The Effects of IFRS Adoption on Cross-border Information Comparability and Economic Activity

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The effects of IFRS adoption on cross-border information comparability and economic activity.

Submitted by YIP Wing Yue

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Abstract:

Demand for internationally comparable accounting information has increased significantly in recent years due to rapid growth in cross-border investment. One reflection of this trend is the widespread adoption of International Financial Reporting Standards (IFRS), a set of accounting rules designed to improve financial reporting quality, including comparability. In this thesis, I empirically test whether IFRS adoption improves cross-border information comparability and whether the improvement in the information comparability, if any, facilitates international investment such as mergers and acquisitions (M&As).

In the first part of the thesis, I use data from 17 European countries that adopted IFRS in 2005 to investigate the effect of IFRS adoption on information comparability. I employ three proxies – the similarity of accounting functions, the degree of cross-border intra-industry information transfer, and the similarity of the information content of earnings and book value – to measure cross-border information comparability. I find that all three measures of information comparability indicate significantly better comparability in the post-IFRS period than in the pre-IFRS period. I also find that the improvement in comparability resulting from IFRS adoption is more evident among countries with similar institutional environments than among those with different institutional environments.

In the second part of the thesis, I examine whether the adoption of IFRS would encourage cross-border M&As. Using data from firms in 17 European countries with mandatory IFRS adoption in 2005, I calculate the frequency that a firm acquires/ merges with a foreign firm, the number of foreign bidders involved in an M&A deal, and the synergistic gains of cross-border M&As. I find that all three measures increase significantly after the mandatory IFRS adoption. These results suggest that IFRS adoption facilitates and create more value for cross-border M&As.

Keywords: IFRS adoption; information comparability; institutional environment

摘要:

由於近年跨國投資活動迅速增長，市場對國際會計訊息的可比較性的需求亦顯著增加，而國際財務報告準則之廣泛採用，正是這種趨勢的一個反映。在本篇論文中，我以實證的方法研究國際財務報告準則之採用是否能夠改善跨國訊息的可比較性，然後進一步探究此等可比較性的改善(如有)，是否能夠鼓勵公司參與跨國的合併與收購活動。

由於歐盟自二零零五年起全面執行國際財務報告準則，我在論文的第一部分，收集了歐洲十七個國家的公司數據，並採用三個方法量度跨國訊息可比性：一、會計函數的相似度；二、行業內訊息的跨境傳遞程度；以及三、盈餘信息含量的相似度。三個方法的結果同樣顯示跨國訊息的可比較性在國際財務報告準則強制執行後顯著提升，這表示國際財務報告準則之採用改善了跨國訊息的可比性。另外，我亦發現跨國訊息的可比較性之改善在制度環境相似的國家之間更爲明顯。

在論文的第二部分，我研究跨國的公司合併與收購活動會否因着國際財務報告準則之採用及跨國訊息可比較性之提升而變得更加活躍。 同樣地，我收集了歐洲十七個國家的跨國公司合併與收購活動數據以量度：一、公司跨國合併和收購之頻率；二、國外公司發出收購建議的數目；以及三、合併和收購活動的協同效應。結果顯示在採用國際財務報告準則後，公司跨國合併和收購之頻率、國外公司發出收購建議的數目，及合併和收購活動的協同效應都顯著增加。這些結果証明了多國採用統一的國際財務報告準則能促進跨國公司合併與收購活動，並提升了併購的協同效應。

關鍵詞: 國際財務報告準則，可比較性，合併與收購

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To my parents, who encourage me to pursue a happy life. My thesis is dedicated to them.

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PART ONE

IFRS Adoption and Cross-border Information Comparability

CHAPTER 1 Introduction

Demand for internationally comparable accounting information has increased significantly in recent years due to rapid growth in cross-border investment. One reflection of this trend is the widespread adoption of International Financial Reporting Standards (IFRS), a set of accounting rules designed to improve financial reporting quality, including comparability. As IFRS have become perhaps the most important financial regulations in recent years, the effects of their adoption have been examined by many studies (e.g., Armstrong et al. 2010; Horton and Serafein 2009; Gjerde et al. 2008; Clarkson et al. 2008; Capkun et al. 2008; Daske et al. 2008). However, to the best of my knowledge, little is known about the effect of IFRS adoption on cross-border information comparability. This is surprising because better comparability has been predicted to be one of the main benefits of IFRS adoption. The purpose of this study is thus to document empirical evidence on this issue.

Information comparability is a qualitative characteristic of financial reporting that allows users to compare the financial statements of different entities to evaluate their relative financial positions, their performance, and any changes in their financial positions (IASB

1989). Although it is intuitively appealing that using a common business language in different countries would improve information comparability across national borders, the existing literature indicates that the reporting incentives of firms can significantly affect their financial reporting properties and hence the effectiveness of accounting standards (e.g., Ball et al. 2003; Leuz et al. 2003; La Porta et al. 1999; Fan and Wong 2002; Watts and Zimmerman 1986). For example, Ball et al. (2003) find that although common-law-style accounting standards are used, financial reporting in Hong Kong, Malaysia, Singapore, and Thailand is more similar to reporting in code-law countries than to reporting in common-law countries due to the differing incentives of the report preparers, suggesting that a switch to IFRS may not by itself be sufficient to bring about an improvement in information comparability. Whether IFRS adoption can effectively improve cross-border information comparability is thus an empirical question.

A high level of information comparability enables information users to identify both similarities in and differences between two sets of economic phenomena (FASB 1980). Accordingly, information comparability has two dimensions: identical economic activities are accounted for in identical ways, and different economic activities are accounted for in different ways. This implies that if cross-border financial information is comparable, then the earnings reported by firms in different countries will be more similar if the firms are exposed to similar economic shocks and more different if they are exposed to different economic

shocks. In this study, I focus on the first dimension of comparability. I also assume that firms in the same industry face similar economic shocks, and thus refer to them as similar firms. I use data from 17 European countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom), where listed companies must prepare their first consolidated financial statements using IFRS in 2005, to empirically test whether the accounting information of similar firms becomes more comparable across these countries following IFRS adoption.

I also examine whether the impacts of IFRS adoption on information comparability, if any, are affected by a firm's institutional environment. Ernst and Young (2006) finds that the IFRS-based financial statements of some of the largest European companies in 2005 contained a strong national identity. They posit that this is primarily driven by the fact that IFRS implementation requires extensive judgment that is shaped by local institutional features. Building on the large body of research that finds the institutional environment of firms can affect their reporting incentives (Ball et al. 2000, 2003; Ball and Shivakumar 2005; Ball 2006; and Burgstahler et al. 2006) and anecdotal evidence of the presence of local features in IFRS-based financial reports, I expect the comparability improvement from IFRS adoption to be greater among countries with similar institutional environments than among countries with significantly different institutional environments.

I classify a firm's institutional environment by the origins of the legal system in its home country (common law versus code law), because the origins of the legal system can effectively proxy for a variety of institutional features that affect a firm's reporting incentives (Bushman et al. 2004). For example, financial reporting in common-law countries is primarily oriented toward providing information to meet the market demand for financial information, whereas financial reporting in code-law countries often serves the regulatory functions of the government, such as economic planning or tax determination. Such differences in reporting orientation are likely to influence the reporting incentives of firms and hence the effect of IFRS adoption on cross-border information comparability.

I employ three proxies for information comparability. The first was developed by De Franco et al. (2009). They argue that when two firms experience similar economic shocks, they should report similar accounting earnings if their accounting is comparable. Following this approach, I measure the information comparability between two firms as follows. First, I estimate the accounting function - relation between accounting performance and economic activities - for each firm using historical data. Second, I use the two estimated accounting functions to translate one firm's economic activities into the two measures of accounting performance, and then compute the difference between the two measures of accounting performance. Third, I use the same two accounting functions to translate the other firm's economic activities into the two measures of accounting performance and again calculate their

difference. I then take the mean of the absolute values of the two differences multiplied by minus one as the proxy for the information comparability of the two firms, where a higher value represents more comparable accounting information. This approach is referred to as the accounting function approach. If the adoption of IFRS improves the ability of firms to translate similar economic activities into similar accounting earnings, then this measure of comparability for similar firms in different countries should be higher in the post-IFRS period than in the pre-IFRS period.

The second proxy is the degree of cross-border intra-industry information transfer. The intuition underlying this measure is that when a firm announces its earnings, it conveys information about the impact of economic shocks on its performance. If accounting information is comparable, then investors should be able to abstract the information on economic shocks from a firm's earnings announcement and adjust stock prices for firms that have not announced earnings but are likely to have been affected by the same economic shocks. I refer to this approach as the information transfer approach. I compute the association between the unexpected earnings of an announcing firm and the mean value of the contemporaneous stock price movements of similar foreign firms that have not released earnings and use it as the second measure of information comparability. If firms in different countries measure economic transactions more similarly under IFRS than under local rules, then IFRS adoption should improve the ability of investors to abstract information on

industry-specific shocks from the earnings announcements of similar foreign firms, which, in turn, should result in a stronger association between the earnings announcements of firms and the price responses of their foreign counterparts in the post-IFRS years.

The third approach is related to a firm's information content of earnings (ICE) and equity book value (ICBV), as measured by the long-window association between earnings and stock price and between book value of equity and stock price respectively. These associations capture the extent to which accounting earnings and book value of equity reflect a firm's economic performance. If firms account for identical economic activities in identical ways, then the ICE and ICBV of firms that have been affected by similar economic shocks should be similar. I use the Ohlson(1995) price model to compare the ICE and ICBV of firms that are in the same industry but from different countries. I then examine whether the probabilities of similar firms from different countries having similar ICE and ICBV are significantly greater in the post-IFRS period than in the pre-IFRS period. This approach is referred to as the ICE and ICBV approach.

Using the accounting function approach, I find that the comparability between two similar firms from different countries is significantly greater in the post-IFRS period than in the pre-IFRS period. I also find that the association between the earnings surprises of announcing firms and the stock price movements of similar foreign firms increases significantly after the mandatory IFRS adoption in 2005. In addition, I find that the

probabilities of similar firms in different countries having similar ICE and ICBV are significantly greater in the post-IFRS years. All of these results suggest that IFRS adoption improves the extent to which firms in different countries account for similar transactions in similar ways. The results are thus consistent with the prediction that IFRS adoption can improve cross-border information comparability.

With regard to the question whether the comparability effect of IFRS adoption is influenced by firms' institutional environments, I document the following results. First, using accounting function approach, I find that IFRS adoption significantly increases cross-border information comparability across countries, regardless of the countries' origins of legal system. Second, using the information transfer approach, I find that IFRS adoption significantly improve the cross-border information transfer only across countries with the same legal origin. Third, using the ICE and ICBV approach, I find that the ICE and ICBV of firms in different countries become more similar in the post-IFRS years than in the pre-IFRS years regardless of the countries' legal origins. However, the extent of increment in the probability of having similar ICE is significantly greater for firms from countries with the same origin of legal system than those from countries with different legal origins. The results are consistent with the expectation that the comparability effects of IFRS adoption are shaped by the local institutional environment.

This dissertation makes several important contributions to the literature. First, I extend

the literature on the effectiveness of financial regulations by documenting empirical evidence on the relation between IFRS adoption and the improvement of cross-border information comparability. Improving cross-border information comparability has been predicted as one of the major benefits of IFRS adoption, yet to the best of my knowledge, no empirical evidence has been documented regarding whether this benefit has indeed occurred. This study fills this gap. Second, I provide some evidence that the effects of IFRS adoption on cross-border information comparability are affected by institutional environment, and thus contribute to the literature on the impact of institutional factors on financial reporting properties. For countries that have already adopted IFRS or are considering the adoption for the benefit of improved information comparability, the findings of this study should be useful for their regulators, policy makers, and investors.

The remainder of this part proceeds as follows. The next chapter discusses the existing literature and presents the research questions. Chapter three describes the sample and variables. Chapter four details the research design and presents the empirical results. Chapter five provides the results of sensitivity tests. Chapter six concludes.

CHAPTER 2 Literature Review and Research Question

In recent years, more than 100 jurisdictions have adopted IFRS, which has led to widespread discussion of the potential advantages of IFRS adoption. Many of the potential advantages are driven by enhanced comparability. For example, Ball (2006) suggests that IFRS adoption can help to eliminate the informational externalities arising from a lack of comparability, thereby reducing the cost of processing financial information to investors and analysts. Covrig et al. (2007) suggest that IFRS adoption may facilitate cross-border investment and the integration of capital markets through the generation of more comparable financial information.

Globalization in the last two decades has significantly increased the economic interaction and interdependence among nations, which, in turn, has created great demand for more internationally comparable information. There are several potential benefits associated with enhanced information comparability. For example, both the Financial Accounting Standards Board in the United States and the International Accounting Standards Board argue that more comparable financial information enables global markets to move with less friction.[1] Other studies suggest that information comparability facilitates international transactions and minimizes exchange costs (e.g., Weber 1992; Turner 1983; Choi et al. 1999). Because comparability requires firms to translate identical economic transactions in identical ways, cross-border comparability cannot be truly achieved when different countries use different

[1] News release by FASB 02/27/06. Available at: http://www.fasb.org/news/nr022706.shtml.

sets of accounting rules to measure transactions. Consequently, a necessary step to improve cross-border information comparability is to use a common business language to articulate business performance. Land and Lang (2002) find empirical evidence that earnings valuation and the correlation between accruals and cash flows across countries became more similar between 1987 and 1999 due to implicit and explicit pressure to harmonize financial reporting.

However, the intended effects of IFRS on information comparability are not guaranteed to occur. A large body of research indicates that the effect of financial reporting is not only a function of accounting standards, but also of reporting incentives and enforcement mechanisms. Consequently, the role of accounting standards is limited if the institutional settings in an economy, which affect both reporting incentives and enforcement, are not in alignment with the standards (Ball et al. 2000, 2003; Ball and Shivakumar 2005; Ball 2006; and Burgstahler et al. 2006). For example, Daske (2006) documents no lowering of the cost of equity capital for firms that voluntarily adopted IFRS and the US GAAP in Germany, contrary to the common view that IFRS adoption lowers a firm's cost of equity capital. Van Tendeloo and Vanstraelen (2005) find that IFRS adopters in Germany do not display different earnings management behavior compared with companies that use the local GAAP. Using a sample of European Union firms over a 15-year period (1991 to 2005), Beuselinck et al. (2007) find that reporting incentive effects related to equity capital market, debt market, and labor pressure are key drivers of reporting behavior and continue to exist in the first year of IFRS adoption.

These findings suggest that IFRS adoption alone may not be sufficient to significantly improve information comparability. It is thus possible that firms with different reporting incentives may report different economic consequences of a unique transaction to users even when the same accounting standards are used. Consequently, I view the effects of IFRS adoption on cross-border information comparability as an empirical issue, and aim to provide empirical evidence on this issue. In particular, I investigate whether IFRS adoption indeed affects cross-border information comparability, and whether its effects, if any, are influenced by the institutional environment of firms.

Improvement in cross-border information comparability due to IFRS adoption has two dimensions. The first is that identical economic shocks are measured in more similar ways under IFRS than under local rules, and hence reported earnings become more similar for firms in different countries that are exposed to similar economic shocks. The second dimension is that different economic shocks are measured more differently under IFRS than under local rules, and hence firms exposed to different economic shocks report more different earnings under IFRS. In this study, I assume that firms in the same industry face similar economic shocks, partly because many economic shocks are industry specific and partly because the economies of the sample countries are closely linked, and hence firms in these countries are likely to face the same market-wide shocks.

I focus on the first dimension of comparability in this study. Because demand for more

comparable information is primarily driven by the need of investors to make comparisons among similar firms in different countries, rather than the need to make earnings less similar for firms in different industries, the effect of IFRS adoption on the first dimension of comparability is likely to be a more important concern for investors and standard setters. Although the effect of IFRS adoption on the second dimension of comparability is also an interesting research question, it is beyond the scope of this study.

CHAPTER 3 Sample and Variables

3.1 Initial sample

The European Commission passed a regulation in June 2002, which mandates that listed companies in European Union (EU) countries prepare their first consolidated financial statements using IFRS in 2005. I collect listed firms in Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom from the *Worldscope* database. These countries are selected because they represent a significant portion of the economy and the variety of institutional settings in the EU. Ireland and the United Kingdom are common-law countries and the other fifteen countries are code-law countries. This difference allows us to test the impact of institutional environment on the effect of IFRS adoption. The number of firms included in the *Worldscope* database for each country is presented in Panel A of Table 1. I restrict the sample to firms with fiscal year endings in December for a manageable sample and ensure that each firm has the same semi-annual period for the first measure. I exclude firms that adopted IFRS voluntarily before the mandatory requirement. Because the mandatory IFRS adoption regulation only applies to consolidated financial statements, firms that do not report such statements are also eliminated from the sample. The sample selection procedures and initial sample size are summarized in Panel B of Table 1. The initial sample includes 4,488 firms across seventeen European countries.

3.2 Measures of Information Comparability

One challenge faced by this study is the measurement of information comparability. I employ three comparability measures: the similarity of accounting function, the degree of intra-industry information transfer across national borders, and the similarity of the information content of earnings and equity book value (ICE and ICBV). In order to examine whether each of these three comparability measures significantly increases after IFRS adoption, I define year 2002-2004 as the pre-IFRS period and year 2005-2007 as the post-IFRS period for all the tests. For all the measures, I assume that stock returns reflect economic transactions similarly in the European countries in my sample.

3.2.1 Similarity of accounting functions

This comparability measure was originally developed by De Franco et al (2009). They argue that accounting is essentially the mapping of economic transactions to financial statements, and that accounting information comparability can thus be defined as the similarity of accounting functions. To calculate the information comparability between two firms using this measure, I generate pairs of firms in the same industry (defined by the 3-digit SIC code) but from different countries. All of the paired firms are required to have accounting and stock return data for six semi-annual periods in both the pre-IFRS years and the post-IFRS years. I rank the firms in each industry (according to 3-digit SIC code) based on

their total assets in 2006. For the largest firm j, I identify all of the firms that satisfy the conditions for being j's pair, and choose the firm with the closest match in terms of total assets. These two firms are then no longer eligible for inclusion in another pair. I also stipulate that the ratio of the smaller firm's total assets to the larger firm's total assets in a pair must not be smaller than 50 percent. The procedure results in 157 pairs of firms.

Second, I estimate the following equation for each firm in the pre- and post-IFRS periods separately.

$$ROA_{it} = \alpha^i + \beta^i RET_{it} + \varepsilon_{it}, \quad (1)$$

where ROA_{it} is the return on assets of firm i in semi-annual period t, which is an accounting-based performance measure and is calculated as income before extraordinary items over total assets. RET_{it}, which is a proxy for economic events, is the stock return of firm i during semi-annual period t. The coefficients α^i and β^i represent the accounting function of firm i.

Third, for a pair of firms i and j, I calculate the predicted ROA for firm i using both its own accounting function (α^i and β^i) and the accounting function of its pair (α^j and β^j).

$$E(ROA)^j_{it} = \alpha^i + \beta^i RET_{it}, \quad (2)$$

$$E(ROA)^j_{it} = \alpha^j + \beta^j RET_{it}, \quad (3)$$

where $E(ROA)^i_{it}$ is the expected ROA of firm i as translated from its economic activities using its own accounting function and $E(ROA)^j_{it}$ is the expected ROA of firm i as translated from its economic activities using firm j's accounting function. Because stock returns are used as the proxy for economic activities, this approach implicitly assumes that stock returns capture economic activities independent of accounting disclosures. I calculate the absolute value of the difference between $E(ROA)^i_{it}$ and $E(ROA)^j_{it}$ for each of the 12 interim periods. I repeat the procedure to translate firm j's economic activities into the expected ROA using its own accounting function $(E(ROA)^j_{jt})$ and firm i's accounting functions $(E(ROA)^i_{jt})$, and then calculate the absolute value of their difference for each of the 12 interim periods. I then compute the information comparability between firms i and j in the pre-IFRS period (post-IFRS period) as the mean of the 12 observations, i.e. six $|E(ROA)^i_{it} - E(ROA)^j_{it}|$ and six $|E(ROA)^j_{jt} - E(ROA)^i_{jt}|$, in the pre-IFRS period (post-IFRS period), multiplied by minus one so that a higher value represents greater information comparability.

3.2.2 Degree of intra-industry information transfer across national borders

Previous studies have found associations between the information released by announcing firms and the returns of non-announcing firms within the same industry and

country. For example, intra-industry information transfer has been documented for unexpected earnings announcements (Firth 1976; Foster 1981; Clinch and Sinclair 1987; Han and Wild 1990; Hramnath 2002), stock split announcements (Tawatnuntachai and D'Mello 2002), management earnings forecasts (Baginski 1987; Han et al. 1989), corporate security offerings (Szewczyk 1992), and news of nuclear accidents (Bowen et al. 1983). Such information transfers occur because the announcements made by announcing firms convey industry-level information that has not previously been publicly available. The stock market responds by re-evaluating the value of non-announcing firms and adjusting their share prices accordingly. Different from the first approach, this method implicitly assumes that information on industry-specific shocks is captured by investors through accounting disclosures.

In this age of the global economy, many economic shocks affect firms in different countries, creating links among stock market returns and corporate performance across national borders. However, when profits are measured using different accounting standards, earnings announcements in one country may be of little value in predicting the value of firms in other countries, which results in a low degree of intra-industry information transfer across borders. Consistent with this reasoning, if IFRS adoption improves the ability of investors to capture industry-specific information from earnings announcements made by similar firms in different countries, then the degree of cross-border intra-industry information transfer should

increase for similar firms in different countries.

The sample is formed using following criteria. First, I select industries (3-digit SIC code) that have at least two firms from different countries. Second, I rank the firms in each industry by their earnings announcement dates. To qualify as an announcing firm, the firm's earnings announcement window (day-1 to day +1) must not overlap with another firm's earnings announcement window.[2] Third, for each announcing firm, its non-announcing firms include all the foreign similar firms that have later earnings announcement dates. I require that the ratio of the total assets for the firms in a pair (the total assets of the smaller firms to that of the larger firm) is not less than 50 percent.

For each earnings announcement, I calculate the unexpected earnings of the announcing firm. It is defined as the difference between reported earnings and an ex-ante earnings expectation, deflated by the stock price at the beginning of the year. The ex-ante earnings expectation is proxied by the mean of analysts' earnings forecasts in the month immediately before the earnings release as recorded in the *IBES* database. I then calculate the abnormal stock returns for the non-announcing firms in the three days around the earnings release of the announcing firm (day-1 to day +1) using the following model.

$$U_{it} = RET_{it} - (\alpha^i + \beta^i RET_{mt}), \tag{4}$$

[2] This requirement is established to ensure that the non-announcing firms are reacting to only one firm's earning announcement.

where U_{it} is the abnormal stock return for firm i on day t, RET_{it} is the stock return of firm i and RET_{mt} is the return on the market index on day t.[3] The coefficients of α^i and β^i are estimated using data from day -185 to day -6, where day 0 is the earnings announcement date of the announcing firm. This estimation procedure is applied in each fiscal year.

The cumulative abnormal return of a non-announcing firm is the sum of its abnormal returns for the three days around the earnings release day of the announcing firm. To reduce the problem of the cross-sectional correlation of prediction errors across clusters of non-announcing firms in an industry, I follow the suggestion of Baginski (1987) and use the average cumulative abnormal return of non-announcing firms to estimate the association between the unexpected earnings of the announcing firm and the abnormal stock returns of the non-announcing firms. Using this approach, there are 773 pair-year observations, and the average number of non-announcing firms per pair is 4.203.

3.2.3 Similarity of the information content of earnings

A long-window association between accounting earnings (book value of equity) and stock price is often used as a proxy for the information content of earnings (book value of equity) (e.g., Beaver 1968; Watts and Zimmerman 1986; Kothari and Zimmerman 1995). If the stock price captures a firm's economic performance, then the association between

[3] The market indexes for Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom are the ATX, BEL, OMXC, OMXH, CAC, DAX, Athex, Ireland SE, MIB, LUX, AEX, OBX, PSI, IBEX, MX Stockholm, Swiss Market and FTSE, respectively.

earnings (book value of equity) and stock price can indicate the extent to which accounting earnings (book value of equity) reflect the firm's economic activities. If IFRS adoption increases the degree of similarity with which firms in different countries translate identical economic activities into accounting earnings (book value of equity), then the earnings - price (equity book value - price) association for similar firms in different countries should become closer in the post-IFRS period.

I employ the Ohlson model, in which a firm's market value is regressed on net income and equity book value (Ohlson 1995), to estimate whether the ICE and ICBV are similar for the two sets of firms.

$$MV_{it} = \beta_0 + \beta_1 NI_{it} + \beta_2 BV_{it} + \beta_3 D + \beta_4 D*NI_{it} + \beta_5 D*BV_{it} + \varepsilon_{it}, \quad (5)$$

where MV_{it} is the total market value of equity, BV_{it} is the book value of equity excluding minority interest, NI_{it} is the net income. These three variables are scaled by the number of outstanding common shares. Variable D is a dummy indicating a set of firms from one country. A significant β_4 and β_5 will indicate that the two sets of firms from two different countries have different ICE and ICBV, respectively, and thus a low degree of information comparability between the two sets of firms.

To examine whether accounting information for similar firms becomes more comparable internationally after IFRS adoption, I estimate equation (5) within each industry for every

possible combination of two countries in the pre-IFRS and post-IFRS periods separately. If β_4 (β_5) is insignificant, then I assign an ICE (ICBV) comparability score 1. If it is significant, I assign an ICE (ICBV) comparability score 0. I require that there are at least five firms in an industry of a country. In our sample, there are 610 regressions, and hence 610 observations on ICE and ICBV comparability scores respectively across pre- and post-IFRS periods.

CHAPTER 4 Research Design and Empirical Results

4.1 The accounting function approach

The descriptive statistics for the first measure of information comparability (the accounting function approach) in the pre- and post-IFRS periods are summarized in Panel A of Table 2. As shown in the table, the mean comparability is greater in the post-IFRS period (-0.040) than in the pre-IFRS period (-0.442), and the difference is significant at one percent level under both Wilcoxon signed-rank test and t-test. The median and minimum values of accounting comparability are also higher, but the standard deviation is smaller in the post-IFRS period than in the pre-IFRS period. These results are consistent with the expectation that IFRS adoption makes financial information more comparable across borders.

I next perform multivariate tests to compare the comparability of financial information before and after IFRS adoption using the following model.

$$Comp_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 TA\_Ratio_i + \beta_3 Com\_Code_i + \beta_4 Listing_i + ID_i \quad (6)$$

where $Comp_{it}$ is the comparability of firm pair i in period t; $IFRS_t$ is a dummy that is equal to 1 if the year is a post-IFRS year and 0 if it is a pre-IFRS year; TA_Ratio_i is the ratio of the total assets of the two firms in pair i in 2006, where the total assets of the smaller firm is the numerator of the ratio; Com_Code_i is an indicator that is equal to 1 when one firm in the

pair is from a common-law country and the other is from a code-law country, and 0 otherwise; and $Listing_i$ is an indicator that is equal to 1 if the two firms in the pair are both listed on at least one same stock exchange, and 0 otherwise. TA_Ratio_i, Com_Code_i, and $Listing_i$ are included in the model to control for differences in firm size, the legal origins of the home country, and the stock listing between the two firms in a pair, because these factors may affect the financial reporting incentives of the two firms and hence the comparability of their accounting information. ID_i is an industry dummy. The descriptive statistics for these variables are presented in Panel B of Table 2. All of the numbers are winsorized at top and bottom 1 percent.

The regression results are summarized in Panel C of Table 2. The coefficient on IFRS (β_1) is positive and significant, indicating that the cross-border information comparability is significantly higher in the post-IFRS period than in the pre-IFRS period. The coefficient on the difference in the legal origins of the firms' home countries (β_3) is negative and significant, suggesting that the information between firms from countries with different origins of legal system is less comparable. The coefficients on the size ratio (β_3) and on the listing status (β_4) are both insignificant.

To ensure that the improvement of cross-border comparability is persistent after the mandatory IFRS adoption in 2005, I perform the regression analysis by year using the following model with year dummies:

$$Comp_{it} = \beta_0 + YD_t + \beta_1 TA\_Ratio_i + \beta_2 Com\_Code_i + \beta_3 Listing_i + ID_i \quad (7)$$

where YD_t is a year dummy ($Year2003_t$, $Year2004_t$, $Year2005_t$, $Year2006_t$ and $Year2007_t$ for observations in the respective years). Panel D of Table 2 presents the regression results. The coefficients on the year dummies $Year2005_t$, $Year2006_t$ and $Year2007_t$ are positive and significant, which suggest that IFRS adoption improves cross-border information comparability persistently in the years after the regulation.

4.2 The information transfer approach

In the test that uses the cross-border intra-industry information transfer approach, I examine whether the degree of cross-border intra-industry information transfer – as proxied by the association between the unexpected earnings of the announcing firm and the stock price movements of its counterparts in foreign countries within the earnings announcement window – increases after IFRS adoption. The regression model is as follows.

$$NAF\_CAR_{it} = \beta_0 + \beta_1 AF\_UE_{it} + \beta_2 IFRS_t + \beta_3 AF\_UE_{it} * IFRS_t + \beta_4 AF\_Size_{it}$$
$$+ \beta_5 AF\_Analyst_{it} + \beta_6 AF\_Loss_{it} + ID_i \quad (7)$$

where NAF_CAR_{it} is the average absolute value of cumulative abnormal return of the similar foreign firms of pair i within the three-day earnings release window of the announcing

firm in year t ; AF_UE_{it} is the absolute value[4] of unexpected earnings of the announcing firm of pair i in year t; $IFRS_t$ is a dummy equal to 1 if the year is a post-IFRS year and 0 if it is a pre-IFRS year; and AF_Size_{it} is the size of the announcing firm of pair i in year t, measured by the logarithm of total assets. This size variable is included because previous studies suggest that the unexpected earnings of large firms reflect market trends better than those of small firms (Atiase 1985; Firth 1996). $AF\_Analyst_{it}$ is the number of one-year-ahead earnings forecasts issued and revised for the announcing firm of pair i in year t. I include this variable to control for the intensity of analyst activity. Finally, I include AF_Loss_{it}, a dummy indicating whether the announcing firm of pair i is reporting a loss in year t, as previous studies find that losses are less informative than profits (Hayn 1995).

The variable of interest is the interaction between the unexpected earnings of the announcing firm and the dummy variable for the post-IFRS period (β_3). If IFRS adoption improves cross-border intra-industry information transfer, then the coefficient on the interaction term should be positive and significant.

The descriptive statistics for the variables in the foregoing model are summarized in Panel A of Table 3. All of the numbers are winsorized at top and bottom 1 percent. As indicated in the table, the absolute value of average cumulative abnormal return of the non-announcing firms is 0.027, which is significantly different from zero at one percent and

[4] Absolute values of cumulate abnormal returns and unexpected earnings are employed in order to avoid the set off of positive and negative information transfers (Kim et al. 2008).

the absolute value of average earnings surprise is 0.208. The average size of the announcing firms is $586 million USD[5], and the average number of analysts following these firms is 6.857. The mean of variable AF_Loss_{it} is 0.177, indicating that about 18 percent of announcements report a loss.

The regression results are presented in Panel B of Table 3. The coefficient on the interaction between the announcing firm's unexpected earnings and the dummy for the post-IFRS period is positive and significant, indicating that the degree of cross-border information transfer is significantly higher in the post-IFRS period than in the pre-IFRS period. This result implies an improvement of international information comparability due to the IFRS adoption.

4.3 The ICE and ICBV approach

With the ICE and ICBV approach, if IFRS adoption increases the degree of similarity with which similar firms in different countries translate identical economic activities into accounting earnings, then the earnings-price and equity book value-price associations for similar firms in different countries should become more similar in the post-IFRS period. I perform paired t-tests to compare the mean ICE and ICBV comparability scores between the pre-IFRS and post-IFRS periods. The results are presented in Table 4. As indicated, the mean

[5] The average value of logarithm of the total assets in million USD of the announcing firms is 2.768, thus the average total assets of the announcing firms is $10^{2.768}$, which is 586 million USD.

comparability scores on ICE and ICBV in the post-IFRS period are significantly greater than those in the pre-IFRS period, which suggests that the probabilities of similar firms from two countries having a similar ICE and ICBV increase in the post-IFRS period.

To summarize, the results show that all three proxies for information comparability increase significantly after the mandatory adoption of IFRS in the sample countries. More specifically, the similarity in accounting functions, the degree of intra-industry information transfer, and the similarity in ICE and ICBV are all greater in the post-IFRS years than in the pre-IFRS years. These findings suggest that firms in different countries account for similar economic activities more similarly in the post-IFRS period than in the pre-IFRS period. The results are thus consistent with the expectation that financial information is more internationally comparable under IFRS.

4.4 Results of the impact of institutional factors on the comparability effect of IFRS adoption

Using the accounting function approach, I modify equation (6) by dropping the control variable that indicates whether the two firms in a pair are from countries with different legal origins (COM_CODE_i). I then estimate the modified equation (6) for two partitioned samples. The first sample includes firm pairs in which two firms are from countries with the same

origin of legal system, and the second sample includes firm pairs in which two firms are from countries with different origins of legal system. The results for the two samples indicate that cross-border information comparability is greater in the post-IFRS period than in the pre-IFRS period, no matter the home countries of the firms are having the same or different origins of legal system.[6] The regression results are presented in Panel A of Table 5.

I next use equation (7) to examine whether the effect of IFRS adoption on the degree of intra-industry information transfer is affected by institutional factors. When NAF_CAR_{it} is the absolute value of average cumulative abnormal return of similar foreign firms that are from countries with the same legal origin as those of the home country of the announcing firm, I find a greater degree of intra-industry information transfer in the post-IFRS period than that in the pre-IFRS period. However, when NAF_CAR_{it} is the absolute value of average cumulative abnormal return of similar foreign firms that are from countries with different legal origins to those of the home country of the announcing firm, I find that the degree of intra-industry information transfer does not increase after IFRS adoption. The difference of the coefficients on the interaction terms in the two samples is significant at ten percent. These results are summarized in Panel B of Table 5.

I then investigate the impact of institutional environment using the ICE and ICBV approach. I compare the mean of comparability scores across the pre- and post-IFRS periods in the two partitioned samples separately, where the first sample includes the scores estimated

[6] The difference between the coefficients on IFRS in the two samples is not significant.

from firms in countries with the same legal origin and the second sample includes the scores estimated from firms in countries with different legal origins. For ICE comparability score, I find that the mean of comparability score is significantly higher in the post-IFRS years than in the pre-IFRS years in both samples, but the improvement in comparability, i.e. the increase in probability of having similar ICE, across the two periods is significantly higher for the first sample (firms are from countries with the same origin of legal system) than for the second sample (firms are from countries with different origin of legal systems). For ICBV comparability score, I also find a significantly higher comparability score in the post-IFRS period in both samples. However, the increase in probability of having similar ICBV is not significantly different between the two samples. These results are reported in Panel C of Table 5.

To summarize, the results in these tests suggest that the effect of IFRS adoption on cross-border information comparability is more evident among countries with similar institutional environments than among countries with different institutional environments. This provides indirect evidence that institutional factors in the home countries of firms may influence the effect of IFRS adoption on cross-border information comparability.

CHAPTER 5 Sensitivity Tests

Apart from the reason of the accounting rule convergence, an improvement in comparability could be owing to an improvement of accounting standards in capturing economic activities. To better gauge the extent of changes in cross-border comparability due to the IFRS adoption, I perform tests on similar firms within the same country, in which the firms are using the same local GAAP in the pre-IFRS period and IFRS in the post-IFRS period. The regression results for the accounting function and information transfer approach are presented in Table 6, which show no significant improvement of comparability across the firms within countries after the IFRS adoption. This suggests that the improvement of cross-border information comparability I find in this study is driven by unification of the accounting rules across countries, but not because IFRS are superior to local accounting rules in capturing and reflecting economic activities.

Besides, since 2005 is presumably a transition year to IFRS, and 2004 conceivably may reflect some unusual accounting choices in anticipation of the transition to IFRS, I perform a sensitivity check by removing the observations in 2004 and 2005. Specifically, I define year 2002 to 2003 as pre-IFRS period while year 2006 to 2007 as post-IFRS period and perform the tests for the three information comparability measures. The results in Table 7 show that the results are qualitatively the same as those in the study for all the three approaches.

CHAPTER 6 Summary and conclusion

One of the most commonly mentioned benefits of IFRS adoption is the improvement in information comparability across national borders. The purpose of this study is to provide empirical evidence of this improvement using data from 17 European countries that adopted IFRS in 2005. I use three proxies for information comparability to determine the effect of IFRS adoption. The first is the similarity with which two similar firms translate the same economic events into their financial statements. The second is the degree of cross-border intra-industry information transfer, which is defined as the association between the unexpected earnings of announcing firms and the abnormal stock returns of similar firms in the same industry but in different countries. The third is the similarity of the information content of earnings (ICE) and equity book value (ICBV), as proxied by the long-window associations between price & earnings and price & book value of equity.

The results are consistent with the view that IFRS adoption improves information comparability across countries. In particular, I find that the degree of similarity with which two similar firms translate the same economic events to their financial statements increases significantly after firms adopt IFRS. I also find evidence of an improved association between the unexpected earnings of announcing firms and the contemporaneous stock returns of similar foreign firms in the post-IFRS period. The results also show that the probabilities of similar firms from different countries having similar ICE and ICBV increase significantly in

the post-IFRS years.

Additionally, I find indirect evidence that the effect of IFRS adoption on information comparability is influenced by the institutional environment of firms. Using accounting function approach, I find that IFRS adoption increases cross-border information comparability significantly across countries, regardless of the countries' origins of legal system; using the information transfer approach, I find that IFRS adoption significantly improve the cross-border information transfer only across countries with the same origin of legal system; using the ICE and ICBV approach, although I find that the ICE and ICBV of firms in different countries become more similar in the post-IFRS years than in the pre-IFRS years regardless of the countries' origins of legal system, the extent of increment in the probability of having similar ICE is significantly higher for firms from countries with the same origin of legal system than those from countries with different origins of legal system. Thus, the comparability effect of IFRS adoption is more evident among countries with similar institutional environments, which suggests that the local institutional environment affects the impact of IFRS adoption.

PART TWO

IFRS Adoption and Cross-border Mergers and Acquisitions

CHAPTER 7 Introduction

Globalization of business and technological innovation have introduced enormous opportunities for firms to expand and to reap the benefits of their comparative advantages across national borders (Gregorious and Renneboog 2007). During the past decades, cross-border mergers and acquisitions (M&As) have become a popular strategy to achieve these goals (Brakman et al. 2006; Shimizu et al. 2004). According to economic theories, the occurrence of M&As may be driven by a number of reasons, including economies of scale, creation of market power, market discipline, empire building, and diversification (Andrade et al. 2001; Brakman et al. 2006; Grant Thronton 2008; Rossi and Volpin 2004; Trautwein 1990).

However, frictions originated from transaction costs, information asymmetries and agency conflicts can prevent M&As. Such frictions are inherently higher in cross-border transfers of control due to geographical distances, differences in language, legal environments, cultures, financial languages and business norms. To reduce such frictions, accounting professionals and academics advocate the worldwide convergence of financial reporting standards (Ball 2006; Deloitte 2008; KPMG and Goldman Sachs 2002). They argue that the use of a common business language by different countries would enhance the comparability

of financial information. This, in turn, can reduce transaction costs and information asymmetries in a cross-border M&A as it allows acquirers to better comprehend the financial information of foreign firms. As a result, this may ameliorate the visibility of suitable targets in foreign countries and facilitate cross-border M&As. The objective of this study is to empirically examine whether an improvement in cross-border information comparability due to the IFRS adoption is significant enough to encourage more cross-border M&As and create greater synergy by improving their process.

In this study, I employ data from 17 European countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom), where the listed firms must prepare their first consolidated financial statements using IFRS in 2005, to empirically test whether the mandatory IFRS adoption encourage cross-border M&As. The sample covers the periods of 2002-2009, in which I classify M&As that were announced in 2007-2009 as Post-IFRS M&As, while those in 2002-2005 as Pre-IFRS M&As. I examine the empirical question by looking at both the frequency and value creation of cross-border M&As. First, I test whether an acquirer that has undertaken at least one M&A in the sample period acquires or merges with foreign firms more frequently after the IFRS adoption. Next, I examine whether a targeted firm that has been bid at least once in the same period is bid by more foreign firms after the IFRS adoption. Last, I investigate whether cross-border M&As create

more synergistic gains after the IFRS adoption.

I find evidence that for acquirer, the cross-border M&A frequency and cross-border M&A ratio, which is the ratio of cross-border M&A frequency to the sum of cross-border and local M&A frequency, are significantly higher in the post-IFRS period than in the pre-IFRS period. For target firms, the number of foreign bidders and the foreign bidder ratio, which is the ratio of number of foreign bidders to total number of bidders, are significantly higher for M&As in the post-IFRS period than in the pre-IFRS period. Finally, I find that the synergistic gains, defined by a value-weighed portfolio of the acquirer and the target returns, increase significantly after IFRS adoption. These results suggest that the mandatory IFRS adoption encourage and improve cross-border M&As.

This study makes several important contributions to the literature. First, I extend the literature on the effectiveness of financial regulations by documenting empirical evidence on the relation between IFRS adoption and cross-border M&As. Facilitating cross-border M&As has been predicted as one of the benefits of IFRS adoption, yet to the best of my knowledge, no empirical evidence has been documented regarding whether this benefit has indeed occurred. My study fills this gap. Second, this study contributes to the foreign direct investment literature as cross-border M&As have been an important driving force in foreign direct investment (FDI) since the mid-1990s (Brakman 2006; Gregorious and Neuhauser. 2007). Third, many countries have already adopted IFRS, and other countries are considering

it because of the various benefits that the adoption can bring. The findings of this study should thus be useful for regulators and policy makers in countries that are considering IFRS adoption.

The remainder of this part proceeds as follows. The next chapter discusses the existing literature and presents the research questions. Chapter nine describes the sample, details the research design and presents the empirical results. Chapter ten provides the results of sensitivity tests. And Chapter 11 concludes.

CHAPTER 8 Literature Review and Research Question

In a survey on merger motives, Trautwein (1990) gives an overview on the related theories, including efficiency theory, which views M&As as a tactic to achieve synergies through increased diversification and economies of scale; monopoly theory, which suggests that M&As allow participating firms to achieve market power and increase product market rents; valuation theory, which describes that M&As could help providing low-cost financing to undervalued target in an imperfect capital market; and empire-building theory, which proposes that managers would maximize their own utility by undertaking inefficient M&As. Furthermore, Rossi and Volpin (2004) suggest that M&As also serve the function of market discipline by reshuffling controls over companies and channeling corporate assets toward their best possible use.

Business globalization and technology advancement offer firms opportunities to develop their competitive advantage, not only domestically, but also internationally. In the past decades, the worldwide trends and shocks such as company restructuring, deregulation, privatization and technological advance have provoked the unprecedented cross-border M&As waves (Andrade et al. 2001; Finkelstein 1999; Gregorious and Renneboog 2007; Shimizu 2004). Cross-border M&As are motivated by similar considerations listed above, and other potential benefits such as exploring foreign markets by overcoming traditional trade and investment barriers (Datta and Puia 1995). Brakman et al. (2006) find that cross-border M&A

activity is the most popular type of foreign direct investment (FDI) in 1986-2005 and about 50% of firms that engaged in cross-border M&As appear to be market-seeking. Coffee (1999) argues that, similar to cross-listing, cross-border M&A activity is an important channel for effective worldwide convergence in corporate governance. Rossi and Volpin (2004) find that cross-border M&As play a governance role by improving the degree of investor protection within target firms in countries with poorer investor protection.

However, the efficient transfers of control could be hindered by frictions such as transaction costs, information asymmetries, and agency conflicts. In the case of cross-border transfers of control, the challenges arise from information gap are inherently greater due to differences in languages, country cultures, business norms, laws and geographical locations (Hofstede 1980; Shimizu 2004). Yao and Dahdouh (1993) remark that the decision making process in M&As would be affected by uncertainty and inconsistencies in information. Thus, the rapid growth in cross-border investments, including cross-border M&As, has created a significant demand for internationally comparable information to alleviate such frictions.

One reflection of this trend is the emergence of International Financial Reporting Standards (IFRS), a set of accounting rules designed to improve financial reporting quality, including information comparability. In 2009, 117 countries worldwide have adopted, have convergence plan or permit the use of IFRS or a local variant of IFRS (Spiceland et al. 2010). Although IFRS are not likely to be the principal driver of an M&A deal, it is believed that

IFRS may encourage international M&A activity through an improvement in cross-border information comparability (Deloitte 2008). An improvement in information comparability across national borders would reduce the transaction costs and information asymmetries. Young and Guenther (2003) assert that reduced information asymmetry between foreign investors and domestic investors increases international capital mobility. Ball (2006) suggests that the widespread international adoption of IFRS leads to a reduction of international differences in accounting standards across border, and thus assists to some degree in removing barriers to cross-border acquisitions and divestitures. Covrig et al. (2007) suggest that IFRS adoption may facilitate cross-border investments and the integration of capital markets through the generation of more comparable financial information. By requiring companies to disclose different aspects of their businesses using the same financial language, IFRS improve the information and valuation metrics that acquirers use to evaluate business performance of potential targets (KPMG and Goldman Sachs 2002). The more comparable financial information and increased visibility of potential targets would enable better screening and reduce the risk of detection in due diligence processes, thus making the acquirers bolder in undertaking cross-border M&As and improve the quality of M&A process (Grant Thornton 2008). Moreover, the high transition and compliance costs due to IFRS adoption may lead to M&A engagements to realize economies of scale. From an integration perspective, the use of IFRS instead of multiple local standards also reduces the costs of global operation.

However, Stulz (2005) argues that despite the reduction in explicit barriers to international investment activity over the last decades, the impact of financial globalization has been limited because home bias and country attributes are still critical to financial decision-making. Defond et al. (2009) finds US mutual fund ownership increases among all voluntary adopters, but only among mandatory adopters in countries where implementation is likely to be credible. Thus, whether an improvement in cross-border information comparability due to IFRS adoption is strong enough to generate more M&As is essentially an empirical question. To examine this question, I look at (1) whether acquirers engage in more cross-border M&As; (2) whether targets are bid by more foreign firms; and (3) whether cross-border M&A create greater synergy after the mandatory IFRS adoption.

CHAPTER 9 Research design and empirical results

9.1 Initial sample

The European Commission passed a regulation in June 2002, which mandates that listed companies in European Union (EU) countries prepare their first consolidated financial statements using IFRS in 2005. Since M&A decisions will be affected by a target's financial performances in prior years, I classify M&As that were announced in 2007 – 2009 as Post-IFRS M&As, while those in 2002-2005 as Pre-IFRS M&As.[7] I collect all M&As, including completed and incomplete transactions, of the public firms in the 17 western countries of Europe (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom) during the sample period from the *Thompson Financial SDC Platinum*. For all tests, I exclude M&A deals that involve firms that adopted IFRS voluntarily before the mandatory requirement. Additionally, because the mandatory IFRS adoption regulation only applies to consolidated financial statements, M&A deals that involve firms which do not report such statements are eliminated from the sample. The sample selection procedures and initial sample size are summarized in Table 8.

[7] Year 2006 is skipped because firms with fiscal year ended in December needs to have IFRS financial statements in 2005 while those with year-ended in January to November needs to have in 2006.

9.2 The cross-border M&A frequency and ratio by acquirer tests

In this test, I examine whether an acquirer that has pursued at least one M&A in the sample period, either local or cross-border, would undertake cross-border M&As more frequently after IFRS adoption. For each year, I count the number of cross-border M&As that an acquirer has encountered as the frequency. I also compute the cross-border M&A ratio, which is the ratio of cross-border M&A frequency to the sum of cross-border and local M&A frequency. Subject to the availability of data, there are 449 acquirers that have ever pursued an M&A in the sample period, with 3,143 acquirer-year observations.

Panel A of Table 9 presents the descriptive statistic of cross-border M&A frequency and cross-border M&A ratio in the pre-IFRS period and the post-IFRS period. I find that the means of cross-border M&A frequency and cross-border M&A ratio are higher in the post-IFRS period than that in pre-IFRS period, in which the mean differences are significant in both t-test and wilcoxon rank-sum test. This is consistent with the assertion that IFRS adoption encourages cross-border M&A activities.

To control for other factors that would probably affect the frequency and the ratio of cross-border M&As, I perform a multivariate analysis using the following Poisson and OLS regression models:

Poisson regression: $Intl\_freq_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 DomFreq_{ict} + \beta_3 Inv\_proc_c + \beta_4 Log\_gnp_c +$

$\beta_5 Common_c + \beta_6 Gdp\_g_{ct} + \beta_7 ROA_{it} + \beta_8 LogTA_{it} + ID_i$ (8)

OLS regression: $Intl\_ratio_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Inv\_proc_c + \beta_3 Log\_gnp_c + \beta_4 Common_c + \beta_5 Gdp\_g_{ct} + \beta_6 ROA_{it} + \beta_7 LogTA_{it} + ID_i$ (9)

where $Intl\_freq_{ict}$ is the frequency of cross-border M&As for acquirer i in country c at time t; $Intl\_ratio_{ict}$ is the cross-border M&A ratio for acquirer i in country c at time t; $DomFreq_{ict}$ is the frequency of domestic M&As for acquirer i in country c at time t; $IFRS_t$ is a dummy variable that equals to one if the year t is a post-IFRS year, and zero otherwise; Inv_proc_c is the investor protection score of country c, which is the average of the rule of law index from La Porta et al.(1998) and the anti-director rights score from Djankov et al. (2008)[8]; Log_gnp_c is the logarithm of GNP per capita in year 2006 for acquirer country c; $Common_c$ is a dummy variable that equals one if the acquirer is from a common-law country c, and zero otherwise; Gdp_g_{ct} is the growth of GDP of country c at time t; ROA_{it} is the return on total assets of acquier i at time t; $LogTA_{it}$ is the logarithm of total assets of acquirer i at time t. The variable of interest is $IFRS_t$. If the mandatory IFRS adoption facilitates M&As, the coefficient on this variable should be significantly positive. Inv_proc_c and $Common_c$ are included because a country's institutions would affect firms' M&A activity (Rossi and Volpin 2004). Log_gnp_c,

[8] The rule of law index in La Porta et al. (1998) is an assessment of the law and order tradition in the country produced by the country risk rating agency International Country Risk (ICR); the anti-director right index in Djankov et al.(2008), is a revised index from La Porta et al. (1998), which is formed by: (1) vote by mail; (2) shares not deposited; (3) cumulative voting; (4) oppressed minority; (5) pre-emptive rights and (6) capital to call a meeting.

and Gdp_g_{ct}, are proxies for a country's wealth and for the change in economic conditions respectively. ROA_{it} and $LogTA_{it}$ are firm-level controls. All variables are winsorized at 1% in the regression.

The descriptive statistics of the variables in the multivariate test are presented in Panel B of Table 9. The mean of cross-border M&A frequency per year is 0.110, lower than the mean of domestic M&A frequency per year (0.184), which is consistent with the literature that suggest home bias of financial decision-making and higher frictions across national borders. The mean of the cross-border M&A ratio is 0.345, which suggest that around 35 percent of M&As are carried out across national borders in my sample.

The regression results are summarized in Panel C of Table 9. In the model of cross-border M&A frequency analysis, the coefficients on *IFRS* (β_1) is positive and significant at one percent, indicating that the cross-border M&A frequency is significantly higher in the post-IFRS period than in the pre-IFRS period. Specifically, the 0.491 coefficient implies that when the mandatory IFRS adoption is carried out, the expected mean increase for an acquirer to undertake cross-border M&A is 1.634 times[9]. The coefficients on the control variables show that firms from wealthier countries, with bigger firm size and in the times with superior economic conditions are more active in cross-border M&A activities. The negative coefficient on the *Common* dummy indicates that acquirers from common-law countries acquire less

[9] In a Poisson regression model, the coefficient is the expected change in log count for a one-unit increase in the dependent variable. In our test, the 0.491 coefficient implies the expected mean increase in M&A frequency is $e^{0.491}$ times when a firm adopts IFRS.

foreign firms than code-law countries. In the model of cross-border M&A ratio analysis, the number of observations is decreased because a firm needs to have at least one M&A transaction in a year for the calculation of the ratio. The coefficient on *IFRS* (β_1) is positive and significant, suggesting that the proportion of cross-border M&A to total M&As has increased after the IFRS adoption. Specifically, after the mandatory IFRS adoption, the expected mean increase of the ratio is 0.078. The positive coefficient on *LogTA* implies larger acquirers pursue cross-border M&As more actively.

9.3 The foreign bidder number and ratio by target tests

If IFRS adoption encourages cross-border M&A, a good target would attract more bidders from foreign countries. In this test, I explore whether the number of foreign bidders and the ratio of number of foreign bidders to total number of bidders (hereafter, foreign bidder ratio), for targeted firms increase after IFRS adoption. I count the number of foreign bidders and compute the foreign bidder ratio for each targeted firm per year over the sample period. Table 10 Panel A presents the descriptive statistics for the number of foreign bidders and foreign bidder ratio in the pre-IFRS period and post-IFRS period. I find that the mean number of foreign bidders and foreign bidder ratio are significantly higher in the post-IFRS period than that in the pre-IFRS period in both t-test and wilcoxon rank-sum test, which are consistent with the expectation that more foreign firms are taking part in bidding suitable

targets aboard after the IFRS adoption.

To control for other factors that would probably affect the number of foreign bidders and the foreign bidder ratio in a cross-border M&A, I perform a multivariate analysis. The descriptive statistics are presented in Panel B of Table 10. The average number of foreign bidder for a target in a year is 0.094 while the average number of local bidder for a target in a year is 0.126. The mean foreign bidder ratio is 0.417, indicating that around 42% of the bidders is from a foreign country.

I use the number of foreign bidders for target i in country c at time t ($FBid\_no_{ict}$) as the dependent variable in the Poisson regression model (9) and foreign bidder ratio for target i in country c at time t ($FBid\_ratio_{ict}$) as the dependent variable in the OLS regression model (10).

$$FBid\_no_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Inv\_proc_c + \beta_3 Log\_gnp_c + \beta_4 Common_c + \beta_5 Gdp\_g_{ct} + \beta_6 ROA_{it} + \beta_7 LogTA_{it} \quad (10)$$

$$FBid\_ratio_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Inv\_proc_c + \beta_3 Log\_gnp_c + \beta_4 Common_c + \beta_5 Gdp\_g_{ct} + \beta_6 ROA_{it} + \beta_7 LogTA_{it} \quad (11)$$

The variable of interest is the $IFRS_t$ dummy variable that equals to one if the year t is a post-IFRS year, and zero otherwise. If the mandatory IFRS adoption encourages more foreign

bidders to participate in a cross-border M&A, the coefficient on this variable should be significantly positive. The control variables include Inv_proc_c, the investor protection score of target country c; Log_gnp_c, the logarithm of GNP per capita in year 2006 for target country c; $Common_c$, a dummy variable that equals one if the target is from a common-law country c, and zero otherwise; Gdp_g_{ct}, the growth of GDP of target country c at time t; *ROA* is the return on total assets of firm i at time t; and *LogTA* is the logarithm of total assets of firm i at time t. All variables are winsorized at 1% in the regression.

The regression results are summarized in Panel C of Table 10. The coefficients on *IFRS* (β_1) are positive and significant in both regression models, indicating that the number of foreign bidders and the foreign bidder ratio in an M&A deal are significantly higher in the post-IFRS period than in the pre-IFRS period. Specifically, after IFRS adoption, a targeted firm will be bid by 3.582[10] more foreign bidders on average and the mean ratio of foreign bidder in each deal is increased by around 21 percent. The coefficients on the control variables show that firms from code-law countries, with larger assets and during the time with better economic conditions are being bid by foreign firms more frequently.

9.4 The M&A synergy test

If IFRS adoption improves the visibility of suitable foreign targets and hence better

[10] In a Poisson regression model, the coefficient is the expected change in log count for a one-unit increase in the dependent variable. In our test, the 1.276 coefficient implies the expected mean increase in M&A frequency is $e^{1.276}$ times when a firm adopts IFRS.

matching favors cross-border M&A process, one may expect that a greater synergy would be created for cross-border M&A activities after IFRS adoption. Following Bradley et al. (1988) and Wang & Xie (2009), I measure the synergistic gains (SYN_{it}) for each M&A transaction by forming a value-weighed portfolio of the acquirer and the target cumulative abnormal returns. I calculate the abnormal stock returns for acquirers and targets respectively during day-5 to day +5 around the initial announcement date of M&A (day 0) using the following model for each M&A transaction:

$$U_{it} = RET_{it} - (\alpha^i + \beta^i RET_{mt}), \tag{12}$$

where U_{it} is the abnormal stock return for firm i on day t, RET_{it} is the stock return of firm i and RET_{mt} is the return on the market index[11] on day t. The coefficients of α^i and β^i are estimated using data from day -210 to day -11. The M&A synergy is defined as the portfolio's cumulative abnormal return over the 11-day event window, with the weights based on their respective market capitalizations at the 6th trading day prior to the initial announcement of the transaction. The target's weight is adjusted by subtracting the value of target equity held by the acquirer prior to the announcement from the target's market capitalization. Panel A of Table 11 presents the descriptive statistics for the pre- and post-IFRS period synergistic gains, which shows that the mean and median synergy created in post-IFRS period are higher than

[11] The market indices for Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom are the ATX, BEL, Prague SE, OMXC, OMXH, CAC, DAX, Athex, BUX, Ireland SE, MIB, LUX, AEX, OBX, WSE, PSI, SAX, SBI, IBEX, OMX Stockholm, Swiss Market, FTSE 100 respectively.

those in the pre-IFRS period. The difference of the mean synergistic gains is significant in both t-test and Wilcoxon rank-sum test.

I regress SYN_{it} of the M&A transaction i in time t on the $IFRS_t$ dummy, which equals to one if the year t is a post-IFRS year, and zero otherwise, and a number of control variables as presented in models (13). If IFRS adoption creates more synergistic gains, a significantly positive coefficient on the IFRS dummy would be obtained in the following model:

$$SYN_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 Asize_{i,t-1} + \beta_3 Tsize_{i,t-1} + \beta_4 AROA_{i,t-1} + \beta_5 TROA_{i,t-1} + \beta_6 IP\_D_i + \beta_7 Allcash_i + \beta_8 Compete_i + \beta_9 Diversify_i + \beta_{10} Tender_i + \beta_{11} MOE_i + \beta_{12} IT_i \quad (13)$$

I include several control variables that represent acquirer, target and deal characteristics. I use the logarithm of total assets as a proxy for firm size ($Asize_{i,t-1}$ and $Tsize_{i,t-1}$) and return on assets as a proxy of financial performance ($AROA_{i,t-1}$ and $TROA_{i,t-1}$) for the acquirer and the target at the fiscal year end prior to the M&A announcement $t-1$ in transaction i. I include IP_D_i, which is the difference of investor protection score of the acquirer and target countries as difference in institutional settings is likely to affect the M&A procedures. The deal characteristics include the method of payment ($Allcash_i$), whether a deal is a competing deal ($Compete_i$), whether the transaction is a diversifying M&A ($Diversify_i$), whether the deal is a tender offer ($Tender_i$), whether a deal is a merger of equal (MOE_i), and whether a deal is between two firms from high-tech industries (IT_i). All variables are winsorized at 1% in the regression.

Panel B of Table 11 shows the descriptive statistics for the variables in the multivariate test. The synergistic gain is around negative three percent for M&A transactions in the sample. There are 94 percent of the deals are paid by cash, around half are diversified deals, 23 percent are tender offers and 20 percent are deals between two high-tech firms.

Panel C of Table 11 shows the results of synergistic gains regression. The coefficient on IFRS is positive and significant (0.045), indicating that IFRS adoption creates more benefits for M&As through achieving synergy.

To further investigate whether the improvement in synergistic gain is driven by an increase in the gains captured by the acquirer or by the target, I replace the 11-day acquirer cumulative abnormal returns (Acq_Ret_{it}) and target cumulative abnormal returns (Tar_Ret_{it}) as the dependent variable in model (14) and (15), respectively.

$$Acq\_Ret_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 Asize_{i,t-1} + \beta_3 Tsize_{i,t-1} + \beta_4 AROA_{i,t-1} + \beta_5 TROA_{i,t-1} + \beta_6 Allcash_i + \beta_7 Compete_i + \beta_8 Diversify_i + \beta_9 Tender_i + \beta_{10} MOE_i + \beta_{11} IT_i + \beta_{12} IP\_D_i \quad (14)$$

$$Tar\_Ret_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 Asize_{i,t-1} + \beta_3 Tsize_{i,t-1} + \beta_4 AROA_{i,t-1} + \beta_5 TROA_{i,t-1} + \beta_6 Allcash_i + \beta_7 Compete_i + \beta_8 Diversify_i + \beta_9 Tender_i + \beta_{10} MOE_i + \beta_{11} IT_i + \beta_{12} IP\_D_i \quad (15)$$

The results are presented in Panel D of Table 11. While IFRS adoption significantly improves cross-border M&A synergy, there is no improvement in gains for acquirers or targets separately.

Additionally, I examine whether institution has an effect on the improvement of synergistic gain by IFRS adoption. I define institution of a firm by the origin of legal system

in its home country. Specifically, I partition the sample into two, in which the first sample includes cross-border M&As among firms from countries with the same origins of legal systems, and the second sample includes cross-border M&As among firms from countries with different origins of legal system. The results are presented in Panel E of Table 11. I find that the coefficient on *IFRS* is positive and significant for the first sample, which indicates that the synergistic gain is significantly higher in the post-IFRS period than in the pre-IFRS period for the M&As among firms from countries with the same origin of legal systems. However, the coefficient on *IFRS* is insignificant in the estimation for the second sample. The results suggest that firms from countries with similar institution environments enjoy greater synergy improvement in cross-border M&As with the IFRS adoption.

CHAPTER 10 Sensitivity tests

In this study, I argue that IFRS adoption encourages M&As due to an improvement of cross-border information comparability. To better gauge the effect of IFRS adoption, I perform the former three tests using domestic M&A transaction data. The regression results for the tests are presented in Table 12, which show no significant increase in acquirers' M&A frequency, targets' number of foreign bidders and synergistic gains of M&A transactions within countries after the IFRS adoption. This suggests that the facilitation of cross-border M&As I find in the study is driven by unification of the accounting rules across countries and the improvement of cross-border information comparability.

Additionally, it is widely believed that the numerous economic integration reforms, including the introduction of euro, carried out by the European Union may have stimulated European firms to take part in cross-border M&As since 1993. To make sure our results are not driven by this explanation, I perform a number of sensitivity tests for samples covering M&As in 2002-2005, using year 2004 as cutoff. Specifically, I define year 2002 to 2003 as a pre-period while year 2004 to 2005 as a post-period and perform the former three tests. The results are summarized in Table 12. The dummy variable *POST* represents the new cutoff period. All the coefficients on *POST* in the sensitivity tests are insignificant and/or negative. These results support our assertion that IFRS adoption has an effect on encouraging cross-border M&As.

CHAPTER11 Summary and conclusion

Cross-border M&As have been the driving force behind the increase in foreign direct investment (FDI) since the mid-1990s. Although cross-border M&As help firms to achieve synergies and promote the international capital market, frictions originated from transaction costs, information asymmetries and agency conflicts, which hinder M&As, are inherently greater for such cross-border activities. This leads to the demand for internationally comparable financial information and thus the wide spread adoption of IFRS around the world.

Using a sample of M&A deals in 17 European countries over the period of 2002-2009, I investigate whether the mandatory adoption of IFRS encourages cross-border M&As. I find evidence that for acquirer, the cross-border M&A frequency and cross-border M&A ratio, which is the ratio of cross-border M&A frequency to the sum of cross-border and local M&A frequency, are significantly higher in the post-IFRS period than in the pre-IFRS period. For target firms, the number of foreign bidders and the foreign bidder ratio, which is the ratio of number of foreign bidders to total number of bidders, are significantly higher for M&As in the post-IFRS period than in the pre-IFRS period. Finally, I find that the synergistic gains, defined by a value-weighed portfolio of the acquirer and the target returns, increase significantly after IFRS adoption. These provide empirical evidences that the mandatory IFRS adoption across different countries of Europe facilitates cross-border M&A activities. Since

many countries have already adopted IFRS, and other countries are considering it because of the various benefits that the adoption can bring, the findings of this study should thus be useful for regulators, policy makers, and investors in such countries.

APPENDIX

A.1 Tables for Part one

Table 1

Sample selection procedures and sample sizes for tests of information comparability

Panel A: Number of firms in each sample country from the Worldscope database

Country	Number of firms
Austria	127
Belgium	197
Denmark	264
Finland	141
France	946
Germany	1210
Greece	329
Ireland	73
Italy	337
Luxembourg	59
The Netherlands	215
Norway	245
Portugal	68
Spain	179
Sweden	467
Switzerland	358
United Kingdom	2579
Total	**7794**

Panel B: Initial sample selection procedures

Number of firms obtained from *Worldscope*	7794
Exclusions:	
Fiscal year are not ended in December	(2180)
Firms that voluntarily adopted IFRS before the mandatory requirement	(867)
Firms without consolidated accounts	(259)
Total number of firms for the tests	**4488**

Table 2

Results of the tests using the accounting function approach

Panel A: Descriptive statistics for pre- and post-IFRS comparability

Variable	Mean	Median	Min	Max	Std Dev
Pre-IFRS comparability	-0.442	-0.061	-1.811	0.000	0.117
Post-IFRS comparability	-0.040	-0.024	-0.718	0.000	0.005

Difference in comparability between the pre-IFRS and post-IFRS periods	0.402
Number of observations	157
Wilcoxon signed-rank test:	
Two-tailed *p*-value	0.000
t-test:	
t-statistic	3.440
Two-tailed *p*-value	0.001

Panel B: Descriptive statistics for the variables in the multivariate test

Variable	N	Mean	Median	Minimum	Maximum	Std Dev
$Comp_{it}$	314	-0.241	-0.030	-1.811	0.000	1.052
$IFRS_t$	314	0.500	0.500	0.000	1.000	0.500
TA_Ratio_i	314	0.808	0.836	0.500	0.998	0.151
Com_Code_i	314	0.541	1.000	0.000	1.000	0.499
$Listing_i$	314	0.038	0.000	0.000	1.000	0.192

Panel C: Regression results

$$Comp_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 TA\_Ratio_i + \beta_3 Com\_Code_i + \beta_4 Listing_i + ID_i \quad (6)$$

Variables	Est. coefficient	t-statistic	2-tailed *p*-value
Intercept	-0.731	-1.453	0.151
IFRS$_t$	0.402***	2.708	0.009
TA_Ratio$_i$	-0.373	-1.659	0.102
Com_Code$_i$	-0.136*	-1.690	0.099
Listing$_i$	-0.631	-1.397	0.167
ID$_i$	Yes		
Observations	314		
Adjusted R^2	0.212		

*, **, *** indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. t-statistics are adjusted for countries clustering in the model.

Variable Definitions: $Comp_{it}$ is the comparability of firm pair i in period t; $IFRS_t$ is a dummy that is equal to 1 if the year is a post-IFRS year and 0 if it is a pre-IFRS year; TA_Ratio_i is the ratio of the total assets of the two firms in pair i in 2006, where the total assets of the smaller firm is the numerator of the ratio; Com_Code_i is an indicator that is equal to 1 when one firm in the pair is from a common-law country and the other is from a code-law country, and 0 otherwise; $Listing_i$ is an indicator that is equal to 1 if the two firms in a pair are listed on at least one same stock exchange, and 0 otherwise; ID_i is an industry dummy.

Panel D: Regression by year results

$$Comp_{it} = \beta_0 + YD_t + \beta_1 TA\_Ratio_i + \beta_2 Com\_Code_i + \beta_3 Listing_i + ID_i \quad (7)$$

Variables	Est. coefficient	t-statistic	2-tailed *p*-value
Intercept	-1.106**	-2.118	0.035
Year2003$_t$	0.114	0.971	0.332
Year2004$_t$	-0.069	-0.495	0.621
Year2005$_t$	0.420***	3.763	0.000
Year2006$_t$	0.425***	3.816	0.000
Year2007$_t$	0.427***	3.838	0.000
TA_Ratio$_i$	-0.359	-1.222	0.222
Com_Code$_i$	-0.070*	-1.745	0.081
Listing$_i$	-0.505*	-1.841	0.066
ID$_i$	Yes		
Observations	942		
Adjusted R^2	0.336		

*, **, *** indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. t-statistics are adjusted for countries clustering in the model.
Additional Variables Definitions: *YDt* is a year dummy - *Year2003$_t$*, *Year2004$_t$*, *Year2005$_t$*, *Year2006$_t$* and *Year2007$_t$* are for observations in the respective years.

Table 3

Results of the tests using the information transfer approach

Panel A: Descriptive statistics for the variables in the multivariate test

Variable	N	Mean	Median	Minimum	Maximum	Std Dev
NAF_CARit	773	0.027	0.188	0.000	0.187	0.030
AF_UE_{it}	773	0.208	0.016	0.001	1.909	0.475
$IFRS_t$	773	0.467	0.000	0.000	1.000	0.500
AF_Size_{it}	773	2.768	2.717	1.199	5.338	0.779
$AF\_Analyst_{it}$	773	6.857	5.000	1.000	32.000	6.684
AF_Loss_{it}	773	0.177	0.000	0.000	1.000	0.382

*** indicates NAF_CAR_{it} is statistically significance at 1 percent level.

Panel B: Regression Results

Model: $$NAF\_CAR_{it} = \beta_0 + \beta_1 AF\_UE_{it} + \beta_2 IFRS_t + \beta_3 AF\_UE_{it} * IFRS_t + \beta_4 AF\_Size_{it} + \beta_5 AF\_Analyst_{it} + \beta_6 AF\_Loss_{it} + ID_i \quad (7)$$

Variables	Est. coefficient	t-statistic	2-tailed *p*-value
Intercept	0.012	1.549	0.144
AF_UE_{it}	0.000	0.069	0.946
$IFRS_t$	-0.002	-1.093	0.293
$AF\_UE_{it} * IFRS_t$	0.001**	2.581	0.022
AF_Size_{it}	-0.000	-0.014	0.989
$AF\_Analyst_{it}$	-0.000	-0.108	0.915
AF_Loss_{it}	-0.001	-0.326	0.749
ID_i	Yes		
Observations	773		
Adjusted R^2	0.093		

*, **, *** indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels respectively. t-statistics are adjusted for announcing firms' countries clustering in the model.

Variable Definitions: NAF_CAR_{it} is the absolute value of average cumulative abnormal return of the similar foreign firms of pair *i* within the three-day earnings release window of the announcing firm in year *t*; AF_UE_{it} is the absolute value of unexpected earnings of the announcing firm of pair *i* in year *t*; $IFRS_t$ is a dummy equal to 1 if the year is a post-IFRS year and 0 if it is a pre-IFRS year; AF_Size_{it} is the size of the announcing firm of pair *i* in year *t*, measured by the logarithm of total assets; $AF\_Analyst_{it}$ is the number of one-year-ahead earnings forecasts issued and revised for the announcing firm of pair *i* in year *t*; AF_Loss_{it}, a dummy indicating whether the announcing firm of pair *i* is reporting a loss in year *t*.

Table 4

Results of the tests using the ICE approach

Panel A: Paired t-test for the difference of ICE comparability scores in the pre- and post-IFRS periods

Variable	n	Mean	Median	Min	Max	Std Dev
Pre-IFRS comparability score on ICE	305	0.463	0.000	0.000	1.000	0.499
Post-IFRS comparability score on ICE	305	0.702	1.000	0.000	1.000	0.458
Difference						0.239***
t-statistic (two-tailed p-value) in paired t-test						7.974 (0.000)

Panel B: Paired t-test for the difference of ICBV comparability scores in the pre- and post-IFRS periods

Variable	n	Mean	Median	Min	Max	Std Dev
Pre-IFRS comparability score on ICBV	305	0.531	1.000	0.000	1.000	0.500
Post-IFRS comparability score on ICBV	305	0.777	1.000	0.000	1.000	0.417
Difference						0.246***
t-statistic (two-tailed p-value) in paired t-test						8.143 (0.000)

Table 5

Impact of institutional factors on the comparability effect of IFRS adoption

Panel A: Accounting function approach by legal system origins

Model: $Comp_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 TA\_Ratio_i + \beta_3 Listing_i + ID_i$ (6)

	(1)	(2)
	The same legal origin	**Different legal origins**
VARIABLE	$Comp_{it}$	$Comp_{it}$
Intercept	1.844	-1.652***
	(1.440)	(-6.136)
$IFRS_t$	0.446**	0.365***
	(2.689)	(2.999)
TA_Ratio_i	-1.243	-0.169
	(-1.142)	(-0.780)
$Listing_i$	-1.123	-
	(-1.390)	
ID_i	Yes	Yes
Observations	144	170
Adjusted R^2	0.116	0.304

*, **, *** indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. t-statistics are adjusted for countries clustering in the model.

Variables are defined in the notes of Table 2.

Panel B: Information transfer approach by legal system origins

Model: $NAF\_CAR_{it} = \beta_0 + \beta_1 AF\_UE_{it} + \beta_2 IFRS_t + \beta_3 AF\_UE_{it} * IFRS_t + \beta_4 AF\_Size_{it} + \beta_5 AF\_Analyst_{it} + \beta_6 AF\_Loss_{it} + ID_i$ (8)

	(1)	(2)
	The same legal origin	**Different legal origins**
VARIABLE	NAF_CAR_{it}	NAF_CAR_{it}
Intercept	0.021***	0.0282**
	(4.286)	(2.656)
AF_UE_{it}	0.006***	-0.001
	(3.904)	(-0.871)
$IFRS_t$	-0.006	-0.002
	(-1.605)	(-0.521)
$AF\_UE_{it} * IFRS_t$	0.003*	0.001
	(1.967)	(-0.575)
AF_Size_{it}	0.003	0.001
	(1.077)	(0.293)
$AF\_Analyst_{it}$	-0.000	-0.000***
	(-1.120)	(-3.630)
AF_Loss_{it}	0.002	0.000
	(0.555)	(0.070)
ID_i	Yes	Yes
Observations	622	298
Adjusted R^2	0.019	0.012

*, **, *** indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. t-statistics are adjusted for announcing firms' countries clustering in the model. Variables are defined in the notes of Table 3.

Panel C: ICE and ICBV approach by legal system origins

T-test for the difference in ICE comparability scores						
Legal origins	**n**	**Pre-IFRS**	**Post-IFRS**	**Difference**	**t-statistics**	**p-value**
The same	222	0.468	0.752	0.284***[a]	7.192	0.000
Different	83	0.446	0.566	0.120**[a]	2.293	0.024
				0.164**[b]	2.441	0.015
T-test for the difference in ICBV comparability scores						
The same	222	0.486	0.752	0.266 ***[a]	7.070	0.000
Different	83	0.651	0.843	0.192 ***[a]	4.118	0.000
				0.074 [b]	1.076	0.283

a. Test of mean difference by paired t-test.
b. Test of difference of mean difference by two-sample t-test.

Table 6

Sensitivity tests: Results for Similar firms within the same country

Panel A: Accounting Approach: Regression Results

Model: $Comp_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 TA\_Ratio_i + ID_i$ (6)

Variables	Est. coefficient	t-statistic	2-tailed *p*-value
Intercept	-0.446	-2.618	0.040
IFRS$_t$	0.655	1.924	0.103
TA_Ratio$_i$	0.132	1.318	0.235
ID$_i$	Yes		
Observations	122		
Adjusted R^2	0.341		

*, **, *** indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. t-statistics are adjusted for countries clustering in the model.
Variables are defined in the notes of Table 2.

Panel B: Information transfer: Regression Results

Model: $NAF\_CAR_{it} = \beta_0 + \beta_1 AF\_UE_{it} + \beta_2 IFRS_t + \beta_3 AF\_UE_{it} * IFRS_t + \beta_4 AF\_Size_{it} + \beta_5 AF\_Analyst_{it} + \beta_6 AF\_Loss_{it} + ID_i + \varepsilon_{it}$ (7)

Variables	Est. coefficient	t-statistic	2-tailed *p*-value
Intercept	0.039	1.027	0.307
AF_UE$_{it}$	0.000	0.144	0.886
IFRS$_t$	-0.008	-1.413	0.160
AF_UE$_{it}$*IFRS$_t$	0.007	1.554	0.123
AF_Size$_{it}$	-0.009	-1.156	0.250
AF_Analyst$_{it}$	0.001	0.954	0.342
AF_Loss$_{it}$	0.003	0.369	0.713
ID$_i$	Yes		
Observations	195		
Adjusted R^2	0.029		

*, **, *** indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. t-statistics are adjusted for countries and years clustering in the model.
Variables are defined in the notes of Table 3.

Table 7

Sensitivity tests: excluding 2004 and 2005 observations

Panel A: Regression results for the accounting function approach

$Comp_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 TA\_Ratio_i + \beta_3 Com\_Code_i + \beta_4 Listing_i + ID_i$ (6)

Variables	Est. coefficient	t-statistic	2-tailed *p*-value
Intercept	-0.415	-0.760	0.450
IFRS$_t$	0.550**	2.484	0.016
TA_Ratio$_i$	-0.192	-1.201	0.208
Com_Code$_i$	-0.173*	-1.696	0.096
Listing$_i$	-0.963	-1.611	0.113
ID$_i$	Yes		
Observations	314		
Adjusted R^2	0.236		

*, **, *** indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. t-statistics are adjusted for countries clustering in the model.
Variables are defined in the notes of Table 2.

Panel B: Regression results for the information transfer approach

Model: $NAF\_CAR_{it} = \beta_0 + \beta_1 AF\_UE_{it} + \beta_2 IFRS_t + \beta_3 AF\_UE_{it}*IFRS_t + \beta_4 AF\_Size_{it} + \beta_5 AF\_Analyst_{it} + \beta_6 AF\_Loss_{it} + ID_i$ (8)

Variables	Est. coefficient	t-statistic	2-tailed *p*-value
Intercept	0.000	0.037	0.971
AF_UE$_{it}$	0.000	0.163	0.873
IFRS$_t$	-0.002	-0.837	0.417
AF_UE$_{it}$*IFRS$_t$	0.002**	2.245	0.041
AF_Size$_{it}$	0.001	0.161	0.874
AF_Analyst$_{it}$	-0.000	-0.349	0.732
AF_Loss$_{it}$	-0.001	-0.335	0.743
ID$_i$	Yes		
Observations	489		
Adjusted R^2	0.010		

*, **, *** indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. t-statistics are adjusted for announcing firms' countries clustering in the model.
Variables are defined in the notes of Table 3.

Panel C: Results of the tests using the ICE and ICBV approach

Variable	**n**	**Mean**	**Median**	**Min**	**Max**	**Std Dev**
Pre-IFRS comparability score on ICE	305	0.669	1.000	0.000	1.000	0.471
Post-IFRS comparability score on ICE	305	0.896	1.000	0.000	1.000	0.307
Difference						0.227***
t-statistic (two-tailed *p*-value) in paired t-test						6.855 (0.000)
Pre-IFRS comparability score on ICBV	305	0.657	1.000	0.000	1.000	0.477
Post-IFRS comparability score on ICBV	305	0.849	1.000	0.000	1.000	0.358
Difference						0.192***
t-statistic (two-tailed *p*-value) in paired t-test						6.297 (0.000)

A.2 Tables and Figures for Part two

Figure 1

Cross-border M&A ratio by year

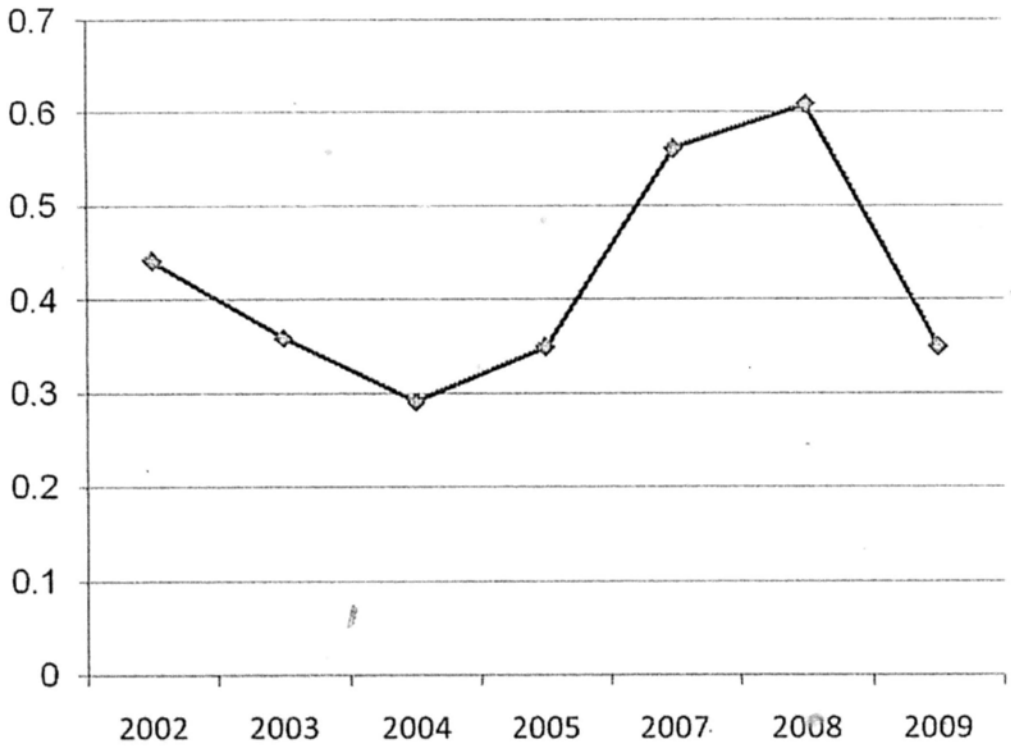

Table 8

Initial sample selection procedures

Number of M&A transactions during the sample period	2226
Exclusions – transactions involve	
Firms without sedol numbers	(315)
Firms that voluntarily adopted IFRS before the mandatory requirement	(506)
Firms without consolidated accounts	(169)
Total number of M&A transactions for the test	**1236**

Table 9

Results of the cross-border M&A frequency and ratio by acquirer tests

Panel A: Descriptive statistics for cross-border M&A frequency & ratio in the pre- and post-IFRS periods

Variable	n	Mean	Median	Min	Max	Std Dev
Pre-IFRS cross-border M&A frequency	1,796	0.085	0.000	0.000	4.000	0.348
Post-IFRS cross-border M&A	1,347	0.145	0.000	0.000	7.000	0.588
Difference in frequency between the pre-IFRS and post-IFRS periods						0.060***
Wilcoxon rank-sum test (two-tailed p-value)						0.001
t-test t-statistic (two-tailed p-value)						3.581 (0.000)
Pre-IFRS cross-border M&A ratio	366	0.306	0.000	0.000	1.000	0.449
Post-IFRS cross-border M&A ratio	323	0.390	0.000	0.000	1.000	0.474
Difference in frequency between the pre-IFRS and post-IFRS periods						0.084**
Wilcoxon rank-sum test (two-tailed p-value)						0.014
t-test t-statistic (two-tailed p-value)						2.370 (0.018)

Panel B: Descriptive statistics for the variables in the multivariate test

Variable	N	Mean	Median	Minimum	Maximum	Std Dev
Intl_freq	3143	0.110	0.000	0.000	7.000	0.467
Intl_ratio	689	0.345	0.000	0.000	1.000	0.463
Dom_freq	3143	0.184	0.000	0.000	1.000	0.490
IFRS	3143	0.429	0.000	0.000	1.000	0.495
Inv_proc	3143	7.656	7.917	4.692	9.285	0.872
Log_gnp	3143	4.500	4.509	4.306	4.678	0.058
Common	3143	0.307	0.000	0.000	1.000	0.461
Gdp_g	3143	-0.050	0.018	-0.076	0.066	0.024
ROA	3143	0.033	0.041	-0.562	0.304	0.112
LogTA	3143	3.432	3.432	0.846	6.119	1.190

Panel C: Regression Results

Poisson regression: $Intl\_freq_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 DomFreq_{ict} + \beta_3 Inv\_proc_c + \beta_4 Log\_gnp_c + \beta_5 Common_c + \beta_6 Gdp\_g_{ct} + \beta_7 ROA_{it} + \beta_8 LogTA_{it} + ID_i$ (8)

OLS regression: $Intl\_ratio_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Inv\_proc_c + \beta_3 Log\_gnp_c + \beta_4 Common_c + \beta_5 Gdp\_g_{ct} + \beta_6 ROA_{it} + \beta_7 LogTA_{it} + ID_i$ (9)

	(8)	(9)
	Intl_freq$_{ict}$	***Intl_ratio$_{ict}$***
Intercept	-17.100***	-3.980
	(-2.761)	(-1.487)
IFRS$_t$	0.491***	0.078**
	(4.625)	(2.554)
Dom_freq$_{ict}$	-0.029	
	(-0.448)	
Inv_proc$_c$	-0.022	0.002
	(-0.247)	(0.067)
Log_gnp$_c$	2.548*	0.864
	(1.848)	(1.447)
Common$_c$	-0.387***	-0.088
	(-2.588)	(-1.450)
Gdp_g$_{ct}$	11.450***	1.341
	(4.317)	(1.478)
ROA$_{it}$	-0.679	-0.303
	(-0.605)	(-1.720)
LogTA$_{it}$	0.876***	0.116***
	(10.330)	(8.091)
ID	Yes	Yes
Observations	3143	689
Pseudo R^2/ Adjusted R^2	0.144	0.136

*** p<0.01, ** p<0.05, * p<0.1 indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Robust z-statistics are adjusted for acquirer countries clustering in model (8) and robust t-statistics are adjusted for acquirer countries clustering in model (9).

Variable definitions: $Intl\_freq_{ict}$ is the frequency of cross-border M&As for acquirer i in country c at time t; $Intl\_ratio_{ict}$ is the cross-border M&A ratio for acquirer i in country c at time t; $DomFreq_{ict}$ is the frequency of domestic M&As for acquirer i in country c at time t; $IFRS_t$ is a dummy variable that equals to one if the year t is a post-IFRS year, and zero otherwise; Inv_proc_c is the investor protection score of country c, which is the average of the rule of law index from La Porta et al.(1998) and the anti-director rights score from Djankov et al. (2008); Log_gnp_c is the logarithm of GNP per capita in year 2006 for acquirer country c; $Common_c$ is a dummy variable that equals one if the acquirer is from a common-law country c, and zero otherwise; Gdp_g_{ct} is the growth of GDP of country c at time t; ROA_{it} is the return on total assets of acquier i at time t; $LogTA_{it}$ is the logarithm of total assets of acquirer i at time t.

Table 10
Results of the foreign bidder number and ratio by target tests

Panel A: Descriptive statistics for number of foreign bidders and foreign bidder ratio in the pre- and post-IFRS periods

Variable	n	Mean	Median	Min	Max	Std Dev
Pre-IFRS number of foreign bidders	1,944	0.049	0.000	0.000	3.000	0.247
Post-IFRS number of foreign bidders	1,458	0.154	0.000	0.000	4.000	0.446
Difference in frequency between the pre-IFRS and post-IFRS periods						0.105***
Wilcoxon rank-sum test (two-tailed p-value)						0.000
t-test t-statistic (two-tailed p-value)						8.780 (0.000)
Pre-IFRS foreign bidder ratio	277	0.296	0.000	0.000	1.000	0.455
Post-IFRS foreign bidder ratio	351	0.513	0.500	0.000	1.000	0.490
Difference in frequency between the pre-IFRS and post-IFRS periods						0.217***
Wilcoxon rank-sum test (two-tailed p-value)						0.000
t-test t-statistic (two-tailed p-value)						5.675 (0.000)

Panel B: Descriptive statistics for the variables in the multivariate test

Variable	N	Mean	Median	Minimum	Maximum	Std Dev
FBid_no	3,402	0.094	0.000	0.000	4.000	0.351
FBid_ratio	628	0.417	0.000	0.000	1.000	0.487
DBid_no	3,402	0.126	0.000	0.000	4.000	0.382
IFRS	3,402	0.429	0.000	0.000	1.000	0.495
Inv_proc	3,402	7.651	7.917	4.692	8.452	0.951
Log_gnp	3,402	4.498	4.509	4.306	4.759	0.064
Common	3,402	0.335	0.000	0.000	1.000	0.472
Gdp_g	3,402	0.122	0.018	-0.076	0.066	0.024
ROA	3,402	0.011	0.037	-0.756	0.305	0.145
LogTA	3,402	2.871	2.788	0.608	5.863	1.160

Panel C: Regression Results

Poisson Regression: $FBid\_no_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Inv\_proc_c + \beta_3 Log\_gnp_c + \beta_4 Common_c + \beta_5 Gdp\_g_{ct} + \beta_6 ROA_{it} + \beta_7 LogTA_{it}$ (10)

Regression: $FBid\_ratio_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Inv\_proc_c + \beta_3 Log\_gnp_c + \beta_4 Common_c + \beta_5 Gdp\_g_{ct} + \beta_6 ROA_{it} + \beta_7 LogTA_{it}$ (11)

	(10)	(11)
	FBid_no$_{ict}$	***FBid_ratio$_{ict}$***
Intercept	-9.384	-3.416
	(-1.574)	(-1.401)
IFRS$_t$	1.276***	0.207**
	(5.319)	(2.852)
Inv_proc$_c$	-0.0304	0.00283
	(-0.407)	(0.0952)
Log_gnp$_c$	1.081	0.769
	(0.836)	(1.389)
Common$_c$	-0.593***	-0.155**
	(-3.876)	(-2.578)
Gdp_g$_{ct}$	11.74***	1.827**
	(4.373)	(2.399)
ROA$_{it}$	0.162	-0.00381
	(0.299)	(-0.0337)
LogTA$_{it}$	0.235***	0.0518**
	(3.155)	(2.158)
Observations	3402	628
Pseudo R^2/ Adjusted R^2	0.089	0.092

*** p<0.01, ** p<0.05, * p<0.1 indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Robust z-statistics are adjusted for targets' countries clustering for model (9) and robust t-statistics are adjusted for targets' countries clustering for model (10).

Variable definitions: $FBid\_no_{ict}$ is the number of foreign bidders for target i in country c at time t; $FBid\_ratio_{ict}$ is the foreign bidder ratio for target i in country c at time t; $IFRS_t$ is a dummy variable that equals to one if the year is a post-IFRS year, and zero otherwise; Inv_proc_c is the investor protection score of target country c; Log_gnp_c is the logarithm of GNP per capita in year 2006 for target country c; $Common_c$ is a dummy variable that equals one if the target is from a common-law country c, and zero otherwise; Gdp_g_{ct} is the growth of GDP of target country c at time t; ROA is the return on total assets of firm i at time t; and $LogTA$ is the logarithm of total assets of firm i at time t.

Table 11

Results of the synergy tests

Panel A: Descriptive statistics for pre- and post-IFRS synergistic gains

Variable	n	Mean	Median	Min	Max	Std
Pre-IFRS synergistic gains	61	-0.046	-0.011	-0.839	0.793	0.001
Post-IFRS synergistic gains	42	-0.005	0.164	-0.839	0.793	0.092

Difference in synergistic gains between the pre-IFRS and post-IFRS periods	0.041
Wilcoxon rank-sum test (two-tailed p-value)	0.046
t-test t-statistic (two-tailed p-value)	2.083 (0.040)

Panel B: Descriptive statistics for the variables in the multivariate test

Variable	n	Mean	Median	Minimum	Maximum	Std Dev
SYN	103	-0.029	-0.001	-0.839	0.793	0.993
$IFRS_t$	103	0.408	0.000	0.000	1.000	0.494
$Asize_{i,t-}$	103	9.951	9.784	4.969	14.895	2.594
$Tsize_{i,t-1}$	103	6.912	6.549	3.224	12.138	2.449
$AROA_{i,t-1}$	103	0.041	0.042	-0.178	0.288	0.073
$TROA_{i,t-1}$	103	0.021	0.047	-0.464	0.164	0.116
IP_D_i	103	0.658	0.510	0.000	3.695	0.655
$Allcash_i$	103	0.942	1.000	0.000	1.000	0.235
$Compete_i$	103	0.029	0.000	0.000	1.000	0.169
$Diversify_i$	103	0.447	0.000	0.000	1.000	0.500
$Tender_i$	103	0.223	0.000	0.000	1.000	0.418
MOE_i	103	0.010	0.000	0.000	1.000	0.099
IT_i	103	0.194	0.000	0.000	1.000	0.397

Panel C: Regression Results for synergistic returns

$$SYN_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 Asize_{i,t-1} + \beta_3 Tsize_{i,t-1} + \beta_4 AROA_{i,t-1} + \beta_5 TROA_{i,t-1} + \beta_6 Allcash_i + \beta_7 Compete_i + \beta_8 Diversify_i + \beta_9 Tender_i + \beta_{10} MOE_i + \beta_{11} IT_i + \beta_{12} IP\_D_i \quad (13)$$

Variables	Est. coefficient	t-statistic	2-tailed *p*-value
Intercept	0.001	0.010	0.991
$IFRS_t$	0.045**	2.645	0.011
$Asize_{i,t-}$	-0.004	-0.669	0.506
$Tsize_{i,t-1}$	0.001	0.100	0.921
$AROA_{i,t-1}$	-0.234*	-1.171	0.093
$TROA_{i,t-1}$	-0.045	-0.415	0.680
IP_D_i	0.018	0.984	0.330
$Allcash_i$	0.004	0.056	0.955
$Compete_i$	0.034***	3.632	0.001
$Diversify_i$	-0.010	-0.216	0.830
$Tender_i$	-0.057	-1.627	0.110
MOE_i	0.063	0.776	0.441
IT_i	-0.011	-0.261	0.795
Observations	103		
Adjusted R^2	0.051		

*** p<0.01, ** p<0.05, * p<0.1 indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Robust t-statistics are adjusted for countries' clustering.

Variable definitions: SYN_{it} is a value-weighed portfolio of the acquirer and the target cumulative abnormal returns over the 11-day event window, with the weights based on their respective market capitalizations at the 6th trading day prior to the initial announcement of the transaction. The target's weight is adjusted by subtracting the value of target equity held by the acquirer prior to the announcement from the target's market capitalization.

Panel D: Regression Results for acquirers' and targets' returns

$$Acq\_Ret_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 Asize_{i,t-1} + \beta_3 Tsize_{i,t-1} + \beta_4 AROA_{i,t-1} + \beta_5 TROA_{i,t-1} + \beta_6 Allcash_i + \beta_7 Compete_i + \beta_8 Diversify_i + \beta_9 Tender_i + \beta_{10} MOE_i + \beta_{11} IT_i + \beta_{12} IP\_D_i \quad (14)$$

$$Tar\_Ret_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 Asize_{i,t-1} + \beta_3 Tsize_{i,t-1} + \beta_4 AROA_{i,t-1} + \beta_5 TROA_{i,t-1} + \beta_6 Allcash_i + \beta_7 Compete_i + \beta_8 Diversify_i + \beta_9 Tender_i + \beta_{10} MOE_i + \beta_{11} IT_i + \beta_{12} IP\_D_i \quad (15)$$

	(14)	(15)
	Acq_Ret$_{it}$	***Tar_Ret$_{it}$***
Intercept	-0.007	0.117***
	(-0.145)	-0.005
IFRS$_t$	0.006	-0.037
	(0.355)	(0.264)
Asize$_{i,t-}$	-0.003	-0.007
	(-0.801)	(0.143)
Tsize$_{i,t-1}$	0.002	-0.005
	(0.578)	(0.230)
AROA$_{i,t-1}$	-0.271**	0.003
	(-2.272)	(0.986)
TROA$_{i,t-1}$	0.036	-0.030
	(0.583)	(0.747)
IP_D$_i$	0.007	0.010
	(0.739)	(0.823)
Allcash$_i$	0.038	0.041
	(1.229)	(0.283)
Compete$_i$	-0.108**	0.161
	(-2.042)	(0.345)
Diversify$_i$	-0.003	-0.026
	(-0.246)	(0.236)
Tender$_i$	0.011	0.127**
	(0.708)	-0.043
MOE$_i$	0.206***	0.138**
	(5.216)	-0.011
IT$_i$	0.005	-0.020
	(0.308)	(0.567)
Observations	103	103
Adjusted R^2	0.122	0.199

Panel E: Regression Results for acquirers' and targets' returns

$$SYN_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 Asize_{i,t-1} + \beta_3 Tsize_{i,t-1} + \beta_4 AROA_{i,t-1} + \beta_5 TROA_{i,t-1} + \beta_6 Allcash_i + \beta_7 Compete_i + \beta_8 Diversify_i + \beta_9 Tender_i + \beta_{10} MOE_i + \beta_{11} IT_i + \beta_{12} IP\_D_i \quad (13)$$

	M&As among firms from countries with the same legal origins	**M&As among firms from countries with different legal origins**
	SYN_{it}	SYN_{it}
Intercept	-0.003	0.096
	(-0.033)	(1.032)
$IFRS_t$	0.064**	0.026
	(2.345)	(0.465)
$Asize_{i,t-}$	-0.002	-0.010***
	(-0.231)	(-3.594)
$Tsize_{i,t-1}$	-0.004	0.010
	(-1.092)	(1.220)
$AROA_{i,t-1}$	-0.326*	-0.040
	(-1.870)	(-0.211)
$TROA_{i,t-1}$	0.009	-0.286***
	(0.060)	(-2.938)
IP_D_i	0.030***	-0.018***
	(3.745)	(-3.503)
$Allcash_i$	0.002	-0.026
	(0.039)	(-1.428)
$Compete_i$	0.084***	-0.038
	(4.931)	(-0.743)
$Diversify_i$	-0.005	-0.018
	(-0.107)	(-0.369)
$Tender_i$	-0.094***	-0.024
	(-3.613)	(-1.016)
MOE_i	0.000	-0.002
	(0.032)	(-0.038)
IT_i	0.018	-0.051
	(0.411)	(-0.844)
Observations	64	39
Adjusted R^2	0.087	0.086

Table 12

Sensitivity test: Local M&A frequency by acquirer

Panel A: M&A frequency by acquirer tests

Poisson regression: $Local\_freq_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Inv\_proc_c + \beta_3 Log\_gnp_c + \beta_4 Common_c + \beta_5 Gdp\_g_{ct} + \beta_6 ROA_{it} + \beta_7 LogTA_{it} + ID$ (8)

Variables	Est. coefficient	z-statistic	2-tailed *p*-value
Intercept	6.194	1.128	0.259
IFRS$_t$	0.148	1.444	0.149
Inv_proc$_c$	0.0939	1.475	0.140
Log_gnp$_c$	-2.038	-1.627	0.104
Common$_c$	-0.378**	-2.373	0.0176
Gdp_g$_{ct}$	2.576	1.084	0.278
ROA$_{it}$	1.137***	2.890	0.004
LogTA$_{it}$	0.117**	2.036	0.042
ID	YES		
Observations	3138		
Pseudo R^2	0.026		

*** p<0.01, ** p<0.05, * p<0.1 indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Robust z-statistics are adjusted for countries clustering.
Variables are defined in Table 9.

Panel B: Number of foreign bidders by target tests

Poisson Regression: $LBid\_no_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Inv\_proc_c + \beta_3 Log\_gnp_c + \beta_4 Common_c + \beta_5 Gdp\_g_{ct} + \beta_6 ROA_{it} + \beta_7 LogTA_{it}$ (9)

Variables	Est. coefficient	z-statistic	2-tailed *p*-value
Intercept	10.650	2.002	0.045
IFRS$_t$	0.315	1.541	0.123
Inv_proc$_c$	0.095*	1.851	0.064
Log_gnp$_c$	-3.050**	-2.501	0.012
Common$_c$	-0.002	-0.014	0.989
Gdp_g$_{ct}$	2.013	0.885	0.376
ROA$_{it}$	-0.247	-0.809	0.418
LogTA$_{it}$	0.024	0.475	0.635
ID	YES		
Observations	3402		
Pseudo R^2	0.010		

*** p<0.01, ** p<0.05, * p<0.1 indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Robust z-statistics are adjusted for countries clustering.
Variables are defined in Table 10.

Panel C: Regression Results for synergistic returns

$$SYN_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 Asize_{i,t-1} + \beta_3 Tsize_{i,t-1} + \beta_4 AROA_{i,t-1} + \beta_5 TROA_{i,t-1} + \beta_6 Allcash_i + \beta_7 Compete_i + \beta_8 Diversify_i + \beta_9 Tender_i + \beta_{10} MOE_i + \beta_{11} IT_i + \beta_{12} IP\_D_i \quad (11)$$

Variables	Est. coefficient	t-statistic	2-tailed *p*-value
Intercept	0.164	1.236	0.240
$IFRS_t$	-0.083	-0.940	0.366
$Asize_{i,t-}$	-0.007	-0.273	0.789
$Tsize_{i,t-1}$	-0.014	-0.600	0.559
$AROA_{i,t-1}$	0.231	0.913	0.379
$TROA_{i,t-1}$	-0.018	-0.203	0.843
$Allcash_i$	-0.013	-0.122	0.905
$Compete_i$	-0.174	-1.488	0.162
$Diversify_i$	-0.042	-0.674	0.513
$Tender_i$	-0.032	-0.600	0.559
MOE_i	0.032	0.173	0.866
IT_i	-0.109	-0.723	0.484
Observations	286		
Adjusted R^2	0.022		

*** p<0.01, ** p<0.05, * p<0.1 indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Robust t-statistics are adjusted for countries' clustering.
Variables are defined in Table 11.

Table 13

Sensitivity test: Alternative cutoffs

Panel A: M&A frequency by acquirer tests

Poisson regression: $Intl\_freq_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Local\_freq_{ict} + \beta_3 Inv\_proc_c + \beta_4 Log\_gnp_c + \beta_5 Common_c + \beta_6 Gdp\_g_{ct} + \beta_7 ROA_{it} + \beta_8 LogTA_{it} + ID$ (8)

OLS regression: $Intl\_ratio_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Inv\_proc_c + \beta_3 Log\_gnp_c + \beta_4 Common_c + \beta_5 Gdp\_g_{ct} + \beta_6 ROA_{it} + \beta_7 LogTA_{it} + ID$ (9)

	(8)	(9)
	Intl_freq$_{ict}$	***Intl_ratio$_{ict}$***
Intercept	-5.619	-2.811
	(-1.142)	(-1.389)
POST$_t$	-0.147	0.046
	(-0.555)	(0.703)
Local_freq$_{ict}$	0.250***	
	(2.709)	
Inv_proc$_c$	0.211*	0.022
	(1.821)	(0.735)
Log_gnp$_c$	-0.299	0.595
	(-0.268)	(1.317)
Common$_c$	-0.806***	-0.103
	(-4.138)	(-1.622)
Gdp_g$_{ct}$	-3.867	-3.338
	(-0.320)	(-1.341)
ROA$_{it}$	-1.003	-0.240
	(-1.155)	(-1.530)
LogTA$_{it}$	0.873***	0.114***
	(10.830)	(5.707)
ID	Yes	Yes
Observations	1796	366
Pseudo R^2	0.139	0.115

*** p<0.01, ** p<0.05, * p<0.1 indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Robust z-statistics are adjusted for acquirer countries clustering in model (8) and robust t-statistics are adjusted for acquirer countries clustering in model (9).

Variables are defined in Table 9.

Additional variable definitions:
POSTt = a dummy variable that equals to one if the year is 2004 or 2005, and equals to zero if the year is 2002 or 2003.

Panel B: Foreign bidder by target tests

Poisson Regression: $FBid\_no_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Inv\_proc_c + \beta_3 Log\_gnp_c + \beta_4 Common_c + \beta_5 Gdp\_g_{ct} + \beta_6 ROA_{it} + \beta_7 LogTA_{it}$ (9)

Regression: $FBid\_ratio_{ict} = \beta_0 + \beta_1 IFRS_t + \beta_2 Inv\_proc_c + \beta_3 Log\_gnp_c + \beta_4 Common_c + \beta_5 Gdp\_g_{ct} + \beta_6 ROA_{it} + \beta_7 LogTA_{it}$ (10)

	(9)	(10)
	FBid_no$_{ict}$	***FBid_ratio$_{ict}$***
Intercept	-4.248	-3.183
	(-0.284)	(-1.036)
POST$_t$	0.0838	0.00393
	(0.251)	(0.0569)
Inv_proc$_c$	-0.0850	-0.117*
	(-0.451)	(-1.823)
Loggnppc$_c$	-2.386	0.919
	(-0.685)	(1.246)
Common$_c$	-1.312***	-0.118
	(-4.740)	(-1.435)
Gdpgrowth$_{ct}$	-8.563	-1.756
	(-0.760)	(-0.535)
ROA$_{it}$	-0.247	0.0828
	(-0.300)	(0.524)
LogTA$_{it}$	0.232**	0.0518
	(2.079)	(1.452)
Observations	1,944	277
Pseudo R^2	0.064	0.098

*** p<0.01, ** p<0.05, * p<0.1 indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Robust z-statistics are adjusted for targets' countries clustering for model (9) and robust t-statistics are adjusted for targets' countries clustering for model (10).

Variables are defined in Table 10.

Additional variable definitions:
POSTt = a dummy variable that equals to one if the year is 2004 or 2005, and equals to zero if the year is 2002 or 2003.

Panel C: Regression Results for synergistic returns

$$SYN_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 Asize_{i,t-1} + \beta_3 Tsize_{i,t-1} + \beta_4 AROA_{i,t-1} + \beta_5 TROA_{i,t-1} + \beta_6 Allcash_i + \beta_7 Compete_i + \beta_8 Diversify_i + \beta_9 Tender_i + \beta_{10} MOE_i + \beta_{11} IT_i + \beta_{12} IP\_D_i \quad (11)$$

Variables	Est. coefficient	t-statistic	2-tailed *p*-value
Intercept	-0.031	-0.384	0.702
$POST_t$	0.044	1.628	0.110
$Asize_{i,t-}$	-0.004	-0.732	0.468
$Tsize_{i,t-1}$	0.003	0.385	0.702
$AROA_{i,t-1}$	-0.380*	-1.945	0.058
$TROA_{i,t-1}$	-0.090	-0.990	0.327
$Allcash_i$	0.010	0.182	0.856
$Compete_i$	0.058	0.586	0.560
$Diversify_i$	0.005	0.179	0.858
$Tender_i$	-0.073**	-2.359	0.022
IT_i	-0.018	-0.526	0.601
IP_D_i	0.010	0.587	0.560
Observations	61		
Adjusted R^2	0.024		

*** p<0.01, ** p<0.05, * p<0.1 indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Robust t-statistics are adjusted for countries' clustering.

Variables are defined in Table 11.

Additional variable definitions:
POSTt = a dummy variable that equals to one if the year is 2004 or 2005, and equals to zero if the year is 2002 or 2003.

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