# DOES IFRS ADOPTION AFFECT ANALYST FORECAST BEHAVIOR? EVIDENCE FROM FOREIGN PRIVATE ISSUERS IN THE UNITED STATES

by

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## Abstract

## DOES IFRS ADOPTION AFFECT ANALYST FORECAST BEHAVIOR? EVIDENCE FROM FOREIGN PRIVATE ISSUERS IN THE UNITED STATES

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The globalization of business and finance has led to the adoption of International Financial Reporting Standards (IFRS) in more than 100 countries, and numerous studies have examined the consequences of IFRS adoption in these countries. Currently, however, U.S. domestic issuers are not required to use IFRS in preparing their financial statements, which makes the study of potential IFRS adoption effects on U.S. domestic issuers difficult. My dissertation uses a unique sample of foreign private issuers that are cross listed in the U.S. and are allowed to use IFRS for their financial statements, so that I can investigate the effect of IFRS adoption on analyst forecast behavior and analyst information precision in the U.S. By comparing this IFRS adoption sample group with another group of U.S. foreign private issuers that use U.S. GAAP for their financial statements, my dissertation examines and answers three research questions. Firstly, whether there are any differences in analyst forecast behavior, such as analyst following, analyst forecast accuracy, and analyst forecast dispersion, between the IFRS group and the U.S. GAAP group. Secondly, whether analyst public and private information precision are affected by foreign private issuers' IFRS adoption. And lastly, whether the IFRS adoption effect is moderated by industry characteristics (whether or not IFRS is the

dominant accounting standard in the issuer's industry) and moderated by the level of rule of law in the issuer's home country.

Results show that compared with the U.S. GAAP group, the IFRS group generally has lower analyst following, lower analyst forecast accuracy, higher forecast dispersion, and less precise public information precision. In addition, the negative effect of foreign private issuers' IFRS adoption on analyst forecast accuracy is weaker when the issuer's industry is in IFRS dominant industry, while the negative effect of IFRS adoption on analyst following is stronger when the issuer comes from a country with strong rule of law.

In essence, my dissertation sheds light on the debate surrounding potential IFRS adoption in the U.S by providing evidence that to some extent, foreign private issuers' IFRS adoption is related to unfavorable analyst forecast behavior and information precision in the U.S. capital market.

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## Chapter 1

## Introduction

My dissertation examines the effect of International Financial Reporting Standards (IFRS) adoption on analyst forecast behavior (analyst following, analyst forecast accuracy and forecast dispersion) and analyst public and private information precision in the U.S by using U.S. foreign private issuers as the sample. In addition, it examines whether the IFRS adoption effect is moderated by industry characteristics (whether or not IFRS is the dominant accounting standard in the issuer's industry) and moderated by the level of rule of law in the issuer's home country.

## 1.1 Overview of the Study

The globalization of business and finance has led to a great demand for global accounting standards. Formed in 1973, the International Accounting Standards Committee (IASC) was the first attempt to establish international accounting standards. It was later restructured and replaced by the International Accounting Standards Board (IASB)<sup>1</sup>, which has worked to improve the quality of IFRS and has introduced IFRS in more than one hundred countries (as of June 2015, 116 jurisdictions require IFRS for all or most domestic publicly accountable entities<sup>2</sup>).

However, the U.S. is not among these 116 jurisdictions. Currently, the SEC does not permit its domestic issuers to use IFRS to prepare their financial statements; instead, U.S. domestic issuers are required to use U.S. GAAP. This requirement makes it hard to study IFRS adoption in the U.S. using U.S. domestic issuers as the research sample. But

<sup>1</sup>http://www.ifrs.org/News/Announcements-and-Speeches/Pages/History-of-the-IASC-1973-2000.aspx

<sup>2</sup>http://www.ifrs.org/use-around-the-world/documents/financial-reporting-standards-world-economy-june-2015.pdf

foreign private issuers that are cross listed in the U.S. can choose among U.S. GAAP, IFRS and their home country accounting standards for their annual financial reports. This unique sample provides an opportunity to possibly examine IFRS adoption consequences in the U.S. market.

Financial analysts are frequently referred to as sophisticated financial information users and important market participants (Schipper 1991; Revsine et al. 2001). Furthermore, prior studies show that financial statements are a critical source of information to analysts as they formulate their forecasts (Acker et al. 2002; Peek 2005). Thus, examining the impact of U.S. foreign private issuers' IFRS adoption on analyst forecast behavior and analyst information precision is important and useful in understanding the overall effects of potential IFRS adoption in the U.S. capital markets.

The first research question in my dissertation tests the association between U.S. foreign private issuers' IFRS adoption and analyst forecast behavior. More specifically, I form two sample groups, an IFRS group and a U.S.GAAP group, by separating all the U.S. foreign private issuers based on the accounting standards they choose for their annual financial statements (20-F<sup>3</sup> or 40-F<sup>4</sup>). I then compare analyst following, analyst forecast accuracy and analyst forecast dispersion between these two groups to examine how IFRS adoption affects analyst forecast behavior. *Ex ante*, the effect of IFRS adoption is unclear since there is mixed evidence of earnings quality between IFRS and U.S. GAAP (Agoglia et al. 2011; Atwood et al. 2011). Results from multivariate regression analyses show that IFRS adoption is negatively associated with analyst following. On average, there are 3.362 fewer analysts following firms in the IFRS group, compared with

<sup>3</sup> https://www.sec.gov/about/forms/form20-f.pdf

<sup>4</sup> https://www.sec.gov/about/forms/form40-f.pdf

firms in the U.S. GAAP group. The results also indicate that to some extent, analysts following the IFRS group have lower forecast accuracy and higher forecast dispersion.

The second research question in my dissertation examines how U.S. foreign private issuers' IFRS adoption affects analyst public and private information precision. Based on prior research, it is desirable to test the effect of IFRS adoption on analyst information precision in addition to the effect on analyst forecast behavior. Previous studies have shown that "it is not possible to unambiguously characterize changes in the precision of common information and idiosyncratic information based on measures such as dispersion or squared error in the mean forecast" (Venkataraman 2001, page 2). Information precision is measured with the BKLS model (Barron et al. 1998). Public information refers to the information that is available to all analysts while private information refers to the information only accessible to that individual analyst. This research question is tested by regressing information precision on the dummy variable IFRS. Results show that, for public information precision, the coefficient on IFRS is negative and significant. For private information precision, the coefficient on IFRS is still negative, but insignificant. The results, combined with the findings in the first research question, reveal that the observed negative effects of IFRS adoption on analyst forecast behavior, such as lower analyst following, lower forecast accuracy and higher forecast dispersion, may be associated with analyst lower public information precision, rather than with analyst private information gathering and searching.

The last research question in my dissertation investigates whether the IFRS adoption effect is moderated by industry characteristics (whether or not IFRS is the dominant accounting standard in the issuer's industry) and moderated by the level of rule of law in the issuer's home country. Industry characteristics are an important

consideration for the convergence between U.S. GAAP and IFRS<sup>5, 6</sup>. In addition, industry knowledge is an important attribute for financial analysts (Kadan et al. 2012). To test the industry characteristics, a dummy variable, IFRS\_Industry, is created with the value of one if IFRS is used as the dominant accounting standard in that industry, and zero otherwise. This dummy variable is interacted with the IFRS dummy variable to capture the moderating effect of industry characteristics. Results show that the coefficient on this interaction variable is significantly positive when using analyst forecast accuracy as the dependent variable. Prior studies find that analysts can get information from firms in the same industry when they make their forecasts, which will help analysts to improve forecast accuracy. Therefore, when a foreign private issuer adopts IFRS as its accounting standard, and IFRS is the dominant accounting standard in its industry, it will be easier for analysts to get more information from the firm's peers who share the same accounting standard. As a result, analysts can make more accurate forecasts in the IFRS dominant industry for firms using IFRS. For the home country characteristics, prior studies generally agree that foreign firms' earnings guality is affected by the institutional characteristics of their home countries even after they cross listed shares overseas (Leuz 2006). To test the effect of home country characteristics, a dummy variable, Strong, is created with value of one if a country's rule of law index is higher than the sample median, and zero otherwise. This dummy variable is interacted with dummy variable IFRS in order to test the moderating effect of issuer's home country charateristics. The rule of law index "captures perception of the extent to which agents have confidence in and abide by the rules of society, and in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and

5 https://www.sec.gov/rules/proposed/2008/33-8982.pdf

6 https://www.sec.gov/spotlight/globalaccountingstandards/ifrs-work-plan-final-report.pdf

violence"<sup>7</sup>. Results show that the coefficient on the interaction variable "IFRS\*Strong" is negative and significant when using analyst following as the dependent variable, which indicates that the negative effect of IFRS adoption on analyst following is more pronounced for firms from strong rule of law countries.

Overall, my dissertation sheds light on the debate surrounding potential IFRS adoption in the U.S by providing evidence that to some extent, foreign private issuers' IFRS adoption is related to unfavorable analyst forecast behavior and information precision in the U.S. capital market.

## 1.2 Significance of the Study

My dissertation contributes to the international accounting literature in several ways. Firstly, it provides evidence for the current policy debates related to the possible use of IFRS in the U.S. The SEC and FASB have been working with the IASB to achieve the goal of developing a single set of high quality accounting standards. Former SEC Chairwoman, Ms. Mary Jo White, mentioned that "it is important for the Commission (SEC) to make a further statement about its general views on the goal of a single set of high-quality global accounting"<sup>8</sup>. Financial analysts are frequently regarded as sophisticated market participants (Schipper 1991; Revsine et al. 2001) and their reaction to IFRS adoption will provide additional evidence regarding "general views on the goal of a single set of high-quality global accounting." Therefore, by studying the effect of foreign private issuers' IFRS adoption on analyst forecast behavior and information precision in the U.S., my dissertation should be of interest to the SEC, FASB or other policy makers, financial analysts, investors and other information users.

<sup>&</sup>lt;sup>7</sup>http://info.worldbank.org/governance/wgi/pdf/rl.pdf

<sup>8</sup> https://www.sec.gov/news/speech/keynote-2015-aicpa-white.html

Secondly, my dissertation examines the effect of foreign private issuers' IFRS adoption on analyst forecast behavior in the U.S. market by using a unique research sample. Prior studies (Byard et al. 2011, Horton et al. 2013, and Tan et al. 2011) have focused on European Union countries that mandatorily adopted IFRS in year 2005 and investigated how IFRS adoption affects analyst forecast behavior in those countries. For the U.S. capital market, since the SEC does not require domestic issuers to file their financial statements using IFRS, it is hard to examine how IFRS adoption affects analyst forecast behavior for the U.S. domestic issuers. Some studies try to compare the outcomes of firms using IFRS with firms using U.S. GAAP in the German market where firms can choose among German GAAP, IFRS and U.S. GAAP. For example, Lin et al. (2012) find a decrease in earnings quality when German firms switched from the U.S. GAAP to IFRS in year 2005, but they point out that their finding cannot be generalized to the U.S. market because of "a number of reasons"9. My dissertation directly examines the effect of IFRS adoption on analyst forecast behavior in the U.S. market by using foreign private issuers who file with the SEC using IFRS as the research sample. Currently, "there are more than 500 foreign private issuers representing trillions of dollars in aggregate market capitalization report to the SEC using IFRS" and "the Commission (SEC) staff monitors and reviews the application of those standards (IFRS) in filings with the SEC in the same manner that it monitors and reviews the application of GAAP" (Dec. 2015, Mary Jo White<sup>10</sup>). Therefore, using these foreign private issuers as the research

<sup>9</sup> Lin et al. (2012) provide four reasons why the findings in the German market cannot be applied to the U.S. market (page 655-page 656): the fewer differences between IFRS and U.S. GAAP because of the convergence projects between the IASB and FASB; the less amount of managerial discretion allowed by IFRS; the different reporting incentives in German market and in U.S. market; the possible regulatory action from the SEC.

<sup>10</sup> https://www.sec.gov/news/speech/keynote-2015-aicpa-white.html

sample allows me to examine the effect of potential IFRS adoption on analyst forecast behavior in the U.S. capital market.

Finally, my dissertation extends prior research on the relationship between IFRS adoption and analyst information precision. Although many studies have investigated the effect of IFRS adoption on analyst forecast behavior in the EU countries (Tan et al. 2011 for analyst coverage, Wang et al. 2008 for analyst forecast accuracy and forecast dispersion), only a few studies have examined the association between IFRS adoption and analyst information precision. The observed differences in analystforecast behavior, such as lower analyst following, a lower level of forecast accuracy and a higher level of dispersion in the IFRS group, may be because analysts have less precise public information of the IFRS firms, or it could be because individual analyst is reluctant to make efforts to acquire his or her own private information about the IFRS firm. Results in my dissertation suggest that IFRS adoption has a negative effect on analyst public information precision, but no effect on analyst private information precision, which suggests the observed differences in analyst forecast behavior are mainly driven by different public information. This finding provides a more complete picture regarding the effect of foreign firms' IFRS adoption on analyst forecast behavior.

## 1.3 Organization of the Study

The remainder of my dissertation is structured as follows. Chapter 2 describes background and literature review of IFRS development and IFRS adoption consequences. Section 2.1 states the development of IFRS and convergence with U.S. GAAP. Section 2.2 compares IFRS and U.S. GAAP. Section 2.3 reviews IFRS adoption and financial reporting quality. Section 2.4 focuses on IFRS adoption and comparability. Section 2.5 discusses IFRS adoption on the equity capital market and Section 2.6 reviews IFRS adoption on the credit and debt market. Chapter 3 is the literature review of

analyst forecast behavior. Section 3.1 reviews analyst following studies including the effect of IFRS adoption. Section 3.2 moves to studies relating to analyst forecast accuracy and dispersion. Section 3.3 discusses analyst information precision, including the theoretical model and empirical studies. Chapter 4 develops hypotheses. Chapter 5 presents methodology, sample selection, and descriptive statistics. Chapter 6 shows the empirical results and analyses. Chapter 7 is the summary and conclusion.

#### Chapter 2

Background and Literature Review: IFRS

## 2.1 Development of IFRS and Convergence with U.S. GAAP

Since the end of World War II, there has been a rapid growth in international trade with companies expanding their cross-border business. The increased globalization of business is accompanied by a higher demand for "international" accounting standards. In response to the demand, in 1973, the International Accounting Standards Committee (IASC) was founded with members from nine countries, including the U.S., the U.K., Canada, France, Japan, Australia, New Zealand, the Netherlands and South Africa. IASC has set out to promote and streamline international accounting standards and to narrow the differences in accounting practices among countries (Zeff 2012).

In order to keep improving its accounting standards quality, the IASC was restructured and renamed as the International Accounting Standards Board (IASB)in year 2000. The standards that are issued by the IASB are referred to as International Financial Reporting Standards (IFRS). The Board has 12 full-time members (including the U.S.) and two part-time members. The mission of IFRS Foundation and IASB is to "develop IFRS Standards that bring transparency, accountability and efficiency to financial markets around the world. IFRS Standards bring transparency by enhancing the international comparability and quality of financial information, enabling investors and other market participants to make informed economic decisions. IFRS Standards strengthen accountability by reducing the information gap between the providers of capital and the people to whom they have entrusted their money. IFRS Standards contribute to

economic efficiency by helping investors to identify opportunities and risks across the world, thus improving capital allocation."<sup>11</sup>

European countries have been working with IASC/IASB regularly since the 1990s. In 1998, Germany approved the "Kapitalaufnameerleichterungsgesetz" (Capital Raising Relief Law) which allowed German companies to prepare their financial statements in accordance with the U.S. GAAP or the IAS, in addition to the German GAAP (Berger 2010). On June 7, 2002, the European Union (EU) announced that most EU listed companies would use IAS/IFRS by January 1, 2005 (IAS Regulation 2002). During the same period, several other jurisdictions, such as Australia and Hong Kong, also chose to adopt IFRS. As of June 2015, 116 jurisdictions have adopted IFRS for all or most domestic publicly traded companies.

Both SEC and FASB have been key players for the development of the international accounting standards. In 1997, SEC submitted a report<sup>12</sup> to Congress and mentioned that "once the IASC completed its project<sup>13</sup>, we would consider allowing use of the resulting standards (IASC standards) in cross-border filings by foreign issuers offering securities in the United States"<sup>14</sup>. In October 2002, the FASB and IASB announced a Memorandum of Understanding (MoU) known as "the Norwalk Agreement", which showed their commitment to "make their existing financial reporting standards (U.S. GAAP and IFRS) fully compatible as soon as is practicable"<sup>15</sup>. In February 2006, the two boards (FASB and IASB) signed another MoU that stated "joint work programme in the

<sup>11</sup> http://www.ifrs.org/About-us/Pages/IFRS-Foundation-and-IASB.aspx

<sup>12</sup> https://www.sec.gov/news/studies/acctgsp.htm

<sup>13</sup> The reports has three criteria to the IASC standards:

<sup>1)</sup> constitute a comprehensive, generally accepted basis of accounting;

<sup>2)</sup> are of high quality; and

<sup>3)</sup> can be rigorously interpreted and applied.

<sup>14</sup> https://www.sec.gov/rules/concept/34-42430.htm#P112\_30894

<sup>15</sup> http://www.ifrs.org/Use-around-the-world/Global-convergence/Convergence-with-US-

GAAP/Documents/Norwalk\_agreement.pdf

form of specific milestones to be reached by 2008"<sup>16</sup>. In September 2008, they updated the 2006 MoU and decided to complete their major joint projects by 2011<sup>17</sup>. In July 2007, the SEC passed the final rule to drop the reconciliation requirement for foreign private issuers adopting "IFRS as published by the IASB"<sup>18</sup>. Also in 2007, the SEC issued a concept release which stated the possibility of allowing U.S. domestic issuers to use IFRS for their financial reports<sup>19</sup>. Then, in August 2008, the SEC proposed a Roadmap for the potential use of IFRS and mentioned that "This Roadmap...could lead to the required use of IFRS by U.S. issuers in 2014"<sup>20</sup>. All these steps signaled that the U.S. appeared heading on the direction of forming a final decision of adopting IFRS. On July 13, 2012, however, the SEC issued a Final Staff Report<sup>21</sup>, which expressed the shared concerns of IFRS adoption and cast doubt on the near-term possibility of IFRS adoption in the U.S.

Since then, the cooperation between FASB and IASB slowed down, until the new SEC Chairwoman, Ms. Mary Jo White, was sworn in on April 10, 2013. She expressed positive attitude to the U.S. GAAP-IFRS convergence projects and asked for recommendation from the Chief Accountant regarding the potential IFRS use in the U.S. In 2014, James Schnurr, the SEC Chief Accountant, submitted a proposal to the SEC that the U.S. domestic issuers would be allowed to provide IFRS-based information as a supplement to their financial statements which is based on U.S. GAAP. He also mentioned that "for the foreseeable future, continued collaboration is the only realistic

<sup>16</sup>http://fasb.org/cs/ContentServer?c=Document\_C&pagename=FASB%2FDocument\_C%2FDocu mentPage&cid=1176156245558

<sup>17</sup> http://www.fasb.org/news/nr091108.shtml

<sup>18</sup> http://www.sec.gov/rules/final/2007/33-8879.pdf

<sup>19</sup> https://www.sec.gov/rules/concept/2007/33-8831.pdf

<sup>20</sup> https://www.sec.gov/rules/proposed/2008/33-8982.pdf

<sup>21</sup> https://www.sec.gov/spotlight/globalaccountingstandards/ifrs-work-plan-final-report.pdf

path to further the objective of a single set of high-quality, global accounting standards"<sup>22</sup>. In 2015, Ms. Mary Jo White stated "with respect to the issue of possible further use of IFRS in the United States, I believe it is important for the Commission (SEC), to make a further statement about its general views on the goal of a single set of high-quality global accounting standards"<sup>23</sup>.

Overall speaking, despite difficulties and struggles, the FASB and the IASB have been cooperating to work on a single set of high-quality, global accounting standards in the past decades. No matter whether, when and how the U.S. will incorporate IFRS in its domestic reporting environment, evidence and research on the outcomes of potential IFRS adoption in the U.S. should be addressed in a more timely manner.

## 2.2 Differences between U.S. GAAP and IFRS

As discussed in the previous section, FASB and IASB have been working together on the goal of developing a single set of high quality global accounting standards. In the past decades, they have achieved significant progress with several convergence projects. However, prior studies show that two main differences still exist between U.S. GAAP and IFRS.

The first main difference is that IFRS is usually referred to as "principles-based standards" (Chen et al. 2015, Evans et al. 2014, and Li and Yang 2015) while U.S. GAAP is viewed as "rules-based standards" (Alon and Dwyer 2016, Boone et al. 2013, Cohen et al. 2013, and Messier et al. 2014). AICPA states that "One of the major differences lies in the conceptual approach: U.S. GAAP is rule-based, whereas IFRS is principle-based"<sup>24</sup>. Donelson et al. (2016) determine whether a standard is more rules-based by examining

<sup>22</sup> https://www.sec.gov/news/speech/remarks-34th-sec-financial-reporting-institute-conference.html

<sup>23</sup> https://www.sec.gov/news/speech/keynote-2015-aicpa-white.html

<sup>24</sup> http://www.ifrs.com/overview/general/differences.html

whether the standard contains the following characteristics: (1) bright-line thresholds, (2) scope and legacy exceptions, (3) large volumes of implementation guidance, and (4) a high level of detail. Based on the presence of these rules-based characteristics, they create a "RBC" (rules-based characteristics) score and compare the RBC score of certain U.S. standards to the RBC sore of equivalent IFRS as of 2008 and find that the PBC score for U.S. GAAP standards is significantly higher than that of IFRS for both mean and median tests, which suggests that U.S. GAAP has more rules-based characteristics. They also identify five theories that explain why U.S. GAAP is more rules-based: litigation risk, constraining opportunism, complexity, transaction frequency and age.

The debate over which accounting standards is better, principles-based or rulesbased standards, has been continued for decades. Proponents of principles-based standards assert that the flexibility in IFRS allows managers to convey firms' economic performance to investors in a better or less costly way (Hail et al. 2010). Critics of principles-based standards argue that managers may use the freedom to manage earnings and mislead investors. Dye and Sunder (2001) claim that "Lax IASB standards allow firms more opportunity to manage their earnings, making financial reports less useful to investors". For the rules-based standards, such as U.S. GAAP, the detailed guidance and less alternative accounting choices will not only restrain managers' freedom to manipulate earnings, but also improve financial statements' consistency and comparability. However, accountants and managers may use the detailed guidance to structure a transaction which meets the requirements but does not reflect the true economic substance. SEC former Chairman, Harvey Pitt, claimed that "The development of rule-based accounting standards has resulted in the employment of financial

engineering techniques designed solely to achieve accounting objectives rather than to achieve economic objectives."<sup>25</sup>

Additionally, another main difference between IFRS and U.S. GAAP is that IFRS focuses more on "fair value" instead of "historical cost" (Ball et al. 2015, DeFond et al. 2015, and Liang and Riedl 2014). IFRS 13 (2011) defines fair value as "the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date"<sup>26</sup>. Barth (2011) summarized reasons regarding why and why not firms should use fair value accounting<sup>27</sup>. Fair value is consistent with financial reporting objectives because (1) it provides relevant information, such as the predicting amounts, timing, and uncertainty of cash flows, to information users; (2) it is faithfully representative for the current measures of assets and liabilities; and (3) it provides comparability by having the same measures for like items across entities. The drawbacks of fair value accounting include: (1) it involves large amount of professional judgment and estimations, which leaves room for managers to manipulate earnings; (2) it will lead to more volatile earnings; and (3) guidance, disclosure and education on fair value accounting is insufficient.

Empirical findings from prior studies provide inconclusive evidences on the association between firms' use of fair value accounting and their reporting quality. For example, Evans et al. (2014) use U.S. bank-year observations from year 1994 to 2008 as the sample to examine whether fair value measurements have predictive value for future accounting earnings. They find that the level of accumulated fair value adjustments for investment securities is positively related with banks' future reported income, which indicates that the unrealized gains and losses from fair value accounting have predictive

<sup>25</sup> http://www.wsj.com/articles/SB103886213539574553

<sup>26</sup> http://www.iasplus.com/en/standards/ifrs/ifrs13

<sup>27</sup> http://cig.ase.ro/amis2011/fisiere/barth%20amis%202011%20plenary.pdf

ability for next period income. However, Magnan et al. (2015) have different findings by testing the relationship between fair value accounting and analyst forecast behavior. They predict that analyst forecasts for banks using fair value accounting will have lower accuracy and higher dispersion for two reasons. First, earnings are more volatile under fair value accounting. Second, the financial amounts under fair value accounting are more likely to be managed. Using U.S. banks from year 1996 to 2009 as the sample, they find that banks using fair value accounting is associated with more dispersed earnings forecasts. Their findings provide support to Dichev et al. (2013) field study that surveyed 169 CFOs regarding firms' earnings quality. One CEO mentioned that "fair value accounting creates a level of volatility and change, even though nothing in the business seems to have changed" (Dichev et al. 2013, page 27).

Due to the differences between U.S. GAAP and IFRS, prior studies have mixed findings regarding the association between firms' accounting standards' choices and firms' reporting quality.

Some studies find that the U.S. GAAP is associated with higher reporting quality, compared with the IFRS. For example, Goncharov et al. (2006) study the German market where firms were allowed to present consolidated financial reports prepared under German GAAP, IAS or U.S. GAAP. Their sample spans from year 1996 to 2002. They find significantly lower levels of earnings management (higher accruals quality and less earnings smoothing) for firms using U.S. GAAP than firms using German GAAP or IFRS, even after controlling for self-selection bias. They interpret the results as "US GAAP mitigate more effectively against earnings management than German GAAP or IAS".

Van der Meulen et al. (2007) use the German New Market firms from year 2001 to 2003 as their sample and find that U.S. GAAP accounting information outperforms

IFRS with higher earning's predictive ability, although both standards have comparable quality on accruals, value relevance and timeliness.

Lin et al. (2012) examine whether there is a change of accounting quality when firms switch their accounting standards from U.S. GAAP to IFRS. They use a sample of German high tech firms that applied U.S.GAAP and were required to mandatorily adopt IFRS in year 2005. By comparing the accounting quality in the pre-adoption period (year 2000-2004) with the post-adoption period (year 2005-2010), they find that in the postadoption period, there is more earnings management (proxied by earnings smoothing and loss avoidance), less timely loss recognition and less value relevance of earnings. They conclude that "a switch from U.S. GAAP to IFRS could reduce accounting quality".

Atwood et al. (2011) investigate the association of accounting standards and earnings persistence and earnings predictive ability for future cash flows. They separate firms from 33 countries (including the U.S.) between year 2002 to 2008 to three types: firms using IFRS, firms using local GAAP, and firms using U.S. GAAP. The findings suggest that for positive earnings, IFRS firms and U.S. GAAP firms have similar earnings persistence. But for negative earnings, IFRS firms have less persistence than U.S. GAAP firms. Also earnings under U.S. GAAP are more related with future cash flows, compared with earnings under IFRS. They assert that "while IFRS and U.S. GAAP are both high quality sets of accounting standards, U.S. GAAP is superior with respect to the prediction of future cash flows".

However, some other studies find opposite evidence by showing that firms' reporting quality under IFRS is higher than under U.S. GAAP. For example, McAnally et al. (2010) use 1,673 observations of U.S. publicly traded firms' actual, reported financial information from year 1995 to 2005 to calculate pro forma GAAP and IFRS stock option expense, stock option tax benefits and related deferred tax assets, effective tax rates,

and net income. They use the derived GAAP and IFRS pro forma numbers to quantify differences in magnitudes, volatilities, and predictive ability of the tax items and find that IFRS tax items are better able to predict future cash flows than U.S. GAAP tax items. They conclude that "IFRS improves the relevance, and thereby, the quality, of at least some reported numbers".

Agoglia et al. (2011) use two experiments to examine the effect of accounting standards on managers' reporting behavior. They asked 96 executives to classify a lease as either a capital or operating lease. One group of participants are provided with a more detailed classification instruction (rules-based) based on SFAS NO.13 (FASB 1976), and the other group participants are provided with a less detailed instruction (principles-based) based on IAS 17 (IASC 1997). Participants are also provided with a summary listing the different outcomes of the classification, which shows that capitalizing the lease would produce less favorable financial results. The results reveal that when the participants are in the principles-based instruction (IASC 1997) group, they are more likely to capitalize the lease. This suggests that participants are less likely to report aggressively with principles-based instruction, compared with rules-based instruction. The authors also find that there is significantly less variability among participants' classification decisions in the principles-based group. Overall, their findings indicate that the application of principles-based standards (IAS 17) is associated with less aggressive reporting behavior and more comparability.

Collins et al. (2012) use Fortune Global 500 firms in year 2007, 2008, and 2009 as their sample to examine the reporting quality between firms using IFRS and firms using U.S. GAAP. For each industry, they find one U.S. firm that uses U.S. GAAP, and match this U.S. firm with an IFRS firm that is headquartered in the EU and applies IFRS for the firm's financial statements. The final sample includes 32 pairs of firms (32 U.S.

firms using U.S. GAAP and 32 EU firms using IFRS). They use the lease payment to classify the sample into two groups: operating lease group and capital lease group. They find strong evidence that U.S. GAAP firms, compared with IFRS firms, are more likely to fall into the operating lease group. There archival findings support Agoglia et al. (2011) experimental findings by showing that IFRS firms, compared with U.S. GAAP firms, have less aggressive reporting practice. Similarly with findings in Agoglia et al. (2011), but inconsistent with the SEC's concerns, they find no evidence that IFRS firms have greater dispersion of their lease classification. Therefore, IFRS firms do not have less comparability than U.S. GAAP firms.

Although the above studies find that firms' reporting quality is related with their choices of accounting standards (either U.S. GAAP or IFRS), there is another stream of study that shows accounting standards, *per se*, have no effect on firms' reporting quality. Hail et al. (2010) states that "a sole focus on accounting standards is not appropriate" because "standards are only one of many factors determining reporting outcomes". Many studies have agreed that firms' reporting incentives, rather than the accounting standards, play a more important role for firms' reporting quality (Ball et al. 2000, 2003, Ball and Shivakumar 2005, Burgstahler et al. 2006, and Leuz et al. 2003). Because both U.S. GAAP and IFRS offer certain levels of discretion, managers can use the discretion for their optimal reporting strategies. Under this argument, there should be no association between firms' accounting standards and firms' reporting quality, after controlling for firms' reporting incentives.

Daske (2006) uses German firms from year 1993 to 2002 to examine whether firms using IFRS/U.S. GAAP would have lower cost of capital, compared with firms using German local GAAP. They did not find significant differences in cost of equity capital among local GAAP, IAS/IFRS and U.S. GAAP adopters, which is consistent with the view

that the reporting incentives of firms, rather than the accounting standards that firms applied, largely determine the properties and quality of the financial statements (Ball et al., 2003).

Hail et al. (2010) analyze the economic consequences for the potential IFRS adoption in the U.S. They argue that "U.S. adoption of IFRS is unlikely to have a major impact on reporting quality". Since the U.S. firms now have their optimal reporting behavior, if IFRS is superior to U.S. GAAP, then U.S. firms can use the flexibility to resist the changes from IFRS adoption to maintain their current reporting behavior. If IFRS is inferior to U.S. GAAP, then U.S. firms can voluntarily go beyond the requirements under IFRS, therefore, there will be no change to their reporting behavior. They conclude that no matter which accounting standards (U.S. GAAP or IFRS) have higher reporting quality, IFRS adoption in the U.S. will have no significant impact on firms' reporting quality.

In conclusion, although FASB and IASB have been working together to converge U.S. GAAP and IFRS in the past decades, differences between these two accounting standards still exist. However, the association between firms' accounting standards choices and firms' reporting quality is unclear. While some studies find that U.S. GAAP is associated with higher reporting quality, others find opposite results. In addition, prior studies also agree that firms' repotting incentives, rather than accounting standards *per se*, play an important role for firms' reporting quality.

## 2.3 IFRS Adoption and Financial Reporting Quality

This section discusses the effect of IFRS adoption on firms' earnings quality (timeliness, accruals quality, conservatism, value relevance, etc.) based on multiple country studies and single country studies.

#### 2.3.1 Evidence from Multi-country Studies

Prior studies with multi-country samples have mixed findings regarding the effect of IFRS adoption on firms' reporting quality. Some find that IFRS adoption leads to lower accounting quality. For example, Callao and Jarne (2010) compare discretionary accruals in the periods preceding (year 2003-2004) and immediately after (year 2005-2006) the IFRS adoption in 11 EU countries and find that discretionary accruals increase after IFRS adoption. They interpret the results as evidence that principles-based accounting standards, such as IFRS, leave more room for earnings management. Piot et al. (2010) study the association between "conditional conservatism" and IFRS adoption in 22 EU countries and find conservatism decreases from the pre-adoption period (year 2001-2004) to the post-adoption period (year 2005-2008). Ahmed et al. (2013) examine the changes of earnings quality from the pre-adoption period (year 2002-2004) to the postadoption period (year 2006-2007) by comparing 20 countries (not limited to EU countries) that mandatorily adopted IFRS in 2005 with a benchmark sample from countries without IFRS adoption during the sample period. They find evidence of an increase in income smoothing (the volatility of net income, the ratio of the volatility of net income to the volatility of cash flows, and the correlation between cash flows and accruals) and in reporting aggressiveness (the magnitude of signed accruals and the timeliness of loss recognition). Their results are consistent with the argument that "IFRS are principlesbased standards, which have looser requirements than domestic standards, on average".

However, other studies find opposite results by showing that IFRS adoption improves firms' reporting quality. For example, Cai et al. (2008, 2014) use 32 countries from year 2000 to year 2006 as their sample and find that compared with firms without IFRS adoption, both voluntary and mandatory IFRS adoption are associated with a decrease in earnings management (proxided by accruals quality). Chen et al. (2010)

study the earnings quality in 15 EU countries and find that in the post-adoption period (year 2005-2007), there is less earnings management towards a target, a lower magnitude of absolute discretionary accruals, and higher cash flow based accruals quality than the pre-adoption period (year 2000-2004).

One reason for the different findings in these studies is that they use different samples and research designs. For example, while Ahmed et al. (2013) employ a benchmark sample of countries without IFRS adoption to have the difference-in-difference research design, Chen et al. (2010) only use the EU countries to compare the earnings quality before and after the IFRS adoption. The other reason is that the proxies for accounting quality are not identical. Ahmed et al. (2013) calculate annual accruals by subtracting the change of cash and current liabilities (and other short term liabilities, including debt, income taxes payable, and depreciation/amortization expense) from the changeof current assets. But Chen et al. (2010) measure accruals quality based on the modified Jones model.

Although prior studies with multi-country samples find mixed results regarding the effect of IFRS adoption on accounting quality, they generally agree that the outcomes of IFRS adoption depend on the institutional characteristics and on the divergence between local GAAP and IFRS. Callao and Jarne (2010) find that countries with strong investor protection and legal enforcement have improved accruals quality after IFRS adoption, although the overall sample have decreased accruals quality. Ahmed et al. (2013) show that the decreased earnings quality is mainly driven by firms in strong enforcement countries. Cai et al. (2014) investigate the roles of the divergence between local GAAP and IFRS, and the countries' enforcement, on the IFRS adoption effect. Their results show that countries with larger divergence between local accounting standards and IFRS

and with higher levels of enforcement experience a greater drop in earnings management after IFRS adoption.

## 2.3.2 Evidence from Single-country Studies

Prior studies find mixed results for the effect of IFRS adoption on firms' reporting quality, even when they use firms from the same country as the sample. The different results may come from different sample periods, research designs, or variables measurements.

For Finland, Aubert and Grudnitski (2011) use the reconciliation numbers under IFRS and under Finland GAAP for the first time adopters in year 2005. They find that value relevance of earnings under IFRS is higher than that under Finland GAAP. Jarva and Lantto (2012) also use the transition year 2005 to get the reconciliation numbers under IFRS and under Finland GAAP. Their findings reveal that book value of assets and liabilities measured under IFRS is not more value relevant than under Finland GAAP. The different results may come from different sample sizes (158 observations in Aubert & Grudnitski study and 94 observations in Jarva & Lantto study) or from different empirical models (Aubert & Grudnitski study focuses on value relevance of earnings and Jarva & Lantto study examines value relevance of assets and liabilities).

For France, Jeanjean and Stolowy (2008) study the effect of IFRS adoption on earnings quality by testing the "loss avoidance threshold" of the distribution of income before extraordinary items in the pre-adoption period (year 2004-2005) and in the postadoption period (year 2005-2006). The results show that firms have more loss avoidance threshold in the post-adoption period. Zeghal et al. (2011) also examine earnings quality for French firms from year 2003 to year 2006. They use Kothari et al. (2005) model to calculate the discretionary accruals to measure earnings management and find that mandatory IFRS adoption is associated with a lower level of earnings management.

For Greece, Aubert and Grudnitski (2011) use the reconciliation numbers under IFRS and under Greece GAAP for the first time adopters in year 2005. They find value relevance of earnings under IFRS is higher than that under Greece GAAP. Tsalavoutas et al. (2012) also study the value relevance of IFRS adoption in the Greece and find some evidence of a decrease in the coefficient on net income from the pre-adoption period (year 2000-2004) to the post-adoption period (year 2005-2008). They interpret their findings as "IFRS being more focused on the balance sheet and introducing more volatility and less persistence in net income". The different results may come from different sample periods (Aubert & Grudnitski only use year 2005, and Tsalavoutas et al. use year 2000 to year 2008) or different research models (Aubert & Grudnitski use the reconciliation amounts while Tsalavoutas et al. use time-series for pre- and post-adoption periods).

For the United Kingdom (UK), Paananen and Parma (2008) investigate the change of value relevance for earnings from year 2003 to year 2006. The results show that the coefficient on earnings is smaller in the post-adoption period compared with the pre-adoption period. Aubert and Grudnitski (2011) use year 2005 as their sample period and use the reconciliation numbers for the first time adopters to study the effect of IFRS adoption. They find that value relevance of earnings under IFRS is higher than that under UK GAAP. Since these two papers have different sample period and different research models (Paananen & Parma use market-adjusted return and Aubert & Grudnitski 2011 use market value of the equity), it is not surprising that they have different findings.

Overall, prior studies examine the effect of IFRS adoption on earnings quality by using accrual quality, timeliness of loss recognition, conditional conservatism, and/or value relevance as the proxy. Since these studies have different sample periods and use different measures for the earnings quality, they have different results regarding the effect of IFRS adoption. But one common finding is that the consequences of IFRS adoption vary with countries institutional characteristics, such as the degree of enforcement and the divergence of local GAAP and IFRS.

## 2.4 IFRS Adoption and Comparability

Comparability is an important qualitative characteristics that "enhance the usefulness of information that is relevant and faithfully represented<sup>28</sup>" (FASB, 2010, Statement of Financial Accounting Concepts No. 8). FASB defines "comparability" as "the qualitative characteristics that enables users to identify and understand similarities in, and differences among, items" (FASB, 2010, Statement of Financial Accounting Concepts No. 8). De Franco et al. (2011) state that "accounting system is a mapping from economic events to financial statements. For a given set of economic events, two firms have comparable accounting systems if they produce similar financial statements".

Improving financial statements' comparability is a main goal for IASB. IASB expresses its mission as "IFRS standards bring transparency by enhancing the international comparability and quality of financial information"<sup>29</sup>. In the "Norwalk Agreement", FASB also mentioned that "FASB and IASB reaffirm commitment to enhance consistency, comparability and efficiency in global capital markets"<sup>30</sup>.

Prior empirical studies regarding the effect of IFRS adoption on financial statement comparability have mixed results. Some of them find that IFRS adoption improves comparability, which provides supportive evidences to IASB mission. For example, Jones and Finley (2011) measure comparability by using the coefficients of variance for a number of accounting measures, such as ROA, across firms. They

28http://www.fasb.org/cs/BlobServer?blobcol=urldata&blobtable=MungoBlobs&blobkey=id&bl obwhere=1175822892635&blobheader=application/pdf

29 http://www.ifrs.org/About-us/Pages/IFRS-Foundation-and-IASB.aspx

<sup>30</sup> http://www.fasb.org/intl/convergence\_iasb.shtml

compare these coefficients before (year 1994-2004) and after IFRS mandatory adoption (year 2006) in 23 countries (EU countries and Australia) and also compare them in different industries. The results show comparability (decreased variance)has improved after IFRS adoption at both country and industry levels.

Yip and Young (2012) examine the effect of IFRS adoption on comparability in 17 EU countries from year 2002 to year 2007. They use three proxies for comparability. The first one is "the similarity of accounting functions that translate economic transactions into accounting data" (De Franco et al. 2011). The second proxy is the degree of information transfer, which is calculated as the association between the earnings surprise of an announcing firm and the contemporaneous stock price movements of other firms. The third proxy is the similarity of the information content of earnings and of the book value of equity, which is interpreted as "firms that engage in similar economic activities should have a similar information content of earnings and information content of book value of equity if their accounting systems are comparable". Their results indicate that IFRS adoption improves comparability.

Wang (2014) uses information transferring as the proxy for comparability and predicts that when a foreign firm using IFRS announces earnings, the domestic market reaction to domestic firms using IFRS will be stronger after IFRS adoption than before IFRS adoption. His argument is that after both foreign firm and domestic firms adopted IFRS, the statements will be more comparable for investors. Using the sample from year 2001 to year 2008, he finds support for his prediction by showing that market reaction (both stock returns and trading volumes) is stronger to foreign firms' earnings announcements in the post-adoption period than in the pre-adoption period, which indicates that IFRS adoption improves financial statements comparability across countries.

However, some other studies argue that sharing the same accounting standards, such as IFRS, does not directly lead to improved firms' comparability. For example, Lang et al. (2010) state that IFRS is principles-based standards which leave freedom for managers. Therefore, mangers' reporting incentives, rather than the accounting standards, play a more important role for firms' reporting quality and the potential comparability benefits. They measure comparability as De Franco et al. (2011) which is the mapping from economic events to financial statements. If two firms experienced similar economic transactions (such as stock returns), they should produce similar accounting outcomes (such as earnings). Using firms from 47 countries (both IFRS adopters and non-IFRS adopters) from year 1998 to 2008, they find that IFRS adopters.

Cascino and Gassen (2015) apply four measurements for comparability. Their sample includes firms from 29 countries (both IFRS adopters and non-IFRS adopters) and covers eight years (year 2001-2008). Their results suggest that the overall effect of IFRS adoption on comparability is marginal (two out of four measures are not significant in the empirical tests). They also find that countries' characteristics and firms' reporting incentives are important moderating factors for their results.

Overall, with different measures and different sample selection criteria, prior studies have mixed results regarding the relationship between IFRS adoption and comparability. Although some papers find that IFRS adoption improves firms' comparability, others find that there is no association between IFRS adoption and comparability. Instead, their results suggest that firms' reporting incentives and countries' characteristics are important factors for IFSR adoption outcomes.

### 2.5 IFRS Adoption Effect on the Stock Market

## 2.5.1 IFRS Adoption Effect on Market Liquidity and Cost of Capital

One of IASB's mission is to "contribute to economic efficiency by helping investors to identify opportunities and risks across the world, thus improving capital allocation." Prior studies find some evidence that IFRS adoption increases market liquidity and decreases cost of capital. However, these studies also point out that the positive economic consequences of IFRS adoption are heterogeneous across firms and countries, which indicates that firms' reporting incentives and countries' institutional characteristics, rather than accounting standards *per se*, are important factors for IFRS adoption outcomes.

For example, Daske et al. (2008) analyze the change of market liquidity, cost of capital and Tobin's q for IFRS adoption in 26 countries (not limited to the EU countries) between January 1, 2001 and December 31, 2005. Using non-IFRS adopters as the benchmark, they find that market liquidity increases after the mandatory IFRS adoption. For the cost of capital and Tobin's q, the results are significant only when they control for the market anticipation. They also document that the capital market benefits (increased market liquidity and Tobin's q, and decreased cost of capital) only occur in countries with strong legal enforcement and in countries with large divergence between local GAAP and IFRS. They interpret their findings as that concurrent institutional changes that improved countries' enforcement and governance regimes, rather than the IFRS adoption per se, are the reasons for the positive market consequences.

Li (2010) examines the effect of mandatory IFRS adoption on firms' cost of capital by using EU countries as the sample. She compares the change of cost of capital for mandatory adopters from pre-IFRS adoption period (year 1995-2004) to post-IFRS adoption period (year 2005-2006) with the change of cost of capital for voluntary adopters at the same time period. Using the difference-in-difference (the difference of time period from pre-adoption period to post-adoption period, and the difference of mandatory adopters and voluntary adopters) research design, she finds that mandatory IFRS adoption, compared with voluntary adoption, significantly reduces firms' cost of equity capital. The additional tests show that the decreased cost of capital is only observed in countries with strong legal enforcement, but not in countries with weak legal enforcement. Therefore, the effect of IFRS adoption on cost of capital depends on countries' characteristics, such as the legal enforcement.

Daske et al. (2013) examine the moderating effect of firm-level reporting incentives on IFRS adoption consequences. They argue that some firms adopt IFRS merely in name without changing their reporting practice, while other firms adopt IFRS with significant changes to their reporting incentives and strategies. They refer to the first type firms as "label adopters" and the second type as "serious adopters". They use three proxies to separate these two types of firms. The first proxy is based on firm's characteristics (size, leverage, profitability, growth opportunities, ownership concentration and internationalization). The second proxy relies on firms' accruals quality, and the last proxy is the number of analyst following. Using observations from 30 countries from year 1990 to year 2005, they find that on average, compared with non-IFRS adopters, IFRS adopters (both voluntary adopters and mandatory adopters) do not have changes in market liquidity or cost of capital. But "serious adopters" have increased liquidity and decreased cost of capital, which suggests that the outcomes of IFRS adoption depends on firms' reporting incentives.

In summary, although improving economic efficiency is the mission of IASB and IFRS, findings from prior studies indicate that merely adopting IFRS would not guarantee positive economic consequences, such as increased market liquidity or decreased cost of

capital. The consequences of IFRS adoption are heterogeneous in different countries and in different firms. Countries with stronger enforcement or larger divergence between local GAAP and IFRS and firms with stronger reporting incentives, experience higher improvement in market liquidity and cost of capital after IFRS adoption.

## 2.5.2 IFRS Adoption Effect on Cross-border Capital Flows

One reason for the creation and development of international accounting standards is to meet the demands of integrated economies and increased cross-border capital flows. Prior studies provide evidence that IFRS adoption increases the efficiency of cross-border capital flows.

DeFond et al. (2011) study the effect of IFRS adoption on cross-border investment (proxied by foreign mutual fund ownership). They predict that IFRS adoption would lead to improved comparability by increasing accounting standards uniformity, which would result in increased cross-border investment. They measure uniformity as the ratio of the number of firms in one industry using the same accounting standards before IFRS adoption (such as the local GAAP) and after IFRS adoption (such as IFRS). Using firms from 14 EU countries from year 2003 to 2007, they find that, compared with non-IFRS adopters, IFRS adopters experience an increase in foreign mutual fund ownership in the post-adoption period (year 2005-2007). But this increase is only observed in countries whose changes of uniformity are above the sample median. Their findings emphasize that the implementation of IFRS adoption, instead of IFRS itself, has an effect on cross-border investment.

Khurana and Michas (2011) examine the effect of IFRS adoption on U.S investors' home bias. Home bias is usually referred to as the tendency to overweight domestic stocks and underweight foreign stocks in the investment portfolios. They use the data from the U.S. Treasury Department to calculate U.S. investors' portfolio holdings of foreign securities from 85 countries between year 2003 to 2007. Using non-adopters as the benchmark, they find that, on average, U.S. investors' home bias decrease in the post-adoption period (year 2005-2007). They also find that the level of home bias decrease is related with adoption countries' characteristics. More specifically, countries with larger divergence of local GAAP and IFRS, stronger rule of law, common law system, and greater reporting incentives (proxied by earnings management score from Leuz et al. 2003), have a larger decrease in U.S. investors' home bias.

Florou and Pope (2012) investigate whether IFRS adoption leads to an increase in global institutional ownership by using a sample from 45 countries between year 2003 and 2006. They find that compared to non-adopters, IFRS adopters have an increase in institutional holdings in the post-adoption period (year 2005-2006). Additional analyses indicate that the change of institutional holdings depends on investors' characteristics and country characteristics. For investors' characteristics, active investors (value/growth), rather than passive investors (index/income), have higher increase in institutional holdings. For country characteristics, countries with stronger enforcement or with larger divergence between local GAAP and IFRS have higher increase in institutional holdings.

Yu and Wahid (2014) study the association between IFRS adoption and crossborder investment (proxied by mutual funds holdings). Their sample covers firms from 46 countries from year 2003 to 2007. They argue that IFRS adoption, either in investee's country or in investor's county, can decrease the accounting distance between the two countries. They define accounting distance as "the difference in the accounting standards used by the investees and the accounting standards used by the investor's country". They find that as either investee's country or investor's country adopted IFRS, the accounting distance is reduced, which leads to the decrease in the tendency of underinvestment of mutual funds holdings in investees. Their finds support the argument

that IFRS adoption facilitates cross-border capital flows by decreasing the accounting distance.

In short, prior studies find that, on average, IFRS facilitates cross-border capital flows by increasing foreign mutual fund ownership, global institutional ownership and global mutual funds holdings, and by decreasing U.S. investors' home bias. However, the level of the positive changes is not homogeneous and depends on firms' and countries' characteristics.

2.6 IFRS Adoption Effect on the Credit and Debt Market

Accounting information is important for investors not only in the equity market, but also in the credit and debt market. Similar with the findings from the equity market, findings from the credit/debt market are mixed due to different sample selection and/or empirical models.

For the credit market, Kraft and Landsman (2014) examine the effect of IFRS adoption on the accuracy of accounting-based prediction models for credit default swap (CDS) spreads. If IFRS provides high quality financial statements for credit market users to assess a firm's creditworthiness, then the CSD spreads model should be more accurate in the post-adoption period. If the model is less accurate, it would indicate that IFRS does not provide high quality information for credit market users. They cite Moody's (2008) report which points out the potential negative outcomes of IFRS adoption in the credit market. IFRS lacks standardization and consistent interpretations, which would lead to unintentional volatility and complexity in firms' financial statements. Using observations from 16 countries from year 2000 to 2012, the authors find that compared with the benchmark sample of U.S. firms, IFRS adopters have larger mean and median absolute percentage prediction errors in the post-adoption period. Their results suggest

that IFRS adoption has a negative effect in the credit market by providing lower quality financial statements.

Bhat et al. (2014) also study the impact of IFRS adoption on the spread/maturity relation of CDS instruments in credit market. They apply Duffie & Lando (2001) model that shows the association of accounting transparency and the spread/maturity relation. If IFRS improves firms' transparency, then IFRS adoption would result in lower CDS spreads across maturities. They compare the change of spread/maturity relation between IFRS-adopters and non-IFRS adopters from pre-adoption period (year 2003-2004) to post-adoption period (year 2005-2008) in 70 countries. They find that IFRS-adopters have lower CDS spreads and higher slope and concavity of the CDS spread/maturity relation, which indicates that IFRS adoption increases accounting transparency in the credit market. Additional analyses show that the change of spread/maturity relation of CDS instruments depends on firms' reporting incentive characteristics and countries' institutional characteristics. The different findings from Kraft and Landsman (2014) may come from the different samples and different empirical models.

For the debt market, Florou and Kosi (2015) investigate the effect of IFRS adoption on firms' debt financing. More specifically, they examine whether IFRS adoption will impact firms' propensity to access public bond market rather than private loan market and whether IFRS adoption will influence firms' cost of debt. If IFRS adopters provide higher quality financial statements to information users in the debt market, then they could access to public bond market more easily with lower cost. Using observations from 35 countries between year 2000 and 2007, the authors find that there is an increase in firms' public bond financing for IFRS-adopters in the post-adoption period, compared with non-adopters. They also find that for IFRS-adopters, the cost of public bonds, rather than the cost of private loans, decreases after the IFRS adoption. This finding suggests that

bond market participants, instead of the private loan market participants, have positive reaction to the IFRS adoption because private loan market participants can rely on private communication rather than firms' public financial reports. Additional analyses show that the positive consequences are more pronounced in countries with larger divergence between local GAAP and IFRS.

Ball et al. (2015) study the effect of IFRS adoption on the usefulness of financial statements in the debt market (proxied by the total number of accounting covenants contained in a debt contract). They predict that IFRS adoption would negatively impact the use of accounting debt covenants for two main reasons. First, the principles-based IFRS gives more flexibility to managers. Second, IFRS focuses on fair value which would lead to more volatile financial amounts. Using new debt issues made between year 2001 and 2010 in 43 countries, they find that in the post-adoption period, there is a decline in the use of accounting debt covenants for IFRS-adopters, but not for non-IFRS adopters, which suggests the IFRS adoption is related with reduced contractibility.

In conclusion, prior studies find mixed results regarding the effect of IFRS adoption on credit/debt market due to different samples and models. However, they generally agree that firms' reporting incentives and countries' institutional characteristics affect the IFRS adoption consequences, which is consistent with findings in the equity market.

## Chapter 3

Background and Literature Review: Analyst Forecast Behavior This section reviews literature of analyst forecast behavior (analyst following, analyst forecast accuracy and dispersion) and analyst information precision. It also discusses studies of IFRS adoption effect on analyst forecast behavior and analyst information precision.

# 3.1 Literature Review of Analyst Following

This part discusses prior studies of analyst following. I start with Bhushan (1989) theoretical model which illustrates an equilibrium that the number of analysts following a firm is a function of the aggregated supply and demand of analysts' services. I then review related empirical studies that are based on the model. Finally, I summarize prior literature regarding the effect of IFRS adoption on analyst following.

# 3.1.1 Determinants of Analyst following: A Theoretical Model

Financial analysts are valuable participants in the capital market. Therefore, it is an important research question to understand the determinants that affect analysts' decisions to follow a firm.

Bhushan (1989) builds a theoretical model which illustrates that the number of analysts following a firm is a function of the aggregated supply and demand of analysts' services. Lang and Lundholm (1996) apply Bhushan (1989) model to test the relationship between firms' disclosure quality and analyst following. As Bhushan (1989) model shows, the equilibrium number of analyst following is decided by the supply and demand curves. For the supply curve, if a firm increases its disclosure, it will be less costly for analysts to receive information from the firm rather than to acquire information from other sources. Therefore, more analysts will be willing to follow that firm and this will shift the supply curve to the right. However, the effect of increased disclosure on the demand curve depends on the role that analysts play in the capital market. Analysts have dual roles in the market, which are information intermediaries and information providers. If analysts are primarily information intermediaries, since information flows from firms to the market through analysts, then the more information firms provide, the more information analysts will have to process and transmit, the higher demand for analysts' services will be. In this case, increased firm disclosure will increase the demand for analysts' services and shift the demand curve to the right, which will lead to an increase in analyst following. However, if analysts are primarily information providers and they compete with firmprovided disclosure, then when firms increase the disclosure and provide more information to investors, it will substitute the demand for analysts' services, which will shift the aggregate demand curve to the left and decrease the equilibrium number of analyst following.

Lang and Lundholm (1996) paper raises an important question: what role do analysts play? Are they the information intermediaries or information providers? If analysts mainly interpret firms' public information, then firms with higher (lower) disclosure quality will have higher (lower) analysts following because there is more (less) information for analysts to interpret and transmit to the market. In this case, analysts and firms are "complementary" to each other. However, if analysts primarily discover and acquire information by themselves, then analysts' services will tend to be pre-empted by firms' disclosures. In this scenario, analysts and firms are "substitutive" to each other. Prior studies have investigated analysts' role and the findings are inconclusive. For example, Francis et al. (2002) find that market responses to analysts' reports and to firms' quarterly earnings' are generally positively related, which indicates the "complementary" relationship between analysts following a firm, the market reaction to that firm's earnings announcements would be weaker. Dempsey (1989) shows that market reaction to firms' annual earnings announcements is negatively related to the number of analysts following the firm. Shores (1990) uses OTC firms as the sample and finds a negative relationship between market reaction to firms' earnings announcements and the level of interim information (one proxy is number of analyst following). These findings are consistent with "substitutive" argument. Although a more detailed discussion regarding analysts' roles in the capital market is beyond my dissertation's scope, it is important to notice that the two different roles that analysts play will affect the relationship between foreign private issuers' IFRS adoption and analyst following.

### 3.1.2 Determinants of Analyst Following: Empirical Studies

Since analysts play dual roles in the capital market, prior studies find mixed results regarding the association between firms' characteristics/reporting quality and the number of analyst following.

Bhushan (1989) investigates the effect of five firms' characteristics, namely ownership structure, firm size, return variability, number of lines of business, correlation between firm return and market return, on analyst following. For the ownership structures, he finds that institutional ownership (insider ownership) has positive (negative) relationship with number of analysts following. For firm size, he finds that larger firms have more analyst following, indicating that investors are more interested in larger firms and this leads to higher demands for analysts' services. For lines of business, the relationship is negative, because firms with more lines of business usually have more complex transactions, which means the cost to acquire firms' information will increase, and therefore, the supply of analysts' services will decrease. For return variability, the relationship is positive. Since firms with higher return variability usually have higher uncertainty, the demands for analysts' services for these firms will be higher. For

correlation between firm return and market return, the relationship is positive because the information acquisition cost is lower for firms with strong correlation with the market.

For the relationship between firms' disclosure and number of analyst following, Lang and Lundholm (1996) examine the effect of firms' disclosure practices (proxied by the Report of the Financial Analysts Federation Corporate Information Committee-FAF Report) on analyst following. The Report is written by industry-specific analysts who give scores for firms' disclosure quality. The disclosure quality is mainly evaluated by three dimensions: annual published information, quarterly and other published information, and investor relations and related aspects. Analysts assess these three dimensions based on the content of the disclosure and also on the timeliness of the disclosure, give a score to each dimension separately, and then finally give the total disclosure score to each firm. Using the Report from year 1985 to 1989, Lang and Lundholm (1996) find that out of the four scores (three individual scores and one total score), only the total disclosure score, quarterly and other information score, and investor relations and relate aspects score, but not the annual published information score, are positively and significantly related with number of analyst following. Their results indicate that firms' disclosure and number of analyst following are complementary, rather than substitutive, to each other, which provides support to the information intermediaries role for analysts.

Healy et al. (1999) identify 97 firms that experienced improvements in their disclosure rating from year 1978 to 1991 and study the effect of disclosure improvements on analysts following. The rating score is obtained from the Association of Investment Management and Research Corporate Information Committee Reports (AIMR Reports). Each year for each industry, 13 analysts analyze and rate firms' disclosure quality based on firms' annual reports and other qualitative factors. The authors find that firms who kept

improving their disclosure quality and became the top quintile in the AIMR Reports have a significant increase in analyst following.

Botosan and Harris (2000) examine the relationship between firms' voluntary disclosure and analyst following by using quarterly segment disclosure from year 1987 to 1994 as their sample. They find that when firms initiated their quarterly segment disclosure (from no disclosure to disclosure), there was an increase in analyst following.

Lang et al. (2003) investigate the effect of foreign firms' cross-listing in the U.S. on analyst following. Using non-cross listing foreign firms in year 1996 as the benchmark, they find that cross-listed foreign firms have more analyst following. They provide two main reasons for the increased analysts following. First, cross listing increases firms reporting quality, which reduces the cost of following these firms. Second, cross listing increases potential investment base, which brings more commission to analysts. They assert that "a firm's disclosure and the information produced by analysts complement each other".

The findings from the above studies generally provide support to the "complementary" relationship argument between firms' characteristics/disclosure and analyst following by showing that when firms have higher disclosure quality, there will be more analysts following. This indicates that analysts mainly play information intermediaries role. The more disclosure firms provide, the more information analysts can process and transmit to the market, and the more analysts following these firms.

However, if analysts mainly play information providers' role, then when firms have lower disclosure quality, the demands for analysts' professional services will be increased, which will motivate analysts to acquire more private information and sell it to investors. In this case, there will be more analysts who "substitutive" for the information that firms' did not provide. For example, Barth et al. (2001) argue that the services of

financial analysts will be more valuable and in greater demand when firms' financial reports provide less information for the uncertainty of their future value. They measure the level of the uncertainty for firms' future value by the amount of intangible assets, such as research and development and advertising expenses. Using firms from 1983 to 1994, they find a positive relationship between firms' amount of intangible assets and number of analysts following.

Lehavy et al. (2011) examine the effect of firms' annual reports readability on number of analysts following. They argue that for firms with less readable annual reports, it will be harder for investors to process firms' information by themselves, and therefore, investors need more professional services from analysts. In this case, analysts will have stronger incentives to acquire their private information and sell it to investors. The increased demands from the market and increased incentives from analysts will lead to more analysts following firms with less readable annual reports.

Lobo et al. (2012) use accounting measurement, accruals quality, as the proxy for firms' information asymmetry. When firms' accruals quality is low, firms' financial reports provide less precise signals about firms' value. Therefore, the demand for private information from analysts will likely increase. In addition, when accruals quality is low, there are more potential opportunities for analysts to identify mispricing securities with their private information and professional skills. Following this argument, both the demand for private information and the likely benefits of analyst private information discovery will be greater, which will result in more analysts following firms with low accruals quality. Their results support their hypotheses by showing that firms with low accruals quality are followed by more analysts.

In conclusion, due to the dual roles that analysts play, there are mixed results regarding the relationship between firms' characteristics/reporting quality and the number of analysts following.

### 3.1.3 IFRS Adoption and Analyst Following

Prior studies have inconclusive findings regarding the effect of IFRS adoption on analyst following because of two reasons. First, as discussed in the prior chapter, whether the IFRS adoption increases or decreases firms' reporting quality is still an empirical question. Second, the relationship between firms' reporting quality and number of analysts following depends on the role of analysts.

Karamanou and Nishiotis (2009) use an international setting where they can identify the date when firms announce the voluntary IAS/IFRS adoption news to examine the effect of IFRS adoption announcements on analyst following changes. Using firms' announcements in eight countries between year 1988 to 2002 as the sample, they find that the number of analysts issuing recommendation reports increases after the IFRS adoption announcement by an average of 2% level after 90 days and 8% after 180 days. This evidence suggests that analysts view the IFRS adoption announcements as a bonding of higher disclosure quality. Their finding is consistent with Lang and Lundholm (1996) which shows analysts tend to follow firms with better disclosure practices.

Tan et al. (2011) investigate the effect of IFRS adoption on analysts following. The unique feature of their study is that they separate analysts to foreign analysts and local analysts based on the nationality of the analysts and firms that analysts cover. They predict a stronger IFRS adoption effect on foreign analysts compared with local analysts. For foreign analysts, IFRS adoption can reduce accounting standards differences by improving comparability, which would reduce the cost to cover foreign firms in the postadoption period. Using firms from 25 countries between year 1998 to 2007, they find that

compared with voluntary adopters, there are more foreign analysts following mandatory adopters in the post-adoption period. They also find that there is an increase for local analysts following and this increase mainly comes from local analysts who have prior IFRS experience. Additional analyses reveal that the level of increased foreign analysts following is higher when the foreign analysts' countries also adopted IFRS concurrently, and when foreign analysts already covered voluntary adopters before the mandatory adoption.

Byard et al. (2011) also examine the association between IFRS adoption and analysts following by using EU firms between year 2003 to 2006 as the sample. *Ex ante*, the direction of the association is not clear. It is possible that IFRS adoption may increase analysts following by improved earnings quality and/or by enhanced comparability. Or local GAAPs are the optimal accounting standards rather than "one size fits all" IFRS. They find that overall, compared with voluntary adopters, there is no significant increase in analysts following for mandatory adopters in the post-adoption period (year 2005-2006). Additional analyses show that even in countries with strong enforcement and large divergence between local GAAP and IFRS, or for firms with strong reporting incentives (firms with more growth opportunities, a smaller proportion of closely held shares, or higher-quality auditor), there is no change for analysts following for IFRS adopters, compared with the control sample. Their findings suggest that there is little effect of IFRS adoption on analyst following.

Kim and Shi (2012) study whether voluntary IFRS adoption affects analyst following. They argue that, from a theoretical perspective, it is unclear whether analysts prefer firms with greater or less disclosure. On the one hand, if firms have higher reporting quality by voluntarily adopting IFRS, then it will be less costly for analysts to get firms' information, which will increase analysts supply. But the improved reporting quality

may preempt analysts' services and then decrease the demands from investors. On the other hand, if firms have lower reporting quality without voluntarily adopting IFRS, then analysts' services would be more valuable, which will increase the demand curve. But the cost of acquiring private information rather than public information would be higher, which deceases the supply for analysts' services. Using firms that voluntarily adopted IFRS between year 1998 and 2004, they find that there is a positive relationship between firms' voluntary IFRS adoption and the number of analyst following.

In conclusion, prior studies have found mixed evidence for the effect of IFRS adoption on analysts following. Although Tan et al. (2011) find there are more foreign analysts following and more local analysts following, especially those with previous IFRS experience, Byard et al. (2011) fail to find any changes of analysts following using the full sample or the sample of countries with strong enforcement and large divergence between local GAAP and IFRS. The different findings may come from different research designs (Tan et al. separate analysts to foreign and local analysts and examine the relationship separately while Byard et al. take all the observations together) or different sample selection criteria (Tan et al. sample is from year 1998 to 2007, and Byard et al. sample is from year 2003 to 2006). These inconclusive results suggest that the effect of IFRS adoption on analyst following is still an empirical research question.

3.2 Literature Review of Analyst Forecast Accuracy and Dispersion

This section discusses prior studies of analyst forecast accuracy and dispersion. I first review the literature regarding determinants of analyst forecast accuracy and dispersion. Then I move to studies that examine the effect of IFRS adoption on analyst forecast accuracy and dispersion.

#### 3.2.1 Determinants of Analyst Forecast Accuracy

Prior studies have found that analyst forecast accuracy is affected by many factors. I classify these factors into three levels: analyst-level attributes, firm-level attributes and country-level attributes.

Analyst-level Attributes: analyst attributes, such as analyst innate ability, firm (industry)-specific experience, all-star or not, and analyst gender are important inputs for their forecast accuracy.

Stickel (1992) studies whether analysts' reputation (proxied by All-Star) affects their forecast performance. He argues that staying in the All-American Research Team is a representative of relative reputation and that analysts would put more effect to make more accurate forecasts so that they can keep the reputation. Using observations from year 1981 to 1985, he finds that All-American analysts have more accurate forecasts than non-All-American analysts.

Mikhail et al. (1997) investigate whether analyst forecast accuracy will increase as they have more firm specific experience. They measure firm-specific experience as the number of prior quarters that analysts issue forecasting reports and predict that based on "learning by doing" theory, analyst forecasts will be more accurate with firm specific experience. Using observations from year 1980 to 1995, they find supportive results for their hypotheses.

Clement (1999) finds that analyst forecast accuracy is positively associated with their general and firm-specific experiences and their available resources, but negatively associated with the task complexity. Analysts' general experience is measured by the number of years that analysts issue forecasting reports. Firm-specific experience is measured by the number of years that analysts issue forecasting reports for that specific

firm. Task complexity is measured by the number of companies and industries that the analyst follows. And available resources is measured by analysts' employers' size.

Jacob et al. (1999) also examine factors that influences analyst forecast accuracy. They find that analyst forecast accuracy is related with number of companies they follow and the employer broker size. But their evidence does not indicate that firmspecific experience, *per se*, is significantly associated with analysts' performance. They provide explanation for the different findings from Mikhail et al. (1997) and Clement (1999). Mikhail et al. (1997) require that analysts should have at least eight years' records to be considered into the sample, which may create a survival bias. And Clement (1999) uses a different research model which does not control for analysts' ability and other variables.

Kumar (2010) studies the relationship between analysts' gender and their forecast performance. She posits that female analysts are not the representative of the average female with risk aversion. They are more competitive and ambitious. Due to a self-selection process, only women that are capable would choose the analyst career and stay and survive in that industry. Therefore, it is reasonable for female analysts to have better performance than male analysts. Using observation from year 1983 to 2006, she finds that compared with make analysts, female analysts issue bolder and more accurate forecasts and their accuracy is higher in market segments in which their concentration is lower.

Firm-level Attributes: Prior studies, on average, find a positive relationship between firms' reporting quality, such as the level of disclosure, firms' accruals quality and conservatism, and analyst forecast accuracy.

Lang and Lundholm (1996) argue that analyst forecast accuracy will increase with the quality of a firm's disclosure policy. Using FAF Report (1985-1989) scores (it is

discussed in more details in the prior section) as the proxy for firm disclosure quality, they find that the total disclosure score, the quarterly and other publications score, and investor relations score, but not the annual report publications score, are positively related to analyst forecast accuracy.

Rogers and Grant (1997) examine firms' annual reports to understand how analysts use these reports for their forecasting reports. They evaluate 187 analysts' reports between year 1993 to 1994 and find that 52% information of analysts' reports come from firms' annual reports while the remaining 48% information is from other sources (such as quarterly reports or other voluntary disclosures). For the 52% information, 26% is from the financial statements, 40% is from the narrative sections (such as management discussion and analysis), and 14% is from both. For the financial statements, they find that earnings are more important than balance sheets and cash flow statements for analysts' forecast reports.

Barron et al. (1999) test the relationship between firms' MD&A disclosure quality and analyst forecast accuracy (dispersion). Firms with better MD&A disclosure practice can provide more public information, such as the forward-looking information and historical analyses of capital expenditure, which would facilitate analyst forecast tasks. They measure MD&A disclosure quality as the score from the SEC's "MD&A Project" with 550 firms from year 1987 to 1989. Their empirical tests show that firms with higher disclosure quality tend to have higher (lower) analyst forecast accuracy (dispersion).

Bradshaw et al. (2001) investigate the effect of firms' accruals quality on analyst forecast behavior. They measure firms' accruals quality with two proxies: working capital accruals and total operating accruals. Using observations from year 1988 to 1998, they find that analyst forecast errors are larger for firms with high accruals. More specifically, the results show that for firms with low accruals, the average forecast error is -0.0033,

which is 6.6% of earnings, while for firms with high accruals, the average forecast error is -0.0096, which is 19.2% of earnings.

Li (2008) finds that analyst forecast errors are negatively related with firms' unconditional conservatism for good news or mild bad news. The reason is that unconditional conservatism can offset part of the uncertainty from the conditional conservatism. Therefore, the overall uncertainty will be lower. Her tests support her argument by using firms from year 1986 to 2004.

Country-level Attributes: Prior studies find that analyst forecast behavior depends on countries institutional characteristics, such as the legal system, the strength of investor protection and other factors.

Hope (2003) argues that firms' annual reports are an important input for analyst forecast. One reason is that annual reports can provide information about firms' future plans and strategies, which contains critical forward-looking information. The other reason is that annual reports state firms' accounting practice, such as their accruals quality. He measures firms' annual reports quality with the Center for International Financial Analysis and Research (CIFAR 1993, 1995) disclosure score, which is constructed from 85 annual report variables. Using a sample with firms from 22 countries between year 1991 and 1993, he finds that annual report disclosures quality is significantly and positively related with forecast accuracy. This positive relationship is observed in both U.S. and non-U.S. subsamples. Additional analyses show that this positive relationship depends on countries' enforcement level, which is calculated by factor analysis of country-level audit spending, judicial efficiency, rule of law, insider trading laws and shareholder protection. Firms in strong enforcement countries are more likely to follow accounting standards/rules. Therefore, analysts will face less uncertainty when forecasting firms in these countries.

Lang et al. (2003) investigate whether firms that are cross-listed in the U.S., compared with non-cross listed firms, have higher analyst forecast accuracy. Cross-listed firms usually have more disclosure and higher reporting quality, which could increase analyst forecast accuracy. Consistent with their hypotheses, they find a positive relationship between cross-listing and forecast accuracy. They also find that this positive cross-listing effect is more pronounced for firms from emerging market and firms from code law countries.

Barniv et al. (2005) test the moderating role of countries legal system in the relationship between analysts' superior characteristics (analysts' ability, effort, experience and resources) and analyst forecast accuracy in 33 countries (12 common law countries and 21 civil law countries) from year 1984 to 2001. Firms in common law countries usually value capital market investor more than firms in civil law countries. Therefore, analysts' services are demanded more by investors in common law countries than in civil law countries. Under this situation, analysts will have stronger incentive to provide higher quality services (such as more accurate forecasts) in common law countries. Their findings suggest that analysts' characteristics are more related with their forecast accuracy in common law countries, compared with civil law countries. The strongest relationship is found in the U.S. market, which has the highest investor protection law system.

# 3.2.2 Determinants of Analyst Forecast Dispersion

Analyst forecast dispersion is generally referred to as the disagreement among analysts on the expected earnings of the firm that they follow. Imhoff and Lobo (1992) interpret forecast dispersion as a proxy for *ex ante* earnings uncertainty before earnings announcements. Herrmann and Thomas (2005) state that greater dispersion indicates

less agreement among analysts because some analysts are not able to or unwilling to gather and process information as efficiently as other analysts.

Prior studies have examined the factors that affect analyst forecast dispersion. For example, Lang and Lundholm (1996) argue that the relationship between firms' disclosure quality and analyst forecast dispersion is unclear. Analyst dispersion comes from two sources. The first one is that analysts have different information. The second one is that analysts have different interpretations even to the same information. If analyst dispersion is mainly from the different information that they have, then increasing firms' disclosure will decrease the uncertainty that analysts face, which will decrease the disagreement among them. If analyst dispersion mainly comes from different interpretations to the same information, then there will be no relationship between firms' disclosure quality and analyst forecast dispersion. Their results show that firms' total disclosure score, annual report and investor relation report score, but not the other publications score, are negatively related with forecast dispersion. Their findings indicate that improved firms' disclosure is negatively related with analyst dispersion.

Kross and Suk (2012) study the effect of regulations, such as Regulation Fair Disclosure (Regulation FD), on analyst forecast dispersion. They predict that in the post-Regulation FD period, analysts forecast will have higher accuracy and lower dispersion for two reasons. The first reason is that Regulation FD requires firms to disclose material information to all investors at the same time, therefore, analysts will have the same level of firms' public information, and this will decrease the level of private information that some analysts used to rely on. The second reason is that in the post-Regulation FD period, managers have stronger incentive to disclose their information more accurately. In the pre-Regulation FD period, managers could update and correct the erroneous information by privately communicating with certain analysts. But in the post-Regulation

FD period, managers lost these chances so that they have to make sure their public communication with all analysts are more accurate. Using quarterly EPS forecasts between year 1996 and 2004, they find supportive evidence for their hypotheses.

Behn et al. (2008) investigate the association between firms' auditor quality and analyst forecast behavior. Firms audited by Big 5 (or industry-specific auditors) usually have higher earnings quality history. Prior studies find that historical earnings are an important input for analysts to forecast future earnings. Therefore, higher quality earnings history can reduce analyst forecasting uncertainty and decrease their dispersion. Their results show that auditor quality (proxied by Big 5 or industry-specific auditors) is negatively related with analyst forecast dispersion.

Lehavy et al. (2011) examine the relationship between firms' annual reports readability and analysts forecast behavior. When firms' annual reports are less readable, analysts may have more disagreement when they process and analyze the information, which will lead to higher dispersion. Using observations from year 1995 to 2006, they find firms with less readable annual reports are associated with higher analyst forecast dispersion.

Gul et al. (2013) find that gender diversity on firms' boards is negatively related with analyst forecast dispersion. Gender diversity can improve firms' reporting quality because gender-diversed boards are less likely to manipulate earnings and are better monitors of managers. The improved reporting quality will decrease information uncertainty and thus decrease analyst forecast dispersion.

Chen et al. (2015) use goodwill impairment charges (SFAS 142) as a proxy for "uncertainty" and find that analyst forecasts are less accurate and more dispersed for the impairment sample, compared with the control sample. Goodwill impairment charges create uncertainty to analysts for two reasons. First, the charges require significant judgment from the managers. In order to determine the impairment amount, managers have to use the fair market value to decide the residual of the goodwill. Second, there are multiple methods to value the impairment, which gives managers' opportunities to manage earnings. The increased uncertainty adversely affects analyst forecast dispersion.

In summary, prior studies, on average, find that higher reporting quality, efficient corporate governance, and professional auditors can decrease the uncertainty for firms' future earnings, which will facilitate analyst forecast and decrease their forecasting dispersion.

### 3.2.3 IFRS Adoption and Analyst Forecast Accuracy and Dispersion

The impact of IFRS adoption on analyst forecast accuracy and dispersion has been examined in many studies and the findings from these studies are inconclusive.

Ashbaugh and Pincus (2001) study the relationship between firms' voluntary IAS adoption and analyst forecast accuracy. They predict that IAS adoption can increase firms' reporting quality by increased disclosure and restricted choices of measurement methods. They identity 163 non-U.S. firms using IAS in 13 countries by year 1993 and find that IAS adoption is positively related with increased analyst forecast accuracy.

Wang et al. (2008) test the effect of IFRS adoption on analyst forecast accuracy and dispersion in 17 EU countries and find that analysts have higher accuracy and lower dispersion in the post-adoption period (year 2005-2006) compared with pre-adoption period (year 2002-2004), and that this finding is observed in both voluntary adopters and mandatory adopters. They also find that the positive effect is due to increased firms' reporting quality. When they separate the sample based on the legal system, they find that the positive effect is only observed in the six common law countries, but not in the 11 code law countries.

Cotter et al. (2012) study 145 Australian firms to investigate the impact of IFRS adoption on analyst forecast behavior. Their findings suggest that IFRS adoption increases analyst forecast accuracy and decreases forecast dispersion as firms increase their disclosure in the post-adoption period (year 2005 to 2007).

Tan et al. (2011) investigate how mandatory IFRS adoption affects financial analysts and find that, compared with non-IFRS adopters, IFRS adoption improves foreign analyst forecast accuracy but local analyst forecast accuracy is not affected. The main reason for the benefit of foreign analysts is that IFRS adoption decreases accounting standard differences between foreign analysts' home countries and the counties of firms that they cover.

Horton et al. (2013) test whether IFRS adoption facilitates analysts forecasts. Using firms from 46 countries between year 2001 and 2007, they find that after mandatory IFRS adoption, forecast accuracy improves more significantly for mandatory adopter than for voluntary adopters. They also find that the larger the divergence between IFRS earnings and local GAAP earnings, the larger improvement is observed for forecast accuracy. They provide evidence that the improvement can be attributed to both increased reporting quality and improved accounting comparability, but not to earnings management.

However, Byard et al. (2011) use voluntary adopters as the control sample and find that on average, mandatory IFRS adoption has no effect on analyst forecast accuracy and forecast dispersion, which casts doubt on the positive relationship between IFRS adoption and analyst forecast behavior. The increased forecast accuracy and decreased dispersion are only observed in countries with both strong enforcement and large divergence between local GAAP and IFRS. Furthermore, for mandatory adopters domiciled in countries with weak enforcement and large divergence, they find that

forecast errors and dispersion decrease more for firms with stronger incentives for transparent financial reporting (i.e., firms with more growth opportunities, a smaller proportion of closely held shares, or higher-quality auditors). Their results indicate that the effect of IFRS adoption is not homogenous across countries and firms.

In summary, prior studies that examine the association between IFRS adoption and analyst forecast accuracy and dispersion have mixed findings. One reason is that the effect of IFRS adoption on firms' reporting quality is still an empirical research question. But these studies generally agree that the consequences of IFRS adoption are not homogenous across countries and firms, which means that countries institutional characteristics and firms' reporting incentive are important factors for the effect of IFRS adoption.

### 3.3 Literature Review of Analyst Information Precision

This part discusses literature of analyst information precision. I start with Barron et al. (1998) model and then review determinants of analyst information precision from prior empirical studies. Lastly, I summarize the effect of IFRS adoption on analyst information precision.

# 3.3.1 Barron et al. (1998) (BKLS) Model

Barron et al. (1998) develop a model that uses observable variables such as analyst forecast dispersion, forecast error and the number of forecasts to measure unobservable variables such as the precision of analyst public (common) information and individual (idiosyncratic) information. In the model, there are N financial analysts forecasting firm j's earnings (y). Each individual analyst's information is composited with two parts: common information (with precision h) and private information (with precision s). Analysts forecast the earnings based on both common and idiosyncratic information. Under a set of simplified assumptions , BKLS model illustrates the precision of individual analyst's common (h) and idiosyncratic (s) information in terms of the squared error of the mean forecast (SE), the forecast dispersion (D), and the number of analyst following (N), as in Proposition 3, Corollary 1: p. 427-428:

Idiosyncratic information precision  $s = \frac{D}{\left[\left(1-\frac{1}{N}\right)D+SE\right]^2}$ 

Common information precision  $h = \frac{SE - \frac{D}{N}}{\left[\left(1 - \frac{1}{N}\right)D + SE\right]^2}$ 

Where  $SE_{jt} = (A_{jt} - \overline{F_{jt}})^2$  is the squared error of the mean forecasts; And  $D_{jt} = \frac{1}{N-1} \sum_{i=1}^{N} (F_{ijt} - \overline{F}_{jt})^2$  is the forecast dispersion;

 $\overline{F_{jt}} = \frac{1}{N} \sum_{i=1}^{N} (F_{ijt})$  is the mean forecast;

 $A_{jt}$  is the actual earnings;

And N is the number of analyst following.

# 3.3.2 The Importance of Understanding the Public and Private Information Precision

Venkataraman (2001) explains that the changes in the precision of public and private information are related but different from the changes of measures of analyst forecast behavior, such as analyst forecast accuracy and dispersion. By taking the partial derivatives using equations 17, 19 and 20 in Barron et al. (1998), Venkataraman (2001) draws the following table to show the relationship between the measures of analyst forecast behavior and the precision of public and private information.

Information		
Precision	Public (common) information	Private (idiosyncratic)
Forecast	precision	information precision
Behavior Measures	(h)	(s)
Forecast error	Positive if (1-1/N)s>h	Negative
(SE)	Negative if (1-1/N)s <h< td=""><td></td></h<>	
Forecast dispersion	Negative	Positive if h>s
(D)		Negative if h <s< td=""></s<>

The above table shows that the negative relationship between forecast error (dispersion) and private (public) information precision is only observed when the public (private) information precision is held constantly. But prior studies have found that public information and private information rely on each other and affect each other. Since there are four possible combinations of changes in public information and private information (both increase, both decrease, one increases and the other one decreases, and one decreases and the other one increases), the changes of public and private information precision cannot be interpreted properly from the change of measures of analyst forecast behavior. For example, although traditional view is that there is a negative relationship between public information precision, the dispersion will decrease), the table shows that this negative relationship can become positive under some circumstances (when (1-1/N)s>h).

Venkataraman (2001) table suggests that direct measures of public information precision and private information precision, in addition to measures of analysts forecast

accuracy and dispersion, can help us to understand individual analyst's information environment in a more explicit manner.

## 3.3.3 Empirical Findings of Analyst Information Precision

Venkataraman (2001) studies the effect of SFAS 131 (segments and related information disclosure) on analyst public information and private information precision. His results show that firms adopted SFAS 131 have an increase in overall information precision, public information precision and private information precision. Also, the increase of overall information precision and public information precision is positively related with change of analysts following. His explanation is that more analysts following will force firms to reveal more public information precision is positively related with precision. However, private information precision is positively related with precision but not with analysts following. This is consistent with McNichols and Trueman (1994) model which suggests that an increase in public information precision will lead to greater private information acquisition and increase private information precision.

Byard and Shaw (2003) examine how corporate disclosure quality affects analyst public information and private information precision. They separate the total corporate disclosure quality (proxied by AIMR score, the Association for Investment Management and Research Corporate Information Committee) to three parts, namely firms' annual report disclosures, quarterly report and other public disclosures, and investor relation activities. The first two parts (annual reports and quarterly reports and other public disclosures) are public information while the last part (investor relation activities) is more private information. By regressing each of these three parts on public information precision and private information precision separately, they find that public information precision is positively related with annual report disclosure quality and quarterly and other reports disclosure quality. Surprisingly, for the private information precision, only annual report disclosure quality and quarterly and other reports disclosure quality are significant, which suggests that analysts develop their own private information from processing public disclosure instead of from personal communication.

Han et al. (2014) study the relationship between managerial ownership and financial analyst public and private information precision. There are two conflicting views regarding the effect of managerial stock ownership on managerial reporting incentives: alignment and entrenchment. The alignment view suggests that managers' stock ownership can align managers' interest with shareholders' interest, while the entrenchment view suggests that stock ownership will induce mangers to pursue their self-interest at the shareholders' cost. If managers align their interest with shareholders' interest, they will provide higher quality financial reports and more disclosures, which will improve the firms' information environment through higher public and private information precision. Their results are consistent with this view by showing a positive relationship between managerial ownership and precision for both public and private information.

Bozanic and Thevenot (2015) examine the effect of qualitative characteristics of firms' quarterly and annual reports on analyst information precision. They have three proxies for qualitative characteristics. The first is readability (including percent of complex words and words per sentence). The second is similarity which is the textual similarity score between the current and prior quarter's earnings press release, and the third is diversity which is the lexical diversity score of the earnings press release and is defined as the number of unique words divided by the total number of non-unique words. They use four measures for analyst information precision: the overall uncertainty (the total of public information precision and private information precision), the consensus (the portion of public information precision to overall uncertainty), the public information precision and

private information precision. They find (1) higher readability, more similarity and diversity will reduce overall uncertainty; (2) similarity is statistically negatively associated with consensus, which means that analysts use similarity to produce more private relative to public information; (3) there is a positive relationship between readability and diversity and public information precision (4) all qualitative disclosure elements are related to private information precision.

For IFRS adoption studies, only a few studies have examined the relationship between IFRS adoption and analyst public and private information precision.

Byard et al. (2011) investigate the effect of mandatory IFRS adoption on analyst information environment in EU countries. They find that analyst forecast errors and forecast dispersion decrease only for the mandatory IFRS adopters that are domiciled in countries with both large divergence between local GAAP and IFRS and with strong enforcement. In part 4.5 (page 91), they examine whether the decreased forecast error and dispersion can be attributed to public information precision or private information precision changes. They find that mandatory IFRS adoption is associated with both public and private information precision improvement. The consensus (the average proportion of analyst public information to total information) maintains the same before and after the adoption since both public and private information precision improve at the same level.

Beuselinck et al. (2010) also focus on mandatory IFRS adoption and find similar results with Byard et al. (20110) by showing that IFRS adoption increases both public and private information precision at a similar degree so that the consensus (the ratio of public information to total information) among financial analysts is not affected. The increase in the precision of public information is offset by a proportionate increase in the precision of private information.

Horton et al. (2013) find that in the post IFRS-adoption period, analyst public and private information precision increase for both mandatory and voluntary adopters. But the magnitude of private information precision increase is higher than the magnitude of public information precision increase, which leads to a decrease of consensus after IFRS adoption.

Kim and Shi (2012) use voluntary adopters as their sample and find some different results. Their tests show that although both public and private information precision improvement is associated with voluntary IFRS adoption, the association is stronger for public information precision improvement. For private information precision, the improvement is more related with the change of analyst coverage, rather than the IFRS adoption.

In summary, prior studies generally find a positive association between firms' reporting quality and analyst information precision. However, the magnitude of the association for public information precision and for private information precision may not be the same. Although Byard et al. (2011) and Beuselinck et al. (2010) find that IFRS adoption improves analyst public information precision and private information precision at the same level, Horton et al. (2013) find that the magnitude of private information precision increase is higher than the magnitude of public information precision increase with IFRS adoption. One explanation for these inconclusive results is that the relationship between public information precision and private information precision is unclear. As discussed above, public information and private information usually interact with each other and affect each other. Early studies, for example, Verrecchia (1982), Diamond (1985), and Kim and Verrecchia (1991), model a setting where more precise public disclosure will decrease private information precision because information users would rely more on the accurate public information and be reluctant to acquire their own private

information. However, recent studies present a scenario under which increased public disclosure stimulates private information acquisition. For example, Kim and Verrrecchia (1994, 1997) model a setting in which financial accounting disclosures provide information that allows market participants with unique information processing skills to develop new idiosyncratic inferences regarding a firm's earnings. In this case, the increased public information will lead to a higher quality of private information. Although a more detailed discussion of the relationship between public information and private information precision is beyond my dissertation scope, it is important to notice that the interaction between them will affect the association between IFRS adoption and analyst information precision for U.S. foreign private issuers.

### Chapter 4

#### Hypotheses Development

4.1 U.S. Foreign Private Issuers' IFRS Adoption and Analyst Forecast Behavior4.1.1 Hypothesis 1: Analyst Following for IFRS vs. U.S. GAAP Adopters.

My first hypothesis examines whether U.S. foreign private issuers' IFRS adoption affects analyst following. The prediction on this hypothesis is unclear for two reasons.

First, as discussed earlier, Bhushan (1989) suggests that the equilibrium number of analysts following a firm is a function of the aggregated demand and supply of analysts' services. If a firm has higher reporting quality, it would be less costly for analysts to get information from the firm than to acquire private information by themselves. Therefore, the aggregated supply will increase and the supply curve will shift to the right. But the demand curve may move to the right or to the left, depending on analysts' role. If analysts are primarily information intermediaries who interpret and transmit firms' information to the market, then firms with higher reporting quality would have more information to be interpreted and transmitted by analysts, which leads to higher demand for analysts' services. In this scenario, the equilibrium number of analyst following would be increased (complementary effect). However, if analysts are primarily information providers and they compete with firm-provided disclosure, then when a firm has higher reporting quality, this would substitute the demand for analysts' services, which would decrease the aggregated demand and the equilibrium number of analyst following (substitutive effect).

Because of the dual roles that analysts play, prior studies find mixed evidence on the relationship between firms' reporting quality and the number of analyst following. Lang and Lundholm (1996) find that the overall disclosure quality (proxied by FAF Report score) is positively related with the number of analyst following, which supports the complementary argument. Lobo et al. (2012), however, provide opposite results by showing that analyst following increases as firms' accruals quality decreases because investors' demand for analysts' services would increase for firms with low accruals quality. Their findings support the substitutive effect argument.

Second, prior research also documents mixed evidence regarding the association between firms' reporting quality and their choices of accounting standards (i.e. IFRS vs. U.S. GAAP). As discussed in the previous section, there are two main differences between IFRS and U.S. GAAP. The first main difference is that IFRS is more principles-based while U.S. GAAP is more rules-based. On the one hand, the principlesbased IFRS allows managers to convey firms' economic performance to outsiders, such as analysts, in a better or less costly way (Hail et al. 2010). On the other hand, managers may use the freedom under IFRS to manage earnings, which makes analyst forecasting job more difficult.

The second main difference is that IFRS focuses more on "fair value" instead of "historical cost" under U.S. GAAP. The fair value accounting can reflect current market conditions and hence provide timely information, thereby facilitating analysts' earnings forecasts. But prior studies also find that fair value accounting undermines the reliability of financial reporting (Watts 2003; Dechow et al. 2010), which could increase forecasting uncertainty. While some empirical studies find IFRS is associated with higher reporting quality compared to U.S. GAAP (McAnally et al. 2010; Agoglia et al. 2011), others reveal opposite findings (Lin et al. 2012; Atwood et al. 2011).

For the effect of IFRS adoption on analyst following, prior studies have mixed findings. Byard et al. (2011) use EU countries that mandatorily adopted IFRS in year 2005 as their sample. They argue that *ex ante*, it is not clear how mandatory IFRS adoption will affect analysts' information environment. IFRS adoption may improve

analysts' information environment by enhancing disclosure and transparency or by increasing the comparability of financial reports, but the local GAAP may be the optimal accounting standards rather than the "one size fits all" IFRS. Their results show that mandatory IFRS adopters exhibit no statistically significant change in analyst following, even for the adopters that are domiciled in countries with large divergence between local GAAP and IFRS and countries with strong enforcement. However, Tan et al. (2011) find that IFRS mandatory adopters experience increased analyst following for both foreign analysts and local analysts.

Given the dual roles that analysts play in the capital market and the mixed empirical evidence regarding the reporting quality between IFRS and U.S. GAAP, I formulate the first hypothesis (H1) in non-directional form, which is stated as follows:

H1: There is no difference in analyst following between IFRS and U.S. GAAP adopters for foreign private issuers in the United States.

4.1.2 Hypothesis 2: Analyst Forecast Accuracy for IFRS vs. U.S. GAAP Adopters.

My second hypothesis considers the impact of IFRS adoption on analyst forecast accuracy for U.S. foreign private issuers. The prediction on this hypothesis is unclear for two reasons.

First, the effect of firms' reporting quality on analyst forecast accuracy is inconclusive. Prior studies find the association between firms' reporting quality and analyst forecast accuracy can be positive, negative or inconsequential. Hope (2003) uses a sample from 22 countries to examine the relationship between annual report quality (proxied by CIFAR score) and analyst forecast accuracy. He finds that annual report disclosures are significantly and positively related with forecast accuracy, and that this relationship is observed in both U.S. and non-U.S. subsamples. However, Eng and Teo (1999) use Singapore firms as their sample and construct a disclosure index, which is based on the amount of disclosure in firms' annual reports and other voluntary disclosures. They find that when earnings surprise is large (greater than 0.8824 in their paper), more disclosure associated with less accurate earnings forecasts. Lang and Lundholm (1996) find that annual reporting disclosure quality (proxied by FAF Report score) is not significantly related to analyst forecast accuracy.

Second, as mentioned in H1, there is no clear answer regarding the reporting quality of IFRS and U.S. GAAP. Some studies find firms using IFRS have higher reporting quality (McAnally et al. 2010; Agoglia et al. 2011), while others find firms using U.S. GAAP have higher reporting quality (Ndubize and Sanchez 2006; Van der Meulen et al. 2007).

Prior studies of IFRS adoption find mixed results regarding mandatory IFRS adoption and analyst forecast accuracy. Wang et al. (2008) find that analysts' earnings forecast errors decrease after mandatory IFRS adoption. However, Byard et al. (2011) find that after mandatory IFRS adoption, analysts' absolute forecast errors decrease only in countries with large divergence of local GAAP and IFRS and countries with strong enforcement. Tan et al. (2011) find that compared with non-IFRS adopters, mandatory IFRS adoption only improves foreign analyst forecast accuracy but local analyst forecast accuracy is unaffected.

Given the two reasons discussed above, I formulate the second hypothesis (H2) in non-directional form, which is stated as follows:

H2: There is no difference in analyst forecast accuracy between IFRS and U.S. GAAP adopters for foreign private issuers in the United States.

4.1.3 Hypothesis 3: Analyst Forecast Dispersion for IFRS vs. U.S. GAAP Adopters.

My third hypothesis focuses on the relationship between IFRS adoption and analyst forecast dispersion for U.S. foreign private issuers. Analyst forecast dispersion is usually referred to as the disagreement among analysts for a firm's expected earnings. Imhoff and Lobo (1999) interpret forecast dispersion as a proxy for *ex ante* earnings uncertainty.

Overall, prior studies suggest that higher reporting quality can decrease forecast dispersion by reducing the uncertainty among analysts. Lang and Lundholm (1996) argue that when firms increase their reporting quality, analysts would rely more on the public information and less on their private information. This would increase the consensus among the analysts, which eventually would decrease analyst forecast dispersion. Using the reporting score of the Financial Analysts Federation Corporation Information Committee as the proxy for reporting quality, they find that annual report disclosure score is significantly and negatively associated with analyst forecast dispersion.

For the effect of IFRS adoption on analyst forecast dispersion, prior studies have inconclusive findings. Wang et al. (2008) find that both voluntary and mandatory IFRS adoption are significantly associated with decreased analyst forecast dispersion. But Byard et al. (2011) find that on average, mandatory IFRS adoption has no effect on analyst forecast dispersion and that decreased forecast dispersionis only observed in countries with large divergence of local GAAP and IFRS and with strong enforcement. Cotter et al. (2012) study 145 Australian firms and find that there is no significant change in analyst forecast dispersion after IFRS adoption.

Since there is no clear answer regarding the reporting quality between IFRS and U.S. GAAP. (Ndubize and Sanchez 2006; Van der Meulen et al. 2007; McAnally et al. 2010; Agoglia et al. 2011), I state my third hypothesis (H3) in non-directional form as follows:

H3: There is no difference in analyst forecast dispersion between IFRS and U.S. GAAP adopters for foreign private issuers in the United States.

4.2 U.S. Foreign Private Issuers' IFRS Adoption and Analyst Information Precision

# 4.2.1 Hypothesis 4: Analyst Public Information Precision for IFRS vs. U.S. GAAP Adopters.

My fourth hypothesis examines the relationship between IFRS adoption and analyst public information precision for U.S. foreign private issuers. Barron et al. (1998) model suggests that each analyst observes two signals of a firm's earnings: public signal that is common for all analysts and private signal that is idiosyncratic for each individual analyst. Analyst forecast errors come from two parts: the common error component is from error in the public information and the idiosyncratic error component is from error in the private information.

Prior studies find that on average firms with higher reporting quality can provide more and accurate public information for analysts, which would decrease the common error component and increase analyst public information precision. Byard and Shaw (2003) use AIMR (the Association for Investment Management and Research Corporate Information Committee) score as the proxy for disclosure quality and find that higher disclosure quality is associated with higher public and private information precision for analysts. Lehavy et al. (2011) examine the effect of annual reports' readability on analyst information precision and find that firms with lower readability have lower overall information precision. Bozanic and Thevenot (2015) also find that firms' annual reports with higher readability and more diversity (the number of unique words divided by the total number of non-unique words for the earnings press release) is associated with increased public information precision.

For IFRS adoption studies, Byard et al. (2011) find that mandatory IFRS adoption increases public information precision for EU adopters. Similar findings are also observed

by Beuselinck et al. (2010) and Horton et al. (2013) who find increased public information precision after mandatory IFRS adoption.

For U.S. foreign private issuers, if IFRS adopters have higher reporting quality compared to U.S. GAAP adopters (Agoglia et al. 2011; Collins et al. 2012), then analysts for the IFRS group would have higher public information precision. If IFRS adopters have similar or lower reporting quality compared to U.S. GAAP adopters (Hail et al. 2010; Lin et al. 2012), then analysts for the IFRS group would have similar or lower public information precision. Since there is no conclusive evidence regarding the reporting quality between IFRS and U.S. GAAP, my fourth hypothesis (H4), stated in non-direction form, is as follows:

H4: There is no difference in analyst public information precision between IFRS and U.S. GAAP adopters for foreign private issuers in the United States.

# 4.2.2 Hypothesis 5: Analyst Private Information Precision for IFRS vs. U.S. GAAP Adopters.

My fifth hypothesis studies the relationship between IFRS adoption and analyst private information precision for U.S. foreign private issuers. The prediction on this hypothesis is unclear for two reasons.

First, prior studies find mixed results regarding the relationship between firms' public reporting quality and private information precision. Early studies, for example, Verrecchia (1982), Diamond (1985) and Kim & Verrecchia (1991), generally find a negative relationship between public disclosure and private information precision. In their models, higher quality public disclosure would result in decreased private information precision because when public information is more accurate and available, information users would rely more on the public information and decrease the efforts to search for private information. Under this situation, there is a trade-off effect between public information precision (substitutive effect). However,

recent studies present a scenario under which increased public disclosure might increase the level of private information acquisition and therefore increase private information precision (complementary effect). For example, Kim and Verrecchia (1994, 1997) model a setting in which financial accounting disclosures provide information that allows market participants to develop new idiosyncratic information regarding firms' earnings. Under this situation, higher quality public information will stimulate more private information searching and eventually increase private information precision.

Second, as discussed above, there is no conclusive evidence regarding the reporting quality between IFRS and U.S. GAAP. (Ndubize and Sanchez 2006; Van der Meulen et al. 2007; McAnally et al. 2010; Agoglia et al. 2011).

For the IFRS adoption studies, Byard et al. (2011) find analysts experienced improved public and private information precision at a similar level for mandatory adopters. Horton et al. (2013) show that for mandatory adopters, analysts had a higher increase in private information precision compared to public information precision. Kim and Shi (2012) use voluntary IFRS adopters (firms that adopted IFRS between year 1998 to year 2004) as their sample and find that voluntary IFRS adoption had more impact on analyst public information precision but not on private information precision.

Because of the two reasons mentioned above, the effect of U.S. foreign private issuers IFRS adoption on analyst private information precision is unclear. For foreign private issuers, if IFRS adopters have higher reporting quality compared with U.S. GAAP adopters, analysts can have either higher private information precision (complementary effect) or lower private information precision (substitution effect). If IFRS adopters have similar or lower reporting quality compared with U.S. GAAP adopters, analysts can have either lower or higher private information precision. Therefore, I state my fifth hypothesis (H5) in non-directional form as follows:

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H5: There is no difference in analyst private information precision between IFRS and U.S. GAAP adopters for foreign private issuers in the United States.

4.3 The Moderating Variables for U.S. Foreign Private Issuers' IFRS Adoption Effect
4.3.1 Hypothesis 6: The Moderating Effect of Industry Characteristics on Analyst Forecast Behavior and information precision for IFRS vs. U.S. GAAP Adopters. My sixth hypothesis examines whether the effect of IFRS adoption on analyst
forecast behavior and analyst information precision is moderated by whether or not the
foreign private issuer's industry is IFRS dominate industry.

As discussed in the literature review, industry characteristics are a main consideration for the U.S. GAAP-IFRS convergence projects. When the SEC proposed the Roadmap for potential use of IFRS (SEC 2008)<sup>31</sup>, it states "We...would allow certain U.S. issuers that meet specific criteria to file financial statements in accordance with IFRS as issued by the IASB, rather than U.S. GAAP...the first element of the eligibility criteria relates to the use of IFRS in the issuers' industry...an industry would be eligible if IFRS is used as the basis of financial reporting more often than any other basis of financial reporting by the 20 largest listed companies worldwide within that industry as measured by market capitalization".

Prior empirical studies have found that U.S. capital market's reaction to the potential IFRS adoption in the U.S. varies between IFRS dominant industries and non-IFRS dominant industries. Joos and Leung (2013) identify 15 events between 2007 and 2009 that affect the likelihood of IFRS potential adoption in the U.S. and examine the U.S. stock market reaction to these events. Their findings suggest that U.S. investors' reaction to these potential IFRS adoption news is more positive in the industries which IFRS is the predominant standards. For these industries where IFRS is already widely

<sup>31</sup> https://www.sec.gov/rules/proposed/2008/33-8982.pdf

adopted by non-U.S. peer firms, U.S. investors expect the potential IFRS adoption would result in convergence benefits. Similarly, Prather-Kinsey and Tanyi (2014) use ADR firms as their sample to test the market reaction to 11 events that were announced between 2007 and 2011 for the potential IFRS adoption in the U.S. The authors argue that the market will react more positively if the investors perceive the benefit from converging to IFRS outweighs the cost. They find that ADR firms in the industries where IFRS is the predominant standards had a significantly positive market reaction to these events. Their findings indicate that investors expect firms in these industries to enjoy the improved comparability.

In addition, previous studies document that industry is an important input for analyst forecasts (Foster 1981; Baginski 1987; Durnev and Mangen 2009). These studies demonstrate that analysts use information from the same industry for their forecasts. Firms in the same industry share a similar business environment and macroeconomic conditions, which are important information sources for analyst forecasts.

Since industry characteristics are a critical factor for the potential IFRS adoption in the U.S., and are also an important input for analyst forecasts, I hypothesize that industry characteristics ("IFRS-industry" vs. "non IFRS-industry") play a moderating role on analyst forecast behavior and information precision for IFRS vs. U.S. GAAP adopters. However, the direction of this moderating variable is not precisely clear. For example, for analyst following, firms in "IFRS-industry" may have higher analyst following because analysts for these firms can get more information from the non-U.S. peer firms with less cost. But the demand for analysts' services for firms in "non IFRS-industry" may be higher since analysts' services are valued more by investors, and this might lead to more

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analyst following. Therefore, I state my sixth hypothesis (H6) in non-directional form as follows:

H6: There is no difference in analyst forecast behavior and information precision between "IFRS-industry" and "non IFRS-industry" for the effect of foreign private issuers' IFRS adoption in the United States.

4.3.2 Hypothesis 7: The Moderating Effect of Home Country Characteristics on Analyst Forecast Behavior and information precision for IFRS vs. U.S. GAAP Adopters. My seventh hypothesis examines whether the IFRS adoption effect is moderated by the rule of law in issuers' home countries.

A number of studies have found that the effect of IFRS adoption depends on firms' home country institutional characteristics (Li 2010 for cost of capital and Byard et al. 2011 for analysts' information environment). These institutional characteristics continue to influence managers' reporting incentives even after firms cross listed shares overseas (Leuz 2006). Srinivasan et al. (2015) find that foreign firms from countries with strong rule of law are more likely to admit mistakes in their financial reports after crosslisting in the U.S., compared with firms from countries with weak rule of law. Also, Kang et al. (2012) find that after the elimination of the20-F reconciliation requirement, foreign firms' earnings persistence and analyst uncertainty vary with the degree of investor protection in these foreign firms' home countries.

*Ex ante*, the direction of issuers' home country rule of law is unclear. Although Srinivasan et al. (2015) show that firms from countries with strong rule of law are more likely to admit their financial mistakes, Kang et al. (2012) find that after the elimination of 20-F reconciliation, analyst forecast dispersion does not increase for firms with weak investor protection in their home countries, but the dispersion increases for firms with strong investor protection in their home countries. Their results suggest that when firms' home countries have weak investor protection environment, these firms would have

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greater incentives to "signal" their earnings quality by voluntarily improving their reporting quality. Given the mixed prior findings, my seventh hypothesis is stated in non-directional form as follows:

H7: There is no difference in analyst forecast behavior and information precision between issuers from countries with "Strong Rule of Law" and "Weak Rule of law" for the effect of foreign private issuers' IFRS adoption in the United States.

### Chapter 5

#### Methodology

# 5.1 Variables Measurement

My dissertation focuses on analyst annual forecasts because foreign private issuers are not required to provide quarterly financial reports. All the forecasts are based on earnings-per-share (EPS) of one-year ahead forecast period (FPI=1) and are retrieved from I/B/E/S Detailed File.

# 5.1.1 Variables Measurement for H1, H2 and H3

For H1, H2 and H3 regarding the relationship between U.S. foreign private issuers' IFRS adoption and analyst following, analyst forecast accuracy and forecast dispersion, all variables are measured as following:

Analyst following (FOL) is measured as the natural logarithm of one plus the number of unique analysts that issue at least one annual earnings forecast for firm j during year t (Yu 2008; Gotti et al. 2012). In the robustness tests, I also use the actual number of unique analysts (NUMB) to measure analyst following (data source: I/B/E/S Detailed File).

Analyst forecast accuracy (ACCY) is measure as -100 times the absolute difference between actual EPS and the mean consensus EPS forecasts, deflated by the stock price at the end of prior fiscal year. In the robustness tests, I also calculate EPS forecasts with the median consensus forecasts and with the most recent forecast for each firm. Following prior studies (Lee et al. 2013), I only keep the last forecast for each analyst if he/she issued multiple forecasts. This step helps to remove the influence of stale forecasts (Behn et al. 2008). I also require that the forecast is made within 90 days before the firm's earnings announcement and that each firm has at least three forecasts (data source: I/B/E/S Detailed File). More specifically, ACCY is measured as: Forecast accuracy (ACCY) =  $-100 * \frac{|Actual EPS_{j,t}-Mean Consensus EPS Forecast_{j,t}|}{Stock Price_{j,t-1}}$ (1)

Analyst forecast dispersion (DISP) is measured as 100 times the standard deviation of the analysts' forecasts for firm *j* in year *t*, deflated by the stock price at the end of prior fiscal year (data source: I/B/E/S Detailed File). I apply the same requirements as the calculation of analyst forecast accuracy (ACCY). More specifically, DISP is measured as:

Forecast dispersion (DISP) =  $100 * \frac{Standard Deviation of EPS Forecast_{j,t}}{Stock Price_{j,t-1}}$ (2)

# 5.1.2 Variables Measurement for H4 and H5

For H4 and H5 regarding the relationship between U.S. foreign private issuers' IFRS adoption and analyst pubic information precision and private information precision, all variables are measured and calculated following Barron et al. (1998) model and other empirical studies (Venkataraman 2001; Lehavy et al. 2011; Byard et al. 2011; Han et al. 2014).

Public information precision (PUBLIC) = 
$$log \frac{SE - \frac{D}{N}}{\left[\left(1 - \frac{1}{N}\right)D + SE\right]^2}$$
 (3)

Private information precision (PRIVATE) = 
$$log \frac{D}{\left[\left(1-\frac{1}{N}\right)D+SE\right]^2}$$
 (4)

Where  $SE_{jt} = (A_{jt} - \overline{F_{jt}})^2$  is the squared error of mean forecasts;

 $D_{jt} = \frac{1}{N-1} \sum_{i=1}^{N} (F_{ijt} \cdot \overline{F}_{jt})^2$  is the forecast dispersion;

 $\overline{F_{jt}} = \frac{1}{N} \sum_{i=1}^{N} (F_{ijt})$  is the mean forecast;

 $A_{it}$  is the actual earnings;

And N is the number of analyst following.

I apply the same requirements to calculate SE and D as the calculation of forecast accuracy (ACCY) and forecast dispersion (DISP). SE and D are scaled by the stock price at the end of prior fiscal year before they are used to calculate information precision. Following prior studies, I take the natural logarithm of the information precision because the distribution of original form is highly skewed (Botosan et al. 2004; Han et al. 2014).

## 5.1.3 Variables Measurement for H6 and H7

ForH6 and H7 regarding the moderating effects on the relationship between U.S. foreign private issuers' IFRS adoption and analyst forecast behavior and information precision, all variables are measured as following.

H6 tests the moderating role of industry characteristics by using a dummy variable "IFRS\_industry", which is defined the same way as SEC (2008) report (page 54-55)<sup>32</sup>. Prather-Kinsey and Tanyi (2014) use similar methodology in their paper. Following SEC (2008) report, I define an industry as IFRS\_industry if "IFRS is used as the basis of financial reporting more often than any other basis of financial reporting by the 20 largest listed companies worldwide within that industry as measured by market capitalization".

 $IFRS_Industry_{jt}$  = indicator variable with the value of one if an industry is an IFRS dominant industry and zero otherwise.

H7 tests the moderating role of home countries characteristics by using a dummy variable "Strong", which is calculated based on the rule of law (RoL) index from the World Bank website<sup>33</sup>. Following prior studies (Srinivasan et al. 2015), a country is defined as "Strong" if its RoL index is higher than the sample median.

 $Strong_{jt}$  = indicator variable with the value of one if a country's RoL index is higher than the sample median, and zero otherwise.

<sup>32</sup> SEC (2008) reports define IFRS-industry as "if IFRS is used as the basis of financial reporting more than any other basis of financial reporting by the 20 largest listed companies worldwide within that industry as measured by market capitalization"

<sup>33</sup> http://databank.worldbank.org/data/databases/rule-of-law

## 5.2 Empirical Models

#### 5.2.1 Empirical Model Examining H1

The following regression model is used to test H1 regarding the effect of U.S. foreign private issuers' IFRS adoption on analyst following.

 $\begin{aligned} FOL_{jt} &= \alpha_0 + \alpha_1 IFRS_{jt} + \alpha_2 SIZE_{jt} + \alpha_3 GROWTH_{jt} + \alpha_4 ROA_{jt} + \alpha_5 LEV_{jt} + \alpha_6 RET\_STD_{jt} + \alpha_7 TRADE_{jt} + \alpha_8 AB\_DA_{jt} + \alpha_9 EFFORT_{jt} + \alpha_{10} BROKER_{jt} + \alpha_{11} Year07 + \varepsilon_{jt} (5) \end{aligned}$ 

Where  $IFRS_{jt}$  = indicator variable with the value of one if U.S. foreign private issuers use IFRS in their annual reports and zero if the U.S. foreign private issuers use U.S. GAAP in their annual reports. This data is hand collected from the SEC website<sup>34</sup>;

 $SIZE_{jt}$  = natural logarithm of firm *j*'s market value at the beginning of year t

(Compustat CSHO\*PRCC\_F);

 $GROWTH_{jt}$  = market-to-book ratio (Compustat CSHO\*PRCC\_F/CEQ) at the beginning of year *t*,

 $ROA_{jt}$  = net income before extraordinary items (Compustat IB) divided by total assets at the beginning of year *t* (Compustat AT);

 $LEV_{jt}$  = leverage ratio, calculated as short-term debt (Compustat DLC) plus longterm debt (Compustat DLTT), scaled by total assets at the beginning of year *t* (Compustat AT);

 $RET\_STD_{jt}$  = standard deviation of monthly stock return, calculated as the standard deviation of firm j's monthly stock returns in previous year(CRSP);

 $TRADE_{jt}$  = trading volume, calculated as the natural logarithm of annual trading volume in millions in year *t* (Compustat CSHTR\_F);

<sup>34</sup> https://www.sec.gov/edgar/searchedgar/companysearch.html

 $AB_DA_{jt}$ = discretionary accruals, calculated from the modified Jones (1991) model described in Dechow et al. (1995):

$$\frac{ACCR_{jt}}{TA_{jt-1}} = \alpha_0 \left[\frac{1}{TA_{jt-1}}\right] + \alpha_1 \left[\frac{\Delta REV_{jt} - \Delta REC_{jt}}{TA_{jt-1}}\right] + \alpha_2 \left[\frac{PPE_{jt}}{TA_{jt-1}}\right] + \varepsilon_{jt}$$
(6)

Where  $ACCR_{jt}$ = total accruals for firm *j* in year *t*. It is defined as earnings before extraordinary items (Compustat IBC) minus the operating cash flows adjusted for extraordinary items and discontinued operations at the beginning of the year *t* (Compustat OANCF minus XIDOC);  $TA_{jt-1}$ = total assets for firm *j* at the beginning of year *t* (Compustat AT);  $\Delta REV_{jt}$ = change in revenue for firm *j* in year *t* (Compustat SALE);  $\Delta REC_{jt}$ = change in accounts receivable for firm *j* in year *t* (Compustat RECT); and  $PPE_{jt}$ = gross property, plant, and equipment for firm *j* in year *t* (Compustat PPEGT).

Regression model (6) is run cross sectionally for each firm-year for each industry (based on two-digit SIC codes). The difference between the actual total accruals and the estimated amount from the regression is used to measure the magnitude of discretionary accruals (AB\_DA).

*EFFORT*<sub>*jt*</sub> = analysts' effort, calculated as the negative of the average number of firms covered by the firm's analysts (Barth et al. 2001; Barron et al. 2002). Following Barth et al. (2001), it is the total number of firms covered by a firm's analyst divided by the total number of analysts covering that firm in that year. For example, if a firm has 4 analysts and each analyst covers 2, 3, 3 and 4 firms in that year, then EFFORT equals to -3 (12/4) (I/B/E/S Detail);

 $BROKER_{jt}$  = size of brokerage houses, calculated as the average number of analysts employed by the brokerage houses that employ firm *j*'s analysts (Barth et al. 2001) (I/B/E/S Detail);

*Year*07 = indicator variable with the value of one if U.S. foreign private issuers' financial years ending after November 15, 2007 and zero if the financial years ending before November 15, 2007 (i.e., 2005-November 14, 2007);

#### $D_Y ear_l = a$ year indicator dummy variable.

The primary variable of interest in the above regression is IFRS. Given that H1 is a non-directional hypothesis, I do not predict the sign on the coefficient on IFRS ( $\alpha_1$ ). Several control variables are included. First, I use firm size (SIZE) to control for a firm's general information environment. Prior studies (Bhushan 1989, Brennan and Hughes 1991, Barth et al. 2001, and Tan et al. 2011) find that larger firms have more analyst following and I predict  $\alpha_2$  to be positive. Second, I include a firm's growth opportunities (GROWTH) because prior studies (Lehavy et al. 2011) find that analysts tend to follow high growth firms since investors have higher demands for these firms. Therefore, I predict  $\alpha_3$  to be positive. Third, I consider a firm's profitability (ROA) as another control variable as prior literature documents that there are more analyst following for firms with high profitability (Jiraporn et al. 2012) and I predict  $\alpha_4$  to be positive. Fourth, I include a firm's leverage level (LEV) because analyst following is less for firms with high leverage (Jiraporn et al. 2012). I predict  $\alpha_5$  to be negative. Fifth, I also use the standard deviation of a firm's monthly stock returns (RET STD) to control for the information uncertainty. Lehavy et al. (2011) and Lobo et al. (2012) find a positive relationship between return volatility and analyst following because the demand for analysts' service would be higher for firms with high return volatility and therefore I predict  $\alpha_6$  to be positive. Sixth, I control for trading volume (TRADE) which captures potential benefits related to brokerage and commissions and fees (Hayes 1998). Prior literature shows that higher trading volume generally brings higher brokerage commissions and fees which leads to more analyst following (Barth et al. 2001, and Jiraporn et al. 2012). I predict  $\alpha_7$  to be positive. Seventh, I include discretionary accruals (AB\_DA) to control for a firm's earnings quality. Lobo et al. (2012) find that analyst following is higher for firms with lower accruals quality. Their argument is that when a firm's discretionary accruals are high, the investors' demand for analysts' service would be increasing. I predict  $\alpha_8$  to be positive. Eighth, I also control for analysts' effort (EFFORT) because Barth et al. (2001) find that given the analysts' capacity constraint, if covering a particular firm requires more effort, then the analyst will cover fewer firms in total. I predict  $\alpha_9$  to be negative. Ninth, I include the size of the brokerage house (BROKER) that the analyst works for. Barth et al. (2001) mentioned that this variable controls for "the mechanical negative relation between coverage and size of the firm's analysts' brokerage houses" because "firms covered by fewer analysts typically are covered by analysts from larger brokerage house" (Barth et al. 2001, page 10). Lobo et al. (2012) also find a negative relationship between the size of brokerage house and the number of analyst following. I predict  $\alpha_{10}$  to be negative. Tenth, I use the dummy variable Year 07 to control for the effect of the elimination of reconciliation requirement for U.S. foreign private issuers. Foreign private issuers are not required to provide the reconciliation for financial years ending after November 15, 2007. In addition, the robustness tests also include year dummies in fixed-effects models to control for any unobservable factors resulting from different year characteristics.

# 5.2.2 Empirical Models Examining H2 and H3

The following regression models are used to test H2 and H3 regarding the effect of U.S. foreign private issuers' IFRS adoption on analyst forecast accuracy and forecast dispersion.

 $\begin{aligned} ACCY_{jt} &= \beta_0 + \beta_1 IFRS_{jt} + \beta_2 SIZE_{jt} + \beta_3 GROWTH_{jt} + \beta_4 ROA_{jt} + \beta_5 LEV_{jt} + \\ \beta_6 RET\_STD_{jt} + \beta_7 FOL_{jt} + \beta_8 AB\_DA_{jt} + \beta_9 EARN\_CHN_{jt} + \beta_{10} LOSS_{jt} + \beta_{11} BIG4_{jt} + \\ \beta_{12} HORZ_{jt} + \beta_{13} Year07 + \varepsilon_{jt} \end{aligned}$ (7)

$$\begin{split} DISP_{jt} &= \gamma_0 + \gamma_1 IFRS_{jt} + \gamma_2 SIZE_{jt} + \gamma_3 GROWTH_{jt} + \gamma_4 ROA_{jt} + \gamma_5 LEV_{jt} + \\ \gamma_6 RET\_STD_{jt} + \gamma_7 FOL_{jt} + \gamma_8 AB\_DA_{jt} + \gamma_9 EARN\_CHN_{jt} + \gamma_{10} LOSS_{jt} + \gamma_{11} BIG4_{jt} + \\ \gamma_{12} HORZ_{jt} + \gamma_{13} Year07 + \varepsilon_{jt}(8) \end{split}$$

All the variables, except for  $EARN_CHN_{jt}$ ,  $LOSS_{jt}$ ,  $BIG4_{jt}$ ,  $HORZ_{jt}$  are defined as previously.

 $EARN\_CHN_{jt}$  = change of earnings, calculated as the difference between annual earnings (Compustat IB) at time *t* and annual earnings at time *t*-1, deflated by the annual earnings at time *t*-1;

 $LOSS_{jt}$  = indicator variable with the value of one if the actual earnings per share before extraordinary items (Compustat EPSPX) is negative and zero otherwise;

 $BIG4_{jt}$  = indicator variable with the value of one if U.S. foreign private issuers' annual reports are audited by Big 4 firms (Compustat AU) and zero otherwise;

 $HORZ_{jt}$  = forecast horizon, calculated as the natural logarithm of the number of calendar days between the forecast date and the actual earnings announcement date (I/B/E/S Detailed).

The primary variable of interest in the above regressions is IFRS. Given that H2 and H3 are non-directional hypotheses, I do not predict the sign on the coefficient on IFRS ( $\beta_1$  and  $\gamma_1$ ). Several additional control variables are included. First, I include number of analyst following (FOL) because prior studies find that firms with more analyst following have more accurate forecasts and less forecast dispersion (Chen et al. 2015, Platikanova and Mattei 2016). I predict  $\beta_7$  to be positive and  $\gamma_7$  to be negative. Second, I consider the change of earnings (EARN\_CHN) for firm j from year *t-1* to year *t*. Lang and Lundholm (1996) find that larger changes in earnings are associated with lower forecast accuracy and higher forecast dispersion. I predict  $\beta_9$  to be negative and  $\gamma_9$  to be positive. Third, I consider whether firm *j* has net loss (LOSS) in year t because Hwang et al. (1996) find forecast accuracy (dispersion) is lower (higher) for loss firms. I predict  $\beta_{10}$  to be negative and  $\gamma_{10}$  to be positive. Fourth I control for auditor effect by including an indicator variable (BIG4). Behn et al. (2008) find that analyst forecast has higher accuracy and less dispersion for firms audited by big4 auditors and therefore, I predict  $\beta_{11}$  to be positive and  $\gamma_{11}$  to be negative. Fifth, I include analyst forecasts horizon (HORZ) because prior studies find that as time goes to annual earnings announcement, the forecast accuracy (dispersion) will be increased (decreased) (Clement et al. 2004, and Behn et al. 2008). I predict  $\beta_{12}$  to be negative and  $\gamma_{12}$  to be positive.In addition, the robustness tests also include year dummies in fixed-effects models to control for any unobservable factors resulting from different year characteristics.

## 5.2.3 Empirical Models Examining H4 and H5

The following regression models are used to test H4 and H5 regarding the effect of U.S. foreign private issuers' IFRS adoption on analyst public information precision and private information precision.

$$PUBLIC_{jt} = \delta_0 + \delta_1 IFRS_{jt} + \delta_2 SIZE_{jt} + \delta_3 GROWTH_{jt} + \delta_4 ROA_{jt} + \delta_5 LEV_{jt} + \delta_6 RET\_STD_{it} + \delta_7 FOL_{it} + \delta_8 LOSS_{it} + \delta_9 BIG4_{it} + \delta_{10} Year07 + \varepsilon_{it}(9)$$

 $\begin{aligned} PRIVATE_{jt} &= \eta_0 + \eta_1 IFRS_{jt} + \eta_2 PUBLIC_{jt} + \eta_3 SIZE_{jt} + \eta_4 GROWTH_{jt} + \eta_5 ROA_{jt} + \eta_6 LEV_{jt} + \eta_7 RET\_STD_{jt} + \eta_8 FOL_{jt} + \eta_9 LOSS_{jt} + \eta_{10} BIG4_{jt} + \eta_{11} Year07 + \varepsilon_{jt} (10) \end{aligned}$ 

All the variables are defined as previously.

The primary variable of interest in the above regressions is IFRS. Given that H4 and H5 are non-directional hypotheses, I do not predict the sign on the coefficient on IFRS ( $\delta_1$  and $\eta_1$ ). For the control variables, first, I use firm size (SIZE) to control for a firm's general information environment. Although most studies find a positive relation between firm size and information precision (Venkataraman 2001; Byard et al. 2011; Lehavy et al. 2011; Bozanic and Thevenot 2015), Kim and Shi (2012) find opposite result that analyst information is more precise for smaller firms. Therefore, I have no prediction on  $\delta_2$  and  $\eta_3$ . Second, I include a firm's growth opportunities (GROWTH). Bhushan (1989) find that investors have higher demand for growth firms, which leads to higher information precision. But growth firms may have lower earnings quality (Frankel and Li 2004). Therefore, I have no prediction on  $\delta_3$  and  $\eta_4$ . Third, I control for a firm's profitability (ROA) because Kim and Shi (2012) find more profitable firms have better information environment. I predict  $\delta_4$  and  $\eta_5$  to be positive. Fourth, I consider a firm's leverage level (LEV). Han et al. (2014) find a negative relation between leverage and information precision. I predict  $\delta_5$  and  $\eta_6$  to be negative. Fifth, I control for a firm's return volatility (RET\_STD). Lehavy (2011) find that information precision is lower for firms with higher return volatility. I predict  $\delta_6$  and  $\eta_7$  to be negative. Sixth, I consider the number of analyst following (FOL). Prior studies find that the number of analyst following plays an important role for information precision. Venkataraman (2001) and Kim and Shi (2012) find positive relation between number of analyst following and information precision, while Han et al. (2014) find negative relationship. Therefore, I have no prediction on  $\delta_7$  and  $\eta_8$ . Seventh, I use the variable LOSS to separate firms with negative earnings from firms with positive earnings. Kim and Shi (2012) find that information precision is lower for firms with negative earnings. I predict  $\delta_8$  and  $\eta_9$  to be negative. Eighth, I consider auditor quality (BIG4) because Kim and Shi (2012) find that firms audited by Big4 auditors have better information environment. I predict  $\delta_9$  and  $\eta_{10}$  to be positive. Ninth, I control for public information (PUBLIC) for the hypothesis of U.S. foreign private issuers' IFRS adoption and analyst private information precision. Venkataraman (2001) find that higher public information precision will increase private information precision. I predict  $\eta_2$  to be positive. In addition, I also control for the effect of the reconciliation requirement (Year07).

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In addition, the robustness tests also include year dummies in fixed-effects models to control for any unobservable factors resulting from different year characteristics.

## 5.2.4 Empirical Models Examining H6 and H7

The following regression models are used to test H6 and H7 regarding the moderating variables for the effect of U.S. foreign private issuers' IFRS adoption on analyst forecast behavior and information precision.

AnalystForecastBehavior(Inforamtion precision)<sub>jt</sub> =  $\theta_0 + \theta_1 IFRS_{jt} + \theta_2 IFRS_Industry_{jt} + \theta_3 (IFRS * IFRS_Industry)_{jt} + Control Variables + \varepsilon_{it}(11)$ 

AnalystForecastBehavior(Information Precision)<sub>jt</sub> =  $\lambda_0 + \lambda_1 IFRS_{jt} + \lambda_2 Strong_{jt} + \lambda_3 (IFRS * Strong)_{jt} + Contrl Variables + \varepsilon_{jt}$  (12)

All the variables, except for *Analysts'ForecastBehavior*<sub>jt</sub>,  $(IFRS * IFRS\_Industry)_{jt}$  and  $(IFRS * Strong)_{it}$ , are defined as previously.

The dependent variable, *Analysts' ForecastBehavior* (*Information Precision*)<sub>*jt*</sub>, can take value of analyst following ( $FOL_{jt}$ ), or analyst forecast accuracy ( $ACCY_{jt}$ ) or analyst forecast dispersion ( $DISP_{jt}$ ) or analyst information precision

(*PUBLIC<sub>it</sub>*, *PRIVATE<sub>it</sub>*), depending on specific tests;

 $(IFRS * IFRS_Industry)_{it}$  = interaction variable of dummy variable  $IFRS_{it}$  and

dummy variable*IFRS\_Industry<sub>jt</sub>*;

 $(IFRS * Strong)_{jt}$  = interaction variable of dummy variable  $IFRS_{jt}$  and dummy variable  $Strong_{jt}$ .

The primary variables of interest in the above regressions are the interaction variables (*IFRS* \* *IFRS\_Industry* and *IFRS* \* *Strong*). Given that H6 and H7 are nondirectional hypotheses, I do not predict the sign on the coefficient on these two interaction variables ( $\theta_3$  and  $\lambda_3$ ). The predictions on all other control variables are the same as previous discussion.

#### 5.3 Data, Sample and Descriptive Statistics

# 5.3.1 Data

Data for the regression tests are obtained from multiple sources. Foreign private issuers' choice of accounting standards (whether the issuer uses IFRS, U.S. GAAP or local GAAP) is hand collected from the SEC's EDGAR database by searching their financial annual reports (Form 20-F or 40-F for Canadian issuers). Variables related to analyst forecast characteristics, including analyst following (FOL), analyst forecast accuracy (ACCY) and dispersion (DISP), analyst public (PUBLIC) and private (PRIVATE) information precision, analysts' effort (EFFORT) and brokerage house size (BROKER) are calculated from the I/B/E/S Detail File. Data to calculate issuers' stock returns (RET\_STD) are retrieved from CRSP monthly stock files. Industry characteristics are proxied by whether the industry is an IFRS dominant industry or not (IFRS\_Industry). The industry information is obtained by merging Compustat North America and Compustat Global databases to get the 2-digit SIC code. Country characteristics are proxied by the level of Rule of Law in foreign private issuers' home countries (Strong). The Role of Law index is obtained from the World Bank database. Data for all other variables are from the Compustat North America.

#### 5.3.2 Sample Selection

The sample period for my dissertation spans from year 2005 to year 2015. In year 2005, companies listed in the European Union and some other countries, such as Australia, were required to report their consolidated financial reports with IFRS in their home countries. Since 2005, more and more foreign private issuers have started filing their financial statements with the SEC using IFRS. The sample period ends in 2015 to reflect the most recent data available.

As the first step, all the foreign private issuers (eleven thousand and eighty five firm-year observations) were downloaded from the SEC website, and then compared with the firms in Compustat North America database to get the issuers' Gvkey and CIK. One thousand eight hundred sixty two firm-year observations were deleted because their company names in the SEC files could not be matched with any of those in Compustat. In the next step, these issuers' names (CIK) were used to obtain their annual financial statements from EDGAR database to decide the accounting standards they adopted. Six hundred thirty five firm-year observations with missing annual reports were dropped. Because my dissertation focuses on the comparison of analyst forecast behavior between the IFRS group and U.S. GAAP group, I excluded two thousand and fifty eight firm-year observations with local GAAP standards. I also eliminated one thousand nine hundred and eighty seven firm-year observations that do not have CRSP data. Furthermore, one thousand six hundred and sixty six firm-year observations with insufficient I/B/E/S data were removed from the sample. I also deleted observations that are in utilities industry (SIC code 4900-4999) and financial service industry (SIC code 6000-6999) because firms in these regulated industries are likely to have different reporting incentives from firms in non-regulated industries. Finally, observations with insufficient financial data to calculate control variables are eliminated. The final sample for testing hypothesis 1 contains two thousand three hundred and sixty six firm-year observations.

For tests of hypothesis 2 and hypothesis 3 regarding analyst forecast accuracy and dispersion, the sample is further restricted to firms that have at least three forecasts within the 90-day forecasting horizon before the earnings announcements. This step removed one thousand two hundred and sixty four observations, leaving one thousand one hundred and two observations for forecast accuracy and dispersion analyses.

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For tests of hypothesis 4 and hypothesis 5 related to analyst information precision, seven hundred twenty one observations with a negative PUBLIC or PRIVATE value were deleted (Botosan et al. 2004). This step left three hundred and eighty one firm-year observations for the regression analyses. Table 1 presents the sample selection procedure.

-----Table 1------

# 5.3.3 Descriptive Statistics and Correlation Matrix

Table 2 presents the descriptive statistics for the variables used in the regression tests. For each panel, the statistics are presented separately for firms using IFRS from firms using U.S. GAAP. All variables are defined as in the Appendix and the continuous variables are winsorized at 1 and 99 percentiles.

Panel A provides the results for variables used in tests of H1 (analyst following). The mean (median) number of analysts (NUMB) following firms using IFRS is 7.762 (5), while the mean (median) number of analysts following firms using U.S. GAAP is 9.804 (7). On average, there are 2 fewer analysts following firms using IFRS compared with firms using U.S.GAAP. Results also show that firms using IFRS are generally larger (SIZE), having less return volatility (RET\_STD) and more trading volume (TRADE). In addition, firms using IFRS typically require more analysts' effort (EFFORT) and are more likely to be followed by larger brokerage houses (BROKER).

Panel B presents the descriptive statistics for H2 and H3 regarding analyst forecast accuracy (ACCY) and dispersion (DISP). Forecast accuracy (ACCY) is measured as the negative number of absolute forecast errors, therefore, larger number indicates higher forecast accuracy. Results show that the mean (median) forecast accuracy of IFRS group is -1.410 (-0.464) while the mean (median) forecast accuracy of U.S. GAAP group is -1.453 (-0.407). It suggests that the IFRS group has higher (lower) forecast accuracy if use the mean (median) statistics. For the dispersion (DISP), larger number indicates higher dispersion. The mean (median) value of IFRS group is 1.518 (0.610) and the mean (median) value of U.S. GAAP group is 1.509 (0.491). Therefore the IFRS group has higher dispersion compared with the U.S. GAAP group.

Panel C shows the results for H4 and H5 of analyst information precision. Higher number means better information precision. The mean (median) value of public information precision (PUBLIC) in the IFRS group is 2.618 (2.510) and the mean (median) value of public information precision in the U.S. GAAP group is 2.66 (2.883). In addition, the mean (median) value of private information precision in the IFRS group is 3.723 (3.991) and the mean (median) value of private information precision in the U.S. GAAP is 3.86 (4.030).The results indicates that the IFRS group has lower information precision compared with the U.S. GAAP group.

------Table 2------

Table 3 presents the Pearson/Spearman correlation matrix for all variables used in the regression tests. The upper (lower) triangular portion is Pearson (Spearman) correlation matrix. Panel A shows that there is a negative relationship between analyst following (FOL) and IFRS adoption. This relationship is statistically significant at the 1% level in both Pearson and Spearman correlation matrix. In addition, analyst following is positively correlated with firm size (SIZE), growth (GROWTH), profitability (ROA), level of leverage(LEV), trading volume (TRADE), the post-2007 period (Year07), and negatively correlated with firm's discretionary accruals (AB\_DA), analysts effort (EFFORT), and brokerage house size (BROKER).

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Panel B reveals that there is no significant correlation between analyst forecast accuracy (ACCY) and IFRS adoption. For analyst forecast dispersion (DISP), it is negatively associated with IFRS adoption at the 5% level in the Spearman correlations but not in the Pearson correlations. Besides, analyst forecasts accuracy (analyst forecast dispersion) is positively (negatively) related with firm size (SIZE), growth (GROWTH), profitability (ROA), discretionary accruals (AB\_DA) and earnings changes (EARN\_CHN), and negatively (positively) related with firm's level of leverage (LEV), return volatility (RET\_STD), and the post-2007 period (YEAR07).

Results in Panel C show that there is no significant correlation between information precision (PUBLIC, PRIVATE) and IFRS adoption. The positive relationship between public information precision and private information precision is consistent with prior studies (Venkataraman 2001). In addition, public (private) information precision is higher for larger firms (SIZE), firms with higher growth (GROWTH), more profitability (ROA), lower level of leverage (LEV), less return volatility (RET\_STD), few losses (LOSS), and the pre-2007 period (YEAR07).

-----Table 3-----

## Chapter 6

# **Empirical Results**

# 6.1 Results for Univariate Tests

Table 4 reports the results for univariate tests. Both t-test and Wilcoxon test are used to test the differences between IFRS group and U.S. GAAP group.

Panel A provides the results for H1 of analyst following (FOL, NUMB) and shows that IFRS group has lower analyst following than U.S. GAAP group. This difference is significant at the 1% level in both t-test and Wilcoxon test. Results in Panel B suggest that there is no significant difference of forecast accuracy (ACCY) between IFRS group and U.S. GAAP group. However, IFRS group has higher forecast dispersion (DISP) when using Wilcoxon test (two-tailed p-value is 0.040). For analyst public and private information precision (PUBLIC, PRIVATE), results in Panel C indicate that there is no significant difference between IFRS group and U.S. GAAP group using t-test or Wilcoxon test.

-----Table 4------Table 4------

Table 5 presents the results for analysis of variance (ANOVA). Panel A shows that when the dependent variable is analyst following (FOL), the p-value of the dummy variable "IFRS" is significant at the 1% level, which indicates the difference of analyst following between the IFRS group and the U.S. GAAP group is statistically significant. The table also shows that when using the actual number of analyst following (NUMB) instead of the natural logarithm form, the result is similar. The means plots of analyst following (FOL or NUMB) illustrate that there are fewer analysts following firms in the IFRS group compared with firms in the U.S. GAAP for each year.

Panel B reports the results for tests of H2 (analyst forecast accuracy ACCY) and H3 (analyst forecast dispersion DISP). The p-value of the dummy variable "IFRS" is insignificant when using forecast accuracy (p-value is 0.444) or dispersion (p-value is 0.671) as the dependent variable. The means plots reveal that firms in the IFRS group have higher (lower) forecast accuracy (dispersion) in some years and lower (higher) forecast accuracy (dispersion) in other years.

Panel C provides results for tests of H4 (analyst public information precision PUBLIC) and H5 (analyst private information precision PRIVATE). The p-value of the dummy variable "IFRS" is not significant when using public information precision (p-value is 0.695) or using private information precision (p-value is 0.520) as the dependent variable. The means plots show that firms in the IFRS group have higher public (private) information precision in some years and lower public (private) information precision in other years.

------Table 5------

#### 6.2 Results for Multivariate Tests

# 6.2.1 Results for Tests of H1

Although results from univariate analyses and ANOVA provide some evidence regarding the relationship between foreign private issuers' IFRS adoption and analyst forecast behavior and information precision, caution should be taken because other confounding factors may lead to the observed relationship. Therefore, multivariate regression tests are conducted with control variables that have been identified in prior studies. Table 6 presents results for tests of H1 (Equation 5) which examines the effect of IFRS adoption on analyst following. For each test, two models are used. Model 1 is the OLS regression and Model 2 is the year fixed-effects model by adding year dummies<sup>35</sup>.

Panel A uses all firm-year observations as the sample (full sample). The variable of interest is IFRS, which equals one if a foreign private issuer uses IFRS as its accounting standard and zero if it uses U.S. GAAP as its accounting standard. Ex ante, the effect of IFRS adoption on analyst following is unclear. As stated in Chapter 4 (hypotheses development), analysts play dual roles in the capital market. In addition, evidence on the reporting quality and choice of IFRS vs. U.S. GAAP is mixed. Therefore, I do not predict the direction of IFRS adoption effect.

Results in Panel A indicate that, on average, IFRS adoption results in lower analyst following because the regression coefficient on IFRS is significantly negative in both models at the 1% level. Panel B uses the actual number of analysts following (NUMB) instead of the natural logarithm form as the dependent variable. The results are consistent with findings in Panel A. On average there are 3.362 fewer analysts following firms in IFRS group, compared with firms in U.S. GAAP group. The coefficient of IFRS is statistically significant at the 1% level in both models.

Panel C repeats the regression tests with a restriction on firm' stock prices in order to control the effect of penny stocks (Dolvin et al. 2009; Ertimur et al. 2011). Specifically, observations whose share price is less than \$3 were excluded, and this sample is referred to as the restricted sample. The results are consistent with those of Panel A and Panel B. The coefficient on IFRS remains negative and significant at the 1% level.

<sup>&</sup>lt;sup>35</sup>In year fixed-effects model, the dummy variable Year07 is not included to avoid multicollinearity. Untabulated tests show that results are similar if including this variable.

The control variables are generally consistent with previous research. Larger firms (SIZE), firms with higher profitability (ROA), and firms with higher trading volumes (TRADE) usually have more analysts following. The negative relationship between analyst following and brokerage house size (BROKER) supports Barth et al. (2001) statement that "firms covered by fewer analysts typically are covered by analysts from larger brokerage house".

Overall, results in Table 6 indicate that there is a strong negative relationship between foreign private issuers' IFRS adoption and analyst following. The coefficient on IFRS is negative and significant at the 1% level in OLS and year fixed-effects tests. On average, there are 3.36 fewer analysts following firms when they use IFRS as their accounting standard, compared with firms that use U.S. GAAP as their accounting standard. One possible reason for the fewer analysts following the IFRS group is that analysts following cross listed firms in the U.S. capital market perceive firms using IFRS as having lower earnings quality, therefore, they may have to make more effort to follow these firms, which reduces their incentive to follow these firms. Another possibility is that even if firms using IFRS and firms using U.S.GAAP produce the same high level of earnings quality, in the U.S. capital market, analysts are less familiar with IFRS, which makes them less willing to follow firms using IFRS.

# 6.2.2 Results for Tests of H2

Table 7 presents the results for tests of H2 (Equation 7) regarding the effect of IFRS adoption on analyst forecast accuracy (ACCY). Accuracy is calculated using three measures of forecasts: mean consensus forecasts, median consensus forecasts, and the most recent forecasts. Panel A uses mean consensus forecasts and all the continuous

-----Table 6------Table 6------

variables are winsorized at 1%. Since analyst forecast accuracy is likely to be affected by outliers, Panel B provides results after winsorizing all the continuous variables at 3%. Panel C through Panel F repeat the regression tests in Panel A and Panel B by using median consensus forecasts and the most recent forecasts to measure accuracy. Panel G to Panel L follow the same regression analyses after removing observations with penny stocks. For each test, two models are used. Model 1 is the OLS regression and Model 2 is the year fixed-effects model by adding year dummies.

When using the mean consensus forecasts (Panel A and Panel B), results show that the coefficient on IFRS is negative and significant at the 10% level (when winsorized at 1%) and the 5% level (when winsorized at 3%) in OLS models, and significantly negative at the 10% level in year fixed-effects model (when winsoried at 3%). When using the median consensus forecasts (Panel C and Panel D), the coefficient on IFRS is significantly negative at the 5% level in OLS and at the 10% level in year fixed-effects model. Panel E and Panel F are the results using the most recent forecasts. The coefficient on IFRS is negatively significant at the 10% level in OLS and year fixed-effects models when winsoreized at 3%. The results from Panel G to Panel L with restricted sample after deleting penny stocks are similar with the findings using the full sample. More specifically, when using the mean consensus forecasts (Panel G and Panel H), the coefficient on IFRS is negative and significant at the 10% level in OLS after winsorizing at 3%. Panel I and Panel J show that the coefficient on IFRS using the median consensus forecasts is negative and significant at the 10% level (when winsorized at 1%) in OLS and at the 5% level (when winsorized at 3%) in both OLS and year fixed-effects models. Lastly, the coefficient on IFRS that use the most recent forecasts (Panel K and Panel L) is significantly negative at the 5% level (when winsorized at 1%) and at the 1% level (when winsorized at 3%) in both OLS and year fixed-effects models.

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Taken together, the results suggest that, to some extent, analyst forecast accuracy is lower for firms using IFRS than for firms using U.S. GAAP. This may be because IFRS has lower earnings quality compared with U.S. GAAP, or it may be because analysts in the U.S. capital market are less familiar with IFRS. Either way, it is more difficult for analysts to make accurate earnings forecast for firms using IFRS than for firms using U.S. GAAP.

The results of the control variables are fairly consistent with previous studies. More specifically, firms with higher level of leverage (LEV), more return volatility (RET\_STD), and losses (LOSS), are more likely to have lower forecast accuracy.

### 6.2.3 Results for Tests of H3

Table 8 presents the results for tests of H3 (Equation 8) regarding the effect of IFRS adoption on analyst forecast dispersion (DISP). Panel A and Panel B use the full sample and winsorized all continuous variables at 1% and 3%. Panel C and Panel D show results after deleting observations with penny stocks and winsorized all continuous variables at 1% and 3%. For each test, two models (OLS and year fixed-effects model) are used.

The coefficient on IFRS in all OLS models is positive and significant at the 5% level (10% level in Panel C) and are positive and significant at year fixed-effects models when winsorized at 3%. This suggests that, on average, the dispersion in analyst forecasts for IFRS firms is higher than the dispersion in analyst forecasts for U.S. GAAP firms. This may be due to different levels of earnings quality associated with these two standards, or it may be a result of analysts' lack of familiarity with the IFRS earnings.

Therefore, analysts are more likely to have different interpretations of firms' earnings, which leads to more divergent beliefs among these analysts.

For the control variables, the results reveal that firms with a higher level of leverage (LEV), more return volatility (RET\_STD) and losses (LOSS), typically have higher forecast dispersion.

------Table 8------

# 6.2.4 Results for Tests of H4 and H5

To gain a better understanding of the different analyst forecast behavior between the IFRS group and U.S. GAAP group, I performed additional regression tests using analyst information precision as the dependent variable.

Table 9 presents the results for tests of H4 (Equation 9) and H5 (Equation 10) regarding the effect of IFRS adoption on analyst public information precision (PUBLIC) (Panel A) and private information precision (PRIVATE) (Panel B). Public information refers to the information that is available to all analysts, while private information is the unique information only for that individual analyst.

The coefficient on variable IFRS is negatively significant at the 10% level in Panel A for public information precision but insignificant in Panel B for private information precision. Combing with findings in Tables 6, 7, and 8, the results suggest that there is some evidence indicating that the observed differences in analyst forecast behavior, such as lower number of analyst following, lower forecast accuracy and higher forecast dispersion in the IFRS group, may be associated with analyst lower public information precision, rather than with analyst private information precision.

Panel B also shows that analyst private information precision is positively associated with analyst public information precision. This is consistent with prior findings (Venkataraman 2001) and suggests that better public information precision will lead to more private information gathering.

The signs of control variables are generally consistent with prior studies. Panel A shows that firms with higher profitability (ROA), lower level of leverage (LEV), and less return volatility (RET\_STD) usually have higher public information precision. Panel B shows that firms reporting losses (LOSS) have low private information precision. In addition, the positive coefficient on analyst following (FOL) reveals that more analysts following will motivate analysts to generate more private information and improve private information precision. This is consistent with prior studies (e.g., Lys and Soo 1995).

## 6.2.5 Results for Tests of H6 and H7

Table 10 presents the results for tests of H6 (Equation 11) and H7 (Equation 12), which investigate the moderating effect of industry characteristics and home country characteristics on the relationship between foreign private issuers' IFRS adoption and analyst following.

For the industry characteristics, as stated in the Methodology chapter, I follow the SEC Report (2008) and define an industry as an IFRS-industry (IFRS\_Industry) if "IFRS is used as the basis of financial reporting more often than any other basis of financial reporting by the 20 largest listed companies worldwide within that industry as measured by market capitalization". The interaction of this dummy variable (IFRS\_Industry) and the dummy variable IFRS captures the moderating effect of industry characteristics.

For the home country characteristics, I follow prior studies (Srinivasan et al. 2015) and partition all foreign private issuers' home countries by these countries' Rule of Law (RoL) index. The index is obtained from the World Bank website. It "captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence<sup>36</sup>. A country is defined as having strong RoL (Strong) if its index is above the sample median. This dummy variable is interacted with the dummy variable IFRS to examine the moderating effect of home countries' characteristics. For each tests, both OLS model and the year-fixed effects models are used.

Panel A shows the results of industry effect using the full sample. Consistent with findings in Table 6, the coefficient on IFRS remains significantly negative at the 1% level in both models, indicating that there are fewer analysts following IFRS firms compared to analysts following U.S. GAAP firms. However, the coefficient on the interaction variable IFRS\*IFRS\_Indutry is insignificant in both models, indicating that the relationship between IFRS adoption and analyst following does not depend on industry characteristics. Results for control variables are similar with the results in Table 6. Panel B reports the results of industry effect after removing the penny stocks. The results are consistent with Panel A. The coefficient on IFRS remains negative and significant at the 1% level, while the coefficient on IFRS\*IFRS\_Industry is not significant.

Panel C reports the results of country effect with the full sample. The coefficient on IFRS is significantly negative at the 1% level in both models. The negative sign on IFRS\*Strong is significantly negative at the 5% level. It suggests that the negative effect of IFRS adoption on analyst following is stronger for firms with strong RoL in their home countries, compared with the negative effect of IFRS adoption on analyst following for firms with weak RoL in their home countries.

<sup>&</sup>lt;sup>36</sup>http://info.worldbank.org/governance/wgi/pdf/wgi.pdf

Panel D shows the results of country effect after deleting penny stocks. The results are similar with the findings in Panel C.

------Table 10------

Table 11 presents the results for tests of H6 (industry effect) and H7 (home country effect) using analyst forecast accuracy as the dependent variable. Panel A and Panel B examine the industry effect with mean consensus forecasts and median consensus forecasts. Panel C and Panel D repeat Panel A and Panel B after deleting penny stocks. Panel G to Panel H contains results for country characteristics using mean and median consensus forecasts for full sample and for restricted sample, respectively.

From Panel A to Panel D, the coefficient on IFRS is statistically negative at the 5% in OLS models and in year fixed-effects models, which indicates that on average, analyst forecasts for firms using IFRS are less accurate compared with forecasts for firms using U.S. GAAP. This finding is consistent with the findings in Table 7. The coefficient on the interaction variable, IFRS\*IFRS\_Industry, is significantly positive at the 10% level in all panels except for Panel D. It suggests that the negative effect of IFRS adoption on analyst forecast accuracy is weaker in IFRS dominant industries, compared with the effect in non-IFRS dominant industries. Prior studies find that industry factors are an important input for analysts. Firms in the same industry usually share the similar industry environment, growth trends, and economy conditions. Therefore, analysts can get information from the industry peers, which will help them to make more accurate forecasts for the firms that they follow (Kini et al. 2009). Thus, if a foreign private issuer adopts IFRS as its accounting standard, and IFRS is the dominant accounting standard in its industry, then it would be easier for analysts to get more information from the firm's peers whose accounting standards are most likely to be IFRS too. As a result, analysts

following IFRS adopters could have more accurate forecasts in the IFRS dominant industries, compared with the non-IFRS dominant industries.

Panel E to Panel H are the results for testing home countries characteristics. The coefficient on Strong is significantly positive in all models. This indicates that analyst forecasts are more accurate for firms that come from strong RoL countries. One possible reason is that firms from strong RoL countries usually have less opportunistic reporting behavior. Hence, their earnings quality may be higher than firms from weak RoL countries, which leads to higher analyst forecast accuracy. However, the coefficient on the interaction variable IFRS\*Strong is not significant in any models.

In summary, results in Table 11 provide evidence that the negative effect of IFRS adoption on analyst forecast accuracy is mitigated in IFRS dominant industries, but the effect of IFRS adoption is not related with the rule of law in the issuers' home countries.

Table 12 presents the results for testing industry characteristics (Panel A and Panel B) and home country characteristics (Panel C and Panel D) using analyst forecast dispersion as the dependent variable.

Panel A and Panel B contain the results for industry characteristics with the full sample and the restricted sample. The coefficient on variable IFRS is significantly positive in all models except for the year fixed-effects model in Panel B. This is consistent with the findings in Table 8, which indicates that analyst forecast dispersion is, on average, higher for firms using IFRS compared with firms using U.S. GAAP. However, either the coefficient on IFRS\_Industry or the coefficient on IFRS\*IFRS\_Industry is significant in any models, which suggests that analyst forecast dispersion is not associated with foreign private issuers' industry characteristics. Panel C and Panel D show the results for home country characteristics with the full sample and with restricted sample. The coefficient on the interaction variable IFRS\*IFRS\_Strong is insignificant in any models, suggesting that the relationship between analyst forecast dispersion and IFRS adoption does not depend on the rule of law in foreign private issuers' home countries.

-----Table 12-----

The last table, Table 13 presents the results for testing industry characteristics (Panel A and Panel B) and home country characteristics (Panel C and Panel D) using analyst public and private information precision as the dependent variables.

Panel A reports industry effect on analyst public information precision. The coefficients on variables IFRS, IFRS\_Industry, and IFRS\*IFRS\_Industry are all insignificant in both OLS and year fixed-effects model. Similar results are found in Panel B for analyst's private information precision. No coefficient on variables IFRS, IFRS\_Industry, or IFRS\*IFRS\_Industry is significant. Therefore, it suggests that the effect of IFRS adoption does not vary between IFRS dominant industries and non-IFRS dominant industries.

Panel C and Panel D are results for home country effect. The coefficients on IFRS\*Strong is not significant, which indicates that the effect of IFRS adoption is not modified by the rule of law in the issuers' home countries.

------Table 13------

#### Chapter 7

#### Summary and Conclusion

7.1 Summary of research questions, research hypotheses and major findings My dissertation studies the effect of foreign private issuers' IFRS adoption on analyst forecast behavior and analyst information precision in the U. S. capital market. Although the consequences of IFRS adoption have been examined in prior literature, most of the studies focus on European Union countries or other countries that have adopted IFRS. Currently, the U.S. domestic firms are not required to use IFRS for their financial statements, which makes the study of IFRS adoption in the U.S. capital market hard to conduct.

My dissertation uses foreign private issuers that are cross listed in the U.S. as the sample because these issuers can choose among IFRS, U.S. GAAP and their local GAAP as their accounting standard. Based on their choices of the accounting standard, I created two groups: the IFRS group that consists of U.S. foreign private issuers that use IFRS, and the U.S. GAAP group that consists of U.S. foreign private issuers that use U.S. GAAP.

The first research question of whether foreign private issuers' IFRS adoption would affect analyst forecast behavior (analyst following, analyst forecast accuracy and dispersion) is addressed by comparing analyst forecast behavior between the IFRS group and the U.S. GAAP group. The coefficient on the dummy variable IFRS in the multivariate regression analyses captures the differences between these two groups. *Ex ante*, the effect of IFRS adoption is unclear since there is mixed evidence of earnings quality between IFRS and U.S.GAAP (Agoglia et al. 2011; Atwood et al. 2011). Results from multivariate regression analyses show that, for analyst following, the coefficient on IFRS is negative and significant at the 1% level in all models. On average there are 3.36

fewer analysts following firms in the IFRS group, compared with firms in the U.S. GAAP group. For analyst forecast accuracy, the coefficient on IFRS is negative and generally significant in OLS models and year fixed-effects models. The results indicate that to some extent, analyst forecast accuracy is lower for firms using IFRS compared with firms using U.S. GAAP. For analyst forecast dispersion, the coefficient on IFRS is positive and generally significant in OLS models and year fixed-effects models. The results suggest that analyst forecast dispersion is somewhat higher for the IFRS group, compared with the U.S. GAAP group.

In order to have a better understanding of the IFRS adoption effect, regression tests were conducted to examine the second research question regarding the relationship between foreign private issuers' IFRS adoption and analyst public and private information precision. Information precision is measured with the BKLS model (Barron et al. 1998) which uses observable variables such as analyst forecast dispersion, forecast error and the number of forecasts to measure unobservable variables such as the precision of analyst public and private information. Public information refers to the information that is available to all analysts while private information refers to the information which only belongs to that individual analyst. The second research question is tested by regressing information precision on the dummy variable IFRS. Results show that, for public information precision, the coefficient on IFRS is negative and significant in OLS model and year fixed-effects model. For private information precision, the coefficient on IFRS is still negative, but insignificant. The results, combined with the findings in the first research question, suggest that the observed negative effects of IFRS adoption on analyst forecast behavior, such as lower analyst following, lower level of analyst forecast accuracy and higher level of dispersion, are more likely from the lower information precision for

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analysts, rather than from differences in individual analyst's private information gathering and acquisition.

The last research question examines whether the effect of U.S. foreign private issuers' IFRS adoption on analyst forecast behavior and information precision is related to issuer' industry characteristics and home country characteristics. Industry characteristics are an important consideration for the convergence between U.S. GAAP and IFRS. The SEC stated that "the first element (of the possible use of IFRS for U.S. domestic issuers) is the issuers' industry" (SEC 2008, page 53). In addition, prior studies find that industry knowledge is an important attribute for financial analysts (Kadan et al. 2012). To test the industry effect, I created a dummy variable IFRS\_Industry that equals one if IFRS is used as the dominant accounting standard in that industry, and then I interact this dummy variable with IFRS dummy variable to capture the moderating effect of industry characteristics. Results show that when using analyst forecast accuracy as the dependent variable, the coefficient on the interaction variable, IFRS\*IFRS\_Industry, is positive and significant in both OLS and year fixed-effects model. This provides evidence that the negative effect of IFRS adoption on analyst forecast accuracy is weaker in IFRS dominant industries, compared with the effect in non-IFRS dominant industries. Prior studies find that analysts can get information from the industry peers, which will help analysts to make more accurate forecasts. Therefore, when a foreign private issuer adopts IFRS as its accounting standard, and IFRS is the dominant accounting standard in its industry, it would be easier for analysts to get more information from the firm's peers who share the same accounting standard. As a result, analysts could make more accurate forecast in the IFRS dominant industry.

For the home country characteristics, prior studies find that foreign firms' earnings quality is affected by the institutional characteristics of their home countries

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even after they cross listed shares overseas (Leuz 2006). To test the effect of home countries characteristics, I create a dummy variable Strong which equals one if the home country's Rule of Law (RoL) index is higher than the sample median and then interacted it with dummy variable IFRS. The RoL index "captures perception of the extent to which agents have confidence in and abide by the rules of society, and in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence". Results show that the coefficient on the interaction variable IFRS\*Strong is negative and significant when using analyst following as the dependent variable, which indicates that the negative effect of IFRS adoption on analyst following is stronger from issuers from strong rule of law countries, compared with the effect for issuers from weak rule of law countries.

Overall, results from multivariate regression tests provide evidence that there are some differences of analyst forecast behavior and analyst information precision between the IFRS group and U.S. GAAP group. More specifically, there is lower analyst following, lower level of forecast accuracy, higher level of forecast dispersion and less precise pubic information for firms in IFRS group, compared with firms in U.S. GAAP group. In addition, results also suggest that the effect of IFRS adoption on analyst forecast accuracy varies between IFRS dominant industries and non-IFRS dominant industries. And the effect of IFRS adoption on analyst following is stronger for issuers from strong rule of law countries, compared with issuers from weak role of law countries.

### 7.2 Contribution

My dissertation contributes to the international accounting literature in several ways.

Firstly, it provides evidence for the current policy debates related to the possible use of IFRS in the U.S. The SEC and FASB have been working with IASB to achieve the

goal of developing a single set of high quality accounting standards. Former SEC Chairwoman, Ms. Marry Jo White, mentioned that "it is important for the Commission (SEC) to make a further statement about its general views on the goal of a single set of high quality global accounting standards". Financial analysts are frequently regarded as sophisticated market participants, and their reaction to IFRS adoption will provide additional evidence for the future of IFRS adoption in the United States. The results indicate that on average, there are fewer analysts following firms using IFRS, and their forecasts have lower level of accuracy and higher level of dispersion, compared with firms using U.S. GAAP. Results also reveal that these differences are mainly from the less precise public information, rather than from analyst individual information acquisition. In addition, certain industry characteristics, such as whether the industry is IFRS dominant industry or not, and country characteristics, such as the rule of law in the issuers' home countries, appear to have influence on the association between IFRS adoption and analyst forecast behavior. These findings should be of interest to the SEC, FASB, and other policy makers. SEC raised a question in its concept release of International Accounting Standard.<sup>37</sup> Question 5 asked "What are the important differences between U.S. GAAP and the IASC standards? We are particularly interested in investors' and analysts' experience with the IASC standards. Will any of these differences affect the usefulness of a foreign issuer's financial information reporting package?" My dissertation provides evidence that foreign private issuers' IFRS adoption affects the usefulness of the financial reporting package, which results in different analyst forecast behavior and analyst information precision. The findings are also important for analysts when they make the decision to follow foreign private issuers and when they announce their forecast reports. For investors, when they use analyst forecast reports to

<sup>&</sup>lt;sup>37</sup>https://www.sec.gov/rules/concept/34-42430.htm

make investment decisions, they should also take the IFRS adoption effect into consideration.

Secondly, my dissertation examines the consequences of the possible use of IFRS in the U.S. capital market by using foreign private issuers as the research sample. Prior studies (Byard et al. 2011, Horton et al. 2013, and Tan et al. 2011) have focused on European Union countries that mandatorily adopted IFRS in year 2005 and investigated how IFRS adoption affected analyst forecast behavior in those countries. For the U.S. capital market, since the SEC does not require domestic issuers to file their financial statements using IFRS, it is difficult to examine how IFRS adoption affects analyst forecast behavior for the U.S. domestic issuers. Some prior studies try to compare the outcomes of firms using IFRS with firms using U.S. GAAP in the German market where firms could choose among German GAAP, IFRS and U.S. GAAP. But these findings cannot provide direct evidence in the U.S. market because of "a number of reasons". My dissertation directly examines the effect of IFRS adoption on analyst forecast behavior in the U.S. market by using a unique sample that consists of U.S. foreign private issuers who file with the SEC using IFRS. Therefore, findings in my dissertation can provide more direct evidence to the information user in the U.S. capital market.

Finally, my dissertation extends prior research of IFRS adoption effect on analyst information precision. The observed differences, such as lower analyst following, lower level of forecast accuracy and higher level of dispersion in the IFRS group, may be because analysts have less precise public information, or it can be because each individual analyst is reluctant to make efforts to acquire his own private information about that firm. Results in my dissertation suggest that IFRS adoption has a negative effect on analyst public information precision, but no effect on analyst private information. This finding provides a more completed picture regarding the effect of foreign firms' IFRS adoption on analyst forecast behavior.

### Appendix

### Variables Definition

Analyst following (FOL): the natural logarithm of one plus the number of unique analysts that issue at least one annual earnings forecasts for firm j during year t (I/B/E/S Detailed File)

Actual number of analysts (NUMB): the actual number of unique analysts following firm j during year t (I/B/E/S Detailed File)

Forecast accuracy (ACCY):  $-100 * \frac{|Actual EPS_{j,t} - EPS Forecast_{j,t}|}{Stock Price_{j,t-1}}$ 

(EPS forecast is measured with three different methods: mean consensus forecasts, median consensus forecasts, and the most recent forecasts. The forecast is made within 90 days before the firm's earnings announcement and each firm only keeps the last forecast if multiple forecasts are issued by the analysts. Each firm has at least three forecasts) (data source: I/B/E/S Detailed File).

Forecast dispersion (DISP):  $100 * \frac{Standard Deviation of EPS Forecast_{j,t}}{Stock Price_{j,t-1}}$ 

Public information precision (PUBLIC) =  $log \frac{SE - \frac{D}{N}}{\left[\left(1 - \frac{1}{N}\right)D + SE\right]^2}$ 

Private information precision (PRIVATE) =  $log \frac{D}{\left[\left(1-\frac{1}{N}\right)D+SE\right]^2}$ 

 $SE_{jt} = (A_{jt} - \overline{F_{jt}})^2$  is the squared error in the mean forecasts;  $D_{jt} = \frac{1}{N+1} \sum_{i=1}^{N} (F_{ijt} - \overline{F}_{jt})^2$  is the forecast dispersion;

 $\overline{F_{jt}} = \frac{1}{N} \sum_{i=1}^{N} (F_{ijt})$  is the mean forecast;

 $A_{jt}$  is the actual earnings;

N is the number of analyst following.

 $SIZE_{jt}$  = natural logarithm of firm *j*'s market value at the beginning of year *t* (Compustat CSHO\*PRCC\_F);

 $GROWTH_{it}$  = market-to-book ratio at the beginning of year t (Compustat

CSHO\*PRCC\_F/CEQ);

 $ROA_{jt}$  = net income before extraordinary items (Compustat IB) dividend by total assets

(Compustat AT) at the beginning of year *t*,

 $LEV_{jt}$ = leverage ratio, calculated as short-term debt (Compustat DLC) plus long-term debt (Compustat DLTT), scaled by total assets (Compustat AT)at the beginning of year *t*;  $RET\_STD_{jt}$ = standard deviation of monthly stock return, calculated as the standard deviation of firm j's monthly stock returns (CRSP) from the previous year;  $TRADE_{jt}$ = trading volume, calculated as the natural logarithm of annual trading volume in millions (Compustat CSHTR\_F) in year *t*;

 $AB_DA_{jt}$  = discretionary accruals, calculated from the modified Jones (1991) model described in Dechow et al. (1995):

$$\frac{ACCR_{jt}}{TA_{jt-1}} = \alpha_0 [\frac{1}{TA_{jt-1}}] + \alpha_1 [\frac{AREV_{jt} - AREC_{jt}}{TA_{jt-1}}] + \alpha_2 [\frac{PPE_{jt}}{TA_{jt-1}}] + \varepsilon_{jt}$$

 $EFFORT_{jt}$  = analysts' effort, calculated as the negative of the average number of firms covered by the firm's analysts (I/B/E/S Detail) in year *t*,

 $BROKER_{jt}$  = size of brokerage houses, calculated as the average number of analysts employed by the brokerage houses that employ firm *j*'s analysts (I/B/E/S Detail) in year *t*, year07 = indicator variable with the value of one if the U.S. foreign private issuers' financial years ending after November 15, 2007 and zero if the financial years ending before November 15, 2007 (i.e., 2005-Novermber 14, 2007);  $EARN_CHN_{jt}$  = change of earnings, calculated as the difference for firm *j* between annual earnings (Compustat IB) at time *t* and annual earnings at time *t*-1, deflated by the annual earnings at time *t*-1;

 $LOSS_{jt}$  = indicator variable with the value of one if the actual earnings per share before extraordinary items (Compustat EPSPX) is negative and zero otherwise in year *t*;  $BIG4_{jt}$  = indicator variable with the value of one if the U.S. foreign private issuers' annual reports are audited by Big 4 firms (Compustat AU) and zero otherwise in year *t*;  $HORZ_{jt}$ = forecast horizon, calculated as the natural logarithm of the number of calendar days between the forecast date and the actual earnings announcement date (I/B/E/S Detailed).

 $IFRS_Industry_{jt}$  = indicator variable with the value of one if an industry is an IFRS dominant industry and zero otherwise;

 $(IFRS * IFRS\_Industry)_{jt}$  = interaction variable of dummy  $IFRS_{jt}$  and dummy

variable*IFRS\_Industry*<sub>it</sub>;

 $Strong_{jt}$  = indicator variable with the value of one if a country's Rule of Law Index is higher than the sample median, and zero otherwise;

 $(IFRS * Strong)_{it}$  = interaction variable of dummy  $IFRS_{it}$  and dummy variable  $Strong_{it}$ .

 $D_Y ear_l = a$  year indicator dummy variable.

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	Firm-year Observations	Firm Observations
Observations from SEC's Foreign Private Issuer Lists (2005 through 2015)	11,085	1703
Less: Observations not in COMPUSTAT (no GVKEY)	-1,862	-159
Less: Observations missing financial statements in EDGAR	-635	-84
Less: Observations using Local GAAP	-2,058	-167
Less: Observations missing CRSP data	-1,987	-525
Less: Observations missing I/B/E/S data	-1,666	-191
Less: Observations in utilities and financial service industry	-307	-55
Less: Observations missing control variables	-204	-36
Final number of observations for tests of H1 of analyst following	2,366	486
Less: Observations that are not in 90-day forecasting horizon	-439	-68
Less: Observations that do not have at least three analyst forecasts	-825	-132
Final number of observations for tests of H2 / H3 of analyst forecast accuracy/dispersion	1,102	286
Less: Observations of information precision that are negative	-721	-108
Final number of observations for tests of H4 / H5 of analyst information precision	381	178

# Table 1 Sample Selection Process

## Table 2 Descriptive Statistics

Variable	Ν	Mean	Std Dev	Minimum	25%	Median	75%	Maximum
FOL	929	1.881	0.754	0.693	1.386	1.792	2.398	3.638
NUMB	929	7.762	7.164	1.000	3.000	5.000	10.000	37.000
SIZE	929	8.902	2.236	3.364	7.241	9.228	10.752	12.226
GROWTH	929	2.640	2.700	-7.679	1.214	1.931	3.243	17.258
ROA	929	0.029	0.142	-0.639	0.003	0.048	0.095	0.390
LEV	929	0.202	0.152	0.000	0.080	0.185	0.287	0.744
RET_STD	929	0.104	0.054	0.033	0.065	0.092	0.131	0.389
TRADE	929	18.659	1.684	14.234	17.484	18.777	19.831	22.248
AB_DA	929	0.063	0.161	-0.343	-0.025	0.038	0.137	0.694
EFFORT	929	-9.916	5.495	-35.200	-13.333	-9.167	-5.600	-1.000
BROKER	929	99.971	57.814	5.000	61.333	90.667	130.250	290.000
YEAR07	929	0.909	0.288	0.000	1.000	1.000	1.000	1.000

Panel A: Descriptive Statistics for H1 (Analyst following)

Firm-year observations using IFRS

Firm-year observations using U.S. GAAP

Variable	N	Mean	Std Dev	Minimum	25%	Median	75%	Maximum
FOL	1437	2.068	0.814	0.693	1.386	2.079	2.708	3.638
NUMB	1437	9.804	8.546	1.000	3.000	7.000	14.000	37.000
SIZE	1437	6.902	1.974	3.364	5.426	6.563	8.160	12.226
GROWTH	1437	2.532	3.003	-7.679	1.077	1.821	3.114	17.258
ROA	1437	0.027	0.147	-0.639	-0.017	0.036	0.093	0.390
LEV	1437	0.223	0.223	0.000	0.000	0.169	0.389	0.744
RET_STD	1437	0.135	0.072	0.033	0.082	0.121	0.170	0.389
TRADE	1437	18.120	1.632	14.234	17.048	18.073	19.221	22.248
AB_DA	1437	0.059	0.160	-0.343	-0.027	0.031	0.116	0.694
EFFORT	1437	-14.520	7.202	-35.200	-18.500	-14.000	-9.810	-1.000
BROKER	1437	74.423	55.484	5.000	40.500	62.862	89.080	290.000
YEAR07	1437	0.841	0.366	0.000	1.000	1.000	1.000	1.000

Panel B: Descriptive Statistics for H2 and H3 (Analyst forecast accuracy and dispersion)

Variable	Ν	Mean	Std Dev	Minimum	25%	Median	75%	Maximum
ACCY	449	-1.410	3.567	-28.547	-1.091	-0.464	-0.148	0.000
DISP	449	1.518	2.827	0.015	0.233	0.610	1.493	21.831
SIZE	449	9.388	1.958	4.581	7.911	9.530	11.243	12.226
GROWTH	449	2.671	2.317	0.231	1.247	2.016	3.328	18.580
ROA	449	0.049	0.106	-0.288	0.006	0.055	0.106	0.401
LEV	449	0.190	0.137	0.000	0.090	0.175	0.260	0.661
RET_STD	449	0.101	0.048	0.034	0.064	0.090	0.129	0.315
FOL	449	1.953	0.489	1.386	1.609	1.792	2.303	3.135
AB_DA	449	0.057	0.166	-0.343	-0.031	0.030	0.122	0.667
EARN_CHN	449	-0.058	3.121	-15.827	-0.517	-0.042	0.266	19.937
LOSS	449	0.227	0.419	0.000	0.000	0.000	0.000	1.000
BIG4	449	0.955	0.207	0.000	1.000	1.000	1.000	1.000
HORZ	449	3.514	0.404	2.269	3.305	3.559	3.784	4.379
YEAR07	449	0.918	0.275	0.000	1.000	1.000	1.000	1.000

Firm-year observations using IFRS

Firm-year observations using U.S. GAAP

Variable	N	Mean	Std Dev	Minimum	25%	Median	75%	Maximum
ACCY	653	-1.453	3.812	-28.547	-1.134	-0.407	-0.127	0.000
DISP	653	1.509	3.239	0.015	0.210	0.491	1.248	21.831
SIZE	653	7.612	1.679	4.581	6.309	7.392	8.812	12.226
GROWTH	653	3.106	3.312	0.231	1.199	2.085	3.581	18.580
ROA	653	0.064	0.119	-0.288	0.005	0.053	0.117	0.406
LEV	653	0.266	0.225	0.000	0.016	0.242	0.438	0.741
RET_STD	653	0.127	0.064	0.034	0.081	0.112	0.155	0.323
FOL	653	1.988	0.478	1.386	1.609	1.946	2.303	3.135
AB_DA	653	0.049	0.149	-0.343	-0.028	0.022	0.100	0.667
EARN_CHN	653	0.141	4.162	-15.827	-0.692	0.025	0.515	19.937
LOSS	653	0.239	0.427	0.000	0.000	0.000	0.000	1.000
BIG4	653	0.922	0.269	0.000	1.000	1.000	1.000	1.000
HORZ	653	3.709	0.409	2.269	3.486	3.738	3.984	4.469
YEAR07	653	0.848	0.359	0.000	1.000	1.000	1.000	1.000

Panel C: Descriptive Statistics for H4 and H5 (Analyst public and private information precision)

Variable	Ν	Mean	Std Dev	Minimum	25%	Median	75%	Maximum
PUBLIC	174	2.618	1.702	-2.518	1.348	2.510	3.785	6.552
PRIVATE	174	3.723	1.926	-1.811	2.426	3.991	4.997	8.472
SIZE	174	9.522	1.871	3.865	8.171	9.550	11.236	12.335
GROWTH	174	2.539	2.276	0.206	1.151	1.911	3.007	16.737
ROA	174	0.047	0.102	-0.386	0.005	0.052	0.104	0.283
LEV	174	0.217	0.141	0.000	0.110	0.207	0.286	0.614
RET_STD	174	0.098	0.046	0.034	0.063	0.091	0.122	0.238
FOL	174	2.014	0.528	1.386	1.609	1.946	2.485	3.258
LOSS	174	0.231	0.427	0.000	0.000	0.000	0.000	1.000
BIG4	174	0.972	0.184	0.000	1.000	1.000	1.000	1.000
YEAR07	174	0.903	0.314	0.000	1.000	1.000	1.000	1.000

Firm-year observations using IFRS

Firm-year observations using U.S. GAAP

Variable	N	Mean	Std Dev	Minimum	25%	Median	75%	Maximum
PUBLIC	207	2.66	1.783	-2.518	1.391	2.883	3.885	6.552
PRIVATE	207	3.86	2.297	-4.007	2.754	4.030	5.289	8.472
SIZE	207	7.932	1.741	3.865	6.581	7.767	9.364	12.251
GROWTH	207	3.207	3.239	0.206	1.220	2.194	3.922	16.737
ROA	207	0.055	0.152	-0.386	-0.026	0.056	0.133	0.435
LEV	207	0.287	0.228	0.000	0.061	0.280	0.459	0.751
RET_STD	207	0.136	0.072	0.034	0.081	0.119	0.170	0.376
FOL	207	2.127	0.498	1.386	1.792	2.079	2.485	3.296
LOSS	207	0.324	0.469	0.000	0.000	0.000	1.000	1.000
BIG4	207	0.976	0.154	0.000	1.000	1.000	1.000	1.000
YEAR07	207	0.899	0.303	0.000	1.000	1.000	1.000	1.000

The descriptive statistics are computed based on firm-year observations from year 2005 to year 2015. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

### Table 3 Correlation Matrix

## Panel A: Correlation Matrix for H1 (Analyst following)

Variable	FOL	IFRS	SIZE	GROWTH	ROA	LEV	RET_STD	TRADE	AB_DA	EFFORT	BROKER	YEAR07
FOL		-0.115 ***	0.194 ***	0.123 ***	0.167 ***	0.054 ***	-0.037 *	0.537 ***	-0.079 ***	-0.162 ***	-0.282 ***	0.072 ***
IFRS	-0.117 ***		0.425 ***	0.018	0.009	-0.053 **	-0.223 ***	0.157 ***	0.013	0.323 ***	0.216 ***	0.098 ***
SIZE	0.204 ***	0.419 ***		0.162 ***	0.371 ***	0.055 ***	-0.503 ***	0.484 ***	0.101 ***	0.370 ***	0.519 ***	-0.056 ***
GROWTH	0.141 ***	0.049 **	0.260 ***		0.195 ***	-0.121 ***	-0.059 ***	0.094 ***	0.042 **	0.032	-0.015	-0.066 ***
ROA	0.148 ***	0.052 ***	0.365 ***	0.438 ***		-0.031	-0.235 ***	0.096 ***	0.075 ***	0.133 ***	0.193 ***	-0.103 ***
LEV	0.047 **	0.03	0.168 ***	-0.209 ***	-0.111 ***		-0.002	0.077 ***	0.035 *	-0.182 ***	0.120 ***	0.026
RET_STD	-0.01	-0.226 ***	-0.545 ***	-0.148 ***	-0.247 ***	-0.087 ***		0.044 **	-0.086 ***	-0.140 ***	-0.347 ***	0.101 ***
TRADE	0.515 ***	0.160 ***	0.500 ***	0.085 ***	0.061 ***	0.127 ***	0.035 *		-0.011	0.050 **	-0.043 **	0.141 ***
AB_DA	-0.088 ***	0.026	0.117 ***	0.111 ***	0.116 ***	0.011	-0.096 ***	0.006		0.060 ***	0.106 ***	-0.037 **
EFFORT	-0.198 ***	0.337 ***	0.384 ***	0.074 ***	0.134 ***	-0.054 ***	-0.155 ***	0.050 **	0.073 ***		0.418 ***	-0.166 ***
BROKER	-0.116 ***	0.272 ***	0.619 ***	0.03	0.207 ***	0.254 ***	-0.426 ***	0.117 ***	0.087 ***	0.399 ***		-0.155 ***
YEAR07	0.074 ***	0.098 ***	-0.060 ***	-0.126 ***	-0.123 ***	0.01	0.115 ***	0.129 ***	-0.053 **	-0.167 ***	-0.102 **	

	ACCY	DISP	IFRS	SIZE	GROW TH	ROA	LEV	RET _STD	FOL	AB _DA	EARN _CHN	LOSS	BIG4	HORZ	YEAR 07
ACCY		-0.759	0.006	0.178	0.138	0.303	-0.185	-0.228	0.032	0.107	0.103	-0.345	-0.056	-0.003	-0.094
		***		***	***	***	***	***		***	***	***	*		***
DISP	-0.696		0.001	-0.189	-0.163	-0.299	0.198	0.275	-0.035	-0.114	-0.099	0.314	0.049	-0.031	0.109
	***			***	***	***	***	***		***	***	***			***
IFRS	-0.024	0.062		0.437	-0.072	-0.063	-0.189	-0.214	-0.035	0.026	-0.026	-0.014	0.067	-0.23	0.103
		**		***	**	**	***	***					**	***	***
SIZE	0.223	-0.178	0.428		0.174	0.278	-0.144	-0.451	0.125	0.134	0.012	-0.272	0.126	-0.261	-0.093
	***	***	***		***	***	***	***	***	***		***	***	***	***
GROW	0.387	-0.454	-0.012	0.313		0.444	-0.104	-0.066	0.004	0.028	0.07	-0.195	-0.002	0.011	-0.098
HT	***	***		***		***	***				**	***			***
ROA	0.316	-0.355	-0.016	0.299	0.571		-0.17	-0.137	0.005	0.149	0.108	-0.679	-0.046	0.018	-0.164
	***	***		***			***	***		***	***	***			***
LEV	-0.249	0.304	-0.126	-0.068	-0.263	-0.215		0.071	-0.013	0.014	0.049	0.046	0.065	-0.035	0.092
	***	***	***	***	***	***		**					**		***
RET	-0.222	0.208	-0.207	-0.476	-0.176	-0.169	-0.015		0.046	-0.098	-0.079	0.237	-0.003	0.093	0.12
_STD	***	***	***	***	***	***				***	***	***		***	***
FOL	0.076	0.009	-0.042	0.118	-0.006	-0.011	0.003	0.053		-0.02	-0.006	0.065	0.065	0.001	0.051
	**			***				*				**	**		*
AB	0.111	-0.093	0.026	0.166	0.101	0.166	0.011	-0.104	-0.02		0.039	-0.142	-0.01	-0.039	0.01
_DA	***	***		***	***	***		***				***			
EARN	0.133	-0.149	-0.041	0.103	0.262	0.413	-0.057	-0.1	-0.019	0.042		-0.086	0.016	-0.109	-0.014
_CHN	***	***		***	***	***	*	***				***		***	
LOSS	-0.296	0.297	-0.014	-0.27	-0.346	-0.733	0.032	0.26	0.06	-0.168	-0.27		0.04	-0.027	0.103
2000	***	***	0.011	***	***	***	0.002	***	**	***	***		0.01	0.027	***
BIG4	-0.089	0.109	0.067	0.128	-0.072	-0.053	0.074	-0.004	0.065	-0.039	-0.011	0.04		-0.031	0.025
DIGT	***	***	**	***	**	*	**	0.004	**	0.035	0.011	0.04		0.051	0.025
HORZ	0.003	-0.033	-0.236	-0.265	0.032	0.019	-0.07	0.098	-0.026	-0.043	-0.023	-0.032	-0.026		
	5.005	0.055	***	***	5.052	5.015	**	***	0.020	0.045	0.025	0.052	0.020		
YEAR	-0.162	0.201	0.103	-0.09	-0.166	-0.169	0.075	0.122	0.05	-0.015	-0.114	0.103	0.025	-0.035	
07	***	***	***	***	***	***	**	***	*	0.015	***	***	0.020	0.055	
	***	***	***	***	***	***	**	***	*		***	***			

# Panel B: Correlation Matrix for H2 and H3 (Analyst forecast accuracy and dispersion)

	PUBLIC	PRIVATE	IFRS	SIZE	GROWTH	ROA	LEV	RET_STD	FOL	LOSS	BIG4	YEAR07
PUBLIC		0.633 ***	-0.012	0.170 ***	0.258 ***	0.342 ***	-0.244 ***	-0.246 ***	-0.079	-0.311 ***	-0.030	-0.174 ***
PRIVATE	0.601 ***		-0.032	0.137 ***	0.301 ***	0.337 ***	-0.259 ***	-0.237 ***	0.088 *	-0.383 ***	-0.059	-0.182 ***
IFRS	-0.033	-0.057		0.403 ***	-0.117 **	-0.032	-0.178 ***	-0.292 ***	-0.110 **	-0.104 **	-0.031	-0.003
SIZE	0.114 **	0.095 *	0.405 ***		0.209 ***	0.244 ***	-0.153 ***	-0.442 ***	0.102 **	-0.326 ***	0.082	-0.118 **
GROWTH	0.344 ***	0.405 ***	-0.072	0.303 ***		0.488 ***	-0.017	-0.130 **	0.006	-0.272 ***	0.020	-0.165 ***
ROA	0.341 ***	0.354 ***	-0.010	0.265 ***	0.606 ***		-0.155 ***	-0.161 ***	-0.024	-0.705 ***	0.039	-0.229 ***
LEV	-0.244 ***	-0.255 ***	-0.122 **	-0.087 *	-0.136 ***	-0.230 ***		0.111 **	-0.017	0.149 ***	0.053	0.111 **
RET_STD	-0.178 ***	-0.203 ***	-0.277 ***	-0.439 ***	-0.250 ***	-0.193 ***	0.046		0.087 *	0.320 ***	0.005	0.118 **
FOL	-0.108 **	0.078	-0.120 **	0.085 *	-0.013	-0.030	0.002	0.113 **		0.070	0.054	0.068
LOSS	-0.301 ***	-0.346 ***	-0.104 **	-0.315 ***	-0.433 ***	-0.778 ***	0.120 **	0.319 ***	0.068		-0.032	0.172 ***
BIG4	-0.001	-0.067	-0.031	0.087 *	-0.046	0.035	0.055	-0.010	0.056	-0.032		-0.007
YEAR07	-0.172 ***	-0.182 ***	-0.003	-0.112 **	-0.178 ***	-0.264 ***	0.097 *	0.127 **	0.068	0.172 ***	-0.007	

Panel C: Correlation Matrix for H4 and H5 (Analyst public and private information precision)

The correlation matrix is computed based on firm-year observations from year 2005 to year 2015.

The upper (lower) triangular portion is Pearson (Spearman) correlation coefficients.

\*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

# Table 4 Univariate analysis

	IFRS	group	U.S. GAA	AP group	t-te	est	Wilco	oxon test
Variable	Mean	Median	Mean	Median	t statistics	p-value	Z statistics	p-value
FOL	1.881	1.792	2.068	2.079	5.620	<.0001	5.686	<.0001
NUMB	7.762	5.000	9.804	7.000	6.040	<.0001	5.686	<.0001
SIZE	8.902	9.228	6.902	6.563	-22.840	<.0001	-20.392	<.0001
GROWTH	2.640	1.931	2.532	1.821	-0.880	0.377	-2.382	0.017
ROA	0.029	0.048	0.027	0.036	-0.430	0.667	-2.542	0.011
LEV	0.202	0.185	0.223	0.169	2.570	0.010	-1.467	0.071
RET_STD	0.104	0.092	0.135	0.121	11.130	<.0001	11.008	<.0001
TRADE	18.659	18.777	18.120	18.073	-7.740	<.0001	-7.791	<.0001
AB_DA	0.063	0.038	0.059	0.031	-0.630	0.526	-1.273	0.203
EFFORT	-9.916	-9.167	-14.520	-14.000	-16.610	<.0001	-16.378	<.0001
BROKER	99.971	90.667	74.423	62.862	-10.760	<.0001	-13.230	<.0001
YEAR07	0.909	1.000	0.841	1.000	-4.770	<.0001	-4.750	<.0001

Panel A: Tests for H1 (analyst following)

Panel B: Tests for H2 & H3 (analyst forecasts accuracy and dispersion)

	IFRS	group	U.S. GA	AP group	t-te	st	Wilco	oxon test
Variable	Mean	Median	Mean	Median	t statistics	p-value	Z statistics	p-value
ACCY	-1.410	-0.464	-1.453	-0.407	-0.190	0.850	0.804	0.422
DISP	1.518	0.610	1.509	0.491	-0.050	0.961	-2.056	0.040
SIZE	9.388	9.530	7.612	7.392	-16.120	<.0001	-14.200	<.0001
GROWTH	2.671	2.016	3.106	2.085	2.410	0.016	0.383	0.702
ROA	0.049	0.055	0.064	0.053	2.080	0.038	0.519	0.604
LEV	0.190	0.175	0.266	0.242	6.400	<.0001	4.187	<.0001
RET_STD	0.101	0.090	0.127	0.112	7.260	<.0001	6.875	<.0001
FOL	1.953	1.792	1.988	1.946	1.160	0.245	1.380	0.168
AB_DA	0.057	0.030	0.049	0.022	-0.850	0.394	-0.858	0.391
EARN_CHN	-0.058	-0.042	0.141	0.025	0.860	0.390	1.361	0.174
LOSS	0.227	0.000	0.239	0.000	0.450	0.652	0.451	0.652
BIG4	0.955	1.000	0.922	1.000	-2.230	0.026	-2.228	0.026
HORZ	3.514	3.559	3.709	3.738	7.850	<.0001	7.846	<.0001
YEAR07	0.918	1.000	0.848	1.000	-3.450	0.001	-3.430	0.001

	IFRS group		U.S. GAAP group		t-test		Wilcoxon test	
Variable	Mean	Median	Mean	Median	t statistics	p-value	Z statistics	p-value
PUBLIC	2.618	2.510	2.660	2.883	0.240	0.814	0.648	0.517
PRIVATE	3.723	3.991	3.860	4.030	0.620	0.533	1.120	0.263
SIZE	9.522	9.550	7.932	7.767	-8.580	<.0001	-7.899	<.0001
GROWTH	2.539	1.911	3.207	2.194	2.290	0.023	1.398	0.162
ROA	0.047	0.052	0.055	0.056	0.620	0.532	0.204	0.839
LEV	0.217	0.207	0.287	0.280	3.520	0.001	2.381	0.017
RET_STD	0.098	0.091	0.136	0.119	5.950	<.0001	5.399	<.0001
FOL	2.014	1.946	2.127	2.079	2.160	0.032	2.347	0.019
LOSS	0.230	0.000	0.324	0.000	2.030	0.043	2.026	0.043
BIG4	0.966	1.000	0.976	1.000	0.600	0.550	0.597	0.550
YEAR07	0.897	1.000	0.899	1.000	0.060	0.949	0.063	0.950

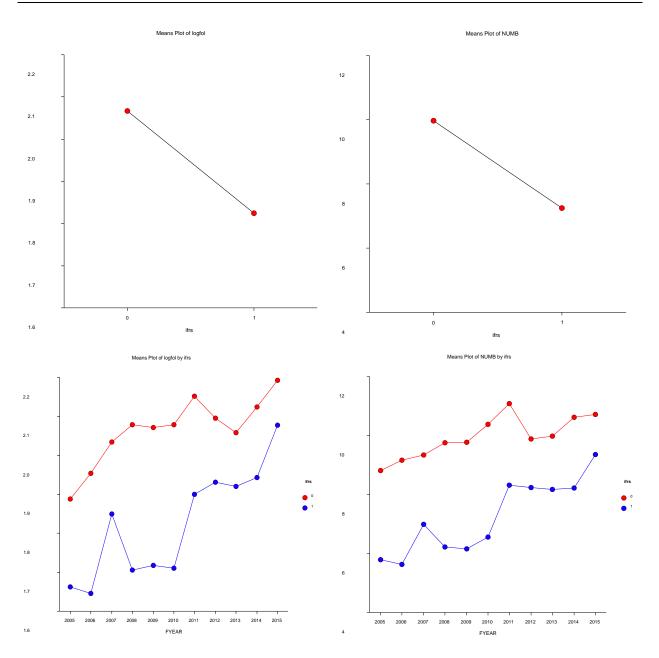
Panel C: Tests for H4 & H5 (analyst public and private information precision)

IFRS group is the firm-year observations that use IFRS as the accounting standard in their annual reports. U.S. GAAP group is the firm-year observations that use U.S.GAAP as the accounting standard in their annual reports

## Table 5 ANOVA

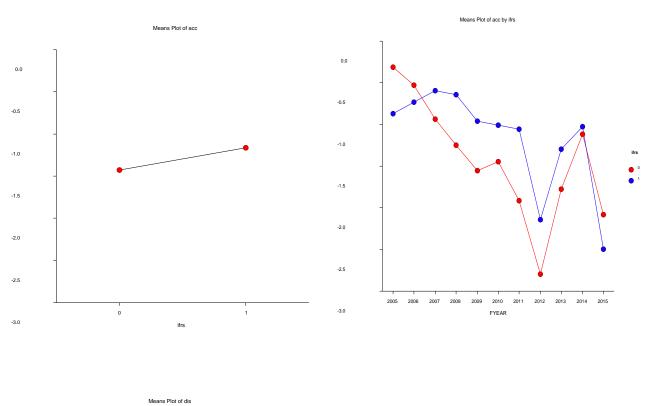
Panel A: Test for H1 (Analyst following)

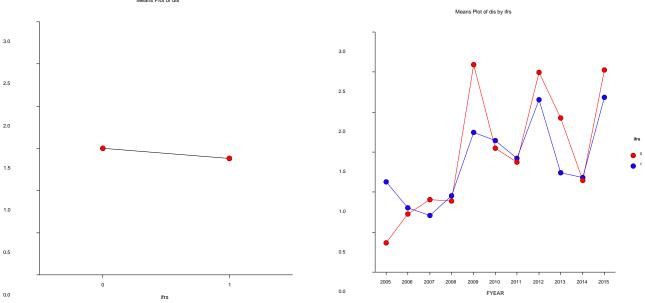
When dependent vari	able is FOL		
	F-Ratio	P-value	
IFRS	11.010	0.000	
When dependent vari	able is NUMB		
	F-Ratio	P-value	
IFRS	11.730	0.000	



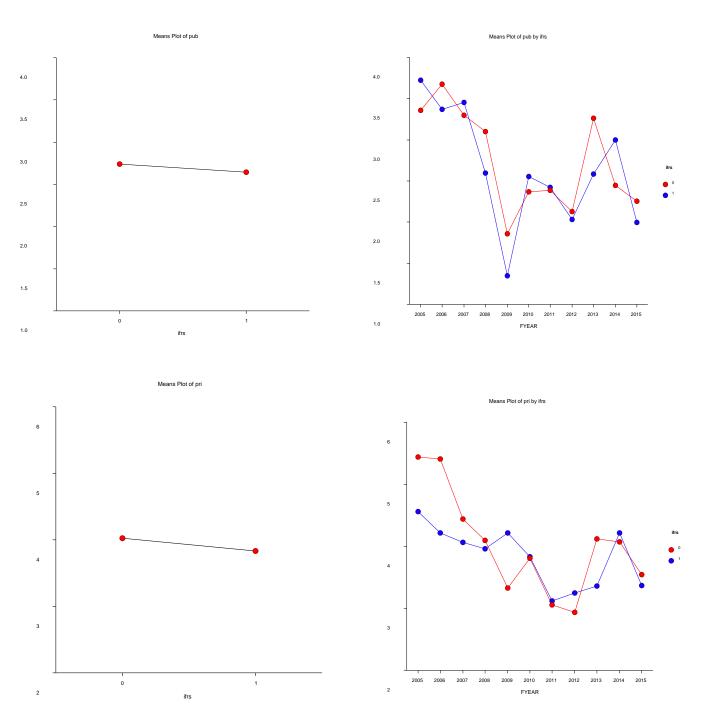
# Panel B: Test for H2 (Analyst forecast accuracy and forecast dispersion)

When dependent variab	ble is ACCY		
	F-Ratio	P-value	
IFRS	0.590	0.444	
When dependent variable	ble is DISP		
	F-Ratio	P-value	
IFRS	0.180	0.671	





When dependent variable	le is ACCY		
	F-Ratio	P-value	
IFRS	0.150	0.695	
When dependent variabl	le is DISP		
	F-Ratio	P-value	
IFRS	0.420	0.520	



### Table 6. Result for testing H1 (The effect of IFRS adoption on analyst following)

 $FOL_{jt} = \alpha_0 + \alpha_1 IFRS_{jt} + \alpha_2 SIZE_{jt} + \alpha_3 GROWTH_{jt} + \alpha_4 ROA_{jt} + \alpha_5 LEV_{jt} + \alpha_6 RET\_STD_{jt} + \alpha_7 TRADE_{jt} + \alpha_8 AB\_DA_{jt} + \alpha_9 EFFORT_{jt} + \alpha_{10} BROKER_{jt} + \alpha_{11} Year 07 + \varepsilon_{jt}$   $ear 07 + \varepsilon_{jt}$ (5)

			Model 1				Model 2	
Variable	Coef.		t-statistics p-value		Coef.		t-statistics	p-value
IFRS	-0.287	***	-9.78	<.0001	-0.306	***	-10.1	<.0001
SIZE	0.035	***	3.43	0.001	0.041	***	3.95	<.0001
GROWTH	0.01	**	2.26	0.024	0.009	*	1.96	0.051
ROA	0.652	***	6.91	<.0001	0.72	***	7.54	<.0001
LEV	0.155	**	2.37	0.018	0.153	**	2.34	0.019
RET_STD	-1.68	***	-7.25	<.0001	-1.445	***	-5.95	<.0001
TRADE	0.235	***	23.5	<.0001	0.232	***	23	<.0001
AB_DA	-0.339	***	-4.39	<.0001	-0.328	***	-4.24	<.0001
EFFORT	-0.007	***	-3.29	0.001	-0.006	***	-2.91	0.004
BROKER	-0.004	***	-15.36	<.0001	-0.005	***	-15.7	<.0001
YEAR07	-0.023		-0.61	0.541				
Intercept	-2.022	***	-13.29	<.0001	-1.885	***	-11.61	<.0001
Year fixed effects	Ν				Y			
F-statistics	169.47				95.28			
Pseudo-R2 (R Square)	0.439				0.448			
No. of observations	2366				2366			

Panel A: when the dependent variable is natural logarithm of number of following (FOL)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-3.362	***	-11.02	<.0001	-3.597	***	-11.4	<.0001
SIZE	0.372	***	3.48	0.001	0.414	***	3.83	0.000
GROWTH	0.109	**	2.36	0.018	0.101	**	2.18	0.030
ROA	5.621	***	5.73	<.0001	6.181	***	6.22	<.0001
LEV	-0.58		-0.85	0.394	-0.583		-0.86	0.391
RET_STD	-14.354	***	-5.96	<.0001	-12.499	***	-4.94	<.0001
TRADE	2.46	***	23.65	<.0001	2.441	***	23.25	<.0001
AB_DA	-3.38	***	-4.21	<.0001	-3.234	***	-4.02	<.0001
EFFORT	-0.06	***	-2.72	0.007	-0.05	**	-2.25	0.024
BROKER	-0.035	***	-11.86	<.0001	-0.036	***	-11.97	<.0001
YEAR07	-0.453		-1.15	0.251				
Intercept	-33.361	***	-21.1	<.0001	-32.544	***	-19.26	<.0001
Year fixed effects	N				Y			
F-statistics	152.78				85.41			
Pseudo-R2 (R Square)	0.414				0.421			
No. of observations	2366				2366			

Panel B: when the dependent variable is the actual number of following (NUMB)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.276	***	-8.95	<.0001	-0.286	***	-9.01	<.0001
SIZE	-0.005		-0.47	0.636	0		0.03	0.976
GROWTH	0.01	**	2.21	0.027	0.008	*	1.75	0.080
ROA	0.637	***	5.23	<.0001	0.707	***	5.73	<.0001
LEV	0.124	*	1.79	0.074	0.122	*	1.76	0.078
RET_STD	-1.94	***	-7.64	<.0001	-1.645	***	-6.11	<.0001
TRADE	0.253	***	23.67	<.0001	0.251	***	23.29	<.0001
AB_DA	-0.336	***	-4.11	<.0001	-0.336	***	-4.11	<.0001
EFFORT	-0.006	**	-2.4	0.017	-0.005	**	-2.2	0.028
BROKER	-0.004	***	-14.53	<.0001	-0.005	***	-14.78	<.0001
YEAR07	-0.034		-0.89	0.376				
Intercept	-1.93	***	-12.07	<.0001	-1.875	***	-10.96	<.0001
Year fixed effects	N				Υ			
F-statistics	160.87				89.98			
Pseudo-R2 (R Square)	0.46				0.468			
No. of observations	2069				2069			

Panel C: when the dependent variable is natural logarithm of number of following and stock price is not less than \$3/share

All variables are defined as in Appendix. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

Table 7. Results for Testing H2 (The effect of IFRS adoption on analyst forecast accuracy)

 $ACCY_{jt} = \beta_0 + \beta_1 IFRS_{jt} + \beta_2 SIZE_{jt} + \beta_3 GROWTH_{jt} + \beta_4 ROA_{jt} + \beta_5 LEV_{jt} + \beta_6 RET\_STD_{jt} + \beta_7 FOL_{jt} + \beta_8 AB\_DA_{jt} + \beta_9 EARN\_CHN_{jt} + \beta_{10} LOSS_{jt} + \beta_{11} BI_{jt} + \beta_{12} HORZ_{jt} + \beta_{13} Year07 + \varepsilon_{jt} (7)$ 

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.409	*	-1.7	0.089	-0.337		-1.35	0.178
SIZE	0.021		0.32	0.752	0.004		0.06	0.955
GROWTH	0.029		0.76	0.447	0.03		0.79	0.430
ROA	2.134		1.55	0.122	2.179		1.54	0.124
LEV	-2.789	***	-5.22	<.0001	-2.801	***	-5.24	<.0001
RET_STD	-9.68	***	-4.99	<.0001	-11.147	***	-5.33	<.0001
FOL	0.343	*	1.86	0.064	0.35	*	1.88	0.061
EARN_CHN	-0.014		-0.56	0.575	-0.011		-0.45	0.655
LOSS	-2.112	***	-6.26	<.0001	-2.049	***	-6.05	<.0001
BIG4	-0.521		-1.25	0.213	-0.498		-1.19	0.235
HORZ	-0.15		-0.59	0.553	-0.122		-0.48	0.632
YEAR07	-0.172		-0.54	0.586				
Intercept	1.222		0.93	0.351	1.236		0.93	0.352
Year fixed effects	Ν				Y			
F-statistics	20.15				12.51			
Pseudo-R2 (R Square)	0.169				0.192			
No. of observations	1130				1130			

Panel A: Using mean consensus forecasts and winsorizing at 1%

		Model 1				Model 2				
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value		
IFRS	-0.242	**	-2.2	0.028	-0.22	*	-1.93	0.054		
SIZE	-0.003		-0.1	0.919	-0.007		-0.22	0.825		
GROWTH	0.081	***	3.73	0.000	0.078	* * *	3.55	0.000		
ROA	0.051		0.07	0.945	0.058		0.08	0.939		
LEV	-1.57	***	-6.3	<.0001	-1.589	***	-6.39	<.0001		
RET_STD	-5.541	***	-5.82	<.0001	-5.929	***	-5.81	<.0001		
FOL	0.236	***	2.76	0.006	0.24	***	2.79	0.005		
EARN_CHN	-0.033	**	-2.01	0.045	-0.033	**	-2	0.046		
LOSS	-1.194	***	-7.43	<.0001	-1.179	***	-7.31	<.0001		
BIG4	-0.304		-1.59	0.113	-0.297		-1.55	0.121		
HORZ	-0.105		-0.86	0.390	-0.099		-0.81	0.419		
YEAR07	-0.17		-1.17	0.241						
Intercept	0.529		0.85	0.398	0.506		0.8	0.424		
Year fixed effects	N				Y					
F-statistics	29.45				17.96					
Pseudo-R2 (R Square)	0.232				0.254					
No. of observations	1130				1130					

Panel B: Using mean consensus forecasts and winsorizing at 3%

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.458	**	-2.1	0.036	-0.389	*	-1.72	0.086
SIZE	0.044		0.72	0.473	0.025		0.4	0.686
GROWTH	0.025		0.74	0.462	0.029		0.83	0.405
ROA	1.282		1.02	0.306	1.301		1.02	0.310
LEV	-2.553	***	-5.26	<.0001	-2.575	***	-5.32	<.0001
RET_STD	-8.329	***	-4.73	<.0001	-10.048	***	-5.3	<.0001
FOL	0.325	*	1.93	0.053	0.334	**	1.98	0.048
EARN_CHN	-0.018		-0.78	0.436	-0.015		-0.67	0.506
LOSS	-1.828	***	-5.97	<.0001	-1.754	***	-5.72	<.0001
BIG4	-0.525		-1.38	0.167	-0.509		-1.34	0.180
HORZ	-0.252		-1.1	0.272	-0.223		-0.97	0.333
YEAR07	-0.116		-0.4	0.686				
Intercept	1.427		1.2	0.230	1.463		1.22	0.224
Year fixed effects	N				Y			
F-statistics	18.23				11.64			
Pseudo-R2 (R Square)	0.155				0.181			
No. of observations	1130				1130			

Panel C: Using median consensus forecasts and winsorizing at 1%

			Model 1		Model 2				
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value	
IFRS	-0.204	**	-2.21	0.027	-0.184	*	-1.92	0.055	
SIZE	0.017		0.64	0.526	0.011		0.42	0.674	
GROWTH	0.065	***	3.56	0.000	0.065	* * *	3.53	0.000	
ROA	-0.011		-0.02	0.986	-0.035		-0.06	0.955	
LEV	-1.316	***	-6.29	<.0001	-1.338	***	-6.41	<.0001	
RET_STD	-4.556	***	-5.7	<.0001	-5.147	***	-6.01	<.0001	
FOL	0.24	***	3.34	0.001	0.245	***	3.39	0.001	
EARN_CHN	-0.028	**	-2	0.046	-0.028	**	-2.01	0.045	
LOSS	-0.868	***	-6.43	<.0001	-0.845	***	-6.24	<.0001	
BIG4	-0.322	**	-2.01	0.045	-0.323	**	-2.01	0.045	
HORZ	-0.179	*	-1.75	0.080	-0.169	*	-1.65	0.099	
YEAR07	-0.114		-0.94	0.350					
Intercept	0.588		1.12	0.263	0.559		1.05	0.292	
Year fixed effects	Ν				Y				
F-statistics	26.74				16.49				
Pseudo-R2 (R Square)	0.215				0.238				
No. of observations	1130				1130				

Panel D: Using median consensus forecasts and winsorizing at 3%

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.266		-0.98	0.327	-0.277		-0.99	0.323
SIZE	0.098		1.34	0.181	0.102		1.38	0.169
GROWTH	0.076	* *	2.06	0.039	0.078	* *	2.1	0.036
ROA	2.842	* *	2.16	0.031	2.818	* *	2.11	0.035
LEV	-4.816	***	-7.88	<.0001	-4.844	***	-7.92	<.0001
RET_STD	-12.769	***	-5.66	<.0001	-12.53	***	-5.19	<.0001
FOL	0.553	***	2.66	0.008	0.566	***	2.69	0.007
EARN_CHN	-0.003		-0.09	0.926	-0.004		-0.14	0.887
LOSS	-1.993	***	-5.2	<.0001	-2.01	***	-5.23	<.0001
BIG4	-0.576		-1.27	0.205	-0.585		-1.28	0.199
HORZ	0.075		0.69	0.488	0.082		0.75	0.451
YEAR07	-0.429		-1.22	0.221				
Intercept	-0.056		-0.06	0.954	-0.245		-0.24	0.808
Year fixed effects	N				Y			
F-statistics	25.46				15.3			
Pseudo-R2 (R Square)	0.13				0.141			
No. of observations	1974				1974			

Panel E: Using the most recent forecasts and winsorizing at 1%

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.239	*	-1.82	0.070	-0.233	*	-1.72	0.086
SIZE	0.033		0.91	0.363	0.038		1.02	0.308
GROWTH	0.142	* * *	5.45	<.0001	0.142	***	5.36	<.0001
ROA	0.707		0.85	0.394	0.624		0.74	0.459
LEV	-2.673	***	-8.83	<.0001	-2.68	***	-8.86	<.0001
RET_STD	-7.157	***	-6.01	<.0001	-6.77	***	-5.31	<.0001
FOL	0.445	***	4.33	<.0001	0.459	***	4.42	<.0001
EARN_CHN	-0.039	*	-1.69	0.092	-0.04	**	-1.76	0.079
LOSS	-1.224	***	-6.14	<.0001	-1.251	***	-6.25	<.0001
BIG4	-0.229		-1.04	0.300	-0.232		-1.05	0.294
HORZ	0.03		0.56	0.577	0.035		0.66	0.508
YEAR07	-0.279		-1.63	0.103				
Intercept	-0.607		-1.24	0.215	-0.767		-1.52	0.129
Year fixed effects	N				Y			
F-statistics	36.15				21.5			
Pseudo-R2 (R Square)	0.176				0.188			
No. of observations	1974				1974			

Panel F: Using the most recent forecasts and winsorizing at 3 %

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.26		-1.46	0.145	-0.239		-1.3	0.195
SIZE	0.015		0.3	0.766	0.012		0.24	0.814
GROWTH	0.09	* * *	3.23	0.001	0.091	* * *	3.23	0.001
ROA	-0.62		-0.59	0.556	-0.581		-0.54	0.590
LEV	-2.036	***	-5.16	<.0001	-2.065	***	-5.24	<.0001
RET_STD	-6.742	***	-4.73	<.0001	-7.468	***	-4.82	<.0001
FOL	0.215		1.6	0.110	0.22		1.63	0.104
EARN_CHN	-0.022		-1.08	0.279	-0.02		-1	0.317
LOSS	-1.914	***	-7.58	<.0001	-1.905	***	-7.51	<.0001
BIG4	-0.431		-1.44	0.151	-0.445		-1.48	0.139
HORZ	-0.042		-0.23	0.819	-0.024		-0.13	0.895
YEAR07	-0.202		-0.89	0.373				
Intercept	0.59		0.62	0.535	0.558		0.58	0.563
Year fixed effects	Ν				Y			
F-statistics	19.26				11.86			
Pseudo-R2 (R Square)	0.171				0.193			
No. of observations	1062				1062			

Panel G: Using mean consensus forecasts and the stock price is not less than \$3/share (winsorizing at 1%)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.175	*	-1.82	0.070	-0.154		-1.55	0.122
SIZE	-0.012		-0.43	0.670	-0.013		-0.49	0.628
GROWTH	0.092	***	4.91	<.0001	0.091	* * *	4.79	<.0001
ROA	-0.834		-1.26	0.207	-0.916		-1.35	0.179
LEV	-1.314	***	-6.07	<.0001	-1.335	***	-6.17	<.0001
RET_STD	-4.567	***	-5.52	<.0001	-4.741	***	-5.28	<.0001
FOL	0.184	**	2.52	0.012	0.194	***	2.63	0.009
EARN_CHN	-0.041	**	-2.35	0.019	-0.042	**	-2.46	0.014
LOSS	-1.084	***	-7.69	<.0001	-1.089	***	-7.68	<.0001
BIG4	-0.25		-1.55	0.122	-0.256		-1.58	0.115
HORZ	-0.108		-1.03	0.304	-0.099		-0.94	0.347
YEAR07	-0.177		-1.45	0.148				
Intercept	0.54		1	0.316	0.5		0.92	0.358
Year fixed effects	N				Y			
F-statistics	24.8				15.05			
Pseudo-R2 (R Square)	0.212				0.233			
No. of observations	1062				1062			

Panel H: Using mean consensus forecasts and the stock price is not less than \$3/share (winsorizing at 3%)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.267	*	-1.8	0.072	-0.242		-1.58	0.114
SIZE	0.035		0.84	0.400	0.029		0.7	0.486
GROWTH	0.078	* * *	3.37	0.001	0.081	* * *	3.44	0.001
ROA	-0.71		-0.81	0.418	-0.697		-0.78	0.437
LEV	-1.756	***	-5.35	<.0001	-1.792	***	-5.47	<.0001
RET_STD	-5.143	***	-4.34	<.0001	-6.089	***	-4.73	<.0001
FOL	0.223	**	2	0.046	0.231	**	2.06	0.040
EARN_CHN	-0.02		-1.19	0.234	-0.019		-1.15	0.250
LOSS	-1.44	***	-6.86	<.0001	-1.424	***	-6.76	<.0001
BIG4	-0.422	*	-1.69	0.091	-0.438	* *	-1.75	0.080
HORZ	-0.136		-0.89	0.376	-0.117		-0.76	0.448
YEAR07	-0.165		-0.87	0.383				
Intercept	0.637		0.8	0.422	0.636		0.8	0.427
Year fixed effects	Ν				Y			
F-statistics	17.51				11.1			
Pseudo-R2 (R Square)	0.157				0.183			
No. of observations	1062				1062			

Panel I: Using median consensus forecasts and the stock price is not less than \$3/share (winsorizing at 1%)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.194	**	-2.41	0.016	-0.18	**	-2.16	0.031
SIZE	0.016		0.69	0.487	0.013		0.57	0.568
GROWTH	0.073	* * *	4.67	<.0001	0.076	* * *	4.71	<.0001
ROA	-0.695		-1.25	0.210	-0.767		-1.34	0.180
LEV	-1.16	***	-6.38	<.0001	-1.184	***	-6.51	<.0001
RET_STD	-3.537	***	-5.09	<.0001	-3.918	***	-5.2	<.0001
FOL	0.191	***	3.11	0.002	0.199	***	3.22	0.001
EARN_CHN	-0.034	**	-2.35	0.019	-0.036	**	-2.46	0.014
LOSS	-0.785	***	-6.64	<.0001	-0.781	***	-6.56	<.0001
BIG4	-0.267	**	-1.96	0.050	-0.277	**	-2.03	0.042
HORZ	-0.169	*	-1.91	0.057	-0.159	*	-1.79	0.073
YEAR07	-0.132		-1.28	0.200				
Intercept	0.517		1.15	0.252	0.494		1.08	0.280
Year fixed effects	N				Y			
F-statistics	22.96				13.97			
Pseudo-R2 (R Square)	0.199				0.22			
No. of observations	1062				1062			

Panel J: Using median consensus forecasts and the stock price is not less than \$3/share (winsorizing at 3%)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.454	**	-2.42	0.016	-0.426	**	-2.2	0.028
SIZE	0.08		1.58	0.115	0.085	*	1.65	0.099
GROWTH	0.09	***	3.32	0.001	0.09	* * *	3.3	0.001
ROA	1.175		1.12	0.265	1.096		1.03	0.304
LEV	-3.208	***	-7.54	<.0001	-3.225	***	-7.58	<.0001
RET_STD	-7.452	***	-4.71	<.0001	-7.023	***	-4.12	<.0001
FOL	0.316	**	2.2	0.028	0.342	**	2.36	0.018
EARN_CHN	-0.054	**	-2.43	0.015	-0.055	**	-2.47	0.014
LOSS	-1.608	***	-5.78	<.0001	-1.654	***	-5.92	<.0001
BIG4	-0.514		-1.61	0.108	-0.509		-1.59	0.113
HORZ	0.009		0.11	0.910	0.017		0.22	0.823
YEAR07	-0.274		-1.16	0.246				
Intercept	-0.16		-0.23	0.814	-0.384		-0.54	0.586
Year fixed effects	N				Y			
F-statistics	23.89				14.3			
Pseudo-R2 (R Square)	0.132				0.144			
No. of observations	1804				1804			

Panel K: Using the most recent forecasts and the stock price is not less than \$3/share (winsorizing at 1%)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.315	***	-2.98	0.003	-0.308	***	-2.83	0.005
SIZE	0.038		1.29	0.199	0.046		1.53	0.126
GROWTH	0.119	***	5.6	<.0001	0.118	* * *	5.45	<.0001
ROA	-0.461		-0.62	0.538	-0.538		-0.71	0.478
LEV	-2.129	***	-8.69	<.0001	-2.134	***	-8.71	<.0001
RET_STD	-4.474	***	-4.61	<.0001	-3.852	***	-3.68	0.000
FOL	0.304	***	3.72	0.000	0.318	***	3.86	0.000
EARN_CHN	-0.06	***	-2.84	0.005	-0.063	***	-2.96	0.003
LOSS	-1.096	***	-6.65	<.0001	-1.133	***	-6.85	<.0001
BIG4	-0.331	*	-1.84	0.066	-0.334	*	-1.85	0.065
HORZ	-0.008		-0.19	0.850	-0.003		-0.07	0.947
YEAR07	-0.214		-1.61	0.107				
Intercept	-0.408		-1.03	0.302	-0.596		-1.46	0.144
Year fixed effects	Ν				Y			
F-statistics	30.25				18.16			
Pseudo-R2 (R Square)	0.163				0.176			
No. of observations	1804				1804			

Panel L: Using the most recent forecasts and the stock price is not less than \$3/share (winsorizing at 3%)

All variables are defined as in Appendix.

\*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

Table 8. Results for Testing H3 (The effect of IFRS adoption on analyst forecast dispersion)

 $DISP_{jt} = \beta_0 + \beta_1 IFRS_{jt} + \beta_2 SIZE_{jt} + \beta_3 GROWTH_{jt} + \beta_4 ROA_{jt} + \beta_5 LEV_{jt} + \beta_6 RET\_STD_{jt} + \beta_7 FOL_{jt} + \beta_8 AB\_DA_{jt} + \beta_9 EARN\_CHN_{jt} + \beta_{10} LOSS_{jt} + \beta_{11} BIG + \beta_{12} HORZ_{jt} + \beta_{13} Year 07 + \varepsilon_{jt}(8)$ 

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	0.410	**	2.02	0.043	0.343		1.63	0.103
SIZE	-0.031		-0.55	0.584	-0.018		-0.31	0.755
GROWTH	-0.052		-1.61	0.107	-0.043		-1.3	0.195
ROA	-1.720		-1.49	0.136	-1.848		-1.56	0.118
LEV	2.583	***	5.78	<.0001	2.540	***	5.68	<.0001
RET_STD	10.585	***	6.53	<.0001	10.639	***	6.07	<.0001
FOL	-0.337	*	-1.89	0.059	-0.341	*	-1.9	0.058
AB_DA	-1.137	**	-2.08	0.038	-1.211	**	-2.2	0.028
EARN_CHN	-0.053	**	-2.33	0.020	-0.051	**	-2.26	0.024
LOSS	1.340	***	4.75	<.0001	1.309	***	4.62	<.0001
BIG4	0.356		1.03	0.304	0.301		0.87	0.386
HORZ	-0.258		-1.21	0.225	-0.255		-1.19	0.233
YEAR07	0.256		0.97	0.332				
Intercept	0.811		0.73	0.466	1.378		1.23	0.220
Year fixed effects	Ν				Y			
F-statistics	20.69				13.02			
Pseudo-R2 (R Square)	0.189				0.210			
No. of observations	1102				1102			

Panel A: No restriction on firm's stock price (winsorized at 1%)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	0.302	**	2.44	0.015	0.262	**	2.04	0.042
SIZE	0.016		0.46	0.646	0.023		0.65	0.517
GROWTH	-0.111	***	-4.53	<.0001	-0.102	***	-4.08	<.0001
ROA	-0.216		-0.26	0.793	-0.327		-0.39	0.699
LEV	1.885	***	6.77	<.0001	1.864	***	6.7	<.0001
RET_STD	7.439	***	6.98	<.0001	7.534	***	6.58	<.0001
FOL	-0.184	*	-1.67	0.095	-0.186	*	-1.68	0.094
AB_DA	-0.868	**	-2.27	0.023	-0.927	**	-2.41	0.016
EARN_CHN	-0.019		-0.75	0.454	-0.022		-0.85	0.397
LOSS	1.004	***	5.59	<.0001	0.976	***	5.41	<.0001
BIG4	0.179		0.85	0.398	0.144		0.68	0.497
HORZ	-0.112		-0.81	0.417	-0.116		-0.84	0.404
YEAR07	0.259		1.61	0.108				
Intercept	0.238		0.33	0.738	0.727		1.01	0.312
Year fixed effects	N				Υ			
F-statistics	25.42				15.96			
Pseudo-R2 (R Square)	0.224				0.246			
No. of observations	1102				1102			

Panel B: No restriction on firm's stock price (winsorized at 3%)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	0.270	*	1.65	0.099	0.223		1.32	0.188
SIZE	0.006		0.12	0.903	0.013		0.28	0.781
GROWTH	-0.112	***	-4.26	<.0001	-0.104	***	-3.89	0.000
ROA	1.029		1.06	0.287	0.966		0.97	0.330
LEV	2.089	***	5.82	<.0001	2.055	***	5.72	<.0001
RET_STD	8.817	***	6.79	<.0001	8.755	***	6.17	<.0001
FOL	-0.171		-1.21	0.225	-0.176		-1.24	0.217
AB_DA	-0.767	*	-1.75	0.081	-0.822	*	-1.86	0.064
EARN_CHN	-0.019		-0.89	0.376	-0.017		-0.82	0.414
LOSS	1.262	***	5.49	<.0001	1.255	***	5.43	<.0001
BIG4	0.217		0.8	0.423	0.172		0.63	0.528
HORZ	-0.316	*	-1.87	0.062	-0.310	*	-1.82	0.069
YEAR07	0.298		1.45	0.148				
Intercept	0.717		0.81	0.416	1.299		1.45	0.147
Year fixed effects	N				Υ			
F-statistics	17.4				10.98			
Pseudo-R2 (R Square)	0.171				0.193			
No. of observations	1035				1035			

Panel C: Stock prices not less than \$3/share (winsorized at 1%)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	0.230	**	2.08	0.038	0.201	*	1.76	0.079
SIZE	0.033		1.06	0.290	0.036		1.14	0.255
GROWTH	-0.131	***	-6.06	<.0001	-0.123	***	-5.58	<.0001
ROA	1.206		1.58	0.114	1.146		1.46	0.145
LEV	1.644	***	6.67	<.0001	1.625	***	6.58	<.0001
RET_STD	6.270	***	6.65	<.0001	6.188	***	6.04	<.0001
FOL	-0.115		-1.2	0.230	-0.117		-1.21	0.228
AB_DA	-0.737	*	-2.18	0.029	-0.771	**	-2.27	0.024
EARN_CHN	0.016		0.63	0.527	0.015		0.56	0.575
LOSS	0.909	***	5.69	<.0001	0.903	***	5.61	<.0001
BIG4	0.106		0.58	0.560	0.080		0.44	0.661
HORZ	-0.144		-1.19	0.236	-0.146		-1.2	0.232
YEAR07	0.307	**	2.2	0.028				
Intercept	0.205		0.33	0.742	0.732		1.16	0.246
Year fixed effects	N				Y			
F-statistics	20.2				12.61			
Pseudo-R2 (R Square)	0.194				0.215			
No. of observations	1035				1035			

Panel D: Stock prices not less than \$3/share (winsorized at 3%)

All variables are defined as in Appendix. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

#### Table 9. Results for testing H4 & H5 (The effect of IFRS adoption on analyst public information precision and private information

precision)

Panel A: Public information precision

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.367	*	-1.96	0.051	-0.373	*	-1.9	0.058
SIZE	0.022		0.43	0.666	0.023		0.43	0.666
GROWTH	0.069	**	2.05	0.041	0.053		1.54	0.124
ROA	2.003	**	2.03	0.043	1.999	*	1.96	0.051
LEV	-1.746	***	-4.11	<.0001	-1.725	***	-4.04	<.0001
RET_STD	-4.526	***	-3.1	0.002	-3.555	**	-2.18	0.030
FOL	-0.23		-1.43	0.155	-0.222		-1.34	0.181
LOSS	-0.313		-1.16	0.246	-0.35		-1.29	0.199
BIG4	-0.33		-0.68	0.495	-0.17		-0.35	0.730
YEAR07	-0.335		-1.22	0.223				
Intercept	4.482	* * *	6.01	<.0001	3.77	***	4.84	<.0001
Year fixed effects	Ν				Y			
F-statistics	10.22				5.85			
R-square	0.195				0.235			
Observation	381				381			

 $PUBLIC_{jt} = \delta_0 + \delta_1 IFRS_{jt} + \delta_2 SIZE_{jt} + \delta_3 GROWTH_{jt} + \delta_4 ROA_{jt} + \delta_5 LEV_{jt} + \delta_6 RET\_STD_{jt} + \delta_7 FOL_{jt} + \delta_8 LOSS_{jt} + \delta_9 BIG4_{jt} + \delta_{10} Year 07 + \varepsilon_{jt} (9)$ 

#### Panel B: Private information precision

 $PRIVATE_{jt} = \eta_0 + \eta_1 IFRS_{jt} + \eta_2 SIZE_{jt} + \eta_3 GROWTH_{jt} + \eta_4 ROA_{jt} + \eta_5 LEV_{jt} + \eta_6 RET\_STD_{jt} + \eta_7 FOL_{jt} + \eta_8 LOSS_{jt} + \eta_9 BIG4_{jt} + \eta_{10} PUBLIC_{jt} + \eta_{11} Year 07 + \varepsilon_{jt}$  (10)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.095		-0.51	0.609	-0.098		-0.51	0.610
PUBLIC	0.648	***	12.68	<.0001	0.65	***	12.68	<.0001
SIZE	-0.104	**	-2.05	0.041	-0.121	**	-2.35	0.019
GROWTH	0.107	***	3.25	0.001	0.106	***	3.14	0.002
ROA	-1.639	*	-1.68	0.094	-1.533		-1.53	0.126
LEV	-1.15	***	-2.7	0.007	-1.196	***	-2.81	0.005
RET_STD	-2.301		-1.58	0.114	-4.265	***	-2.66	0.008
FOL	0.668	***	4.2	<.0001	0.7	***	4.32	<.0001
LOSS	-1.184	***	-4.48	<.0001	-1.114	***	-4.2	<.0001
BIG4	-0.587		-1.24	0.217	-0.568		-1.19	0.235
YEAR07	-0.344		-1.27	0.204				
Intercept	3.199	***	4.17	<.0001	3.172	***	4.05	<.0001
Year fixed effects	Ν				Y			
F-statistics	33.16				19.3			
R-square	0.482				0.517			
Observation	381				381			

All variables are defined as in Appendix.

\*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

Table 10. Results for Testing H6 and H7 (the moderating effect of industry characteristics and home country characteristics) using

analyst following as the dependent variable

 $FOL_{jt} = \theta_0 + \theta_1 IFRS_{jt} + \theta_2 IFRS_Industry_{jt} + \theta_3 (IFRS*IFRS_Industry)_{jt} + \theta_4 SIZE_{jt} + \theta_5 GROWTH_{jt} + \theta_6 ROA_{jt} + \theta_7 LEV_{jt} + \theta_8 RET_STD_{jt} + \theta_9 AB_DA_{jt} + \theta_{10} EARN_CHN_{jt} + \theta_{11} LOSS_{jt} + \theta_{12} BIG4_{jt} + \theta_{13} HORZ_{jt} + \theta_{14} Year07 + \varepsilon_{jt}(11)$ 

 $FOL_{jt} = \lambda_0 + \lambda_1 IFRS_{jt} + \lambda_2 Strong_{jt} + \lambda_3 (IFRS * Strong)_{jt} + \lambda_4 SIZE_{jt} + \lambda_5 GROWTH_{jt} + \lambda_6 ROA_{jt} + \lambda_7 LEV_{jt} + \lambda_8 RET\_STD_{jt} + \lambda_9 AB\_DA_{jt} + \lambda_{10} EARN\_CHN_{jt} + \lambda_{11} LOSS_{jt} + \lambda_{12} BIG4_{jt} + \lambda_{13} HORZ_{jt} + \lambda_{14} Year 07 + \varepsilon_{jt}$ (12)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.253	***	-6.75	<.0001	-0.273	***	-7.2	<.0001
IFRS_Industry	-0.086	**	-1.98	0.048	-0.064		-1.46	0.144
IFRS*IFRS_Industry	-0.01		-0.16	0.871	-0.022		-0.38	0.703
SIZE	0.037	***	3.58	0.000	0.042	***	4.05	<.0001
GROWTH	0.009	**	2.03	0.043	0.008	*	1.82	0.069
ROA	0.652	***	6.92	<.0001	0.716	***	7.5	<.0001
LEV	0.164	**	2.51	0.012	0.16	**	2.46	0.014
RET_STD	-1.655	***	-7.14	<.0001	-1.452	***	-5.97	<.0001
TRADE	0.238	***	23.67	<.0001	0.234	***	23.14	<.0001
AB_DA	-0.343	***	-4.44	<.0001	-0.331	***	-4.28	<.0001
EFFORT	-0.006	***	-2.96	0.003	-0.006	***	-2.6	0.009
BROKER	-0.004	***	-15.39	<.0001	-0.005	***	-15.69	<.0001
YEAR07	0.001		0.02	0.982				
Intercept	-2.074	***	-13.55	<.0001	-1.908	***	-11.74	<.0001
Year fixed effects	N				Y			
F-statistics	144.5				87.05			
Pseudo-R2 (R Square)	0.441				0.45			
No. of observations	2366				2366			

Panel A: Industry effect and no restriction on firms' stock price

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.247	***	-6.31	<.0001	-0.261	***	-6.57	<.0001
IFRS_Industry	-0.083	*	-1.82	0.068	-0.057		-1.22	0.221
IFRS*IFRS_Industry	-0.001		-0.01	0.990	-0.012		-0.19	0.850
SIZE	-0.003		-0.29	0.768	0.002		0.14	0.891
GROWTH	0.009	**	2.01	0.045	0.008		1.64	0.102
ROA	0.632	***	5.19	<.0001	0.7	***	5.67	<.0001
LEV	0.131	*	1.9	0.058	0.128	*	1.85	0.065
RET_STD	-1.905	***	-7.49	<.0001	-1.646	***	-6.12	<.0001
TRADE	0.255	***	23.79	<.0001	0.252	***	23.37	<.0001
AB_DA	-0.341	***	-4.17	<.0001	-0.339	***	-4.15	<.0001
EFFORT	-0.005	**	-2.16	0.031	-0.005	**	-2	0.046
BROKER	-0.004	***	-14.56	<.0001	-0.005	***	-14.76	<.0001
YEAR07	-0.011		-0.29	0.771				
Intercept	-1.978	***	-12.28	<.0001	-1.894	***	-11.05	<.0001
Year fixed effects	N				Y			
F-statistics	136.98				82.04			
Pseudo-R2 (R Square)	0.461				0.469			
No. of observations	2069				2069			

Panel B: Industry effect and stock price not less than \$3/share

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.217	***	-4.88	<.0001	-0.235	***	-5.18	<.0001
Strong	0.061	*	1.87	0.061	0.063	*	1.92	0.055
IFRS*Strong	-0.124	**	-2.31	0.021	-0.123	**	-2.3	0.022
SIZE	0.034	***	3.31	0.001	0.04	***	3.8	0.000
GROWTH	0.011	**	2.39	0.017	0.009	**	2.07	0.039
ROA	0.667	***	6.93	<.0001	0.734	***	7.53	<.0001
LEV	0.126	*	1.9	0.057	0.127	*	1.92	0.055
RET_STD	-1.623	***	-6.99	<.0001	-1.39	***	-5.69	<.0001
TRADE	0.236	***	23.47	<.0001	0.233	***	23	<.0001
AB_DA	-0.334	***	-4.32	<.0001	-0.326	***	-4.21	<.0001
EFFORT	-0.007	***	-3.05	0.002	-0.006	***	-2.75	0.006
BROKER	-0.005	***	-15.45	<.0001	-0.005	***	-15.74	<.0001
YEAR07	-0.027		-0.72	0.472				
Intercept	-2.044	***	-13.35	<.0001	-1.923	***	-11.76	<.0001
Year fixed effects	N				Y			
F-statistics	143.31				86.4			
Pseudo-R2 (R Square)	0.441				0.449			
No. of observations	2351				2351			

Panel C: Country effect and no restriction on firms' stock price

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.201	***	-4.33	<.0001	-0.209	***	-4.39	<.0001
Strong	0.032		0.94	0.350	0.034		0.99	0.324
IFRS*Strong	-0.126	**	-2.28	0.023	-0.124	**	-2.25	0.025
SIZE	-0.004		-0.34	0.732	0.001		0.1	0.918
GROWTH	0.011	**	2.41	0.016	0.009	*	1.95	0.051
ROA	0.634	***	5.11	<.0001	0.7	***	5.57	<.0001
LEV	0.093		1.32	0.187	0.093		1.33	0.184
RET_STD	-1.894	***	-7.42	<.0001	-1.613	***	-5.96	<.0001
TRADE	0.253	***	23.6	<.0001	0.251	***	23.25	<.0001
AB_DA	-0.326	***	-3.99	<.0001	-0.329	***	-4.02	<.0001
EFFORT	-0.005	**	-2.24	0.025	-0.005	**	-2.13	0.034
BROKER	-0.004	***	-14.7	<.0001	-0.005	***	-14.9	<.0001
YEAR07	-0.04		-1.05	0.293				
Intercept	-1.949	***	-12.08	<.0001	-1.912	***	-11.06	<.0001
Year fixed effects	Ν				Y			
F-statistics	136.04				81.57			
Pseudo-R2 (R Square)	0.461				0.469			
No. of observations	2056				2056			

Panel D: Country effect and stock price not less than \$3/share

All variables are defined as in Appendix. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

Table 11. Results for Testing H6 and H7 (the moderating effect of industry characteristics and home country characteristics) using

#### analyst forecast accuracy as the dependent variable

 $ACCY_{jt} = \theta_0 + \theta_1 IFRS_{jt} + \theta_2 IFRS_{Industry_{jt}} + \theta_3 (IFRS*IFRS_{Industry_{jt}} + \theta_4 SIZE_{jt} + \theta_5 GROWTH_{jt} + \theta_6 ROA_{jt} + \theta_7 LEV_{jt} + \theta_8 RET_{STD_{jt}} + \theta_9 AB_D A_{jt} + \theta_{10} EARN_{CHN_{jt}} + \theta_{11} LOSS_{jt} + \theta_{12} BIG4_{jt} + \theta_{13} HORZ_{jt} + \theta_{14} Year07 + \varepsilon_{jt}(11)$ 

 $ACCY_{jt} = \lambda_0 + \lambda_1 IFRS_{jt} + \lambda_2 Strong_{jt} + \lambda_3 (IFRS * Strong)_{jt} + \lambda_4 SIZE_{jt} + \lambda_5 GROWTH_{jt} + \lambda_6 ROA_{jt} + \lambda_7 LEV_{jt} + \lambda_8 RET\_STD_{jt} + \lambda_9 AB\_DA_{jt} + \lambda_{10} EARN\_CH$  $N_{jt} + \lambda_{11} LOSS_{jt} + \lambda_{12} BIG4_{jt} + \lambda_{13} HORZ_{jt} + \lambda_{14} Year07 + \varepsilon_{jt}$ (12)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.744	**	-2.23	0.026	-0.696	**	-2.06	0.039
IFRS_Industry	-0.606	*	-1.77	0.077	-0.585	*	-1.67	0.096
IFRS*IFRS_Industry	0.921	*	1.92	0.055	0.953	**	1.97	0.049
SIZE	0.043		0.62	0.538	0.02		0.28	0.782
GROWTH	0.038		0.95	0.340	0.042		1.06	0.290
ROA	1.458		1.04	0.299	1.456		1.01	0.311
LEV	-2.9	***	-5.33	<.0001	-2.922	***	-5.37	<.0001
RET_STD	-8.576	***	-4.32	<.0001	-10.341	***	-4.85	<.0001
FOL	0.402	*	1.86	0.064	0.412	*	1.89	0.059
AB_DA	1.257	*	1.89	0.059	1.427	**	2.14	0.033
EARN_CHN	0.068	**	2.48	0.013	0.068	**	2.46	0.014
LOSS	-2.199	***	-6.42	<.0001	-2.12	***	-6.17	<.0001
BIG4	-0.545		-1.29	0.196	-0.516		-1.22	0.222
HORZ	-0.029		-0.11	0.910	0.003		0.01	0.991
YEAR07	-0.231		-0.71	0.477				
Intercept	0.449		0.33	0.740	0.082		0.06	0.952
Year fixed effects	N				Y			
F-statistics	16.97				11.49			
Pseudo-R2 (R Square)	0.179				0.204			
No. of observations	1102				1102			

Panel A: Industry effect, no restriction on firms' stock price, using mean consensus forecasts

		٩	Aodel 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.741	**	-2.44	0.015	-0.698	**	-2.28	0.023
IFRS_Industry	-0.479		-1.54	0.124	-0.472		-1.48	0.138
IFRS*IFRS_Industry	0.748	*	1.72	0.086	0.789	*	1.8	0.072
SIZE	0.062		0.97	0.332	0.038		0.59	0.554
GROWTH	0.028		0.79	0.430	0.034		0.94	0.346
ROA	0.78		0.61	0.541	0.788		0.6	0.546
LEV	-2.675	***	-5.41	<.0001	-2.704	***	-5.48	<.0001
RET_STD	-7.301	***	-4.05	<.0001	-9.234	***	-4.78	<.0001
FOL	0.384	*	1.95	0.051	0.393	**	1.99	0.047
AB_DA	1.306	**	2.16	0.031	1.477	**	2.44	0.015
EARN_CHN	0.058	**	2.32	0.021	0.058	**	2.32	0.021
LOSS	-1.888	***	-6.07	<.0001	-1.796	***	-5.76	<.0001
BIG4	-0.546		-1.43	0.154	-0.528		-1.38	0.168
HORZ	-0.145		-0.62	0.538	-0.115		-0.49	0.626
YEAR07	-0.157		-0.53	0.594				
Intercept	0.702		0.57	0.567	0.461		0.37	0.710
Year fixed effects	N				Y			
F-statistics	15.21				10.62			
Pseudo-R2 (R Square)	0.162				0.191			
No. of observations	1102				1102			

Panel B: Industry effect, no restriction on firms' stock price, using median consensus forecasts

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.49	**	-1.99	0.047	-0.491	**	-1.98	0.048
IFRS_Industry	-0.407		-1.62	0.106	-0.395		-1.53	0.127
IFRS*IFRS_Industry	0.598	*	1.7	0.090	0.639	*	1.8	0.072
SIZE	0.03		0.57	0.568	0.021		0.41	0.681
GROWTH	0.103	***	3.51	0.001	0.108	***	3.6	0.000
ROA	-1.103		-1.02	0.307	-1.114		-1.01	0.315
LEV	-2.106	***	-5.24	<.0001	-2.137	***	-5.32	<.0001
RET_STD	-6.193	***	-4.23	<.0001	-7.208	***	-4.55	<.0001
FOL	0.238		1.51	0.131	0.248		1.56	0.118
AB_DA	0.884	*	1.8	0.072	1.001	**	2.03	0.043
EARN_CHN	0.018		0.77	0.444	0.018		0.77	0.443
LOSS	-2.047	***	-7.99	<.0001	-2.03	***	-7.87	<.0001
BIG4	-0.447		-1.48	0.140	-0.452		-1.49	0.137
HORZ	-0.012		-0.06	0.951	0.013		0.07	0.946
YEAR07	-0.249		-1.06	0.289				
Intercept	0.296		0.3	0.763	-0.028		-0.03	0.978
Year fixed effects	N				Y			
F-statistics	16.05				10.8			
Pseudo-R2 (R Square)	0.179				0.204			
No. of observations	1035				1035			

Panel C: Industry effect, stock price not less than \$3/share, using mean consensus forecasts

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.431	**	-2.1	0.036	-0.426	**	-2.06	0.039
IFRS_Industry	-0.314		-1.49	0.136	-0.32		-1.49	0.137
IFRS*IFRS_Industry	0.416		1.41	0.158	0.464		1.57	0.117
SIZE	0.047		1.1	0.272	0.038		0.87	0.383
GROWTH	0.083	***	3.4	0.001	0.088	***	3.55	0.000
ROA	-1.002		-1.11	0.266	-1.003		-1.09	0.277
LEV	-1.821	***	-5.43	<.0001	-1.857	***	-5.55	<.0001
RET_STD	-4.646	***	-3.8	0.000	-5.796	***	-4.4	<.0001
FOL	0.255	*	1.94	0.052	0.266	**	2.01	0.044
AB_DA	0.879	**	2.14	0.032	0.993	**	2.42	0.016
EARN_CHN	0.012		0.59	0.555	0.012		0.59	0.552
LOSS	-1.525	***	-7.13	<.0001	-1.499	***	-6.99	<.0001
BIG4	-0.442	*	-1.75	0.081	-0.452	*	-1.79	0.074
HORZ	-0.12		-0.76	0.446	-0.098		-0.62	0.537
YEAR07	-0.183		-0.94	0.349				
Intercept	0.368		0.45	0.655	0.221		0.27	0.790
Year fixed effects	N				Y			
F-statistics	14.33				9.97			
Pseudo-R2 (R Square)	0.162				0.192			
No. of observations	1035				1035			

Panel D: Industry effect, stock price not less than \$3/share, using median consensus forecasts

		٦	Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.466		-1.33	0.183	-0.421		-1.18	0.237
Strong	0.656	**	2.42	0.016	0.660	**	2.43	0.015
IFRS*Strong	-0.196		-0.46	0.646	-0.211		-0.49	0.621
SIZE	0.023		0.34	0.736	0.008		0.12	0.906
GROWTH	0.030		0.78	0.435	0.032		0.82	0.415
ROA	1.235		0.88	0.377	1.350		0.94	0.346
LEV	-3.315	***	-6.15	<.0001	-3.359	***	-6.24	<.0001
RET_STD	-8.858	***	-4.6	<.0001	-10.185	***	-4.89	<.0001
FOL	0.383	*	1.8	0.072	0.378	*	1.77	0.078
AB_DA	1.089	*	1.68	0.093	1.277	**	1.96	0.050
EARN_CHN	0.072	***	2.77	0.006	0.074	***	2.81	0.005
LOSS	-2.205	***	-6.51	<.0001	-2.133	***	-6.28	<.0001
BIG4	-0.610		-1.48	0.139	-0.617		-1.49	0.136
HORZ	0.029		0.11	0.909	0.062		0.24	0.810
YEAR07	-0.199		-0.64	0.524				
Intercept	0.266		0.2	0.842	0.095		0.07	0.945
Year fixed effects	Ν				Y			
F-statistics	17.74				11.97			
Pseudo-R2 (R Square)	0.188				0.213			
No. of observations	1088				1088			

Panel E: Country effect, no restriction on firms' stock price, using mean consensus forecasts

		Ν	/lodel 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.450		-1.38	0.168	-0.401		-1.21	0.225
Strong	0.603	**	2.39	0.017	0.597	**	2.36	0.019
IFRS*Strong	-0.245		-0.62	0.539	-0.250		-0.63	0.530
SIZE	0.049		0.76	0.445	0.030		0.48	0.635
GROWTH	0.019		0.54	0.588	0.023		0.65	0.516
ROA	0.928		0.71	0.476	1.002		0.75	0.453
LEV	-2.991	***	-5.95	<.0001	-3.033	***	-6.05	<.0001
RET_STD	-7.509	***	-4.18	<.0001	-9.157	***	-4.72	<.0001
FOL	0.361	*	1.82	0.069	0.362	*	1.82	0.070
AB_DA	1.181	*	1.95	0.051	1.363	**	2.25	0.025
EARN_CHN	0.060	**	2.45	0.015	0.061	**	2.48	0.013
LOSS	-1.862	***	-5.89	<.0001	-1.777	***	-5.62	<.0001
BIG4	-0.621		-1.62	0.106	-0.626		-1.63	0.104
HORZ	-0.068		-0.28	0.777	-0.035		-0.15	0.885
YEAR07	-0.128		-0.44	0.661				
Intercept	0.380		0.3	0.761	0.237		0.19	0.851
Year fixed effects	Ν				Y			
F-statistics	15.47				10.75			
Pseudo-R2 (R Square)	0.166				0.195			
No. of observations	1088				1088			

Panel F: Country effect, no restriction on firms' stock price, using median consensus forecasts

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.489	**	-2.24	0.025	-0.475	**	-2.14	0.033
Strong	0.287	*	1.7	0.090	0.299	*	1.76	0.078
IFRS*Strong	0.258		0.97	0.334	0.243		0.91	0.361
SIZE	0.003		0.07	0.942	0.000		0.01	0.993
GROWTH	0.092	***	3.76	0.000	0.092	***	3.69	0.000
ROA	-1.158		-1.25	0.211	-1.076		-1.13	0.257
LEV	-2.135	***	-6.28	<.0001	-2.173	***	-6.4	<.0001
RET_STD	-6.091	***	-5.02	<.0001	-6.543	***	-4.94	<.0001
FOL	0.202		1.53	0.126	0.203		1.52	0.128
AB_DA	0.588		1.43	0.153	0.697	*	1.69	0.092
EARN_CHN	0.015		0.75	0.453	0.015		0.77	0.441
LOSS	-1.811	***	-8.39	<.0001	-1.798	***	-8.29	<.0001
BIG4	-0.420	*	-1.66	0.096	-0.442	*	-1.74	0.081
HORZ	-0.003		-0.02	0.985	0.010		0.06	0.952
YEAR07	-0.229		-1.2	0.232				
Intercept	0.361		0.43	0.665	0.264		0.31	0.756
Year fixed effects	N				Y			
F-statistics	18.72				12.5			
Pseudo-R2 (R Square)	0.206				0.231			
No. of observations	1023				1023			

Panel G: Country effect, stock price not less than \$3/share, using mean consensus forecasts

		Ν	/Iodel 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.415	**	-2.07	0.039	-0.396		-1.95	0.052
Strong	0.312	**	2.01	0.045	0.318	**	2.04	0.041
IFRS*Strong	0.088		0.36	0.720	0.079		0.32	0.746
SIZE	0.032		0.81	0.421	0.026	***	0.65	0.514
GROWTH	0.077	***	3.43	0.001	0.080		3.48	0.001
ROA	-1.027		-1.21	0.227	-0.961		-1.11	0.269
LEV	-1.968	***	-6.3	<.0001	-2.013	***	-6.47	<.0001
RET_STD	-4.644	***	-4.17	<.0001	-5.447	***	-4.5	<.0001
FOL	0.229	*	1.88	0.060	0.232	*	1.9	0.058
AB_DA	0.706	*	1.87	0.062	0.819	**	2.17	0.031
EARN_CHN	0.013		0.73	0.466	0.014		0.76	0.450
LOSS	-1.412	***	-7.13	<.0001	-1.390	***	-7	<.0001
BIG4	-0.451	*	-1.95	0.052	-0.476	**	-2.05	0.041
HORZ	-0.075		-0.51	0.611	-0.058		-0.39	0.695
YEAR07	-0.175		-0.99	0.321				
Intercept	0.251		0.33	0.743	0.247		0.32	0.751
Year fixed effects	Ν				Y			
F-statistics	15.67				10.86			
Pseudo-R2 (R Square)	0.177				0.207			
No. of observations	1023				1023			

Panel H: Country effect, stock price not less than \$3/share, using median consensus forecasts

All variables are defined as in Appendix.

\*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

Table 12. Results for Testing H6 and H7 (the moderating effect of industry characteristics and home country characteristics) using

analyst forecast dispersion as the dependent variable

 $DISPjt=\theta 0+\theta 1IFRSjt+\theta 2IFRS\_Industryjt+\theta 3(IFRS*IFRS\_Industry)jt+\theta 4SIZEjt+\theta 5GROWTHjt+\theta 6ROAjt+\theta 7LEVjt+\theta 8RET\_STDjt+\theta 9AB\_DAjt+\theta 10EARN\_CHNjt+\theta 11LOSSjt+\theta 12BIG4jt+\theta 13HORZjt+\theta 14Year07\varepsilon jt$ (11)

 $DISPjt = \lambda 0 + \lambda 1IFRSjt + \lambda 2Strongjt + \lambda 3(IFRS*Strong)jt + \lambda 4SIZEjt + \lambda 5GROWTHjt + \lambda 6ROAjt + \lambda 7LEVjt + \lambda 8RET\_STDjt + \lambda 9AB\_DAjt + \lambda 10EARN\_CHNjt + \lambda 11LOSSjt + \lambda 12BIG4jt + \lambda 13HORZjt + \lambda 14Year07 + \varepsilon jt$ (12)

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	0.578	**	2.1	0.036	0.518	*	1.86	0.063
IFRS_Industry	0.441		1.57	0.118	0.37		1.28	0.202
IFRS*IFRS_Industry	-0.552		-1.4	0.162	-0.529		-1.33	0.185
SIZE	-0.043		-0.74	0.459	-0.025		-0.43	0.669
GROWTH	-0.053		-1.63	0.104	-0.045		-1.37	0.170
ROA	-1.655		-1.43	0.152	-1.754		-1.48	0.139
LEV	2.526	***	5.64	<.0001	2.486	***	5.54	<.0001
RET_STD	10.269	***	6.28	<.0001	10.538	***	6	<.0001
FOL	-0.337	*	-1.89	0.059	-0.344	*	-1.91	0.056
AB_DA	-1.178	**	-2.15	0.032	-1.249	**	-2.27	0.024
EARN_CHN	-0.054	**	-2.38	0.017	-0.052	**	-2.28	0.023
LOSS	1.347	***	4.78	<.0001	1.315	***	4.64	<.0001
BIG4	0.366		1.05	0.292	0.299		0.86	0.391
HORZ	-0.26		-1.22	0.223	-0.261		-1.22	0.224
YEAR07	0.236		0.88	0.379				
Intercept	0.883		0.79	0.427	1.447		1.29	0.199
Year fixed effects	N				Y			
F-statistics	18.12				12.02			
Pseudo-R2 (R Square)	0.189				0.211			
No. of observations	1088				1088			

Panel A: Industry effect with all observations

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	0.366	*	1.66	0.097	0.331		1.49	0.137
IFRS_Industry	0.091		0.4	0.687	0.049		0.21	0.833
IFRS*IFRS_Industry	-0.214		-0.68	0.499	-0.212		-0.66	0.507
SIZE	0.005		0.1	0.919	0.014		0.3	0.762
GROWTH	-0.113	***	-4.29	<.0001	-0.106	***	-3.95	<.0001
ROA	1.04		1.07	0.283	0.979		0.98	0.325
LEV	2.075	***	5.76	<.0001	2.042	***	5.66	<.0001
RET_STD	8.763	***	6.67	<.0001	8.757	***	6.16	<.0001
FOL	-0.169		-1.19	0.232	-0.173		-1.22	0.224
AB_DA	-0.782	*	-1.77	0.076	-0.834	*	-1.88	0.060
EARN_CHN	-0.019		-0.89	0.374	-0.017		-0.82	0.414
LOSS	1.268	***	5.51	<.0001	1.262	***	5.45	<.0001
BIG4	0.212		0.78	0.436	0.16		0.59	0.557
HORZ	-0.32	*	-1.89	0.059	-0.317	*	-1.86	0.064
YEAR07	0.309		1.47	0.142				
Intercept	0.727		0.82	0.411	1.328		1.48	0.139
Year fixed effects	N				Y			
F-statistics	15.09				10.08			
Pseudo-R2 (R Square)	0.17				0.193			
No. of observations	1023				1023			

Panel B: Industry effect with stock price not less than \$3/share

			Model 1			Мо	del 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	0.43		1.49	0.137	0.378		1.28	0.199
Strong	-0.507	**	-2.26	0.024	-0.504	**	-2.24	0.026
IFRS*Strong	0.193		0.55	0.585	0.198		0.56	0.576
SIZE	-0.028		-0.49	0.623	-0.018		-0.31	0.755
GROWTH	-0.048		-1.52	0.130	-0.039		-1.21	0.228
ROA	-1.51		-1.31	0.191	-1.657		-1.4	0.163
LEV	2.858	***	6.41	<.0001	2.828	***	6.34	<.0001
RET_STD	10.466	***	6.57	<.0001	10.41	***	6.03	<.0001
FOL	-0.315	*	-1.79	0.073	-0.314	*	-1.77	0.077
AB_DA	-1.069	**	-2	0.046	-1.155	**	-2.14	0.032
EARN_CHN	-0.058	***	-2.66	0.008	-0.057	***	-2.62	0.009
LOSS	1.345	***	4.8	<.0001	1.321	***	4.69	<.0001
BIG4	0.409		1.2	0.230	0.369		1.08	0.280
HORZ	-0.304		-1.43	0.152	-0.307		-1.44	0.151
YEAR07	0.23		0.89	0.374				
Intercept	1.004		0.91	0.364	1.468		1.31	0.192
Year fixed effects	Ν				Y			
F-statistics	18.87				12.46			
Pseudo-R2 (R Square)	0.198				0.22			
No. of observations	1102				1102			

## Panel C: Country effect with all observations

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	0.436	**	1.96	0.049	0.399		1.76	0.079
Strong	-0.247		-1.44	0.151	-0.244		-1.41	0.159
IFRS*Strong	-0.157		-0.58	0.562	-0.156		-0.58	0.565
SIZE	0.012		0.28	0.780	0.018		0.41	0.685
GROWTH	-0.107	***	-4.28	<.0001	-0.099	***	-3.89	0.000
ROA	1.197		1.27	0.204	1.11		1.15	0.252
LEV	2.23	***	6.44	<.0001	2.203	***	6.36	<.0001
RET_STD	8.352	***	6.76	<.0001	8.226	***	6.1	<.0001
FOL	-0.129		-0.96	0.339	-0.13		-0.96	0.339
AB_DA	-0.623		-1.49	0.136	-0.687		-1.63	0.103
EARN_CHN	-0.022		-1.1	0.271	-0.021		-1.03	0.304
LOSS	1.232	***	5.61	<.0001	1.227	***	5.55	<.0001
BIG4	0.222		0.86	0.387	0.186		0.72	0.473
HORZ	-0.33	**	-2.02	0.044	-0.325	**	-1.98	0.048
YEAR07	0.281		1.44	0.151				
Intercept	0.715		0.84	0.399	1.19		1.38	0.169
Year fixed effects	N				Y			
F-statistics	16.04				10.59			
Pseudo-R2 (R Square)	0.181				0.203			
No. of observations	1035				1035			

Panel D: Country effect with stock price not less than \$3/share

All variables are defined as in Appendix. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

Table 13. Results for Testing H6 and H7 (the moderating effect of industry characteristics and home country characteristics) using

## analyst information precision as the dependent variable

 $PUBLIC(PRIVATE)jt = \theta 0 + \theta 1IFRSjt + \theta 2IFRS\_Industryjt + \theta 3(IFRS*IFRS\_Industry)jt + \theta 4SIZEjt + \theta 5GROWTHjt + \theta 6ROAjt + \theta 7LEVjt + \theta 8RET\_STDjt + \theta 9AB\_DAjt + \theta 10EARN\_CHNjt + \theta 11LOSSjt + \theta 12BIG4jt + \theta 13HORZjt + \theta 14Year07 + \varepsilon jt(11)$ 

 $PUBLIC(PRIVATE)jt = \lambda 0 + \lambda 11FRSjt + \lambda 2Strong\_Protectionjt + \lambda 3(IFRS*Strong)jt + \lambda 4SIZEjt + \lambda 5GROWTHjt + \lambda 6ROAjt + \lambda 7LEVjt + \lambda 8RET\_STDjt + \lambda 9AB\_DAjt + \lambda 10EARN\_CHNjt + \lambda 11LOSSjt + \lambda 12BIG4jt + \lambda 13HORZjt + \lambda 14Year07 + \varepsilon jt(12)$ 

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.096		-0.36	0.718	-0.078		-0.29	0.775
IFRS_Industry	-0.134		-0.48	0.629	-0.087		-0.3	0.761
IFRS*IFRS_Industry	-0.33		-0.87	0.387	-0.407		-1.04	0.299
SIZE	0.033		0.63	0.531	0.033		0.61	0.540
GROWTH	0.063	*	1.87	0.062	0.047		1.35	0.178
ROA	2.03	**	2.06	0.041	2.055	**	2.02	0.045
LEV	-1.794	***	-4.18	<.0001	-1.792	***	-4.16	<.0001
RET_STD	-4.328	***	-2.92	0.004	-3.457	**	-2.11	0.035
FOL	-0.205		-1.26	0.208	-0.196		-1.18	0.239
LOSS	-0.282		-1.05	0.296	-0.316		-1.16	0.246
BIG4	-0.41		-0.84	0.399	-0.268		-0.54	0.586
YEAR07	-0.215		-0.76	0.447				
Intercept	4.334	***	5.77	<.0001	3.796	***	4.87	<.0001
Year fixed effects	N				Y			
F-statistics	8.81				5.47			
R-square	0.198				0.242			
Observation	381				381			

Panel A: Industry effect on analyst public information precision

		N	lodel 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.188		-0.72	0.474	-0.213		-0.8	0.423
IFRS_Industry	-0.151		-0.55	0.581	-0.379		-1.36	0.174
IFRS*IFRS_Industry	0.234		0.62	0.535	0.409		1.07	0.286
PUBLIC	0.648	***	12.62	<.0001	0.649	***	12.61	<.0001
SIZE	-0.098	*	-1.87	0.063	-0.106	**	-2	0.047
GROWTH	0.106	***	3.19	0.002	0.102	***	3.03	0.003
ROA	-1.657	*	-1.69	0.091	-1.584		-1.58	0.114
LEV	-1.107	**	-2.56	0.011	-1.128	***	-2.62	0.009
RET_STD	-2.163		-1.46	0.145	-4.108	**	-2.56	0.011
FOL	0.654	***	4.07	<.0001	0.684	***	4.2	<.0001
LOSS	-1.194	***	-4.49	<.0001	-1.12	***	-4.21	<.0001
BIG4	-0.563		-1.18	0.240	-0.545		-1.13	0.258
YEAR07	-0.355		-1.27	0.204				
Intercept	3.172	***	4.1	<.0001	3.088	***	3.93	0.000
Year fixed effects	N				Y			
F-statistics	27.97				17.62			
R-square	0.48				0.52			
Observation	381				381			

Panel B: Industry effect on analyst private information precision

		N	1odel 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.351		-1.33	0.185	-0.334		-1.23	0.221
Strong	0.554	**	2.45	0.015	0.605	***	2.66	0.008
IFRS*Strong	-0.162		-0.49	0.626	-0.224		-0.67	0.503
SIZE	-0.005		-0.09	0.927	-0.004		-0.07	0.946
GROWTH	0.067	**	2	0.047	0.049		1.43	0.153
ROA	2.141	**	2.1	0.036	2.231	**	2.13	0.034
LEV	-1.778	***	-4.18	<.0001	-1.745	***	-4.09	<.0001
RET_STD	-4.36	***	-2.99	0.003	-3.146	*	-1.93	0.054
FOL	-0.24		-1.5	0.135	-0.244		-1.49	0.138
LOSS	-0.292		-1.09	0.278	-0.332		-1.22	0.222
BIG4	-0.342		-0.71	0.475	-0.195		-0.4	0.687
YEAR07	-0.339		-1.25	0.214				
Intercept	4.493	***	6.06	<.0001	3.863	***	4.98	<.0001
Year fixed effects	N				Y			
F-statistics	9.13				5.69			
R-square	0.206				0.251			
Observation	378				378			

Panel C: Country effect on analyst public information precision

			Model 1				Model 2	
Variable	Coef.		t-statistics	p-value	Coef.		t-statistics	p-value
IFRS	-0.098		-0.37	0.708	-0.135		-0.50	0.616
Strong	0.198		0.87	0.383	0.151		0.67	0.506
IFRS*Strong	-0.089		-0.27	0.788	-0.029		-0.09	0.929
PUBLIC	0.631	* * *	12.14	<.0001	0.634	* * *	12.12	<.0001
SIZE	-0.108	**	-2.09	0.038	-0.124	**	-2.37	0.019
GROWTH	0.110	**	3.29	0.001	0.107	***	3.15	0.002
ROA	-1.685	*	-1.65	0.099	-1.584		-1.52	0.129
LEV	-1.276	***	-2.95	0.003	-1.305	***	-3.03	0.003
RET_STD	-2.173		-1.48	0.139	-4.092	**	-2.53	0.012
FOL	0.656	***	4.11	<.0001	0.683	***	4.20	<.0001
LOSS	-1.179	***	-4.41	<.0001	-1.123	***	-4.19	<.0001
BIG4	-0.598		-1.26	0.209	-0.583		-1.22	0.224
YEAR07	-0.358		-1.32	0.188				
Intercept	3.260	***	4.22	<.0001	3.305	***	4.17	<.0001
Year fixed effects	Ν				Y			
F-statistics	27.49				17.13			
R-square	0.477				0.515			
Observation	378				378			

Panel D: Country effect on analyst private information precision

All variables are defined as in Appendix. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respective