Singapore Management University Institutional Knowledge at Singapore Management University

Research Collection School Of Accountancy

School of Accountancy

1-2006

Empirical evidence on jurisdictions that adopt IFRS

Ole-Kristian HOPE

Justin JIN

Tony KANG

DOI: https://doi.org/10.2139/ssrn.751264

Follow this and additional works at: https://ink.library.smu.edu.sg/soa_research

Part of the Accounting Commons, and the Finance and Financial Management Commons

Citation

HOPE, Ole-Kristian; JIN, Justin; and KANG, Tony. Empirical evidence on jurisdictions that adopt IFRS. (2006). *Journal of International Accounting Research*. 5, (2), 1-20. Research Collection School Of Accountancy. **Available at:** https://ink.library.smu.edu.sg/soa_research/1752

This Journal Article is brought to you for free and open access by the School of Accountancy at Institutional Knowledge at Singapore Management University. It has been accepted for inclusion in Research Collection School Of Accountancy by an authorized administrator of Institutional Knowledge at Singapore Management University. For more information, please email libIR@smu.edu.sg.

Singapore Management University Institutional Knowledge at Singapore Management University

Research Collection School Of Accountancy (SMU Access Only)

School of Accountancy

2006

Empirical Evidence on Jurisdictions That Adopt Ifrs

Ole-Kristian Hope
University of Toronto - Rotman School of Management

Justin Jin *University of Toronto*

Tony Kang
Singapore Management University, tonykang@smu.edu.sg

Follow this and additional works at: https://ink.library.smu.edu.sg/soa_research_smu

Citation

Hope, Ole-Kristian; Jin, Justin; and Kang, Tony. Empirical Evidence on Jurisdictions That Adopt Ifrs. (2006). *Journal of International Accounting Research*. 5, (2), 1-20. Research Collection School Of Accountancy (SMU Access Only). **Available at:** https://ink.library.smu.edu.sg/soa_research_smu/1

This Journal Article is brought to you for free and open access by the School of Accountancy at Institutional Knowledge at Singapore Management University. It has been accepted for inclusion in Research Collection School Of Accountancy (SMU Access Only) by an authorized administrator of Institutional Knowledge at Singapore Management University. For more information, please email libIR@smu.edu.sg.

Empirical Evidence on Jurisdictions that Adopt IFRS

Current Draft: June 24, 2005

Ole-Kristian Hope

Rotman School of Management University of Toronto okhope@rotman.utoronto.ca

Justin Jin

Rotman School of Management University of Toronto yiqiang.jin03@rotman.utoronto.ca

Tony Kang

School of Accountancy Singapore Management University tonykang@smu.edu.sg

Acknowledgments

We have received valuable comments from Yuyan Guan and Don Herrmann. Hope gratefully acknowledges the financial support of the Rotman School of Management and the Social Sciences and Humanities Research Council of Canada. Kang acknowledges funding from the Wharton-SMU Research Center.

Abstract

International Financial Reporting Standards (IFRS) are currently being adopted in a number of jurisdictions, including the European Union. Despite the importance of IFRS in the context of global accounting standards harmonization, little is known regarding what institutional factors influence countries' decisions to voluntarily adopt IFRS. This issue is relevant to standard setters because a better understanding of the motivations for adoption will enable them to promote IFRS more effectively to countries that currently do not employ IFRS. Consistent with bonding theory, we find that countries with weaker investor protection mechanisms are more likely to adopt IFRS. Our evidence also shows that jurisdictions that are perceived to provide better access to their domestic capital markets are more likely to adopt IFRS. Taken together, our results are consistent with the view that IFRS represent a vehicle through which countries can improve investor protection and make their capital markets more accessible to foreign investors.

1. Introduction

The positive impacts of global accounting harmonization have been increasingly recognized by countries around the world. International Financial Reporting Standards (IFRS) are currently being adopted in a number of jurisdictions. In 2005, IFRS will be required in at least 65 countries for all domestic listed companies, including 28 European Union and European Economic Area member countries. In the U.S., more than 400 European SEC registrants that currently use their national GAAP will switch to IFRS by the end of 2005.

In 2002, the (then) U.S. SEC chairman Harvey Pitt delivered a speech on the convergence of capital markets: ¹ "If, by 2005, there has been sufficient progress in the improvement and short-term convergence of accounting standards, in the development of a process and structure for consistent interpretation and application of IFRS, and in the enhancement of financial reporting infrastructure, then I believe that 2005 could become the target date on which it may be appropriate for the SEC to determine whether foreign private issuers from EU member countries should be required to reconcile from IFRS to U.S. GAAP." In fact, the SEC released an agreement on April 22, 2005, which envisions that by 2009, and perhaps as early as 2007, European companies that follow IFRS might be able to file financial reports with the SEC without reconciling to U.S. GAAP (New York Times, April 23, 2005).

Despite the importance of IFRS adoption in the context of global accounting harmonization, little is known about the institutional characteristics of jurisdictions that choose to adopt these standards. With a better understanding of the legal and economic factors that determine the demand for IFRS, standard setters might be able to promote IFRS more effectively to countries that currently do not employ IFRS.

-

¹ Source: Revsine, Collins and Johnson, 3rd edition, 2005, page 1018 and Financial Times October 8, 2002.

Our sample includes 38 countries around the world, some of which have voluntarily adopted IFRS at the end of 2004. We examine a group of institutional factors that might influence a country's decision to adopt IFRS: securities laws on security offerings, anti-director rights, law enforcement, and commitment to building a more accessible capital market to foreign investors. Countries with relatively weak investor protection mechanisms in place might be more likely to adopt IFRS if they seek to improve their investor protection by "bonding" to a reporting standard that provides more comparable and comprehensive financial information. As Ross (1979) points out, issuers can signal the quality of their equity to investors by resorting to additional mechanisms when verification is costly. Countries with relatively weak investor protection mechanisms have incentives to voluntarily adopt stringent international standards in order to reduce the expropriation risk by majority shareholders. In contrast, countries that already have effective investor protection mechanisms in place might view potential benefits from adopting IFRS as only marginal, and therefore are less likely to adopt IFRS. Our empirical analysis supports this prediction.

We further hypothesize that the law enforcement level of a country is negatively related to the adoption of IFRS. The bonding theory predicts that, *ceteris paribus*, the demand for a high quality accounting standard such as IFRS will be lower in a country with more effective law enforcement. Using *Public_enforcement* and *Orders* indexes to represent across-country private and public enforcement of laws, we find that law enforcement level is negatively associated with a country's decision to adopt IFRS, consistent with the notion that the benefit from bonding is higher for firms in countries with poor law enforcement.

We also predict a positive association between the access to capital markets and the adoption of IFRS. By opening up its capital market, a country can better appeal to a foreign

capital base by providing more opportunities and liquidity for investors who seek portfolio diversification, therefore lowering firms' cost of capital. In contrast, a relatively closed capital market provides few opportunities and low return on investment for foreign investors. A country already committed to opening up its capital markets is more likely to use IFRS to increase access and attract additional investors, thus we would observe a positive association between the access to capital markets and the likelihood of IFRS adoption. Our evidence is consistent with this view.

Our study is one of the earliest attempts to identify country-level determinants of accounting standard choice. Although prior studies have examined voluntary adoption of IAS/IFRS at the firm-level (e.g., Ashbaugh, 2001), there is little evidence on institutional features for jurisdictions that adopt IFRS early. Our study also serves as a complement to the study of firm-level determinants of IFRS adoption given that the decision to adopt IFRS can be made either at the firm-level (if IFRS are one of the reporting standards firms are allowed to choose from) or at the country-level (if IFRS are mandated to be followed as nation-wide reporting standards).

The remainder of the article is organized as follows. In Section 2, we provide background knowledge, describe our motivation, and develop our hypotheses. In Section 3, we discuss our research design. We discuss the sample and report the empirical results in Section 4. Finally, we conclude in Section 5.

2. Background and Hypotheses

In this section, we provide background information on IFRS, describe the bonding theory and cost/benefit framework, and develop our hypotheses related to investor protection and capital market access.

2.1 Background on International Accounting Standards

International Accounting Standards (IAS) are a set of standards stating how particular types of transactions and other events should be reflected in financial statements, issued by the International Accounting Standards Committee (IASC). From April 1, 2001, the International Accounting Standards Board (IASB) superseded IASC's role of international accounting standard setting and began issuing International Financial Reporting Standards (IFRS).

The trend of accounting globalization has been accelerated by voluntary compliance with IFRS and has been strengthened by several major events in the past five years. The International Organization of Securities Commissions (IOSCO) endorsed the IASC standards for cross-border stock exchange listings in 2000. In 2001 the IASC was restructured as the IASB, thereby gaining support of the SEC (IASC, 2000). Many major stock exchanges around the world, including the London, Frankfurt, Zurich, Luxembourg, Bangkok, Hong Kong, Amsterdam, Rome, and Kuala Lumpur stock exchanges, accept financial statements of foreign listed companies prepared under IFRS without reconciliation. In 1998, the law §292a HGB was passed in Germany, which permits German listed companies to prepare consolidated accounts in accordance with either IFRS or U.S. GAAP. The European Commission (EC) and Australian regulators have announced that IFRS will be adopted from 2005 (IASB, 2002). All European listed companies (more than 7,000) are required to adopt IFRS for consolidated financial statements starting from January 1, 2005. In addition, IFRS will be permitted or required for companies in at least 30 other countries. One possible reason why Europe has decided to adopt IFRS rather than U.S. GAAP for international harmonization of accounting standards is because IFRS are viewed as more politically neutral (Zeff, 1998).

On April 22, 2005, the SEC released a "roadmap" toward allowing European companies that follow IFRS to sell securities in the U.S. without having to revise their financial statements (New York Times, April 23, 2005). The roadmap establishes a goal of eliminating the requirement of reconciling the financial reports prepared under IFRS in accord with U.S. GAAP as early as possible between now and 2009 at the latest. Street, Nichols, and Gray (2002) provide empirical support for this "roadmap" by showing that in recent years the impact of accounting differences between IFRS and U.S. GAAP is narrowing. Leuz (2003) finds that IFRS and U.S. GAAP firms from the New Market exchange do not exhibit significant differences in several information asymmetry proxies. He concludes that U.S. GAAP and IFRS produce financial statements of similar informational quality and that IFRS and U.S. GAAP may be viewed as comparable in reducing information asymmetries. Nicolaisen (2005) does not expect that IFRS and U.S. GAAP will necessarily produce totally identical financial statements, however, he considers it necessary that convergence result in close alignment of accounting for the same or essentially the same transactions, comparable results in trends, a continued cooperative will to reduce differences over time, and a transparent understanding of any significant differences.

_

² According to the New York Times article, SEC Chairman William Donaldson supports the convergence program being undertaken jointly by the IASB and the U.S. FASB. Achieving that goal would, among other things, depend on a detailed analysis of the faithfulness and consistency of the application and interpretation of IFRS in financial statements across companies and jurisdictions, and continued progress on the IASB-FASB convergence project. Chairman Donaldson cautioned that "the ultimate success of IFRS will depend on many parties – including companies, auditors, standard-setters and regulators, but I am glad that all parties are taking on the challenge. We need the contributions of all of them to reach the goal." Source: New York Times (April 23, 2005) and http://www.sec.gov/news/press/2005-62.htm.

2.2 Bonding Theory and Investor Protection Hypotheses

Coffee's (2002) bonding theory states that cross-listing on a U.S. stock exchange commits the listing firm to respect minority investor rights and to provide more comprehensive disclosure. We employ Coffee's (2002) bonding theory to explain why firms choose IFRS and why countries voluntarily adopt IFRS. By adopting IFRS, issuers expose their accounting information to international scrutiny of reputational intermediaries such as brokerage analysts, auditors, and credit rating agencies (Coffee, 2002). Coffee (2002) terms this channel reputational bonding. Tarca (2004) uses signaling theory (Spence, 1973) to explain why firms approach international capital markets by adopting international standards. The adoption of international standards could signal to market participants that the firm is committed to disclosing more information to investors, to listing on foreign stock exchanges, or to absorbing international capital infusion. Reputational bonding is costly to controlling shareholders because it restricts their ability to expropriate rents from the firm (Reese and Weisbach, 2002). Bonding to IFRS also empowers international minority shareholders to utilize shareholders' rights against management decisions. This channel is called legal bonding or liability bonding. Ding et al. (2005) provide evidence that IFRS require more comprehensive disclosures than do most countries' accounting standards. Information asymmetry and agency problems are likely to diminish after the adoption of IFRS because insiders face a higher risk of class-action lawsuit by minority shareholders. As IFRS encourage international investment, domestic firms will be accountable to minority shareholders from different countries.

Reese and Weisbach (2002) find that increased investor protection decreases managers' ability to expropriate wealth from the firm and subsequently increases the firm's stock price. Shareholders' protected rights typically include mandates for disclosures and accounting

information, the receipt of pro-rata dividends, voting for directors, participation in shareholders' meetings, subscription to new issues of securities on the same terms as the insiders, the ability to sue directors or the majority for suspected expropriation, and the opportunity to call extraordinary shareholders' meetings, etc. (La Porta et al., 2000).³

We use four variables to represent the following four aspects of investor protection: (1) securities laws on new equity offerings; (2) anti-director rights held by minority shareholders; (3) public law enforcement; and (4) private law enforcement. The strictness of securities laws and the magnitude of anti-director rights indicate the maturity and completeness of the investor protection mechanism developed by a country's law makers. The degree of public and private law enforcement measures the effectiveness and efficiency of enforcement of the investor protection mechanism. The legal development of investor protection mechanism and the law enforcement represent two independent but positively correlated processes.

Our first variable is the *Disclosurerq* index, which measures the strength and strictness of *mandatory* disclosure requirements by securities laws pertaining to the "promoter's problem." La Porta et al. (2005) calculate the *Disclosurerq* index as the average score of the following six areas: (1) prospectus⁴; (2) insiders' compensation; (3) ownership by large shareholders; (4) inside ownership; (5) contracts outside the normal course of business; and (6) transactions with related parties. Increased disclosure requirements are a means to reduce information asymmetries and mitigate the agency problems existing between shareholders and management (Jensen and

³ Better legal protection of outside shareholders is associated with: (1) higher valuation of corporate assets (La Porta et al., 2002); (2) higher valuation of listed firms relative to their assets (Claessens, et al., 2002; La Porta et al., 2002); (3) lower private benefits of control (Zingales, 1994; Nenova, 1999); (4) higher correlation between investment opportunities and actual investments (Wurgler, 2000); (5) financial market expansion (La Porta et al., 2002); and (6) lower cost of equity (Giannetti and Koskinen, 2004).

⁴ The most basic area is whether promoters can issue securities without *delivering* a prospectus describing them to potential investors in advance. Since every country requires a prospectus before securities are sold and listed, the operational word here is "delivering." In some countries, it is possible to sell securities after a prospectus is deposited at the company, or with the Supervisor, without delivering it to investors. Delivering a prospectus to potential investors is an affirmative step in making disclosures *to them* (La Porta et al., 2005).

Meckling, 1976). Investors in countries with weak disclosure requirements (or weak securities laws) demand more information when firms issue equities. In order to require issuers to disclose more information, governments have to modify or create securities laws regarding securities offerings. However, it is a time-consuming and costly process for most countries to stipulate a comprehensive set of securities laws or accounting standards. Hence, bonding to IFRS offers a better solution to such information demand because IFRS requires a higher level of disclosures in financial reporting relative to most domestic accounting standards (e.g., Ding et al., 2005). In turn, countries with weak disclosure requirements by securities laws may have a greater tendency to adopt IFRS. Our hypothesis 1a is then:⁵

H1a: A country's decision to adopt IFRS is negatively correlated with the mandatory disclosure requirements of securities laws in that country.

The second variable for investor protection is the anti-director rights of minority shareholders in that country, *Antidir*. ⁶ This anti-director rights index measures the legal protection afforded to minority shareholders against the private benefits of control of managers and controlling shareholders in the corporate decision making process. High anti-director rights are associated with effective corporate governance, as reflected in valuable and broad financial

-

⁵ All hypotheses are stated in the alternative.

⁶ The anti-director index reflects such aspects of minority rights as (1) the ease of voting for directors; (2) the freedom of trading shares during a shareholders meeting; (3) the possibility of electing directors through a cumulative voting mechanism or proportional representation of minorities on the board; (4) the existence of a grievance mechanism for oppressed minority shareholders (i.e., class-action lawsuit); (5) the existence of a preemptive right to new security issues by the firm; and (6) the percentage of votes needed to call an extraordinary shareholder meeting. For each of the first five measures, a country gets a score of 1 if it protects minority shareholders according to this measure and a score of 0 otherwise. For the sixth measure, a country gets a score of 1 if the percentage of share capital needed to call an extraordinary shareholder meeting is at or below the world median of 10 percent, and a score of 0 otherwise. Finally, these six anti-director rights scores are added up into an aggregate score as the anti-director index. (Source: La Porta et al., 1998; La Porta et al., 2002)

markets, dispersed ownership of shares, and efficient allocation of capital across firms (La Porta et al., 2000). La Porta et al. (2002) further find that anti-director rights are positively associated with the valuation of corporate assets, suggesting that the level of legal protection of investors in a country is an important determinant in the development of its financial markets. By limiting expropriation of controlling shareholders, the investor protection mechanism raises the securities prices in the marketplace, leading to the expansion of financial markets.

We hypothesize that countries with low (high) anti-director rights are more (less) likely to adopt IFRS for two reasons. First, countries with low anti-director rights may view the adoption of IFRS (a bonding behavior) as a way to improve investor protection. They are willing to "bond" themselves to a reporting standard that provides information with enhanced comparability and comprehensiveness. Second, because family-controlled firms are more common in poor investor protection countries (La Porta et al., 1999), the concentration of family ownership and control discourages minority shareholders' activism against controlling shareholders. Considering the cost and length of legal process and the potential deterrent from family-controlled firms, countries with low anti-director rights may adopt IFRS as a way to improve minority shareholders rights rather than modify or create anti-director laws/regulations. Our hypothesis 1b is then:

H1b: A country's decision to adopt IFRS is negatively correlated with the level of antidirector rights in that country.

⁷ As a competing hypothesis it is possible that countries with high anti-director rights may be reluctant to adopt IFRS since they already have relatively effective investor protection mechanisms in place and thus view only trivial incremental benefit of IFRS adoption.

In this study, we measure the overall quality of investor protection using the level of disclosure requirements and the enforcement of security regulations. The quality of financial information is a function of both the quality of accounting standards and regulatory enforcement (Kothari, 2000) and prior studies show that the enforcement of accounting standards is as important as the quality of accounting standards (e.g., Hope, 2003; Sunder, 1997). We posit that the enforcement of investor protection mechanism is highly positively correlated with the enforcement of laws in a country because both securities laws and accounting regulations (i.e., GAAP) are monitored and enforced by government regulators. We use anti-director rights, as well as the effectiveness of public enforcement (the *Public_enforcement* index) and the effectiveness of private enforcement (the *Orders* index), to represent the effectiveness of enforcement of investor protection mechanism.⁸

La Porta et al. (1997) indicate that the extent of law enforcement in a country is influenced by the economy and laws in that country. They show that richer countries enforce laws better than poorer countries, and French Civil law countries have the lowest quality of law enforcement after controlling for per capita income. Regulatory enforcement is a separate mechanism from accounting standards and is essential to the corporate application of accounting standards. *Ceteris paribus*, the quality of law enforcement directly impacts the quality of financial reporting of domestic firms. We hypothesize that countries with weak (strong) public enforcement are more (less) likely to adopt IFRS. Countries with weak public enforcement may realize that the quality of financial reporting of their domestic firms is comparatively low and

_

⁸ La Porta et al. (2005) study five aspects of public law enforcement: (1) "Supervisor attributes," measures public enforcer's independence including the processes of its key members' appointment, dismissal, and working focus; (2) "Rule-making power" measures whether the public enforcer has the power to regulate primary offerings and/or listing rules on stock exchanges; (3) "Investigative powers" measures the investigative powers of the public enforcer; (4) "Orders" covers non-criminal sanctions for violations of securities laws; (5) "Criminal sanctions" is the average scores for criminal sanctions against directors, distributors, and accountants. The average of the preceding five sub-indexes forms the index of public enforcement.

that improving the level of public enforcement is a time-consuming and costly process. Thus they are more likely to adopt IFRS because the adoption of IFRS is viewed as an immediate way to improve the quality of financial reporting. Those countries with weak public enforcement are willing to "bond" themselves to a reporting standard that provides information with enhanced comparability and comprehensiveness (the bonding theory), offsetting some of the disadvantages of weak public enforcement. 9 Our Hypothesis 1c is as follows.

H1c: A country's decision to adopt IFRS is negatively correlated with the level of public enforcement in that country.

Among the five sub-indexes of public enforcement (see Table 1), we are especially interested in the "orders" because it most directly substitutes for the strength of private enforcement. Orders cover non-criminal sanctions for violations of securities laws. These sanctions include ordering the directors (issuers, distributors or accountants) of a public firm to rectify non-compliance with disclosure requirements, to institute changes recommended by outside reviewers, and to compensate investors for their losses. (La Porta et al., 2005). Countries with weak private enforcement are willing to "bond" themselves to a high reporting standard to improve investor protection. In contrast, countries with strong private enforcement may be reluctant to adopt IFRS since they already have relatively effective private enforcement mechanisms in place and high quality of financial reporting, and thus view only trivial incremental benefit of IFRS adoption. Thus, we hypothesize that firms with weak (strong)

⁹ Countries with strong public enforcement may be reluctant to adopt IFRS since they already have relatively effective law enforcement mechanisms in place and high quality of financial reporting, and thus view only trivial incremental benefit of IFRS adoption.

"orders" in their home country are more (less) likely to adopt IFRS. Our Hypothesis 1d (which is clearly not independent of H1c) is as follows.

H1d: A country's decision to adopt IFRS is negatively correlated with the level of "orders" in that country.

2.3 Cost/Benefit Framework and Capital Markets Access Hypothesis

The potential benefits of bonding to IFRS include lower cost of capital and higher firm value, increased shareholder base and trading volume, and better reputation (e.g., Leuz, 2003; Hope, Kang and Zang, 2005). Besides the firms that benefit from the lower cost of capital, financial statement users including domestic minority shareholders, foreign investors, as well as governments are apparent beneficiaries of higher accounting quality. The potential costs of IFRS adoption include both transitional costs of IFRS adoption and on-going costs of compliance (to the firms) and enforcement (to the relevant government agencies) (e.g., Carnachan, 2003). Hence our cost and benefit analyses in this section include but are not limited to the benefits and costs of the bonding behavior.

Carnachan (2003) notes that the first benefit of convergence to IFRS is lower transactions costs for preparers of financial reports, since they would be able to comply with a single set of accounting standards instead of multiple sets. Second, a positive "network externality" arises because the widespread usage of one set of standards saves users of financial information the time and energy of having to learn to apply and interpret multiple sets of standards. Third,

12

 $^{^{10}}$ Barth, Landsman and Lang, (2005) find that IFRS adopting firms have higher financial reporting quality after adoption than before.

convergence to IFRS will enhance comparability between entities' financial statements for investors, thus potentially making investment decisions easier.

Carnachan (2003) points out that convergence to IFRS generates both one-time transitional costs and the on-going costs of maintaining a standard-setting system for global accounting principles. In the short-term, successful convergence involves protracted negotiations among the IASB, as well as the various national standard-setters and regulators, government officials and interested professionals with a vested interest in participating in the convergence process. This requires the expenditure of a significant amount of time and money. Direct compliance costs also arise as a result of the need to retrain preparers, users, auditors and regulators to apply and interpret the converged global standards. Once existing standards have been converged, there will be on-going costs as mechanisms need to be put in place to permit the formulation of future standards.¹¹

Do the capital markets of a country (aggregated firms) benefit from adopting IFRS? This is probably the most important reason for a government to voluntarily initiate the IFRS compliance in that country. El-Gazzar, Finn, and Jacob (1999) state that firms voluntarily comply with IFRS because they wish to obtain exposure to new markets, obtain foreign debt and equity capital, improve customer recognition, or reduce political costs. Tarca (2004) finds that competitive market forces can promote the use of international standards since many firms believe the use of international standards will enable better communication with information users. KPMG (2000) reports in a survey that the reasons for European companies to switch from national standards to international standards include (1) the possibility of increasing the availability of capital and lowering its cost; (2) the perceived high quality of IFRS; and (3)

.

¹¹ In addition, it is possible that widespread use of IFRS would impose a cost on issuers by depriving them of the ability to choose to operate in jurisdictions where the accounting rules best reflect the nature of their business.

preferences of institutional investors and analysts. Providing empirical support for the survey results, Leuz and Verrecchia (2001) examine German firms that changed from national to international standards and find that cost of capital (proxied by bid-ask spread and trading volume) is reduced. Barth, Landsman and Lang (2005) find that firms that adopt IFRS show less evidence of earnings smoothing, less evidence of managing earnings towards a target, more timely recognition of losses, and a higher association with returns. Their results suggest that IFRS adoption improves financial reporting quality. If all the firms in a country adopt IFRS simultaneously and their financial reportings have enhanced quality (i.e., accounting information is more reliable, relevant, and accurate), the capital markets of the country as a whole gain better reputation and thus attract more foreign investments.

Making the country's capital market more accessible to foreign investors has distinct benefits. By opening up its capital market, a country can attract foreign capital by providing investors with opportunities for portfolio diversification. Liberalizing restrictions and reducing barriers to cross-border capital flows can improve the functioning of emerging stock markets by:

(1) enhancing the integration of emerging markets into world capital markets; (2) forcing domestic firms to upgrade their information disclosure policies and accounting systems to seek foreign investment; (3) leading domestic firms to upgrade trading systems to support more trading and the introduction of a greater variety of financial instruments; and (4) accelerating economic growth by enhancing stock market liquidity (Levine et al., 1996). Opening up capital markets can increase efficiencies in the domestic financial system, which will enhance the competitiveness of the economy at large (Hanson, 1995). Countries with relatively immature or closed capital markets are less likely to converge to a higher accounting standard because those countries do not provide infrastructural framework for international investors to generate

reasonable returns. The *net* incremental benefit of such convergence for countries with immature capital markets is smaller than that for countries with opened capital markets.

We predict that countries that provide high (poor) access to the domestic capital markets for foreign investors are more (less) likely to adopt IFRS. The domestic capital markets with high access for foreign investors should have a high percentage of foreign investor ownership and control. Foreign investors evaluate domestic firms by comparing domestic financial reports and ratios to those of foreign peers. Since the process of comparing financial reports prepared under different accounting standards not only consumes time and money but also bears the risk of errors, foreign investors prefer the use of a uniform set of accounting standards such as IFRS. In contrast, domestic capital markets with low access for foreign investors are primarily owned and controlled by domestic investors who own little foreign stocks. To the extent that the controlling shareholders of firms domiciled in relatively closed capital markets enjoy large private control benefits (e.g., voting rights, cash flow rights, etc.), their incentives to support government decisions to make the capital markets more accessible to foreign investors might be low. Therefore, jurisdictions that are already committed to making their capital markets more accessible for international investors are more likely to voluntarily adopt a uniform international accounting standard. Hypothesis 2 is then:

H2: A country's decision to adopt IFRS is positively correlated with the access level of that country's capital markets.

3. Regression Model and Variables

We use the following logit model to test our hypotheses.

$$IFRS 2004 = \alpha + \beta_1 Disclosurerq + \beta_2 Antidir + \beta_3 Public_enforcement + \beta_4 Orders$$
$$+ \beta_5 Access + \beta_6 CIFAR + \beta_7 Mktcap + \beta_8 LogGNP + \varepsilon$$
(1)

where,

IFRS2004: defined as 1 if the countries have adopted IFRS as of December 31, 2004, and 0 otherwise. 12

Disclosurerq: an index of disclosure requirements that measures the strength of specific disclosure requirements pertaining to promoters and issuers.

Antidir: an index of anti-director rights that measures how strongly the legal system favors minority shareholders against managers or dominant shareholders in the corporate decision-making process, including the voting process.

Public enforcement: an index that represents the level of public enforcement in a country.

Orders: an index that represents the level of private enforcement (i.e., sanctions against issuers, distributors, and accountants) in a country.

Access: an index of the extent to which business executives in a country agree with the statement "Stock markets are open to new firms and medium-sized firms" that proxies for the easiness of access to domestic capital markets by international investors (Schwab et al., 1999).

We control for three additional factors that potentially relate to the decision to adopt IFRS. First, we control for the transparency of accounting information and quality of financial reporting by using the *CIFAR* index.¹³ Different from the *Disclosurerq* index (a legal approach to

¹² As a robustness test we also use 2005 as the adoption year (see Section 4.3).

¹³ La Porta et al. (1998) suggest that a country's financial accounting regime affects enforcement of investors' rights in that country. They measure the quality of the accounting regime with an index developed for each country by the Center for International Financial Analysis and Research (*CIFAR*). The *CIFAR* index rates annual reports of at least three firms in a country on the basis of ninety disclosure items. The average of the summation of these points is the *CIFAR* index for that country (see Hope, 2003).

measure the strength of specific disclosure requirements pertaining to the issuers/promoters by securities laws), the *CIFAR* index is a financial-reporting approach to measure the across-country corporate disclosure intensity. Since only mandatory disclosures, one component of the *CIFAR* index, are subject to the scrutiny of government agencies, we expect a weak negative association between the adoption of IFRS by a country and the *CIFAR* index that represents the quality of financial reporting in that country.

Second, we control for the development of securities markets using the proxy *Mktcap*, which is measured as the ratio of stock market capitalization held by small shareholders to gross domestic product for the period 1996-2000 (La Porta et al., 1999). Since the development of securities markets is highly correlated to the access to those markets (Pearson correlation = 0.649), we predict a positive association between the adoption of IFRS and the development of securities markets. Third, we include the natural logarithm of GNP (obtained from the 1996 World Development Report) to control for the size of the domestic markets with the expectation of a negative association because countries with smaller markets potentially have a greater incentive to access international investors (Reese and Weisbach, 2002).

We test 10 different models for our hypotheses because some of the explanatory variables in our study are potentially correlated. ¹⁵ Correlation between explanatory variables may impede

_

¹⁴ The Pearson correlation between *CIFAR* and *Disclosurerq* is relatively low (=0.415), suggesting that these two indexes are conceptually different. The major difference between the two is that the *Disclosurerq* index focuses on the *mandatory* disclosure requirement for promoters by securities laws whereas the *CIFAR* index focuses on the *mandatory* disclosures (required by domestic accounting standards) and *voluntary* disclosures of financial reports. Thus the *Disclosurerq* index reflects the strictness of securities laws in protecting minority shareholders while the *CIFAR* index reflects the general level of mandatory/voluntary disclosures. The *CIFAR* index equally weights every disclosure item and does not differentiate voluntary disclosure from mandatory disclosure. Equal weight for each disclosure item may bias the index because the information content and implication of each disclosure item varies. In addition, the *CIFAR* index may only partially reflect a country's disclosure environment given the small sample of firms in each country to calculate the index.

¹⁵ For instance, *Public_enforcement* is significantly positively correlated with *Orders* (Pearson correlation = 0.828), indicating that a country with higher public enforcement of laws likely has higher private enforcement of laws. Another example is the positive correlation between *Access* and *Mktcap* (Pearson correlation = 0.649), indicating that highly developed domestic stock markets provide high accessibility for foreign investors.

interpretation of regression results. For this reason we examine Variance Inflation Factors (VIF) of all reported regressions. All VIFs are lower than 4.3, indicating that multicollinearity is not a serious issue in the estimation.

4. Data Analysis

4.1 Descriptive statistics and univariate results

Table 1 defines the variables included in our study including the sources from which each variable is collected. Table 2 presents data on the IFRS adoption and independent variables for our sample of 38 countries. The table shows that 12 countries voluntarily adopted IFRS before the end of 2004. In 2005, nine more countries will converge to IFRS: seven EU member countries as well as Australia and Norway.

Table 3 reports Pearson correlations in the lower half and Spearman correlations in the upper half for our variables and their two-sided significance levels. Pearson correlations are consistent in signs with Spearman correlations for the relation between the dependent variable IFRS2004 and the test variables (i.e., Disclosurerq, Antidir, Public_enforcement, Orders, and Access). The correlations between IFRS2004 and various explanatory variables are consistent with our hypotheses: (1) IFRS2004 is negatively correlated with Disclosurerq (Pearson correlation significant at the five percent level); (2) IFRS2004 is weakly negatively correlated with Antidir (Pearson correlation significant at the 12 percent level); (3) IFRS2004 is negatively correlated with both Public_enforcement and Orders (Pearson correlation significant at the five percent level); and (4) IFRS2004 is positively correlated with Access (Pearson correlation significant at the eight percent level).

4.2 Regression results

Table 4, Models 1 to 10, presents the results of regressions of the adoption of IFRS by December 31, 2004 on the four investor protection proxies, i.e., disclosure requirement, antidirector rights, public enforcement, orders, and stock market access. Our empirical evidence is consistent with our hypotheses. After controlling for CIFAR, market capitalization and GNP, we find in Models 1 and 2 that countries with low disclosure requirements and weak anti-director rights are more likely to adopt IFRS (the estimated coefficients are negative and t-values are significant at the one percent and five percent level, respectively). Second, Models 3 and 4 show that the coefficients of *Public enforcement* and *Orders* are also negative and significant (*t*-values are significant at the one percent level). Third, we find in Model 5 that countries with greater access of stock markets for foreign investors are more likely to adopt IFRS (the coefficient of Access is positive and t-value is significant at the one percent level). In summary, we find that the adoption of IFRS before the end of 2004 is significantly negatively associated with both the investor protection and law enforcement variables, which is consistent with our hypotheses H1a, H1b, H1c, and H1d. Moreover, IFRS adoption is significantly positively related to the accessibility of domestic stock markets, which is consistent with our hypothesis H2.

Models 6 to 10 present multivariate regression results by testing jointly the impact of investor protection, law enforcement, and market access variables. We find that the coefficients on either *Public_enforcement* (Models 7 and 10) or *Orders* (Models 6 and 9) are negative and significant at the 10 percent level or better, suggesting that the adoption of IFRS by 2004 is negatively correlated with the extent of public and private enforcement of laws within the country. Based on the coefficient on *Access* (Models 6 to 10), we conclude that IFRS adoption is significantly positively associated with the stock market accessibility. Among Models 8 to 10,

the coefficient on *Antidir* is significant only in Model 8 that excludes *Public_enforcement* or *Orders*.

The regression results presented in Table 4 are consistent with our hypotheses. In sum, we have three important findings. First, based on the coefficients on *Disclosurerq* and *Antidir* variables, we conclude that the adoption of IFRS is negatively correlated with the investor protection level within a country. Second, based on the coefficients on *Public_enforcement* and *Orders* variables, we conclude that the adoption of IFRS is negatively associated with the extent of public and private law enforcement. Third, based on the coefficient on the *Access* variable, we conclude that the adoption of IFRS is positively related to the stock market accessibility of a country.

4.3. Robustness Tests

We conduct several robustness tests. First, we replace the dependent variable *IFRS2004* by *IFRS2005* and run the same ten regressions. The dichotomous variable *IFRS2005* is defined as 1 if the countries will have adopted IFRS as of December 31, 2005, and 0 otherwise. Table 5 presents the regression results of the adoption of IFRS by the end of 2005. The regression results are consistent with those of Table 4 and our three main findings remain robust.¹⁶

As an additional (untabulated) robustness test, we add an indicator variable for common law legal system (as compared with code law) as a new control variable to all regressions. We find no significant association between legal origin and the adoption of IFRS. More importantly, our previously reported results continue to hold after controlling for legal origin.

¹⁶ First, based on the coefficients on *Disclosurerq* and *Antidir* variables, we confirm the hypotheses H1a and H1b and find that the adoption of IFRS is negatively correlated with the investor protection level within a country. Second, based on the coefficients on *Public_enforcement* and *Orders* variables, we confirm the hypotheses H1c and H1d and find that the adoption of IFRS is negatively correlated with the extent of public and private law enforcement in a country. Third, based on the coefficient on *Access* variable, we confirm the hypothesis H2 and find that the adoption of IFRS is positively correlated with the stock market access of a country.

5. Conclusions

As international financial reporting standards (IFRS) have been developed and accepted internationally, the decision of a country to adopt IFRS becomes an important topic for researchers and standard setters. This decision can be influenced by various institutional factors. We use Coffee's (2002) bonding theories and cost/benefit analysis to predict the association between adoption of IFRS and certain institutional factors. In particular, we examine the role of investor protection, law enforcement, and stock market access in the adoption decision.

Using a sample of 38 countries, we document a significant negative association between the adoption of IFRS and investor protection or law enforcement. In particular, countries with weak shareholder protection (i.e., poor disclosure rules and weak law enforcement) are more likely to adopt IFRS than are countries with strong shareholder protection. The findings are consistent with the view that countries with weak shareholder protection bond themselves to superior accounting standards in order to access international investors and/or markets. Our empirical analyses further support the view that countries providing better access to their stock markets for international investors are more likely to adopt IFRS. The adoption of IFRS is likely viewed as a means to improve disclosure policies and accounting systems, to enhance the integration of domestic markets into world markets, and to subsequently accelerate economic growth. In order to improve financial reporting quality, the adoption of IFRS by a country is an important step.

One important implication of our study is that countries that already have relatively strong investor protection mechanisms in place might view little incremental net benefit from IFRS adoption. This suggests that standard setters should highlight the benefits of uniform

reporting standards across countries. As Pownall and Schipper (1999) suggest, the components of high quality financial reporting include not only transparency and full disclosure but also comparability. Thus, even if a country already has a reporting system that produces relatively transparent financial information, investors can benefit from cross-country comparability. At a minimum, uniform reporting standards reduce the non-trivial costs of financial statement reconciliation currently associated with international (and in particular U.S.) equity listings (e.g., Biddle and Saudagaran, 1989; Hope, Kang and Zang, 2005), thus potentially facilitating economic growth.

Although the adoption of IFRS is meant to achieve uniformity worldwide, it is possible that this desired uniformity may remain theoretical rather than real due to the lack of simultaneous changes of other accompanying institutions (e.g., Ding et al., 2005). Ball (2001) suggests that greater uniformity of accounting standards is unlikely to achieve greater comparability of financial statements so long as differences in the economic and political infrastructures determine financial reporting in actual practice. He also points out that higher-quality standards do not automatically lead to higher-quality financial reporting. Future research needs to address two important questions: (1) whether the economic, financial and governance institutions at the country level change after the adoption of IFRS; and (2) whether the financial reporting quality of a country improves after the adoption of IFRS.

References

- Ashbaugh, H. 2001. "Non-US firms' accounting standard choices." *Journal of Accounting and Public Policy*, Vol. 20, 129-153.
- Ball, Ray. 2001. "Infrastructure requirements for an economically efficient system of public financial reporting and disclosure." *Brookings-Wharton Papers on Financial Services*, 127-169.
- Barth, M., W. Landsman, M. Lang. 2005. "International accounting standards and accounting quality." Working paper, Stanford University and University of North Carolina.
- Biddle, G.C., and Saudagaran, S. M., 1989. "The effects of financial disclosure levels on firms' choices among alternative foreign stock exchange listings." *Journal of International Financial Management and Accounting* Vol. 1, 55-87.
- Carnachan, R. 2003. "The case for competition between US GAAP and IFRS in US capital Markets." Working paper, Harvard Law School.
- Claessens, S., S. D. Djankov, J. H. Fan, and L. H. P. Lang. 2002. "Disentangling the incentive and entrenchment effects of large shareholdings." *Journal of Finance*, Vol. 57, 2741-2771.
- Coffee, J. C. 2002. "Racing towards the top?: The impact of cross-listings and stock market competition on international corporate governance." Working paper, Columbia Law School.
- Ding, Y., O.-K. Hope, T. Jeanjean, H. Stolowy. 2005. "Differences between domestic accounting standards and IAS: Measurement, determinants and implications." Working paper, HEC Paris and University of Toronto.
- El-Gazzar, S. M., P. M. Finn, and R. Jacob. 1999. "An empirical investigation of multinational firms' compliance with International Accounting Standards." *The International Journal of Accounting*, Vol. 34:2, 239-248.
- Giannetti, M., Y. Koskinen. 2004. "Investor protection and the demand for equity." SSE/EFI Working paper series in Economics and Finance No. 526.
- Hanson, J.A. 1995. "Opening the capital account: Costs, benefits, and sequencing." In *Capital Controls, Exchange Rates, and Monetary Policy in the World Economy*, ed. by S. Edwards, Cambridge University Press, New York, 383-430.
- Hope, O.-K. 2003. "Disclosure practices, enforcement of accounting standards, and analysts' forecast accuracy: An international study." *Journal of Accounting Research*, Vol. 41:2, 235-272.
- Hope, O.-K., T. Kang, Y. Zang. 2005. "The bonding hypothesis revisited: Do cross-listing firm bond to the improved disclosure environment in the United States?" Working paper, University of Toronto and Singapore Management University.
- IASC. "News IASC members approve new constitution." (2000) http://www.iasc.org.uk/news/cen8_096.htm. May 24.
- IASB. "IASB/IAS around the world/capital markets and IFRS/national regulators." (2002) http://www.iasb.org.uk. July 7.
- Jensen, M. C. and W. H. Meckling. 1976. "Theory of the firm: Managerial behavior, agency costs and ownership structure." *Journal of Financial Economics*, Vol. 3, 305-360.
- Kothari, S. P. 2000. "The role of financial reporting in reducing financial risks in the market." In E. S. Rosengren and J. S. Jordan ed.: *Building an Infrastructure for Financial Stability*, Federal Reserve Bank of Boston Conference Series No.44, 89-102.

- KPMG. 2000. "Global financial reporting, IAS or US GAAP?" A European survey, London.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 1997. "Legal determinants of external finance." *Journal of Finance*, Vol. 52, 1131-1150.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 1998. "Law and finance." *Journal of Political Economy*, Vol. 106, 1113-1155.
- La Porta, R., F. Lopez-de-Silanes, and A. Shleifer. 1999. "Corporate ownership around the world." *Journal of Finance*, Vol. 54:2, 471-517.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 2000. "Investor protection and corporate governance." *Journal of Financial Economics*, Vol. 58, 3-27.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 2002. "Investor protection and corporate valuation." *Journal of Finance*, Vol. 57, 1147-1170.
- La Porta, R., F. Lopez-de-Silanes, and A. Shleifer. 2005. "What works in securities laws?" *Journal of Finance*, Forthcoming.
- Leuz, C. 2003. "IAS Versus U.S. GAAP: Information asymmetry-based evidence from Germany's new market." *Journal of Accounting Research*, Vol.41:3, 445-472.
- Leuz, C. and R. Verrecchia. 2001. "The economic consequences of increased disclosure." *Journal of Accounting and Public Policy*, Vol. 20, 129-153.
- Levine, Ross & Zervos, Sara, 1996. "Stock market development and long-run growth." *World Bank Economic Review*, Oxford University Press, Vol. 10:2, 323-339.
- Nenova T. 1999. "The value of a corporate vote and private benefits: a cross-country analysis." Working paper, Harvard University.
- Nicolaisen, D. T. 2005. "A securities regulator looks at convergence." Forthcoming, *Journal of International Law and Business*.
- Pownall, G., and K., Schipper. 1999. "Implications of accounting research for the SEC's consideration of International Accounting Standards for U.S. security offerings." *Accounting Horizons*, Vol. 13, 259-280.
- Reese, W. A., and M. S. Weisbach. 2002. "Protection of minority shareholder interests, cross listings in the United States, and subsequent equity offerings." *Journal of Financial Economics*, Vol. 66, 65-104.
- Revsine, L., D.W. Collins and W.B. Johnson. 2005. *Financial reporting and analysis*. Third edition, Pearson Prentice Hall, New Jersey.
- Ross, S. 1979. "Disclosure regulation in financial markets: Implication of modern finance theory and signaling theory." In Franklin Edwards ed.: *Issues in Financial Regulation*, McGraw-Hill, New York.
- Schwab, K., M. Porter, and J. Sachs. 1999. *The Global Competitiveness Report 1999*. Geneva, World Economic Forum.
- Spence, M. 1973. "Job market signaling." *The Quarterly Journal of Economics*, Vol. 87, 355-374.
- Street, D. L., N. B. Nichols, and S. J. Gray. 2000. "Assessing the acceptability of international accounting standards in the US: An empirical study of the materiality of US GAAP reconciliations by non-US companies complying with IASC standards." *The International Journal of Accounting*, Vol. 35:1, 27-63.
- Sunder, S. 1997. Theory of Accounting and Control. Thompson Learning.
- Tarca, A. 2004. "International convergence of accounting practices: Choosing between IAS and US GAAP." *Journal of International Financial Management and Accounting*, Vol. 15:1, 60-91.

- White, H. 1980. "A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity." *Econometrica*, Vol. 48:4, 817-838.
- Wurgler, J. 2000. "Financial markets and the allocation of capital." *Journal of Financial Economics*, Vol. 58, 187-214.
- Zeff, S. A. 1998. "An American view on CLERP." *Australian Accounting Review*, Vol. 8:2, 3-8. Zingales, L. 1994. "The value of the voting right: A study of the Milan stock exchange experience." *Review of Financial Studies*, Vol. 7, 125-148.

Table 1 Description of the Variables

This table defines the variables collected for the 38 countries included in our study. We present the description and the sources from which each variable is collected.

Variables	Description
IFRS2004	Defined as 1 if the countries have adopted IFRS as of December 31, 2004, and 0 otherwise.
IFRS2005	Defined as 1 if the countries will have adopted IFRS by December 31, 2005, and 0 otherwise.
Early/late	Defined as 0 if the countries adopted IFRS during 2004 or early, 1 if the countries adopted IFRS during 2005, and 2 if the countries do not adopt IFRS before December 31, 2005.
Disclosure requirement	An index aggregating investor protection. We add one when we have any of the six proxies for the strength of specific disclosure requirements pertaining to the promoter's: (1) prospectus; (2) insiders' compensation; (3) ownership by large shareholders; (4) insider ownership; (5) contracts outside the normal course of business; and (6) transactions with related parties. The index is the average of the preceding six proxies. Source: La Porta et al. (2005).
Anti-director rights	An index aggregating shareholder rights. The index is formed by adding one when: (1) the country allows shareholders to mail their proxy vote, (2) shareholders are not required to deposit their shares prior to the General Shareholders' Meeting, (3) cumulative voting or proportional representation of minorities on the board of directors is allowed, (4) an oppressed minorities mechanism is in place, (5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting is less than or equal to 10 percent (the sample median), or (6) when shareholders have preemptive rights that can only be waived by a shareholders meeting. The range for the index is from zero to six. Source: La Porta et al. (1998).
Public enforcement	The index of public enforcement equals the arithmetic mean of: (1) Supervisor characteristics index; (2) Investigative powers index; (3) Orders index; and (4) Criminal index. Source: La Porta et al. (2005).
Orders	The index of orders equals the arithmetic mean of: (1) Orders issuer (An index aggregating stop and do orders that may be directed at the Issuer in case of a defective prospectus. The index is formed by averaging the sub-indexes of orders to stop and to do. The sub-index of orders to stop equals one if the <i>Issuer</i> may be ordered to refrain from a broad range of actions; equals one-half if the <i>Issuer</i> may only be ordered to desist from limited actions; equals zero otherwise. The sub-index of orders to do equals one if the <i>Issuer</i> may be ordered to perform a broad range of actions to rectify the violation; equals one-half if the <i>Issuer</i> may only be ordered to perform limited actions; equals zero otherwise. We disregard orders that may be issued by Courts at the request of a private party in a civil lawsuit.); (2) Orders distributor (An index aggregating stop and do orders that may be directed at the <i>Distributor</i> in case of a defective prospectus. The index is formed by averaging the sub-indexes of orders to stop and to do. The sub-index of orders to stop equals one if the <i>Distributor</i> may be ordered to refrain from a broad range of actions; equals one-half if the <i>Distributor</i> may only be ordered to desist from limited actions; equals zero otherwise. The sub-index of orders to do equals one if the <i>Distributor</i> may be ordered to perform a broad range of actions to rectify the violation; equals one-half if the <i>Distributor</i>

may only be ordered to perform limited actions; equals zero otherwise. We disregard orders that may be issued by Courts at the request of a private party in a civil lawsuit.); and (3) Orders accountant (An index aggregating stop and do orders that may be directed at the *Accountant* in case of a defective prospectus. The index is formed by averaging the sub-indexes of orders to stop and to do. The sub-index of orders to stop equals one if the *Accountant* may be ordered to refrain from a broad range of actions; equals one-half if the *Accountant* may be ordered to perform a broad range of actions to rectify the violation; equals one-half if the *Accountant* may only be ordered to perform limited actions; equals zero otherwise. We disregard orders that may be issued by Courts at the request of a private party in a civil lawsuit.). Source: La Porta et al. (2005).

Access to equity

Index of the extent to which business executives in a country agree with the statement "Stock markets are open to new firms and medium-sized firms." Scale from 1 (strongly disagree) though 7 (strongly agree). Source: Schwab et al. (1999).

CIFAR

CIFAR index represents across-country disclosure environment. We use this CIFAR index to control for the effect of accounting system and financial reporting in a country on the decision of adopting IFRS. Source: Center for International Financial Analysis and Research (CIFAR) 1995.

LogGNP

Logarithmic of per capita Gross National Product (in US dollars) in 1996. Source: 1996 World Development Report.

Market capitalization/GDP

Average of the ratio of stock market capitalization held by small shareholders to gross domestic product for the period 1996-2000. The stock market capitalization held by small shareholders is computed as the product of the aggregate stock market capitalization and the average percentage of common shares not owned by the top three shareholders in the ten largest non-financial, privately-owned domestic firms in a given country. A firm is considered privately-owned if the State is not a known shareholder in it. Source: La Porta et al. (1999).

Table 2

Descriptive Statistics

It presents the variables IFRS2004, IFRS2005, Early/late, Disclosurerq, Antidir, Public_enforcement, Orders, Access, CIFAR, LogGNP, and Mktcap as well as their means for 38 countries. Table 1 defines the variables.

Country	IFRS2004	IFRS2005	Early/late	Disclosurerq	Antidir	Public_ enforcement	Orders	Access	CIFAR	LogGNP	Mktcap
Argentina	0	0	2	0.50	4	0.58	0.08	3.23	68.00	12.40	0.13
Australia	0	1	1	0.75	4	0.90	1.00	6.00	80.00	12.64	0.63
Austria	1	1	0	0.25	2	0.17	0.00	4.89	62.00	12.13	0.07
Belgium	1	1	0	0.42	0	0.15	0.00	5.70	68.00	12.29	0.33
Brazil	0	0	2	0.25	3	0.58	0.75	4.05	56.00	13.03	0.13
Canada	0	0	2	0.92	4	0.80	1.00	6.39	75.00	13.26	0.61
Chile	0	0	2	0.58	3	0.60	0.42	4.80	78.00	10.69	0.50
Colombia	0	0	2	0.42	1	0.58	0.33	2.78	58.00	10.82	0.04
Denmark	1	1	0	0.58	3	0.37	0.33	5.87	75.00	11.84	0.31
Finland	1	1	0	0.50	2	0.32	0.17	6.37	83.00	11.49	0.93
France	0	1	1	0.75	2	0.77	1.00	5.75	78.00	14.07	0.49
Germany	1	1	0	0.42	1	0.22	0.00	5.93	67.00	14.46	0.26
Greece	1	1	0	0.33	1	0.32	0.17	5.28	61.00	11.25	0.25
Hong Kong	1	1	0	0.92	4	0.87	1.00	5.50	73.00	11.56	1.39
India	0	0	2	0.92	2	0.67	0.67	5.30	61.00	12.50	0.19
Ireland	0	1	1	0.67	3	0.37	0.00	5.29	81.00	10.73	0.42
Israel	0	0	2	0.67	3	0.63	1.00	5.35	74.00	11.19	0.24
Italy	0	1	1	0.67	0	0.48	0.00	4.41	66.00	13.94	0.19
Japan	0	0	2	0.75	3	0.00	0.00	4.92	71.00	15.18	0.59
Korea	0	0	2	0.75	2	0.25	0.08	5.02	68.00	12.73	0.32
Malaysia	0	0	2	0.92	3	0.77	1.00	5.11	79.00	11.00	0.78
Mexico	0	0	2	0.58	0	0.35	0.00	3.90	71.00	12.69	0.11
Netherlands	1	1	0	0.50	2	0.47	0.00	6.43	74.00	12.68	0.88
New Zealand	0	0	2	0.67	4	0.33	0.00	5.82	80.00	10.69	0.25
Norway	0	1	1	0.58	3	0.32	0.33	5.57	75.00	11.62	0.25
Philippines	0	0	2	0.83	4	0.83	1.00	4.62	64.00	10.44	0.28
Portugal	0	1	1	0.42	2	0.58	0.25	4.50	56.00	11.41	0.22
Singapore	0	0	2	1.00	3	0.87	1.00	5.50	79.00	11.68	0.80
South Africa	1	1	0	0.83	4	0.25	0.00	5.94	79.00	10.92	0.78
Spain	0	1	1	0.50	2	0.33	0.00	5.09	72.00	13.19	0.32
Sweden	0	1	1	0.58	2	0.50	0.67	6.15	83.00	12.28	0.90
Switzerland	1	1	0	0.67	1	0.33	0.00	6.07	80.00	12.44	1.44

Taiwan	0	0	2	0.75	3	0.52	0.17	5.54	58.00	12.34	0.83
Thailand	0	0	2	0.92	3	0.72	0.33	4.24	66.00	11.72	0.18
Turkey	1	1	0	0.50	2	0.63	0.00	5.03	58.00	12.08	0.13
United Kingdom	0	1	1	0.83	4	0.68	1.00	6.26	85.00	13.86	1.20
United States	0	0	2	1.00	5	0.90	1.00	6.74	76.00	15.67	1.18
Zimbabwe	1	1	0	0.50	3	0.42	0.08	4.93	72.00	8.63	0.15
Sample mean	0.32	0.55	1.13	0.65	2.55	0.51	0.39	5.27	71.32	12.20	0.49

Among our sample of 38 countries, 12 (21) countries voluntarily adopted IFRS by the end of 2004 (2005).

Table 3 Univariate correlations (Pearson and Spearman correlations)

	IFRS2004	IFRS2005	Disclosurerq	Antidir	Public_	Orders	Access	CIFAR	Mktcap	LogGNP
			•		enforcement				•	C
IFRS2004		0.611 (<0.0001)	-0.393 (0.015)	-0.274 (0.096)	-0.429 (0.007)	-0.415 (0.010)	0. 292 (0.076)	-0.031 (0.853)	0.096 (0.568)	-0.150 (0.370)
IFRS2005	0.611 (<0.0001)		-0.384 (0.017)	-0.304 (0.064)	-0.326 (0.046)	-0.314 (0.055)	0. 362 (0.026)	0.208 (0.210)	0. 184 (0.270)	0. 022 (0.897)
Disclosurerq	-0.378 (0.019)	-0.373 (0.021)		0. 559 (0.0003)	0. 568 (0.0002)	0. 509 (0.001)	0. 286 (0.082)	0.390 (0.015)	0. 502 (0.001)	0. 101 (0.545)
Antidir	-0.259 (0.116)	-0.284 (0.083)	0. 519 (0.001)		0. 490 (0.002)	0. 498 (0.002)	0. 216 (0.192)	0.351 (0.031)	0. 303 (0.065)	-0.167 (0.317)
Public_enforcement	-0.394 (0.014)	-0.294 (0.073)	0. 556 (0.0003)	0. 480 (0.002)		0. 806 (<0.0001)	0. 032 (0.851)	0.088 (0.600)	0. 172 (0.302)	-0.014 (0.935)
Orders	-0.403 (0.012)	-0.282 (0.086)	0. 557 (0.0003)	0. 513 (0.001)	0. 828 (<0.0001)		0. 159 (0.339)	0.191 (0.252)	0. 270 (0.100)	-0.051 (0.759)
Access	0.307 (0.060)	0.384 (0.017)	0. 323 (0.048)	0. 251 (0.128)	0. 023 (0.893)	0. 220 (0.185)		0.652 (<0.0001)	0. 754 (<0.0001)	0. 227 (0.171)
CIFAR	-0.026 (0.877)	0. 195 (0.242)	0. 415 (0.009)	0. 328 (0.045)	0. 068 (0.683)	0. 248 (0.134)	0. 602 (<0.0001)		0. 678 (<0.0001)	-0.067 (0.687)
Mktcap	0.152 (0.364)	0.168 (0.312)	0.500 (0.001)	0.321 (0.050)	0.255 (0.123)	0.344 (0.034)	0.649 (<0.0001)	0.593 (<0.0001)		0.160 (0.337)
LogGNP	-0.191 (0.252)	-0.025 (0.880)	0. 150 (0.368)	-0.075 (0.656)	-0.015 (0.929)	0. 095 (0.572)	0. 249 (0.132)	0.007 (0.965)	0. 233 (0.159)	

See Table 1 for explanations of variables. The lower left half of the matrix contains Pearson correlations and the upper right half of the matrix contains Spearman correlations. The Pearson and Spearman correlations in bold are significant at the 10 percent level (two-tailed) or better. N = 38.

Table 4
Results of OLS regressions on adoption of IFRS by December 2004-Various Regression Specifications
Dependent variable: IFRS2004

	Pred.	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Disclosurerq	_	-1.322 (-3.49)***					-0.840 (-2.30)**	-0.842 (-2.13)**			
Antidir	_		-0.141 (-2.24)**						-0.145 (-2.59)**	-0.074 (-1.29)	-0.078 (-1.33)
Public_enforcement	_			-1.033 (-3.53)***				-0.563 (-1.82)*			-0.735 (-2.41)**
Orders	-				-0.566 (-3.31)***		-0.375 (-2.32)**			-0.450 (-2.65)**	
Access	+					0.317 (2.78)***	0.289 (3.14)***	0.265 (2.78)***	0.324 (3.08)***	0.311 (3.22)***	0.280 (2.80)***
CIFAR	_	-0.007 (-0.67)	-0.009 (-0.84)	-0.017 (-1.74)*	-0.011 (-1.10)	-0.025 (-2.23)**	-0.019 (-2.02)*	-0.022 (-2.21)**	-0.022 (-2.04)**	-0.021 (-2.20)**	-0.025 (-2.48)**
Mktcap	+	0.693 (2.95)***	0.542 (2.19)**	0.663 (2.87)***	0.614 (2.64)**	0.145 (0.57)	0.456 (2.09)**	0.484 (2.13)**	0.252 (1.05)	0.353 (1.58)	0.405 (1.74)*
LogGNP	_	-0.080 (-1.60)	-0.109 (-1.99)*	-0.109 (-2.20)**	-0.088 (-1.74)*	-0.123 (-2.30)**	-0.109 (-2.54)**	-0.119 (-2.67)**	-0.141 (-2.82)***	-0.128 (-2.78)***	-0.141 (-3.03)***
Intercept		2.286 (2.41)**	2.393 (2.31)**	3.092 (3.15)***	2.094 (2.18)**	1.874 (1.87)*	1.934 (2.40)**	2.508 (2.87)***	2.106 (2.26)**	1.948 (2.28)**	2.699 (2.99)***
Adj. R-square (%)		27.20	13.53	27.66	25.18	19.29	47.94	44.83	31.17	42.11	40.19

T-statistics (in parentheses) are based on White (1980). N = 38.

^{***} Significant at the one percent level; ** Significant at the five percent level; * Significant at the 10 percent level.

Table 5
Robustness Test
Results of OLS regressions on adoption of IFRS by December 2005-Various Regression Specifications
Dependent variable: IFRS2005

	Pred.	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Disclosurerq	-	-1.609 (-3.96)***					-1.341 (-3.09)***	-1.519 (-3.28)***			
Antidir	_		-0.173 (-2.54)**						-0.177 (-2.81)***	-0.133 (-1.90)*	-0.150 (-2.09)**
Public_enforcement	_			-0.773 (-2.17)**				-0.014 (-0.04)			-0.301 (-0.81)
Orders	-				-0.474 (-2.34)**		-0.178 (-0.93)			-0.278 (-1.35)	
Access	+					0.297 (2.27)**	0.261 (2.40)**	0.260 (2.33)**	0.305 (2.57)**	0.297 (2.53)**	0.287 (2.35)**
CIFAR	_	0.016 (1.49)	0.013 (1.09)	0.005 (0.41)	0.010 (0.83)	-0.003 (-0.25)	0.005 (0.49)	0.005 (0.48)	0.001 (0.12)	0.002 (0.13)	0.001 (0.01)
Mktcap	+	0.447 (1.78)*	0.265 (0.98)	0.303 (1.08)	0.281 (1.02)	-0.137 (-0.47)	0.215 (0.83)	0.196 (0.74)	-0.008 (-0.03)	0.054 (0.20)	0.055 (0.19)
LogGNP	_	-0.003 (-0.06)	-0.038 (-0.65)	-0.031 (-0.51)	-0.014 (-0.24)	-0.047 (-0.77)	-0.030 (-0.58)	-0.030 (-0.56)	-0.069 (-1.22)	-0.061 (-1.08)	-0.069 (-1.21)
Intercept		0.269 (0.27)	0.405 (0.36)	0.820 (0.69)	0.065 (0.06)	-0.141 (-0.12)	-0.012 (-0.01)	0.043 (0.04)	0.137 (0.13)	0.039 (0.04)	0.381 (0.35)
Adj. R-square (%)		27.41	10.35	6.26	8.09	7.35	36.24	34.40	23.34	25.25	22.52

T-statistics (in parentheses) are based on White (1980). N = 38.

^{***} Significant at the one percent level; ** Significant at the five percent level; * Significant at the 10 percent level.