differences for these two accounting regimes. For example, based on the 2019 guidance of PricewaterhouseCoopers, the divergence comes from the revenue recognition, expense recognition (share-based payments and employee benefits), assets, liabilities, financial liabilities and equity, derivatives and hedging, consolidation, business combinations, leases, and other accounting and reporting topics.

From the academic perspective, prior studies have shown that U.S. GAAP is "rules-based" while IFRS relies more on "principles" (Chen et al. 2015). Donelson et al. (2016) provide five possible reasons why U.S. GAAP contains rules-based characteristics, namely the litigation risk, constraining opportunism, complexity, transaction frequency and age. The other main difference is that U.S. GAAP focuses more on "historical costs" rather than the "fair value" as the IFRS (Ball et al. 2015; Liang and Riedl 2014). PricewaterhouseCoopers 2019 guidance illustrates the fair value versus historical cost in biological assets. Under U.S. GAAP, biological assets can be measured at historical cost or fair value, while under IAS 41, biological assets are only measured at fair value.

In spite of these differences between the two accounting standards, in July 2007, the SEC released the Proposal of "acceptance from foreign private issuers of financial statement prepared in accordance with international financial reporting standards without reconciliation to U.S. GAAP". About 125 respondents from various organizations stated their opinions in the comment letters (all the comment letters can be found at <https://www.sec.gov/comments/s7-13-07/s71307.shtml>). While some of them supported the proposal, others argued that the elimination is premature. We provide a brief review of these comment letters.

Among the Big 4 auditors, Ernst & Young and KPMG voted for the Proposal since "IFRS issued by the IASB are sufficiently high-quality and comprehensive to be used by FPIs without reconciliation to U.S. GAAP" (KPMG, p.1). PricewaterhouseCoopers and Deloitte, however, expressed their concerns to the Proposal, especially given the "jurisdictional version" of IFRS (Deloitte, p.2). PricewaterhouseCoopers concluded that "we believe that the Proposed Rule's applicability, as currently structured, unnecessarily reduces the number of foreign private issuers that could potentially benefit from the change in regulation" (p.1).

Within the American Accounting Association (AAA), the AAA Financial Accounting Standards Committee reviewed related accounting research from four perspectives, namely the consequences of IFRS adoption, firms' accounting standards and their value relevance, the aggregated properties of the stock market, and the institutional factors in the reporting environment. They claimed that "the quality of IFRS

and U.S. GAAP are compatible and that the proposal to allow foreign firms to use IFRS without reconciliation deserve support” (p.6). In contrast, the Financial Accounting and Reporting Section of the AAA “has concluded that eliminating the reconciliation requirement is premature” (p.2). The Committee offered six reasons based on extant academic literature, including material differences between the two accounting regimes, the “home GAAP” preference from the U.S. investors, various implementation of accounting standards, low compliance of foreign firms, benefits from cross-listing exceeding the costs of reconciliation, and the proper standard harmonization procedure.

Other respondents also had different opinions. Some organizations, such as the NYSE Euronext, believed that the convergence projects between IASB and FASB help “neutralize any differences” between the two accounting regimes (p.1). However, others organizations, including the Chartered Institute of Management Accountants and the CFA Institute Center for Financial Market Integrity, were concerned that “the current reconciliation requirement for IFRS to U.S. GAAP serves as a primary tool for identifying the material differences in practice as well as in principle” (CFA Institute Center for Financial Market Integrity, p. 2), therefore, the proposal “might, at this stage, be a step too far for US investors” (p. 3).

The various options from the comment letters parallel with the controversial research findings on the consequences of eliminating the 20-F reconciliation. Some scholars argue that the 20-F reconciliation contains useful information for market participants; therefore, the elimination might cause negative outcomes. As discussed earlier, Henry et al. (2007) conclude that “significant differences exist between results reported using IFRS versus U.S. GAAP despite convergence efforts” (p.7). Supporting their argument, Chen and Sami (2008) notice that the abnormal trading volume in the U.S. capital markets is significantly higher when foreign IFRS firms announce their 20-F earnings with the reconciliation. This phenomenon indicates that U.S. investors view the reconciliation as informative for their equity allocation decisions.

On the other hand, some studies claim that the 20-F reconciliation does not contain incremental information. Jiang et al. (2010) find opposite results from Chen and Sami (2008) by showing an insignificant relation between foreign firms’ 20-F earnings and abnormal return volatility (bid-ask spread). Kim et al. (2012) investigate the effect of removing the reconciliation by testing the informed trading and market liquidity. They conjecture that the reconciliation is non-essential given the comparable reporting quality between the U.S. GAAP and the IFRS. The results from the difference-in-difference models indicate insignificant changes of informed trading and market liquidity in the pre- and post-elimination periods.

Another opinion regarding firms’ reconciliation, such as Chiu and Lee (2013), is that foreign firms had the pressure to minimize the reconciliation amount; therefore, managers might choose inappropriate accounting treatments that fail to reflect the real underlying performance. If this is the case, removing the elimination can release managers’ concerns and improve firms’ reporting quality. Their results support the argument by showing less discretionary accruals and more timely loss recognition in firms’ earnings after the SEC’s Rule. Chen et al. (2015) test IFRS filers’ information asymmetry between the insiders and external report users. The results are consistent with Chiu and Lee (2013) by showing decreased information asymmetry after eliminating the reconciliation.

Analysts are important users of foreign firms’ financial statements. Therefore, prior studies have tested the effect of eliminating the 20-F reconciliation on analyst forecast properties. Kim et al. (2012) propose the incremental information contained in the 20-F reconciliation is minimal given the compatible earnings quality between IFRS and U.S. GAAP. The elimination of this reconciliation, therefore, will not have a significant impact on information users, such as equity analysts. Their results support the prediction by showing that there is no substantial change in terms of analyst forecast error before and after the elimination. The findings are robust based on firms’ various characteristics, such as the level of institutional ownership. Another paper from Kang et al. (2012) finds similar evidence but focuses on analyst forecast dispersion.

They compare foreign firms using IFRS with foreign firms using U.S. GAAP from 2006 to 2009. Results from the difference-in-difference regression models suggest that analyst forecast dispersion is not significantly affected by SEC's Rule of eliminating the reconciliation. However, the insignificant change is only held for foreign firms with weak shareholder protection in their home countries. For foreign firms from strong shareholder protection countries, the information loss from the elimination is not compensated by improved reporting quality. Analysts following these firms experience larger forecast dispersion in the post-elimination period. These two studies show that firm-level characteristics and country-level characteristics are important factors when testing the consequences of eliminating 20-F reconciliation.

Besides firm- and country-level characteristics, prior literature suggests that analyst individual-level characteristics are also related with the forecast properties. For example, Barniv and Myring (2015) find that analyst forecast accuracy is negatively related with the magnitude of the reconciliation amount in foreign firms' 20-F reports. But for analysts who are in the All-Star list, they are able to adjust the inconsistency between IFRS and U.S. GAAP and are less affected by the differences. The importance of analyst individual characteristics is also documented by Bradley et al. (2017) who examine analysts' working background before they became equity analysts. They analyze analysts' LinkedIn information from 1983 to 2011 to test whether analysts' industry working experience can help them issue more accurate forecasts when the firms they follow are in the same industry. The findings suggest that in general, if analysts worked in the same industry as their covered firms, these analysts outperform their peers who do not have the industry experience. Song (2019) finds that when analysts follow Chinese firms listed in the U.S. markets, those analysts who are familiar with China, such as the culture, language, and economy, can provide better forecast service than analysts without Chinese familiarity.

## DATA AND METHODOLOGY

The literature review indicates that although prior studies have tested the effect of eliminating the 20-F reconciliation on analyst forecast properties, none of them investigates the importance of analyst individual-level characteristics, such as the analyst's familiarity with IFRS. We aim to fill this gap by testing the effect of analyst's IFRS knowledge on his/her forecast error pre- and post-eliminating the 20-F reconciliation. We predict that for a given analyst, analyst F, who has IFRS knowledge and follows a foreign firm filing with IFRS, since the firm's accounting standards (IFRS) match with that analyst's expertise (IFRS knowledge), the incremental information in the reconciliation, if any, will be minimal for that analyst. In this case, the elimination of the reconciliation might not have a significant effect on the analyst's forecasts since there is no information loss. In the SEC's comment letter, Credit Suisse stated a similar argument that "based on our experience, analysts and investors rarely make use of the reconciliation to U.S. GAAP. Rather, analysts and investors focus almost exclusively on the financial statements prepared under the primary GAAP, respective whether it is IFRS or U.S. GAAP" (p.4). Therefore, our first hypothesis is stated as the following:

*H1: For a given analyst who has IFRS knowledge, the forecast error is not significantly affected by the elimination of the 20-F reconciliation.*

On the other hand, for a given analyst M who has been using U.S. GAAP instead of IFRS, there will be a mismatching between his expertise (U.S. GAAP) and the accounting standards of the foreign firms (IFRS) that he follows. Under this circumstance, the reconciliation, which contains the adjustment between IFRS and U.S. GAAP, is more valuable for two reasons. Firstly, the analyst can use the reconciliation to have a better understanding of the firm's earnings that are presented with IFRS as well as with U.S. GAAP. Secondly, the U.S. GAAP based reconciliation also enables him to compare that firm with other peers. Standard & Poor's states in the comment letter that "the reconciliation...serves a useful function in highlighting differences in accounting conventions, thereby supporting our analytical process and aiding us in making comparisons among global peers" (p.2). However, after eliminating the reconciliation, this critical information would no longer be available to that analyst. Since there are still material differences

between IFRS and U.S. GAAP, that analyst might have a hard time reconciling the earnings by himself. In addition, the reduced comparability between that firm and other peers could also cause further information loss, which leads to increased forecast error. Therefore, our second hypothesis is stated as the following:

*H2: For a given analyst who does not have IFRS knowledge, the forecast error is significantly affected by the elimination of the 20-F reconciliation.*

Since our research question is the effect of eliminating the 20-F reconciliation, we first get all foreign private issuers' 20-F reports between 2005 and 2009 from the SEC website (<https://www.sec.gov/divisions/corpfin/internat/companies.shtml>). Out of the 5,429 firm-year observations, we only keep 644 IFRS observations that provided the reconciliation information. We also require that for any given specific firm, it must be in both pre- and post-elimination periods. We have 409 observations after this step. Observations that do not meet the following restrictions are deleted: non-financial regulated industries, listed in the three main stock exchanges, and having December as the fiscal year-end. We then manually check these 195 firm-year observations with their 20-Fs to make sure there is (not) reconciliation before (after) the SEC's Rule. After getting the firm-year observations, we merge them with the I/B/E/S to obtain the analyst individual data. We have 66 unique analysts who follow the same firm in both pre- and post-elimination periods. This step is important because we aim to compare their forecast error before and after the elimination. Since I/B/E/S only provides the last name and the initial of the first name for each analyst, we use that information and the firms' names to identify the analyst's full name. Out of the 66 unique analysts, we are able to find 65 analysts' names.

For these 65 unique analysts with full names, 18 of them do not have public LinkedIn information. In this situation, we search for other professional profiles from the brokerage website, Wall Street website, interviews, Institutional Investor website, and related news to gather that analyst's information. We define "with IFRS knowledge" if the analyst meets one of the two criteria:

- 1) The analyst resided in IFRS-adoption (IFRS-permitting) countries before the elimination. For example, the LinkedIn for analyst Andrew Benson who followed the foreign firm Syngenta (LinkedIn: <https://www.linkedin.com/in/andrew-benson-0438b119/?originalSubdomain=uk>), indicates that he has been living in the UK since (at least) 1981 where he got this bachelor degree at University of York. Since the UK mandatorily adopted IFRS in 2005, we propose that the analyst got IFRS-related training in the UK. Therefore, when the SEC removed the elimination in 2007, he already had IFRS knowledge before the Rule. We code him as "with IFRS knowledge".

Or

- 2) The analyst focused on foreign firms from IFRS-adoption (IFRS-permitting) countries before the elimination. For example, analyst Alexander Lindstrom, "responsible for Nordic Healthcare Equity Research" (LinkedIn: <https://www.linkedin.com/in/alexander-lindstrom-2a49424/>). Countries in the Nordic area, including Denmark, Finland, Iceland, and Norway, mandatorily adopted IFRS in 2005. Therefore, we code him as "with IFRS knowledge".

An example of an analyst without IFRS knowledge is analyst Thomas Carpenter. His LinkedIn (<https://www.linkedin.com/in/thomas-carpenter-cfa-652b2a145/>) indicates that he has stayed in New York and Louisville (Kentucky area) in his career life. We code him as no "IFRS knowledge". We obtain countries' IFRS adoption status from the IASB website and other research papers (Song and Trimble, 2020).

To get the final decision with "IFRS knowledge", each author coded the analysts separately. If they both had the same code, that would be the final decision. If they had different coding, then they discussed before reaching the final code.

After merging with all control variables, we have 242 analyst-firm-year observations (104 firm-year and 25 firm observations) as our final sample. Table 2 presents the sample distribution by year and by industry. While year 2005 and 2009 have fewer observations, the yearly distribution is pretty even in the five years. Most of the observations are concentrated on chemical and allied products, electronic and other electric equipment, and petroleum (coal) products industries.

Table 2: Sample Distribution by Year and by Industry

<b>Year</b>	<b>Freq.</b>	<b>Percent</b>
2005	38	15.7
2006	57	23.55
2007	54	22.31
2008	54	22.31
2009	39	16.12
<b>Total</b>	<b>242</b>	<b>100</b>
<b>Industry</b>	<b>Freq.</b>	<b>Percent</b>
Metal, Mining	9	3.72
Printing & Publishing	3	1.24
Chemical & Allied Products	69	28.51
Petroleum & Coal Products	51	21.07
Primary Metal Industries	25	10.33
Electronic & Other Electric Equipment	66	27.27
Communications	11	4.55
Automotive Dealers & Service Stations	4	1.65
Hotels & Other Lodging Places	4	1.65
<b>Total</b>	<b>242</b>	<b>100</b>

*Table 2 presents the sample distribution by year and by industry. We collect the information of analysts' IFRS knowledge from the I/B/E/S database and the LinkedIn website. The final sample contains 242 analyst-firm-year observations from 2005 to 2009. The yearly distribution is pretty even in the five years. Most of the observations are concentrated on chemical and allied products, electronic and other electric equipment, and petroleum (coal) products industries.*

Table 3 shows the descriptive statistics for the full sample (Panel A), IFRS-knowledge sample (Panel B), and No-IFRS-knowledge sample (Panel C). Our main variable, analyst forecast error (ERROR), is measured as the relative forecast error of one specific analyst compared with all other analysts. The dummy variable IFRS is coded as one if the analyst has IFRS knowledge as discussed above, and zero if no IFRS knowledge. We define the post-elimination period (POST) as 2008 and 2009. Since the IFRS-knowledge group and the No-IFRS-knowledge group are different in some firm-level characteristics, we control for these variables in our multivariate regression models (firm size SIZE, firm profitability ROA, firm growth GROW, firm return RET, firm unexpected earnings surprise SURP, forecast horizon HORZ, firm loss LOSS, big 4 auditor Big4, and analyst coverage Cover).



Table 3: Descriptive Statistics

Panel A: Full Sample							
Variable	N	Mean	25th Pctl	Median	75th Pctl	Std Dev	
ERROR	242	0.155	-0.161	0.028	0.348	1.554	
IFRS	242	0.496	0	0	1	0.501	
POST	242	0.384	0	0	1	0.487	
SIZE	242	10.702	10.181	11.097	11.816	1.571	
ROA	242	0.109	0.073	0.108	0.150	0.091	
GROW	242	3.717	1.787	2.917	5.063	3.277	
RET	242	0.079	0.049	0.062	0.105	0.043	
SURP	242	0.294	-0.179	0.015	0.310	1.861	
HORZ	242	4.902	4.712	4.886	5.086	0.305	
LOSS	242	0.074	0	0	0	0.263	
Big4	242	0.971	1	1	1	0.168	
Cover	242	2.138	1.609	2.079	2.773	0.765	
Panel B: IFRS-knowledge Group							
Variable	N	Mean	25th Pctl	Median	75th Pctl	Std Dev	
ERROR	120	-0.017	-0.184	0.044	0.365	1.824	
POST	120	0.375	0	0	1	0.486	
SIZE	120	10.780	10.285	11.246	11.779	1.549	
ROA	120	0.111	0.073	0.108	0.158	0.079	
GROW	120	4.090	1.833	3.194	5.118	4.196	
RET	120	0.074	0.045	0.059	0.089	0.041	
SURP	120	0.277	-0.140	0.085	0.310	1.683	
HORZ	120	4.950	4.754	4.938	5.127	0.312	
LOSS	120	0.05	0	0	0	0.219	
Big4	120	0.983	1	1	1	0.129	
Cover	120	1.871	1.386	1.792	2.398	0.722	
Panel C: No-IFRS-knowledge Group							
Variable	N	Mean	25th Pctl	Median	75th Pctl	Std Dev	Mean-Difference
ERROR	122	0.324	-0.139	0.000	0.256	1.217	(*)
POST	122	0.393	0	0	1	0.491	
SIZE	122	10.625	10.134	10.963	11.890	1.595	
ROA	122	0.107	0.073	0.108	0.146	0.101	
GROW	122	3.350	1.784	2.769	4.982	1.949	(*)
RET	122	0.085	0.053	0.062	0.114	0.044	(**)
SURP	122	0.311	-0.216	0.008	0.310	2.029	
HORZ	122	4.855	4.650	4.837	5.053	0.291	(**)
LOSS	122	0.098	0	0	0	0.299	
Big4	122	0.959	1	1	1	0.199	
Cover	122	2.400	1.792	2.441	2.996	0.715	(***)

Table 3 shows the descriptive statistics for the full sample (Panel A), IFRS-knowledge sample (Panel B), and No-IFRS-knowledge sample (Panel C). The main variable, analyst forecast error (ERROR), is measured as the relative forecast error of one specific analyst compared with all other analysts. The dummy variable IFRS is coded as one if the analyst has IFRS knowledge, and zero otherwise. The post-elimination period (POST) is year 2008 and 2009. Other control variables are firm size (SIZE), firm profitability (ROA), firm growth (GROW), firm stock return (RET), firm unexpected earnings surprise (SURP), analyst forecast horizon (HORZ), firm loss (LOSS), big 4 auditor (Big4), and analyst coverage (Cover).

Table 4 is the Person correlation matrix using the full sample. Overall, there is no significant relationship between the analyst’s relative forecast error (ERROR) and the elimination of the reconciliation (POST). This evidence is consistent with prior studies, such as Kang et al. (2012) and Kim et al. (2012). In the next part, we test whether this finding still holds or not when we control for firm-level characteristics.

Table 4: Person Correlation Matrix

	ERROR	POST	SIZE	ROA	GROW	RET	SURP	HORZ	LOSS	Big4	Cover
ERROR	1										
POST	0.030	1									
SIZE	-0.040	<b>-0.161</b>	1								
ROA	-0.049	<b>-0.337</b>	<b>0.454</b>	1							
GROW	-0.038	<b>-0.281</b>	<b>0.122</b>	<b>0.418</b>	1						
RET	-0.072	<b>0.178</b>	<b>-0.357</b>	<b>-0.170</b>	<b>-0.118</b>	1					
SURP	0.068	<b>-0.199</b>	-0.066	<b>-0.169</b>	0.024	-0.012	1				
HORZ	-0.013	-0.017	-0.006	0.028	0.006	0.038	<b>0.126</b>	1			
LOSS	<b>0.157</b>	0.035	<b>-0.421</b>	<b>-0.643</b>	<b>-0.230</b>	0.103	<b>0.323</b>	0.020	1		
Big4	-0.056	<b>-0.168</b>	<b>0.507</b>	<b>0.179</b>	0.065	<b>-0.167</b>	0.019	-0.046	<b>-0.139</b>	1	
Cover	0.013	-0.090	<b>0.281</b>	0.062	<b>-0.133</b>	0.062	0.052	<b>-0.109</b>	0.011	<b>0.165</b>	1

Table 4 is the Person correlation matrix with the full sample. Variables in the matrix are: analyst relative forecast error (ERROR), analysts’ IFRS knowledge (IFRS), post-elimination period (POST), firm size (SIZE), firm profitability (ROA), firm growth (GROW), firm stock return (RET), firm unexpected earnings surprise (SURP), analyst forecast horizon (HORZ), firm loss (LOSS), big 4 auditor (Big4), and analyst coverage (Cover). Variables in bold are significant at the 10% level.

## RESULTS AND DISCUSSION

To test our hypotheses, we run the following multivariate regression model:

$$ERROR = \beta_0 + \beta_1 POST + \beta_2 SIZE + \beta_3 ROA + \beta_4 GROW + \beta_5 RET + \beta_6 SURP + \beta_7 HORZ + \beta_8 LOSS + \beta_9 Big4 + \beta_{10} Cover + error\ term \tag{1}$$

We define an analyst’s relative forecast error (ERROR) as the difference between his/her forecast error (the deflated absolute value of his/her most recent forecast minus firm’s actual earnings) and the median of all other analysts’ forecast error (the deflated absolute value of median consensus forecast minus firm’s actual earnings). We follow Kang et al. (2012) and code the post-elimination period (POST) as year 2008 and 2009. Our results are quantitatively similar when we include year 2007 in the post period.

As discussed early, we include several firm-level characteristics as the control variables. Prior studies (Hwang et al. 1996; Lang & Lundholm, 1996; Behn et al. 2008) have found that analyst forecast error is associated with firm’s size (SIZE), firms’ profitability (ROA), firm’s growth rate (GROW), firm’s return (RET), firm’s unexpected earnings surprise (SURP), analyst forecast horizon (HORZ), firm’s loss (LOSS), the auditor of the firm (Big 4), and analyst coverage (Cover).

We present our main results in Table 5. Panel A shows the results with the full sample. Model 1 only includes the control variables while Model 2 is with industry fixed effects. The coefficient on the main variable “POST” is insignificant in both models, indicating that overall, analyst relative forecast error is not significantly related with the SEC’s Rule of removing the reconciliation. This finding is consistent with Kang et al. (2012) and Kim et al. (2012). Both studies document that the elimination has no significant impact on analyst forecast’s dispersion and forecast error. One possible reason is, as explained in the literature review part, IFRS and U.S. GAAP are comparable accounting standards. Therefore, there is no material information contained in the reconciliation for analysts. When the SEC removed the reconciliation, it would not have a significant effect on analysts’ forecasts.

Table 5: Main Results

Panel A: Full Sample		
Variable	Model 1 Coefficient	Model 2 Coefficient
POST	0.236	0.261
SIZE	0.001	-0.082
ROA	2.191	2.890
GROW	-0.012	0.008
RET	-3.586	-5.315
SURP	0.029	0.024
HORZ	-0.108	-0.066
LOSS	1.313**	1.301**
Big4	-0.511	-0.530
Cover	0.034	-0.136
Intercept	0.996	1.687
Industry Fixed-effect	NO	YES
Observations	242	242
R-squared	0.045	0.063
Adjusted R-squared	0.003	0.006
Panel B: IFRS-knowledge Group		
Variable	Model 1 Coefficient	Model 2 Coefficient
POST	0.041	0.090
SIZE	0.183	0.074
ROA	1.555	3.647
GROW	-0.008	-0.006
RET	-7.980*	-9.405*
SURP	0.147	0.132
HORZ	-0.574	-0.399
LOSS	0.518	0.577
Big4	-3.055*	-2.781
Cover	-0.070	-0.185
Intercept	4.353	4.121
Industry Fixed-effect	NO	YES
Observations	120	120
R-squared	0.100	0.116
Adjusted R-squared	0.017	0.085
Panel C: No-IFRS-knowledge Group		
Variable	Model 1 Coefficient	Model 2 Coefficient
POST	0.584**	0.712***
SIZE	-0.166	-0.371**
ROA	3.771*	2.499
GROW	-0.056	0.151
RET	-0.555	-1.159
SURP	-0.058	-0.045
HORZ	0.557	0.345
LOSS	1.789***	1.825***
Cover	0.141	0.152
Intercept	-2.241	-0.346
Industry Fixed-effect	NO	YES
Observations	122	122
R-squared	0.195	0.240
Adjusted R-squared	0.122	0.132

Table 5 shows the main results. Panel A, B and C present the results with the full sample, IFRS-knowledge group, and no-IFRS-knowledge group, respectively. For each panel, Model 1 only includes all control variables while Model 2 is with industry fixed effects. Variables in the models are: analyst forecast error (ERROR), analysts' IFRS knowledge (IFRS), post-elimination period (POST), firm size (SIZE), firm profitability (ROA), firm growth (GROW), firm stock return (RET), firm unexpected earnings surprise (SURP), analyst forecast horizon (HORZ), firm loss (LOSS), big 4 auditor (Big4), and analyst coverage (Cover). \*\*\*, \*\*, and \* indicate the significance at the 1% level, 5% level, and 10% level.

Panel B is the result when we only use analysts with IFRS knowledge as the sample to test hypothesis 1. Similar with the full sample result, there is no significant change for analysts' relative forecast error in the post-elimination period compared with the pre-elimination period. This finding echoes with Credit Suisse's statement that "analysts and investors rarely make use of the reconciliation to U.S. GAAP". Since these analysts are familiar with IFRS, which is the same accounting standards as the firms they follow, it is not surprising that the reconciliation is not valuable for these analysts. Therefore, their forecast behavior will be constant before and after the elimination. Our first hypothesis is supported.

The last panel, Panel C, shows the result for hypothesis 2 using analysts without IFRS knowledge as the observations. Contrary to results in Panel A and Panel B, results in Panel C indicate that for analysts who have no IFRS knowledge, such as analysts that just worked in a local U.S. domestic brokerage and only know U.S. GAAP, their relative forecast error is increased in the post-elimination period. The coefficient is positively significant at the 1% level in the fixed-effect model (Model 2). The possible reason is that for analysts who do not have IFRS knowledge, when they follow IFRS foreign filers, they had to rely heavily on the reconciliation that contains the adjustment between IFRS and U.S. GAAP. The reconciliation is valuable and essential for these analysts by enabling them to understand the business performance and comparing the earnings with other peers. Standard & Poor's had a similar argument that "the reconciliation...serves a useful function in highlighting differences in accounting conventions, thereby supporting our analytical process and aiding us in making comparisons among global peers". When the SEC removed the elimination, these analysts lost the important information of the reconciliation; therefore, their relative forecast error would be higher in the post-elimination period. The findings support our second hypothesis.

We reran all the tests using the mean consensus forecasts as the robustness tests. The results of the fixed effect model are presented in Table 6. We observe similar results that for the full sample and the IFRS-knowledge sample, there is no significant change for analysts' relative forecast error in the post-elimination period, however, for analysts without IFRS knowledge, their relative forecast error is increased significantly after removing the reconciliation.

Table 6: Robustness Tests

VARIABLE	Full Sample Coefficient	IFRS-knowledge Group Coefficient	No-IFRS-knowledge Group Coefficient
POST	<b>0.224</b>	<b>0.115</b>	<b>0.598**</b>
SIZE	-0.065	0.078	-0.338**
ROA	1.974	2.811	0.931
GROW	0.011	-0.004	0.180
RET	-6.534**	-10.607*	-2.819
SURP	0.064	0.152	0.004
HORZ	-0.174	-0.502	0.244
LOSS	0.901	0.157	1.376**
Big4	-0.867	-3.043*	0.939
Cover	-0.176	-0.224	0.110
Intercept	2.341	4.648	0.266
Industry Fixed-effect	YES	YES	YES
Observations	242	120	122
R-squared	0.070	0.127	0.220
Adjusted R-squared	0.012	0.031	0.132

Table 6 presents the results for robustness test using the mean consensus forecasts. All regression models are with industry fixed effects. Variables in the models are: analyst forecast error (ERROR), analyst's IFRS knowledge (IFRS), post-elimination period (POST), firm size (SIZE), firm profitability (ROA), firm growth (GROW), firm stock return (RET), firm unexpected earnings surprise (SURP), analyst forecast horizon (HORZ), firm loss (LOSS), big 4 auditor (Big4), and analyst coverage (Cover). \*\*\*, \*\*, and \* indicate the significance at the 1% level, 5% level, and 10% level.

## CONCLUDING COMMENTS

In this study, we try to test the effect of analyst-individual characteristics, such as his/her knowledge with IFRS, on the forecast error after the SEC eliminated foreign firms' 20-F reconciliation. We propose that the insignificant change of analysts' forecast properties from prior studies (Kim et al. 2012) may not hold for analysts who do not have IFRS knowledge and who rely heavily on the reconciliation information. We test our prediction with a hand-collected data set of analysts who follow foreign IFRS firms in the U.S. capital markets. Results suggest that, on average, for the full sample and the sample only with analysts having IFRS knowledge, there is no significant change in terms of analysts' relative forecast error. But for analysts without IFRS knowledge, their relative forecast error was significantly increased after eliminating the reconciliation.

Our findings not only support the SEC's Rule of removing the reconciliation by showing that in general, analysts' performance is not affected by the elimination of the reconciliation, but also highlight the importance of analysts' accounting knowledge on IFRS for their forecasts. These findings echo with the SEC's suggestion that information users "may need to obtain training or education in IFRS before they are comfortable working without the U.S. GAAP reconciliation" (SEC 2007, P.23).

One limitation of our paper is the relative small sample size. Later studies can expand the sample and include more years to see whether the difference between IFRS-knowledge analysts and no-IFRS-knowledge analyst still hold in the long term.

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