THE IMPACT OF MANDATORY IFRS ADOPTION ON STOCK EXCHANGE LISTINGS: INTERNATIONAL EVIDENCE

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ABSTRACT

This paper investigates the change in firm listing activities in thirteen countries around two IFRS adoption events, the time the IFRS adoption decision is made and the time IFRS becomes effective. The results show that overall listings including both domestic and foreign firms on stock exchanges decrease after the IFRS adoption decision is announced, then increase after IFRS becomes effective. A further examination provides similar evidence for only listed domestic firms. Lastly, this paper finds similar results regardless of the law systems (common law or code law) of countries where firms domicile in.

INTRODUCTION

In the globalization of world economy and capital markets, more and more countries either have already adopted International Accounting Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) or are in the process of converting local accounting standards to IFRS. There are many perceived political and economical benefits as a result of adopting IFRS, such as, increased market liquidity, decreased transaction costs for investors, lower cost of capital, and facilitation of international capital flows. This study examines one of many capital market consequences, public company listings on stock exchanges in IFRS adoption countries.

Specifically, this paper investigates whether adoption of IFRS affects listings of public companies in countries mandating IFRS. Adoption of IFRS generally increases financial reporting costs of public local firms, at least in the first few financial reporting periods. Meanwhile, conformity to IFRS can improve accounting reporting quality and thereby lower the cost of capital. If high costs of complying with IFRS outweigh potential benefits, then listed local firms may decide to go private and private local firms will have no incentives to go public because private firms are often exempt from complying with IFRS. IFRS adoption, however, has different cost and benefit implications for cross-listed foreign firms. Adoption of IFRS in a country generally provides the convenience and incentive for foreign companies to enter this country's capital markets and raise capital because of lower cost of complying with an international stock exchange requirement, particularly when foreign firms come from countries

already requiring or permitting use of IFRS. Moreover, the effect of IFRS adoption on stock exchanges may vary among different countries. For example, IFRS adoption countries with high quality local accounting standards will incur different costs and benefits than countries with low quality local accounting standards. With different costs and benefits for different countries, the impact of mandatory IFRS adoption on stock exchange listings could vary across countries.

This paper examines whether there is a change in listing activities around two important events in thirteen IFRS adoption countries, the year when the IFRS adoption decision is made and the year when IFRS becomes effective. It examines the listing changes around these two events for different samples, all firms listed, domestic firms listed, and firms listed on stock exchanges partitioned by common law or code law countries, which is a proxy for a country's institutional factors. The results generally show that listings on stock exchanges decrease after the IFRS adoption decision is announced, but increase after IFRS becomes effective.

Most prior research that examines the consequences of IFRS adoption focuses on the effects of voluntary IFRS adoption on individual firms (e.g., Armstrong, Barth, Jagolinzer & Riedl, 2010; Daske, Hail, Leuz & Verdi, 2008). There are only a few studies that examine the effect of mandatory adoption on individual firms. Armstrong, Barth, Jagolinzer & Riedl (2010) find that firms in financial industry or with lower quality pre-adoption information receive net information quality benefits from mandatory IFRS adoption, firms domiciled in code law countries receive negative reaction, and firms with high quality pre-adoption information receive positive reaction. Daske, Hail, Leuz & Verdi (2008) also examines the economic consequences of mandatory IFRS reporting and find an increase in market liquidity and equity valuations, and a decrease in cost of capital around the time of the introduction of IFRS. Daske, Hail, Leuz & Verdi (2008) also find that the capital-market benefits occur only in countries where firms have strong incentives to be transparent and legal enforcement is strong.

This study adds to the limited number of research on mandatory IFRS adoption. Moreover, in contrast to studies that examine the impact of mandatory IFRS adoption on individual companies, this paper contributes to the literature by examining a macro phenomenon - the overall listings at country level - in thirteen countries before and after mandatory adoption of IFRS. The findings suggest that there is a temporary negative market reaction to the improved accounting disclosure requirement, but after a period of time firms in IFRS adoption countries learn to embrace it.

BACKGROUND AND RESEARCH QUESTIONS

Since European Union (EU) countries announced the decision to use IFRS for accounting periods starting on or from 2005, nearly 85 countries around the world currently require the use of IFRS in financial reporting and more than 20 countries permit the use of IFRS (http://www.sec.gov/news/press/2008/2008-184.htm). More and more countries are joining in this trend. For example, Canada and India have announced a plan to adopt IFRS as local

financial reporting standards effective 2011; Mexico and Malaysia will convert to IFRS effective 2012 (http://www.iasplus.com). In the US, the SEC has waived the requirement of reconciliation to US GAAP for foreign firms registered in the US that prepare financial statements in full compliance with IFRS; it has also proposed a road map that could mandate adoption of IFRS beginning in 2014 (SEC, 2008).

It is evident that different countries have taken different paces and attitudes towards adopting IFRS. Some countries are early pioneers in this accounting globalization process while others are still hesitating or even have reservations of using it. For example, the SEC chair, Mary Schapiro, is concerned that the conversion to IFRS might be costly to companies, noting that the SEC estimates that the price tag could run as high as $32 million for the largest firms adopting IFRS in the first three years of 10-k filing. Thus, the move to IFRS from US GAAP slows down.

There are a few studies at country level that examine why some countries ex-ante are early adopters of IFRS. Ramanna & Sletten (2010) find that countries with less power, low opportunity cost of domestic standards, close proximity to IFRS standard setters are more willing to adopt IFRS. However, they do not find that the level of foreign trade investment in a country affects the adoption decision, which is not consistent with the general notion that IFRS lowers information costs in global economy. Relatedly, Hope, Kang & Jin (2006) find that, consistent with bonding theory, countries with weaker investor protection mechanisms are more likely to adopt IFRS. It also shows that countries that provide better access to their domestic capital markets are more likely to adopt IFRS. Hope, Kang & Jin (2006) results suggest that IFRS is a mechanism through which countries can improve investor protection and make their capital markets more accessible to foreign investors.

In general, prior research suggests that IFRS adoption countries ex-ante perceive certain benefits from complying with IFRS and such benefits exceed increased costs in financial reporting. However, ex-post, it is still an empirical question whether these benefits are realized after these countries convert from local GAAP to IFRS. Moreover, Ramanna & Sletten (2010) and Hope, Kang & Jin (2006) studies do not find consistent results on whether the IFRS adoption would reduce information cost and hence make capital markets more accessible. Thus, this paper examines stock exchange listings in IFRS adoption countries to gauge whether stock markets in these countries receive the perceived benefits from their choice and hence are more accessible after the adoption of IFRS. To explore the effect of adopting IFRS on local capital markets, this study examines the listing activities on stock exchanges in IFRS adoption countries hinged on two events in the introduction of IFRS, the decision of IFRS adoption and the actual IFRS implementation. The first two research questions, stated in the alternative, are as follows:

Research Question 1: There is a change of stock exchange listings around the time when IFRS adoption decision is made.

Research Question 2: There is a change of stock exchange listings around the time when IFRS becomes effective in financial reporting.

IFRS adoption affects domestic and cross-listed firms differently. Cross-listed firms are likely to benefit more or incur lower costs than domestic firms for a few reasons. First, foreign firms who cross-list in international stock exchanges are usually large in size and thus have more ability to bear high financial reporting costs. Second, cross-listed firms have more international backgrounds and are generally more in favor of accounting globalization and IFRS adoption. Third, IFRS adoption would lower the cost of complying with an international stock exchange requirement for foreign firms if they have already voluntarily adopted IFRS or come from IFRS convergence countries. Thus, this paper also examines the impact of IFRS on listings of domestic firms. It is worth noting that although a comparison of the impacts on the domestic and foreign firms will be more meaningful, the data limitation allows us to examine domestic firms only. This leads to the third research question which is stated in the alternative as follows:

Research Question 3: There is a change of domestic firm listings around the two time points, adoption decision time and effective time.

Different countries perceive accounting convergence differently. Some countries have high quality local GAAP that have been harmonized with IFRS and hence face less cost in IFRS adoption. Some countries voluntarily adopt IFRS after weighing the costs and benefits and have made extensive study and preparation before using IFRS; in contrast, some countries like EU countries conform to IFRS because EU mandates it and some other countries move to IFRS just to be in line with most of the world. Enforcement is also likely to vary across countries with different shareholder protection and other local institutional factors (Ball, 2009; Jeanjean & Stolowy, 2008; Hodgdon, Tondkar, Adhikari & Harless, 2009). To investigate the difference in the IFRS adoption's impact on different countries, the sample is partitioned into two groups: common law and code law. These two different law regimes vary materially in the levels of shareholder protection (La Porta, Lopez-de-Silanes, Shleifer & Vishny, 1998) and properties of local financial reporting (Ball, Kothari & Robin, 2000). This leads to the fourth research question which is stated in the alternative as follows:

Research Question 4: The change in stock exchange listings differs between common law countries and code law countries.

Because previous research and theory, *a priori*, does not consistently support whether the adoption of IFRS causes an increase or decrease in the firm listings, thus all research questions are non-directional. Therefore, in the next section, results in Tables 2, 3 and 4 are based on two-tailed statistical tests.

DATA AND RESULTS

Data are drawn mainly from two sources. Deloitte's website, http://www.iasplus.com/country/useias.htm, is used to obtain countries' IFRS adoption status, and web searches are conducted to determine IFRS adoption years and effective years for non-EU countries. There are several types of IFRS adoption status, IFRS required for all public companies, IFRS permitted, IFRS required for companies in some industries, and IFRS not permitted. This study only considers the full adoption cases, i.e., IFRS required for all public companies.

World Federation of Exchanges website, http://www.world-exchanges.org/, is used to obtain listing and delisting data in every country. To be included in the final sample, countries must have listing data for every year in the sample period from 2000 to 2008.

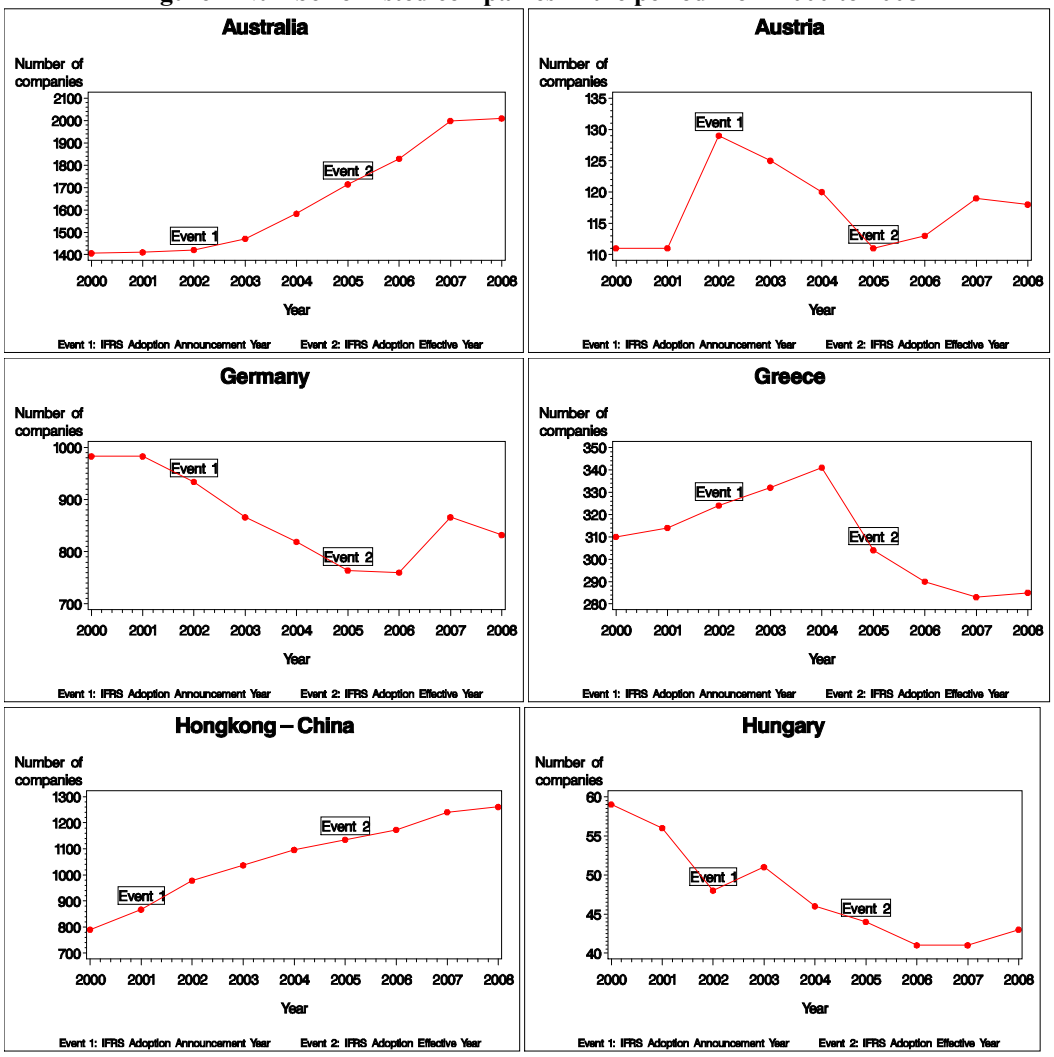
The final sample consists of thirteen countries that comply with IFRS and have listing data available for each year in the entire sample period. A few countries are dropped because listing data by country is not available after merger of stock exchanges (For example, NASDAQ OMX Nordic Exchange consolidated data started in 2005 and include Copenhagen, Helsinki, Iceland, Stockholm, Tallinn, Riga and Vilnius Stock Exchanges; Euronext was formed on 22 September 2000 following a merger of the Amsterdam Stock Exchange, Brussels Stock Exchange, and Paris Bourse, and later in 2002, the group merged with the Portuguese stock exchange Bolsa de Valores de Lisboa e Porto (BVLP)). Table 1 presents information of final sample countries, the year to decide adoption of IFRS, IFRS effective year, and the number of listed companies in the IFRS adoption year for every country. The final sample consists mainly of European countries. It includes Australia, Hong Kong, New Zealand, South Africa, and 9 EU countries. Most countries except New Zealand mandated IFRS for financial periods beginning on or after January 1, 2005.

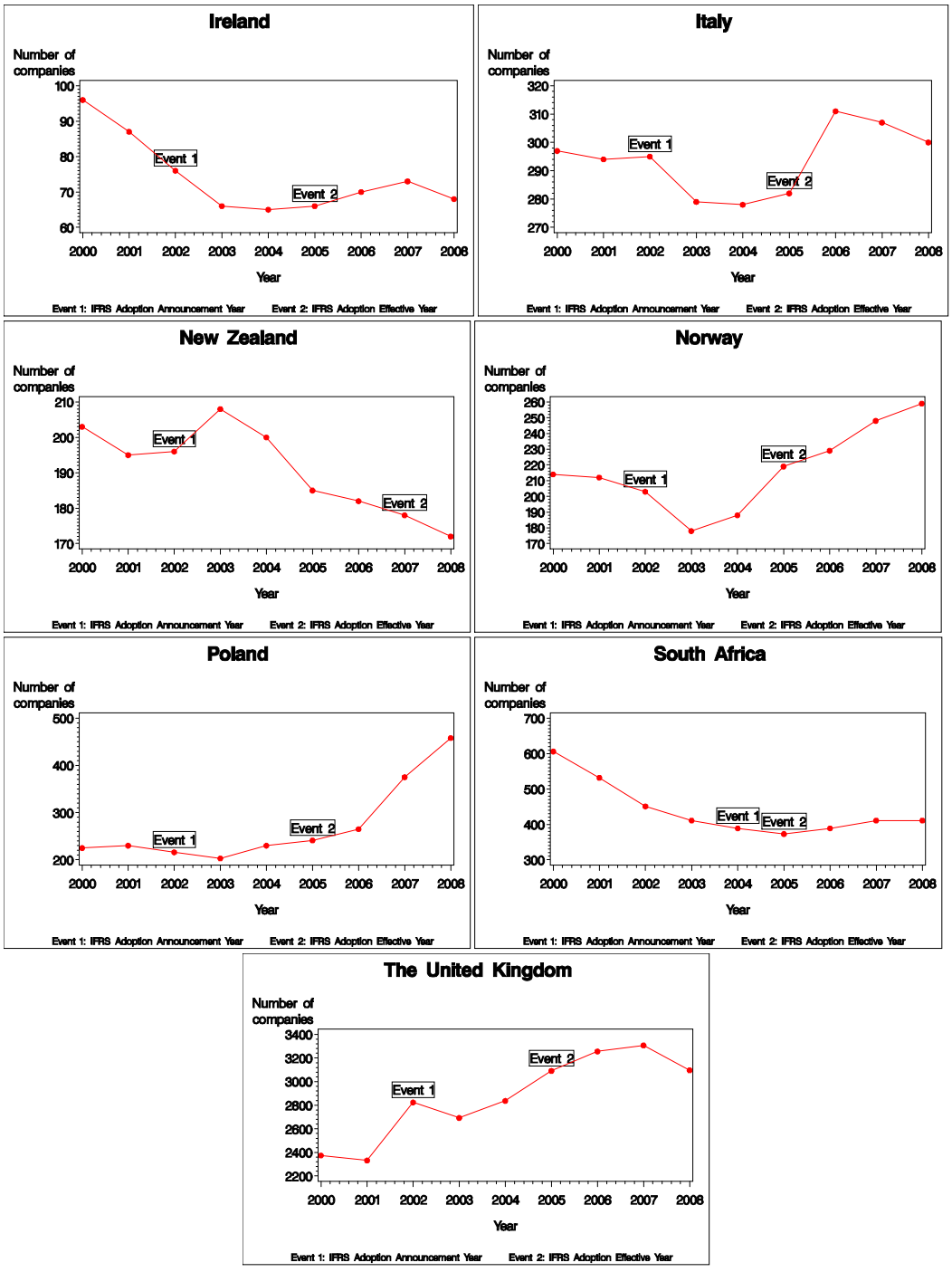
Table 1 Sample Countries

Country	IFRS adoption announcement year	IFRS adoption effective year	Number of companies listed in IFRS adoption effective year
Australia	2002	2005	1714
Austria	2002	2005	111
Germany	2002	2005	764
Greece	2002	2005	304
Hong Kong, China	2001	2005	1135
Hungary	2002	2005	44
Ireland	2002	2005	66
Italy	2002	2005	282
New Zealand	2002	2007	178
Norway	2002	2005	219
Poland	2002	2005	241
South Africa	2004	2005	373
The United Kingdom	2002	2005	3091

For each country, its number of firms listed in every year during the sample period is graphed. The graphs are shown in Figure 1. In Australia and Hong Kong, listing is monotonically increasing in every year, even around these two event years, which suggests that they are not affected by IFRS adoption. This trend is generally consistent with that Australia and Hong Kong have previously taken many efforts to harmonize their local accounting standards with International Accounting Standards. In South Africa, the listing decreases in pre-IFRS adoption period and increases slightly in the post-IFRS adoption period. In New Zealand, the listing first increases after the IFRS adoption decision, then decreases. The majority of EU countries, such as Austria, Germany, Ireland, Italy, Norway, observe listing decrease and then increase, which suggest that there is a negative reaction to IFRS adoption but such negative effect on stock exchanges gradually disappear and changes to positive trend.

Figure 1 Number of listed companies in the period from 2000 to 2008





To examine research question 1, this study compares the average of listing change rates, with one year rate computed as (number of listed firms in current year- number of listed firms in last year)/number of listed firms in last year, during the two year period before the event year and the two year period after the event year. Prior research on the impact of an event on stock listing

typically examines the new listed firms and delisted firms (Kamar, Karaca-Mandic & Talley, 2009; Piotroski & Srinivasan, 2008; He, 2008). Similarly, this listing rate variable captures the net effect of new listed firms and delisted firms during the pre- and post-event period. Because this study examines and compares the same observations, firm listings of thirteen countries, in the pre-IFRS period and the post-IFRS period, therefore paired t-test is used. Table 2 reports the t-test results to compare listing activities around two time points, the time when the IFRS adoption decision is made and the time when IFRS becomes effective. Table 2 Panel A shows that after countries announced their IFRS conversion decision, there is a decrease, albeit insignificant (t=1.17) in number of listed companies. Table 2 Panel B shows that after IFRS become effective, there is a significant increase (t=2.96) in number of listed companies. In summary, regarding research questions 1 and 2, the results show different market reactions.

Table 2 Paired t-test of Difference in Listing Activities in the Pre- and Post-IFRS Periods

	Pre-IFRS mean	Post-IFRS mean	t-statistics	No. of Observations
Panel A Use IFRS adoption announcement year to separate pre- and post-IFRS periods	0.036	-0.009	1.17	13
Panel B Use IFRS adoption effective year to separate pre- and post-IFRS periods	-0.029	0.110	2.96**	13

Variable Definition: Listing Activity is calculated for every year as (number of listed firms in current year – number of listed firms last year)/number of listed firms last year.
*, **, and *** indicate statistical significance at the 1%, 5%, and 10%, respectively.

To further examine the listing activity changes influenced by the IFRS adoption, i.e., research question 3, this paper focuses on just a subset of listed companies, domestic firms. Foreign firms are not separately studied because some countries in the final sample have too few foreign firms to conduct a test.The results are presented in Table 3. Every year's domestic firms listing change rate is computed as (number of domestic firms listed in current year- number of domestic firms listed in last year)/number of domestic firms listed in last year. Then the average listing rate for the two year period before the event and the two year period after the event is compared. Table 3 Panel A shows that after countries announced their IFRS conversion decision, there is a decrease in the number of listed domestic companies, albeit insignificant (t=1.72) in two-tailed test and significant only when one tailed test is used. Table 3 Panel B shows that after IFRS become effective, there is a significant increase (t=2.53) in the number of listed domestic companies.

Table 3 Paired t-test of Difference in Domestic Firms Listings in the Pre- and Post-IFRS Periods

	Pre-IFRS mean	Post-IFRS mean	t-statistics	No. of observations
Panel A Use IFRS adoption announcement year to separate pre- and post-IFRS periods	0.058	-0.009	1.72	13
Panel B Use IFRS adoption effective year to separate pre- and post-IFRS periods	-0.029	0.095	2.53**	13

Variable Definition: Listing Activity is calculated for every year as (number of listed firms in current year – number of listed firms last year)/number of listed firms last year.
*, **, and *** indicate statistical significance at the 1%, 5%, and 10%, respectively.

To examine research question 4, the final sample is partitioned into two groups, common law countries and code law countries. As in shown in Table 4, in both groups, listed firms decrease at the time the IFRS adoption decision is made and increase at the time IFRS becomes effective; however, such change is only significant for common law countries at the time the IFRS adoption decision is made.

Table 4 Paired t-test of Difference in Listing Activity in the Pre- and Post-IFRS Periods for Common Law Countries and Code Law Countries

	Pre-IFRS mean	Post-IFRS mean	t-statistics	No. of Observations
Panel A Use IFRS adoption announcement year to separate pre- and post-IFRS periods				
Common law countries	0.036	0.016	1.18	7
Code law countries	0.035	-0.039	1.72	6
Panel B Use IFRS adoption effective year to separate pre- and post-IFRS periods				
Common law countries	0.015	0.177	2.33**	7
Code law countries	-0.068	0.043	1.71	6

Variable Definition: Listing Activity is calculated for every year as (number of listed firms in current year – number of listed firms last year)/number of listed firms last year.
*, **, and *** indicate statistical significance at the 1%, 5%, and 10%, respectively.

Due to the limitation of using a small sample size, sensitivity tests using nonparametric Wilcoxon signed rank test are performed. Results are consistent and thus untabulated.

CONCLUSION

This paper examines whether the adoption of IFRS affects stock exchange listings in thirteen countries. The first two research questions investigate whether there is a change in firm listings around two IFRS adoption events, the IFRS adoption announcement year and the IFRS adoption effective year. The results show that after these countries decide to comply with IFRS, stock exchanges see a decline in listings. However, a few years later when these countries actually comply with IFRS, stock exchanges start to see an increase in listings. The results suggest that firms in IFRS adoption countries are not willing to subject themselves to stricter IFRS, but only for a limited period of time.

Research question 3 expects that domestic firms may have different view towards IFRS adoption than listed foreign firms. The results based on domestic firms are similar in that domestic firms listings decrease at the announcement year but increase around the effective year. However, due to small sample of listed foreign firms, it is unable to compare different reactions of listed domestic firms and listed foreign firms.

Similar results are also found for research question 4 when countries are partitioned based on common or code law. Regardless of the institutional environment of a country, there is a decrease around the IFRS adoption announcement and an increase around the IFRS effective year.

Although this paper finds consistent decrease of firm listings at the announcement year and increase around the effective year, these results should be interpreted with caution as some are not statistically significant. Overall, the results suggest that the mandatory adoption of IFRS has a short term negative impact on stock exchange listings, but such negative effect fades away after these countries adapt to it. Eventually, firms recognize the value of high-quality global accounting standards.

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