

INSTITUTIONAL INVESTORS AND CROSS-BORDER MERGERS AND ACQUISITIONS:  
THE 2000-2012 PERIOD

by

JINSUK YANG

DISSERTATION

Submitted in partial fulfillment of the requirements  
For the degree of Doctor of Philosophy at  
The University of Texas at Arlington  
May, 2017

Arlington, Texas

Supervising Committee:

(Grace) Qing Hao, Supervising Professor  
Larry Lockwood  
John C Adams  
Mahmut Yasar

Copyright by  
Jinsuk Yang  
2017

## ACKNOWLEDGEMENTS

My utmost thanks and sincere gratitude go to my dissertation chair, (Grace) Qing Hao, who constantly supports and encourages me to make this project possible. The advice and wisdom Dr. Hao has given me over the years has helped me shape who I am now and become a researcher. I also want to extend my thanks and gratitude to my dissertation committee members, Larry Lockwood, John Adams, and Mahmut Yasar, who have always stood by me from the beginning of Ph.D. program and through this long process. I am grateful to Prof. Lockwood for his insightful comments and for sharing with me his invaluable research experience and knowledge. Also, I am thankful to Dr. Adams for his encouragement and continuous support of my Ph.D. study. Further, I am indebted to Dr. Yasar for all his great help on my dissertation and for spending his precious time on my research.

## DEDICATION

All of my academic achievements and this dissertation are dedicated first and foremost to my beloved wife, Jiyoong Jung, who has always been there for me, encouraged me, and understood me every single moment of my life. Thank you, Jiyoong, for your love, support, wisdom, and belief in me. Without you, this work would have been impossible.

Next, I would like to express my deep gratitude to my parents who have so selflessly supported me throughout the course of the program and my life. I also want to thank my brother, Heemin Yang, for his sacrifice and being a friend with me all the time. Further, I am very grateful to my parents-in-law for their understanding and encouragements. Finally, I would like to acknowledge all the supports from staff in the Department of Finance and Real Estate, my friends, and peers.

I am truly blessed to have you all in my life.

## LIST OF FIGURES

Figure	Page
1. Average Foreign and Domestic Institutional Ownership and Number of Domestic and Cross-border M&As per Country.....	40

## LIST OF TABLES

Table	Page
1. Descriptions of Variables.....	42
2. Number of Cross-Border and Domestic M&As by Target Country.....	45
3. Domestic and Foreign Institutional Ownership by Target Country.....	46
4. Average Country-Specific Characteristics.....	47
5. Summary Statistics of Country-Level Variables.....	48
6. Country-Level Regressions: Ordinary Least Squares and Zero-Inflated Poisson Models.....	50
7. Country-Pair Regressions: Ordinary Least Squares and Zero-inflated Poisson Models.....	52
8. Country-Pair Zero-Inflated Poisson Regressions with Interaction Terms between Institutional Ownership and Country Characteristics.....	56

## LIST OF ABBREVIATIONS

M&As.....	Mergers and Acquisitions
CBMAs.....	Cross-Border Mergers and Acquisitions
DOMAs .....	Domestic Mergers and Acquisitions
IOs.....	Institutional Ownerships
OLS.....	Ordinary Least Squares
ZIP.....	Zero-Inflated Poisson

## ABSTRACT

# INSTITUTIONAL INVESTORS AND CROSS-BORDER MERGERS AND ACQUISITIONS: THE 2000-2012 PERIOD

Jinsuk Yang, Ph.D.

The University of Texas at Arlington, 2017

Supervising Professor: (Grace) Qing Hao

Using mergers and acquisitions (M&As) from 26 countries between 2000 and 2012, I examine the role of foreign and domestic institutional investors in cross-border M&As. I have several findings. First, both foreign and domestic institutional ownerships increase significantly during the period 2000-2012. Meanwhile, the volume of the cross-border M&As does not increase during the same time period. Second, domestic institutional investors facilitate both domestic and cross-border M&As. However, this seems to be inconsistent with the negative impact of domestic institutional ownership on the intensity of cross-border M&A activity, as reported in Ferreira et al. (2010). I discover that domestic institutional investors facilitate domestic M&As more effectively than cross-border M&As, which contributes to the finding in Ferreira et al. (2010). Third, domestic institutional investors can facilitate cross-border M&As more effectively when the acquirer country has greater financial freedom than the target country. Last but not least, while previous studies use either Tobit or Ordinary Least Squares regressions to examine the determinants of country-level volume and intensity of cross-border M&A activity, I show that zero-inflated Poisson regressions should be used instead.



TABLE OF CONTENTS

Acknowledgements..... iii

Dedication.....

i x v

List of Figures..... v

List of Tables..... vi

List of Abbreviations..... vii

Abstract..... viii

Chapters

Chapter 1: Introduction..... 1

Chapter 2: Literature..... 5

Chapter 3: Sample and Variables..... 15

Chapter 4: Methodology..... 20

Chapter 5: Empirical Results..... 23

Chapter 6: Conclusions..... 37

Figures..... 40

Tables..... 42

References..... 58

## Chapter 1

### Introduction

Cross-border mergers and acquisitions (M&As) are important for corporations to expand their business into foreign countries. According to the United Nations Conference on Trade and Development (UNCTAD), the total value of cross-border M&As accounts for 55% of the foreign direct investment volume worldwide between 2000 and 2012. During the same time period, both foreign and domestic institutional ownerships increase significantly worldwide. Using the global institutional investor holdings data from FactSet LionShares database, I examine the role of foreign and domestic institutional ownerships in the cross-border M&A activity from 26 countries during the period 2000-2012.

I have several findings. First, both foreign and domestic institutional ownerships increase significantly during the period 2000-2012. Specifically, the average foreign and domestic institutional ownerships across the 26 countries in my sample increase by about 35% and 36%, respectively, from the period 2000-2005 to the period 2006-2012. Meanwhile, the annual average number of cross-border M&A transactions across the 26 countries does not increase during the same time period. Figure 1 shows the annual average foreign and domestic institutional ownerships as well as the annual average number of domestic and cross-border M&As across the 26 countries in my sample from 2000 to 2012. As far as I know, the latest study on the impact of foreign and domestic institutional ownerships on the intensity of cross-border M&A activity is Ferreira et al. (2010), in which the sample period is 2000-2005. With increased institutional ownerships globally, foreign

and domestic institutional investors in the acquirer countries and the target countries may play different roles in cross-border M&As.

[Figure 1]

Second, while domestic institutional investors facilitate both domestic and cross-border M&As, they facilitate more domestic M&As than cross-border M&As, which contributes to the finding in Ferreira et al. (2010) that domestic institutional ownership is negatively associated with the intensity of cross-border M&A activity. Specifically, Ferreira et al. (2010) measure the intensity of cross-border M&A activity as the ratio of the cross-border M&As to all M&As, where all M&As include both cross-border M&As and domestic M&As. Therefore, the fact that domestic institutional investors facilitate more domestic M&As than cross-border M&As results in a negative correlation between domestic institutional ownership and the ratio of cross-border M&As to all M&As. Using a new ratio to measure the cross-border M&A activity, I am able to better disentangle the relationship and explain the finding in Ferreira et al. (2010).

Third, domestic institutional investors can facilitate cross-border M&As more effectively when the acquirer country has greater financial freedom than the target country. The finding brings to our attention some desirable benefits that cross-border M&As can bring to target firms in countries where such benefits are not sufficiently provided. For example, in a country with less financial freedom, there are more government interferences that hinder local firms from funding investment projects, which in turn limits business expansion and corporate profits. However, cross-border M&As can help local firms overcome this problem. Moreover, I find that greater freedom of the press in the target country is positively associated with both the volume and intensity of cross-border M&As. As far as I know, I am the first to report such a positive impact of the press freedom on the cross-border M&A activity.

Fourth, while previous studies use either Tobit or Ordinary Least Squares (OLS) regressions to examine the determinants of the volume and intensity of cross-border M&A activity (e.g., Rossi and Volpin, 2004; Ferreira et al., 2010; Erel, Liao, and Weisbach, 2012), I show that Zero-Inflated Poisson (ZIP) regressions should be used instead. Specifically, in target-acquirer country-pairs regressions in which the dependent variable is a measure of the volume of cross-border M&As in a target country and a given year, I find that the dependent variable is zero for about 90% of the observations. The excessive zeros in the dependent variable may cause biased estimates of the standard errors. Alternatively, if zeros are generated by a separate process, they need to be modeled independently for better estimates. I argue that ZIP regressions can overcome this problem. For example, by comparing the results using OLS and ZIP regressions, I find that OLS regressions tend to overestimate the positive impact of foreign institutional ownership on the volume and intensity of cross-border M&A activity.

My study makes two contributions. First, by using ZIP regressions to examine the determinants of the volume and intensity of cross-border M&A activity, my study contributes to the research methodology in the area of cross-border M&As, as ZIP regressions can overcome the standard error mis-estimation problem due to excessive zeros in the dependent variable. Furthermore, I use a new ratio to measure the cross-border M&A activity. Previous studies (e.g., Rossi and Volpin, 2004; Ferreira et al., 2010; Erel et al. 2012) measure the intensity of cross-border M&A activity by comparing the number of cross-border M&As with the number of domestic M&As in a target country. This ratio reflects the likelihood of a merger in a country that involves a foreign acquirer. In contrast, I scale the number of cross-border M&As by the number of firms in a target country, which reveals new insight about cross-border M&As and clarifies potential misunderstanding of a finding in Ferreira et al. (2010).

The second contribution of my study is that I find some new country-level determinants of the volume of cross-border M&As. As a more comprehensive analysis of the determinants of cross-border M&As, my study not only uses a longer sample period and provides more recent evidence, but it also includes some country-level variables that are not used in prior studies on cross-border M&As. Consequently, I find new country-level variables, such as the financial freedom index and the freedom of the press index, that play an important role in cross-border M&As.

The rest of this paper proceeds as follows. Chapter 2 reviews the related literature. Chapter 3 describes the sample and variables. Chapter 4 discusses the methodology, followed by chapter 5 with the empirical results. And, chapter 6 concludes.

## Chapter 2

### Literature

My paper is related to several lines of literature: cross-border M&As, global institutional ownership, and the effect of country-specific variables, which have all received increasingly greater attention in the past two decades.

#### **2.1. Cross-Border M&As**

Many empirical studies show that foreign direct investment (FDI) inflows have a strong positive impact on the economic growth of the host country. For example, using FDI flows between industrial and developing countries, Borensztein et al. (1998) find that the technology transferred via FDI contributes to the economic growth in the host country. Alfaro et al. (2004) further find that a country with a developed financial market gains the most significant benefits from FDI. According to the UNCTAD, the total value of cross-border M&As accounts for 55% of the foreign direct investment volume worldwide between 2000 and 2012, suggesting the importance of cross-border M&As to the economic growth of the target country.

The literature on cross-border M&As mainly examines the determinants of cross-border M&As. For example, by focusing on differences in laws and regulation across countries, Rossi and Volpin (2004) find that there are more cross-border M&As in countries with better accounting standards and stronger shareholder protection. Typically, the acquirer's country has stronger investor protection than the country of the target firm. Bris and Cabolis (2008) further find that shareholder protection and accounting standards in the acquirer's country is positively related to the merger premium in cross-border M&As. Erel, Liao, and Weisbach (2012) extend their sample

to include not only public firms but also private firms. They find that the likelihood of cross-border M&As is related to geography, the quality of accounting disclosure, bilateral trade, and stock valuation. Ferris, Jayaraman, and Sabherwal (2013) find that CEO overconfidence plays an important role in cross-border M&As. Using hand-collected data on mergers in the European Union during 1997 to 2006, Dinç and Erel (2013) find that the government of the target country prefers domestic M&As rather than cross-border M&As, suggesting widespread economic nationalism.

Among the studies on the determinants of cross-border M&As, Ferreira et al. (2010) is most closely related to my study. Using a sample of domestic and cross-border M&As during 2000 to 2005, Ferreira et al. (2010) is the first to examine the role of foreign institutional investors in cross-border M&As. They argue that foreign institutional investors facilitate cross-border M&As by reducing transaction costs and information asymmetry between bidders and targets. Following the prior literature, they draw conclusions mainly from OLS regressions, supplemented by some robustness checks using Tobit models.

However, I argue that a Zero-Inflated Poisson model should be used instead, especially for target-acquirer country-pairs regressions in which the dependent variable is a measure of the volume of cross-border M&As within a given country in a given year. Specifically, I find that the dependent variable is zero for about 90% of the observations in such target-acquirer country-pairs regressions. The excessive zeros in the dependent variable may cause the problem of underestimation of standard errors. Alternatively, if zeros are generated by a separate process, they need to be modeled independently for better estimates. In Chapter 5, I will compare the results from OLS regressions and Zero-Inflated Poisson regressions.

## **2.2. Global institutional ownership**

Studies on U.S. institutional investors are numerous, partly due to the availability of the Thomson Financial's 13F institutional ownership database. In contrast, the literature on international institutional ownership had been rather limited until recently as the FactSet LionShares Global Ownership database becomes available (e.g., Ferreira and Matos 2008; Ferreira et al. 2010; Aggarwal, Erel, Ferreira, and Matos 2011; Lin, Massa, and Zhang 2014; Pevzner, Xie, and Xin 2015; Iliev, Lins, Miller, and Roth 2015; Bartram, Griffin, Lim, and Ng 2015).

Studies generally find that foreign institutional investors not only prefer the stock of firms with good governance but also promote stronger corporate governance. For example, Aggarwal, Klapper, and Wysocki (2004) investigate the investment preference of US mutual funds in many emerging markets and discover that U.S. funds are more likely to invest in firms with greater accounting transparency. Using a sample of cross-country equity holdings over the 2000-2005 period, Ferreira and Matos (2008) find that all institutional investors prefer to invest in firms with good governance. They also confirm the monitoring role of foreign and independent institutions. Aggarwal et al. (2011) confirm that international institutional investment serves as an important channel for improving corporate governance.

In this study, I use the global institutional ownership data from the FactSet LionShares Global Ownership database to examine the relationships between foreign and domestic institutional ownerships and the cross-border and domestic M&A activity. My study complements the findings in Ferreira et al. (2010) and increase our understanding about how foreign and domestic institutional ownership affect the volume of cross-border M&As.

## **2.3 Investment Freedom and Financial Freedom**



The literature on cross-border M&As has examined a number of country-specific characteristics and found some significant determinants of the cross-border M&A activity. However, I argue that country-level investment freedom, financial freedom, and freedom of the press can also affect the cross-border M&A activity.

*Investment freedom* In 2013, the government of Canada rejected a proposal to acquire the Allstream division of Manitoba Telecom Services Inc. by Accelero Capital Holdings because of national security concerns. Indeed, economic nationalism in international M&As is widespread. Using the largest 25 merger targets in each of the 15 EU countries, Dinç and Erel (2013) find that potential foreign acquirers are reluctant to make a bid for a firm in a country whose government prefers a domestic acquirer over a foreign acquirer.

According to the finding in Dinç and Erel (2013), I expect that potential foreign acquirers are less likely to acquire firms in a country with strong protectionism against foreign acquirers. In other words, a country with more freedom for foreign investors may tend to attract more foreign acquirers. To measure a country's fair treatment for foreign investors, I use the investment freedom index provided by the Heritage Foundation.<sup>1</sup> The investment freedom index reflects whether a country has different rules for foreign and domestic investment, whether the access to foreign exchange is restricted, whether certain industries are closed to foreign investment, and so on. The index scores various regulatory restrictions on investment, including "national treatment of foreign investment, foreign investment code, restrictions on land ownership, sectoral investment

---

<sup>1</sup>The investment freedom index is part of the economic freedom index, which has been widely used in studies in different areas, for example, Meyer et al. (2009), Bengoa and Sanchez-Robles (2003), Meyer and Sinani (2009), Herzer (2012), Easton and Walker (1997), De Haan and Sturm (2000), Heckelman and Stroup (2000), Berggren and Jordahl (2006), Pasiouras et al. (2011), and Beccalli and Frantz (2013).

restrictions, expropriation of investments without fair compensation, foreign exchange controls, and capital controls” (Heritage Foundation). Index value ranges from 0 to 100. A score of 100 indicates the greatest investment freedom.

*Financial freedom* Many studies examine how financing constraints affect firms’ investment decision. Love (2003) shows that financing constraints predispose firms to postpone investment to the next period. Campello et al. (2010) find that firms facing difficulty in obtaining external funds inevitably forgo attractive investment opportunities. Losing out on profitable investment reduces corporate profits and hinders firms from expanding business. Further, Beck et al. (2004) find a positive association between the degree of financing constraints that firms face and the concentration of banking market. They also show that the relation between bank concentration and financing obstacles is exacerbated if the government imposes more restrictions on the banking activities. These obstacles may hinder firms from funding investment projects, especially for corporations that rely on external financing, thus exerting a negative influence on firm growth.

To measure how difficult firms obtain external finance for investment and growth and how independently the banking sector operates in each market, I use the financial freedom index provided by the Heritage Foundation. Financial freedom measures banking efficiency and independence from government control. The index evaluates an economy’s financial freedom from five broad areas: “the extent of government regulation of financial services, the degree of state intervention in banks and other financial firms through direct and indirect ownership, the extent of financial and capital market development, government influence on the allocation of credit, and openness to foreign competition” (Heritage Foundation). The index value ranges from 0 to 100, with a score of 100 indicating the greatest financial freedom.

*Freedom of the press.* The freedom of the press index constructed by Freedom House covers various media platforms, including print outlets, broadcast stations, news websites, blogs on public affairs, and social media. The index reflects not only government policies and actions regarding the freedom of the press, but also the behavior of the press itself in terms of operating freely and without fear of repercussions. The index value for each country is updated every year.

Brunetti and Weder (2003) show that a country with greater freedom of the press has less corruption. Perhaps because greater freedom of the press is associated with less corruption, Qi et al. (2010) find that the cost of debt is smaller if the issuer is from a country with greater freedom of the press. Furthermore, Chen and Hao (2011) find that insider trading laws are more likely to be enforced in a country with more freedom of the press. If foreign institutional investors are concerned about corruption and insider trading in the target country, then a country with less corruption and stricter insider trading regulations should attract more international investors. As greater freedom of the press is associated with less corruption and stricter insider trading regulations, I expect more cross-border M&As in a target country with greater freedom of the press.

## **2.4 Investor Protection**

Investor protection has been shown to be an important determinant of the M&A activity, especially cross-border M&As activity. Foreign acquirers tend to come from a country with stronger investor protection (Erel et al. 2012) and bid firms in countries with weaker investor protection (Rossi and Volpin 2004, Ferreira et al. 2010). Bris and Cabolis (2008) report a positive association between shareholder protection in the acquirer's country and merger premium. Furthermore, Ferreira et al. (2010) find that foreign institutional investors facilitate cross-border

M&As to a greater extent if the investor protection in the target country is weaker than the acquirer country.

While the specific measures of investor protection vary by studies, those used in the prior studies on cross-border M&As all have a fixed value for each country over time. For example, Rossi and Volpin (2004) and Ferreira et al. (2010) use a product of the index of anti-director rights and the rule of law index. The values of both components are from La Porta et al. (1998) and both are time-invariant. Bris and Cabolis (2008) use a product of the anti-director rights index and the efficiency of legal system. Again, the values of both components are from La Porta et al. (1998) and both are time-invariant for each country. Erel et al. (2012) use the anti-self-dealing index from Djankov et al. (2008), which is a revised version of the *antidirector rights* index in La Porta et al. (1998).

In this study, I follow Rossi and Volpin (2004) and Ferreira et al. (2010) to use a product of the index of anti-director rights and the rule of law index. As the values of the index of anti-director rights and the rule of law index from La Porta et al. (1998) may be outdated for my study, I use the most recent values. As the *antidirector rights* (La Porta et al., 1998) is revised by Djankov et al. (2008), I use the updated values from Djankov et al. (2008) in my study.<sup>2</sup> In addition, a country's judicial system evolves over time. Therefore, I use the annual value of the *Rule of Law* developed by Kaufmann, Kraay, and Mastruzzi (2011), which is a country-level time-varying index. The index value ranges from -2.5 to 2.5, with a higher value indicating better quality of contract enforcement, property rights, the police, and the courts.

## **2.5 Other country-specific variables**

---

<sup>2</sup> Djankov et al. (2008) refer to the revised index as the anti-self-dealing index.

In this section, I review the literature that motivates the inclusion of other country-specific variables in my analysis.

*Openness.* The degree of economic openness can affect the cross-border M&A activity. Following Ferreira et al. (2010), I use the sum of imported and exported goods and services over the GDP to measure the openness of economy for a country. This measure is widely used in studies on economic growth. Harrison (1996) finds that the ratio of trade to GDP is positively and significantly related to the economic growth. Frankel and Romer (1999) argue that there is a strong positive association between the ratio of trade to GDP and the income per person in a country. Ferreira et al. (2010) report a positive relationship between the openness of economy and the cross-border M&A activity. Therefore, I expect more cross-border M&As in a country trading more goods and services with foreign countries.

*Bilateral trade.* Ferreira et al. (2010) and Erel et al. (2012) argue that the value of bilateral trades between two countries can affect the cross-border takeover transactions. To measure bilateral trade, Ferreira et al. (2010) use the value of imports by a target country from an acquirer country as a percentage of total imports by a target country, while Erel et al. (2012) use the maximum of bilateral imports and exports scaled by total imports and exports respectively. However, even between the same two countries, the value of import in one country is different from the value of export from the counterpart. For example, in the year of 2010, the value of imports by Canada (Austria) from Austria (Canada) is about 1.14 (0.48) billion dollars, while the value of exports from Austria (Canada) to Canada (Austria) is 0.99 (0.34) billion dollars. There are several reasons for a discrepancy between imports and exports value. First, imports are priced with “Cost, Insurance, and Freight”, while exports are measured with “Free on Board”. Second, there is a time lag between exports and imports. Moreover, because goods arrive at the destination

via third countries or products are classified differently in individual countries, the total import or export values are not matched in the reports from each country between counterparties. If I follow Erel et al. (2012), then the bilateral trade would be the import value of 1.14 billion dollars for Canada-Austria country-pair and the export value of 0.99 billion dollars for Austria-Canada country-pair. To avoid this type of inconsistency, I follow Ferreira et al. (2010) to construct the bilateral trade as the value of imports by a target country from an acquirer country as a percentage of total imports by a target country. As Rossi and Volpin (2004), Ferreira et al. (2010), and Erel et al. (2012) all report a positive relation between the bilateral trade and the volume of cross-border M&As, I expect more cross-border M&As between countries with more bilateral trades.

*Bilateral investment treaty and double taxation treaty.* Barthel et al. (2010) show that the amount of FDI is larger if two countries have a double taxation treaty. Ahern et al. (2015) present strong evidence that the bilateral investment treaty and double taxation treaty are strongly related to the volume of cross-country M&A transactions. Further, Di Giovanni (2005) argues that a capital tax treaty between two countries makes cross-country M&As more likely to occur. Hence, I expect more cross-country M&As for two countries with double taxation treaty.

*GDP growth and GDP per capita.* Prior studies find that economic shocks captured by GDP growth or GDP per capita affect the M&A activities. Shleifer and Vishny (1992) point out that takeover waves take place during economic booms. Maksimovic and Phillips (2001) demonstrate that changing ownership through M&As becomes more active during expansion periods. Dittmar and Dittmar (2008) share this view, claiming that the merger waves are highly correlated with the GDP growth. Rossi and Volpin (2004) present findings that acquirers are more likely to come from nations with better economic conditions and greater wealth. Di Giovanni

(2005) presents empirical results indicating that acquirers and targets are more likely to come from nations with larger real GDP.<sup>3</sup> Therefore, I control for both GDP per capita and real GDP growth.

*Market capitalization scaled by GDP and the stock turnover.* Financial market development is one of the essential characteristics attracting more investment into a country (Di Giovanni 2005). The market capitalization scaled by GDP and the stock turnover are most widely used in the literature to proxy for financial market development. Therefore, I expect that acquirers are more likely to come from countries with more developed financial markets.

*Return of the stock market.* Shleifer and Vishny (2003) discover that the return of the stock market can have an impact on cross-border M&As.

*Corporation tax.* Erel et al. (2012) find that acquirers tend to buy firms in countries with lower corporate income tax. Hence, I expect lower corporate tax rates in a target country to attract more foreign acquirers.

*Law origin.* Using a sample of M&As in the banking industry, Buch and Delong (2004) find that cross-border M&As are more likely to occur between countries with the same origin of law. I expect the same finding to be generalizable to the cross-border M&As in other industries.

*Same region.* Geographical barriers can impede cross-border M&As. Rossi and Volpin (2004) and Ferreira et al. (2010) report more cross-border M&As between countries in the same region. Using data on cross-border M&As in the banking industry, Ahern et al. (2015) confirm the finding. Therefore, I use a same region binary variable to indicate whether two countries are within the same region. I expect more cross-border M&As between countries in the same region.

---

<sup>3</sup> Many other past studies are arguing that GDP per capita, GNP, or real GDP growth exert influences on cross-border M&As. Kang and Johansson (2000), Nadolska and Barkema (2007), Shimizu et al. (2004), and Buch and DeLong (2004) found results that the economic variables and cross-border M&As are positively related.

## Chapter 3

### Sample and Variables

The initial sample includes all domestic and cross-border M&As announced between 2000 and 2012. The sample period starts in 2000 because the FactSet/LionShares database reports institutional investors' holdings since 2000. My sample period ends in 2012 because some country-level variables were not available at the time of data collection.<sup>4</sup> Information on M&A transactions is obtained from the Thomson Financial's Securities Data Corporation (SDC) Platinum database. Following Ferreira et al. (2010), I keep only the M&A transactions in which both target and acquirer firms are public firms.<sup>5</sup> I select the completed and withdrawn deals. In other words, transactions whose status is either "pending" or "rumor" in the SDC database are excluded from the sample. I exclude LBOs, spin-offs, recapitalizations, self-tender offers, and exchange offers. I also exclude the acquisitions that are related to minority stake purchases and privatization.

While my main analysis is based on completed deals, I also conduct robustness tests on a sample that includes both completed and withdrawn deals. Following prior studies (e.g., Rossi and Volpin 2004 and Ferreira et al. 2010), for completed deals, I require the acquiring firm to have greater than 50% of the shares of the target company after the transaction and more than 50% of

---

<sup>4</sup> For example, stock market capitalization and stock market turnover variables from World Bank were not available for all the 26 countries since 2013.

<sup>5</sup> As Ferreira et al. (2010) do not explain in detail how they define a firm as a publicly listed firm, I follow the definition of public firms in Erel, Liao, and Weisbach (2012): a firm is public if its public status is "Public" or if its SEDOL is nonmissing, as shown in the SDC database.



the shares sought before the transaction. An observation is excluded from the sample if it misses both the percentage owned after deal completion and the percentage sought before completion. Withdrawn transactions are selected if the acquiring firm aims to acquire more than 50% of the shares in a deal. After merging with the global institutional ownership data, the final sample includes domestic and cross-border M&As from 26 countries.

Institutional investors' holdings data is taken from the FactSet Ownership database (LionShares), which provides equity ownership data worldwide at the fund/firm/quarter level. In calculating institutional ownership, the data includes ordinary shares, preferred shares, ADRs, GDRs, and dual listings. Following Ferreira et al. (2010), the total institutional ownership is calculated as the sum of the holdings of all institutions in a firm's stock divided by the stock's total market capitalization at the end of each calendar quarter. Annual market-value weighted institutional ownership is constructed based on the fourth quarter files each year.

I use *domestic IO* to denote domestic institutional ownership, which is measured as the market value of the shares held by all institutions domiciled in the same country in which the companies are incorporated, scaled by the market capitalization of the companies. Similarly, I use *foreign IO* to denote foreign institutional ownership, which is measured as the market value of the shares held by all institutions domiciled in a country different from the one in which the companies are incorporated, scaled by the market capitalization of the companies. Table 1 lists the definition and data source of all the variables in my study.

[Table 1]

Table 2 reports the number of cross-border M&As (CBMAs) and the number of domestic M&As (DOMAs) completed in each target country during 2000-2012. There are 1,822 cross-border M&As and 5,911 domestic M&As completed in all the 26 countries from 2000 to 2012.

The annual average number of deals for each country is reported within parentheses. Some countries, such as the US, Canada, UK, and Australia, have been an active market for international takeover transactions.

[Table 2]

To compare with the sample period in Ferreira et al. (2010), I also provide the statistic description for two sub-periods: 2000-2005 (the sample period in Ferreira et al., 2010) and 2006-2012. Some countries have the greatest percentage increase in the number of cross-border M&A deals from the period 2000-2005 to the period 2006-2012. For instance, the number of cross-border M&A deals has more than doubled in Australia, Hong Kong, and Singapore from the period 2000-2005 to the period 2006-2012. Meanwhile, the number of cross-border M&A deals has dropped in many countries, including Germany, Spain, Finland, France, Japan, Netherlands, Poland, Portugal, Sweden, and the US, from the period 2000-2005 to the period 2006-2012.

Note that Ferreira et al. (2010) measure the intensity of cross-border M&As by the *CBMAs-to-all-M&As* ratio, which is the number of cross-border M&As divided by the number of domestic and cross-border M&As. The ratio can increase when the number of cross-border M&As increases or when the number of domestic M&As decreases. In countries such as Australia and Canada, both the number of domestic M&As and the number of cross-border M&As have increased. For these countries, whether or not the *CBMAs-to-all-M&As* ratio has increased depends on the relative magnitude of the increase in the number of domestic M&As and the number of cross-border M&As.

Table 3 reports the average domestic and foreign institutional ownerships as a percentage of market capitalization for each of the 26 countries during the entire sample period 2000-2012, as well as the two sub-periods: 2000-2005 and 2006-2012. During 2000-2012, the average

domestic institutional ownership ranges from 0.37% in Greece to 63.03% in the US, and the average foreign institutional ownership ranges from 6.19% in the US to 56.71% in Ireland. Note that the average domestic and foreign institutional ownerships for the period of 2000-2005 in my study differ slightly from those presented in Ferreira et al. (2010), probably because of updates made in the FactSet datasets.

[Table 3]

The last two columns of Table 3 report the change in domestic and foreign institutional ownerships from the period 2000-2005 to the period 2006-2012. Most of the countries have both domestic and foreign institutional ownerships increased, but none of the 26 countries experiences a decline in both domestic and foreign institutional ownerships. Germany and Ireland experience the biggest increase in foreign institutional ownerships (about 10%), while the foreign institutional ownership in Finland and Poland has dropped from the period 2000-2005 to the period 2006-2012. Meanwhile, Poland has the biggest increase in domestic institutional ownership. Several countries witness a slight drop in domestic institutional ownership, including Belgium, Germany, Spain, Ireland, Italy, Luxembourg, and Portugal. Overall, the average domestic institutional ownership across the 26 countries shows a proportional increase of 36.29% from the period 2000-2005 to the period 2006-2012 and the average foreign institutional ownership increased by 35.20%.

Table 4 shows the average investor protection, investment freedom, financial freedom, and press freedom for the 26 countries during 2000-2012. Across all the four indices, a higher value indicates stronger investor protection or greater investment, financial or press freedom. The US has an average investor protection score of 4.67, ranking the 16<sup>th</sup> among the 26 countries. UK, Ireland, and Singapore have the strongest investor protection, and India and South Africa have the poorest investor protection. India also has the least investment freedom and financial freedom,

while Hong Kong enjoys the most investment freedom, and both Hong Kong and Australia enjoy the most financial freedom. Regarding the freedom of the press, Singapore ranks the lowest and Norway ranks the highest.

[Table 4]

Table 5 reports summary statistics of some key regression variables for the full sample as well as for subsamples that are divided by the median value of investor protection, investment freedom, financial freedom, and press freedom, respectively. A target country belongs to the subsample of strong investor protection, more investment freedom, more financial freedom, or more press freedom if it has the corresponding index value greater than the median in a year. The most noticeable result in Panel B is that foreign institutional investors hold more shares in a country with better investor protection. The difference in the mean (median) foreign institutional ownership between the two subsamples is 4.62% (2.69%), which is significant at the 1% level. Similarly, Panels C-E show that foreign institutional ownership is higher in a country with greater investment freedom, financial freedom, or press freedom. The differences in the mean and the median foreign institutional ownership between the two subsamples are all significant at the 1% level. In addition, Panels C-E show that the *CBMAs-to-all-M&As Ratio* is higher in target countries with greater investment freedom, financial freedom, or press freedom.

[Table 5]

## Chapter 4

### Methodology: Zero-inflated Poisson

Prior studies such as Rossi and Volpin (2004), Ferreira et al. (2010), and Erel et al. (2012) use either OLS or Tobit model to analyze the determinants of the intensity of cross-border M&A activity in a country. The analysis typically includes both country-level regressions and country-pair regressions. In country-level regressions, the dependent variable measures all the cross-border M&A transactions completed in a target country in a year, regardless of whether the acquirer is from which foreign country. In country-pair regressions, the dependent variable measures only the cross-border M&A transactions completed between the target country and a specific foreign acquirer country in a year. In both country-level and country-pair regressions, the dependent variable is the number of cross-border M&A deals scaled by either the number of domestic and cross-border M&A deals or the number of listed firms in a target country. As the dependent variable is bounded between zero and one, some studies such as Rossi and Volpin (2004) and Ferreira et al. (2010) use the Tobit model for some of their regressions, although most of the analysis in the literature is still based on OLS regressions. For example, OLS is the only method in the country-pair regressions in Rossi and Volpin (2004), Ferreira et al. (2010), and Erel et al. (2012).

However, I argue that zero-inflated Poisson (ZIP) should be used to examine the determinants of the volume or intensity of cross-border M&As for the following reason. As the number of cross-border M&As in a target country in a given year has a non-negative integer value, a Poisson model is well suited. Silva and Tenreyro (2006, 2011) argue that the Poisson pseudo-

maximum likelihood estimator is preferred over OLS, especially when the proportion of zeros in the sample is very large, which turns out to be true for the volume of cross-border M&As, as cross-border M&As do not occur in every country every year. In my country-level regressions of the volume or intensity of cross-border M&As, the dependent variable is equal to zero in 13%-23% of the cases. The proportion of zeros is even larger if we analyze the volume or intensity of cross-border M&As between two specific countries in a year. If there are  $N$  countries in the sample and the sample period covers  $Y$  years, there will be  $N \times (N-1) \times Y$  country pair-year observations. Specifically, in my country-pair regressions of the volume or intensity of cross-border M&As, almost 90% of the observations are equal to zero. These excessive zeros not only violate the OLS assumption of homoscedasticity (Cameron and Trivedi, 1998), but also give rise to either the over-dispersion or under-dispersion problem, which occurs when the dependent variable's variance is different from its mean. As a result, the standard errors may be underestimated or overestimated. Consequently, an explanatory variable may appear to be a statistically significant predictor when in fact it is not, or vice versa.

As explained in Long (1997), to appropriately model the excessive zeros, the counts of events in the ZIP model, or in the context of cross-border M&As, the numbers of the cross-border M&A transactions are assumed to be generated by two processes. First, both zero and positive numbers of cross-border M&A transactions for observation  $i$  can be generated by a Poisson process:

$$\Pr(y_i | x_i) = \frac{\mu_i^{y_i} \times e^{-\mu_i}}{y_i!}, \quad (1)$$

where  $\mu_i$  is the mean of the Poisson distribution and  $x_i$  is a vector of the country-specific characteristics for observation  $i$ . As the variable of interest is the ratio of cross-border M&As instead of the number of the cross-border M&A transactions, an “exposure” variable or offset variable,  $\ln(Exposure)$ , is included to construct the ratio of cross-border M&As (e.g., Long and

Freese, 2006 and Rodriguez, 2007).<sup>6</sup> Therefore, the mean number of the cross-border M&A transactions is expressed as follows:

$$\mu_i = \exp(x_i' \beta + \ln(\text{Exposure})) , \quad (2)$$

where  $\beta$  is a vector of coefficients. In addition, zeros arise with probability  $\pi_i$  from a second process. In this process,  $\pi_i$  is a function of the country-specific characteristics for observation  $i$  and is determined by a logit model:

$$\pi_i = \frac{[\exp(z_i' \gamma + \ln(\text{Exposure}))]}{[1 + \exp(z_i' \gamma + \ln(\text{Exposure}))]} , \quad (3)$$

where  $z_i'$  is a vector of the country-specific characteristics for observation  $i$  and  $\gamma$  is a vector of coefficients. The elements of  $x_i$  may include the elements of  $z_i$  (Giles, 2010).

Combining the Poisson count model and the binary process for the ZIP model, we have

$$\begin{cases} \Pr(y_i = 0 | x_i) = \pi_i + (1 - \pi_i)e^{-\mu_i} & (4) \\ \Pr(y_i | x_i) = (1 - \pi_i) \frac{\mu_i^{y_i} \times e^{-\mu_i}}{y_i!} \text{ for } y_i > 0. & (5) \end{cases}$$

Equation (4) shows that zeros are generated from two processes. With probability  $1 - \pi_i$  zeros are generated from the first process and with probability  $\pi_i$  zeros are generated from the second process.

---

<sup>6</sup> Manichaikul (2007) provides a detailed explanation about Poisson models with offsets.

## Chapter 5

### Empirical Results

In this chapter, I conduct an empirical analysis of how foreign and domestic institutional ownerships are associated with the cross-border M&A activity. For comparison, I estimate both country-level regressions and country-pair regressions using both OLS and ZIP. I show that OLS and ZIP models yield different results sometimes, highlighting the importance of controlling for the excessive zeros. I use three different dependent variables in both the country-level and country-pair regressions: *CBMAs-to-all-M&As Ratio*, *CBMAs-to-all-Firms Ratio*, and *M&As-to-all-Firms Ratio*. I also analyze the *DOMAs-to-all-Firms Ratio* in the country-level regressions and the *CBMAs-to-all-CBMAs Ratio* in the country-pair regressions.

#### 5.1 Country-Level Analysis

In this section, I estimate country-level regressions to examine the determinants of the volume of domestic M&As and cross-border M&As, as well as the intensity of the cross-border M&A activity. I also compare the estimation results between the OLS and ZIP models.

The dependent variables are *CBMAs-to-all-M&As Ratio*<sub>(i,t)</sub>, *CBMAs-to-all-Firms Ratio*<sub>(i,t)</sub>, *DOMAs-to-all-Firms Ratio*<sub>(i,t)</sub>, and *M&As-to-all-Firms Ratio*<sub>(i,t)</sub>. *CBMAs-to-all-M&As Ratio*<sub>(i,t)</sub> is the number of completed cross-border M&A deals in which the target is from country *i* and the acquirer is from a foreign country scaled by the number of completed domestic and cross-border M&A deals in target country *i* in year *t*. *CBMAs-to-all-Firms Ratio*<sub>(i,t)</sub>, *DOMAs-to-all-Firms Ratio*<sub>(i,t)</sub>, and *M&As-to-all-Firms Ratio*<sub>(i,t)</sub> are obtained by scaling the following numbers,



respectively, by the number of listed companies in country  $i$  in year  $t-1$ : the number of completed cross-border M&A deals in which the target is from country  $i$  and the acquirer is from a foreign country in year  $t$ , the number of completed domestic M&A deals in target country  $i$  in year  $t$ , and the number of completed domestic and cross-border M&As in a country  $i$  in year  $t$ .<sup>7</sup>

The explanatory variables of main interest in the regression models are the foreign institutional ownership, *foreign IO*<sub>( $i,t$ )</sub>, and domestic institutional ownership, *domestic IO*<sub>( $i,t$ )</sub>. The control variables include GDP per capita, GDP growth, stock market capitalization, stock market return, and stock market turnover, openness, freedom of the press, financial freedom, investment freedom, and investor protection in the target country. All of the variables are discussed in Chapter 2 and defined in Table 1.

In Table 6, Panel A reports the country-level OLS regression results and Panel B reports the country-level ZIP regression results. In both Panels A and B, the dependent variable is the *CBMAs-to-all-M&As Ratio* in Columns (1)-(3), the *CBMAs-to-all-Firms Ratio* in Columns (4)-(6), the *DOMAs-to-all-Firms Ratio* in Columns (7)-(9), and the *M&As-to-all-Firms Ratio* in Columns (10)-(12). The coefficients on *foreign IO* in Columns (1)-(3) of Panel A are all positive and significant at the 5% or 1% levels. In contrast, the coefficients on *foreign IO* in Columns (1)-(3) of Panel B are positive but significant at the 10% level at best. Compared with the ZIP model,

---

<sup>7</sup> In the ZIP regression, the “exposure” variable is used to construct the same ratios as the dependent variables in the OLS regressions. The Logit regression model for the probability of a case belongs to the second zero generating process, as discussed in Chapter 4, includes the *openness* variable, which measures the degree of economic openness of a country. As *openness* reduces the information cost of cross-border M&As, a lower level of economic openness entails a higher chance of a country receiving zero bid from foreign buyers.

OLS regressions overestimate the impact of foreign institutional ownership on the *CBMAs-to-all-M&As Ratio*.

[Table 6]

As the ZIP model is more appropriate in the context of cross-border M&As, my discussion of the country-level regression results will be based on Panel B of Table 6. The coefficients on *domestic IO* are all negative and significant in Columns (1)-(3), where the dependent variable is the *CBMAs-to-all-M&As Ratio*. In contrast, the coefficients on *domestic IO* are all positive and significant in Columns (4)-(6), where the dependent variable is the *CBMAs-to-all-Firms Ratio*. At first glance, the results seem conflicting. However, I find that the opposite signs are because domestic institutions are more effective facilitators for domestic M&As than cross-border M&As. Specifically, the coefficients on *domestic IO* in Columns (7)-(9), where the dependent variable is the *DOMAs-to-all-Firms Ratio*, are all positive and highly significant. The magnitudes of the coefficients on *domestic IO* in Columns (7)-(9) are greater than those in Columns (4)-(6), suggesting that domestic institutions can facilitate domestic M&As more effectively than cross-border M&As. Note that the *CBMAs-to-all-M&As Ratio* can be obtained if we divide the *CBMAs-to-all-Firms Ratio*, the dependent variable in Columns (4)-(6), by the *M&As-to-all-Firms Ratio*, the dependent variable in Columns (10)-(12). As the magnitudes of the coefficients on domestic IO in Columns (10)-(12) are greater than those in Columns (4)-(6), the influence of domestic IO on the *CBMAs-to-all-M&As Ratio* turns out to be negative, as shown in in Columns (1)-(3). In addition, Columns (10)-(12) in Panel B of Table 6 also suggest that the impact of domestic institutional ownership on the total volume of domestic and cross-border M&As is much stronger than that of foreign institutional ownership.

Furthermore, Table 6 shows that the coefficients on the press freedom are all positive and highly significant in Columns (1)-(6), suggesting that greater freedom of the press in the target country significantly attracts more foreign acquirers. The results are robust to both the *CBMAs-to-all-M&As Ratio* and the *CBMAs-to-all-Firms Ratio*. As far as I know, I am the first to report such a positive impact of the target country's press freedom on the volume and intensity of the cross-border M&As.

## 5.2. Country-Pair Regressions with OLS and ZIP Models

In this section, I examine the determinants of the volume and intensity of cross-border M&As for the 26×25 country-pairs. Again, I compare the estimation results from the OLS and ZIP models.

The dependent variable is the following four variables: *CBMAs-to-all-M&As Ratio* $_{(i,j,t)}$ , *CBMAs-to-all-Firms Ratio* $_{(i,j,t)}$ , *M&As-to-all-Firms Ratio* $_{(i,j,t)}$ , and *CBMAs-to-all-CBMAs Ratio* $_{(i,j,t)}$ . The first dependent variable is the number of completed cross-border M&A deals in which the target is from country  $i$  and the acquirer is from country  $j$  ( $i \neq j$ ) scaled by the number of completed domestic and cross-border M&A deals in which the target firm from country  $i$  in year  $t$ . The second dependent variable is the number of completed cross-border M&A deals in which the target is from country  $i$  and the acquirer is from country  $j$  ( $i \neq j$ ) in year  $t$  scaled by the number of listed companies in country  $i$  in year  $t-1$ . The third dependent variable is the number of completed domestic and cross-border M&A deals in target country  $i$  in year  $t$  scaled by the number of listed companies in country  $i$  in year  $t-1$ . The last dependent variable is the number of completed cross-border M&A deals in which the target is from country  $i$  and the acquirer is from country  $j$

( $i \neq j$ ) scaled by the number of completed cross-border M&A deals with target firm from country  $i$  in year  $t$ .

The explanatory variables of main interest in the regression models are the foreign institutional ownership,  $foreign\ IO_{(i,j,t)}$ , and domestic institutional ownership,  $domestic\ IO_{(i,t)}$ . The control variables include the bilateral trade between the target and acquirer countries and the acquirer country's level minus the target country's level in the following variables: economic development (GDP per capita and GDP growth), market return, stock market development (stock market capitalization over GDP and stock market turnover), corporate tax, press freedom, financial freedom, investment freedom, and investor protection.

The control variables also include several dummy variables. *Law Origin-D* is a dummy variable that equals one if the target and acquirer countries have the same legal origin (English, French, German, and Scandinavian), zero otherwise (Djankov et al. 2008). *Same Region-D* is a dummy variable that equals one if the target and the acquirer countries are in the same broadly defined region (i.e., East Asia & Pacific, Europe & Central Asia, North America, South Asia, and Sub-Saharan Africa), zero otherwise. *Bilateral Investment Treaty-D* is a dummy variable that equals one if the target and the acquirer countries have a bilateral investment treaty, zero otherwise. *Double Taxation Treaty-D* is a dummy variable that equals one if the target and the acquirer countries have a double taxation treaty, zero otherwise.<sup>8</sup>

---

<sup>8</sup> As proxies for the amount of information transferred between the target and acquirer countries, the following five regressors are included in the Logit regression model for the probability of a case belongs to the second zero generating process (as discussed in Chapter 4): *Bilateral Investment Treaty D*, *Double Taxation Treaty D*, *Same Region-D*, *Bilateral trade*, and *R-foreign IO*. *R-foreign IO* is the stock holdings in the acquirer country  $j$  by institutions domiciled in the target country  $i$ .

In Table 7, Panel A reports the country-pair OLS regression results and Panel B reports the country-pair ZIP regression results. Compared with the country-level regressions in Table 6, an important difference in the country-pair regressions in Table 7 is that there are significantly more zeros in the dependent variable. For example, in all the columns except (7)-(9), the dependent variable is zero for about 90% of the observations. As the ZIP model can better control for the excessive zeros, the results using the ZIP model may differ further away from the OLS results.

[Table 7]

We continue to find that OLS regressions overestimate the positive impact of foreign institutional ownership on the *CBMAs-to-all-M&As Ratio*. Specifically, the coefficients on *foreign IO* in Columns (1)-(3) of Panel A are all positive and significant at the 1% level. In contrast, the coefficients on *foreign IO* in Columns (1)-(3) of Panel B are positive but significant only at the 10% level. Similarly, the coefficients on foreign IO in Columns (4)-(6) of Panel A are all positive and significant at the 5% level, while the coefficients on foreign IO in Columns (4)-(6) of Panel B are largely not significantly different from zero.

Similar to Table 6, Table 7 suggests that domestic institutional investors facilitate both cross-border M&As and domestic M&As. This finding is robust to both OLS and ZIP regressions. Specifically, the positive coefficients on domestic IO in Columns (4)-(6) of both Panels A and B suggest that domestic institutional investors facilitate cross-border M&As. Further, in both Panels A and B, the coefficient estimates on domestic IO in Columns (7)-(9) are greater than those in Columns (4)-(6), implying that domestic institutional investors also facilitate domestic M&As.

In Panel A, the coefficients on domestic IO in Columns (1)-(3) are not significantly different from zero. In Panel B, the coefficients on domestic IO in Columns (1)-(3) are all negative, but only the coefficient in Column (3) is statistically significant. Given that ZIP regression results

are more reliable than the OLS regression results and the regression model in Column (3) includes the most control variables, we conclude that domestic IO negatively affects the *CBMAs-to-all-M&As Ratio*. This is not surprising, given that domestic institutional investors exert a more positive influence on the *M&As-to-all-Firms Ratio* than the *CBMAs-to-all-Firms Ratio*, and the *CBMAs-to-all-M&As Ratio* can be obtained by dividing the *CBMAs-to-all-Firms Ratio* by the *M&As-to-all-Firms Ratio*.

Panel B of Table 7 also shows that cross-country *Financial Freedom*, *Investment Freedom*, and *Investor Protection* significantly affect the intensity of the cross-border M&A activity. Cross-border M&As are more likely to occur if the acquirer country has greater financial freedom than the target country for the following reason. In a country where the banking sector is inefficient due to severe government interference, firms face financial constraints in funding their investment projects. Therefore, they need financial resources from outsiders, which makes them more likely to become targets of cross-border M&As. Similarly, when a country treats foreign investors fairly, it attracts more foreign acquirers. Therefore, cross-border M&As are more likely to occur if the target country provides greater investment freedom for foreign acquirers. In contrast to the findings in country-level regressions, the cross-country *Press Freedom* is not a significant predictor of the intensity of the cross-border M&A activity.

I also have findings that are consistent with prior studies. For example, in a country with weaker investor protection, firms are more likely to become targets of cross-border M&As as foreign acquirers can better assist in improving the corporate governance. Two countries sharing the same legal origin are more likely to have cross-border M&As. A country with lower corporation income taxes is more attractive to foreign acquirers.

As an important difference from the country-level regressions in Table 6, the country-pairs regressions in Table 7 includes a new dependent variable: the *CBMAs-to-all-CBMAs Ratio* $_{(i,j,t)}$ , which is the ratio of the number of cross-border M&As in target country  $i$  in year  $t$  in which the acquirer is from foreign country  $j$  to the total number of cross-border M&As in target country  $i$  in year  $t$ . In other words, it answers the question of what proportion of the cross-border M&As in target country  $i$  involves a specific foreign acquirer country  $j$  in year  $t$ .

The last three columns in Panels A and B report the estimation results for regressions of the *CBMAs-to-all-CBMAs Ratio* using the OLS and ZIP models, respectively. If the foreign institutional investors from country  $j$  facilitate the firms from country  $j$  to acquire firms in country  $i$ , then the coefficient on *foreign IO* $_{(i,j,t)}$  should be positive. However, all of coefficient estimates on *foreign IO* $_{(i,j,t)}$  in Columns (10)-(12) in both Panels A and B are not significantly different from zero, implying that foreign institutional investors from country  $j$  do not facilitate the firms from country  $j$  to acquire firms in country  $i$  and this result is not sensitive to whether the OLS or ZIP model is used.

Importantly, this result is in sharp contrast to the finding from Columns (1)-(3) in Panels A and B that *foreign IO* $_{(i,j,t)}$  has a positive influence on the *CBMAs-to-all-M&As Ratio*. Although the OLS model overestimates the positive influence of foreign institutional ownership in Columns (1)-(3) of Panel A, the ZIP model results still suggest a marginally significant and positive influence of foreign institutional ownership in Columns (1)-(3) of Panel B. However, once we scale the number of cross-border M&As between target country  $i$  and acquirer country  $j$  by the number of cross-border M&As between target country  $i$  and all the foreign acquirer countries, we no longer find any positive influence of foreign institutional ownership from country  $j$ . In other words, institutional investors from foreign country  $j$  do not increase the proportion of the cross-border

M&As having the acquirer from country  $j$ . The finding is rather surprising because it suggests that foreign institutional ownership from a specific country does not increase the probability that a cross-border merger has the acquirer from the same foreign country.

In summary, my study has new findings that are seemingly inconsistent with Ferreira et al. (2010). First, by using the *CBMAs-to-all-Firms Ratio* to measure the volume of cross-border M&As, I discover a positive impact of domestic institutional investors on the volume of cross-border M&As. Note that Ferreira et al. (2010) reports a negative impact of domestic institutional investors on the intensity of cross-border M&As, which is measured by the *CBMAs-to-all-M&As Ratio*. In other words, while domestic institutional investors help increase the number of cross-border M&As in a target country, once we scale the number of cross-border M&As by the sum of the number of cross-border M&As and the number of domestic M&As in the target country, domestic institutional ownership reduces the probability that a merger is cross-border.

Second, the positive impact of foreign IO on the *CBMAs-to-all-M&As Ratio* is less significant when the excessive zeros are controlled for by the ZIP model. Given the preponderance of zeros in the sample for country-pairs analysis of cross-border M&As, my findings suggest that ZIP is a more appropriate model.

Third, using the new ratio, *CBMAs-to-all-CBMAs Ratio*, to measure the proportion of the cross-border mergers that come from a specific foreign acquirer country, I find no influence of foreign institutional ownership from a specific acquirer country on the probability that a cross-border merger has an acquirer from the same foreign country. To put it more intuitively, for instance, if UK has a higher institutional ownership in Japan, it does not increase the probability that a *cross-border merger* in Japan has an acquirer from UK. To illustrate with the same hypothetical example, the main finding in Ferreira et al. (2010) suggest that if UK has a higher institutional ownership in



Japan, it increases the probability that a *merger* in Japan has an acquirer from UK. While the two arguments are seemingly inconsistent with each other, the key difference is how to measure the probability of a cross-border merger. The *CBMAs-to-all-M&As Ratio* in Ferreira et al. (2010) compares the number of cross-border M&As from acquirer country  $j$  with the number of domestic M&As, while the *CBMAs-to-all-CBMAs Ratio* in my study compares the number of cross-border M&As from acquirer country  $j$  with the number of cross-border M&As from all the acquirer countries. This new finding makes us re-evaluate how effectively foreign institutional ownership can increase the probability that a cross-border merger has the acquirer from the same foreign country.

## **5.2. Country-Specific Characteristics and the Effect of Institutional Ownership**

To better understand whether the impact of foreign and domestic institutional ownership on the intensity of the cross-border M&A activity depend on the relative financial and investment freedom as well as the relative investor protection between the acquirer and target countries, I interact foreign IO and domestic IO with three dummy variables: *Financial Freedom-D*, which equals one if the acquirer country has greater financial freedom than the target country, and zero otherwise; *Investment Freedom-D*, which equals one if the acquirer country has greater investment freedom than the target country, and zero otherwise; and *Investor Protection-D*, which equals one if the acquirer country provides stronger investor protection than the target country, and zero otherwise. For simplicity, I only use the ZIP model to examine the two ratios measuring the intensity of the cross-border M&A activity: the *CBMAs-to-all-M&As Ratio* and the *CBMAs-to-all-Firms Ratio*.

Table 8 reports the regression results. Several findings are worth a discussion. Columns (1) and (4) show that the interaction term between Financial Freedom-D and domestic IO is highly significant for both the *CBMAs-to-all-M&As Ratio* and the *CBMAs-to-all-Firms Ratio*, suggesting that when the acquirer country has greater financial freedom than the target country, domestic institutional investors in target countries have more positive influence on the intensity of the cross-border M&A activity. However, given that the coefficients on the domestic IO are different between Columns (1) and (4), the specific interpretations differ for the two cross-border M&A ratios.

[Table 8]

Specifically, in the regression of the *CBMAs-to-all-M&As Ratio* in Column (1), the coefficient on the domestic IO is significantly negative, suggesting that when the acquirer country does not have greater financial freedom than the target country, domestic institutional investors in target countries have negative influence on the *CBMAs-to-all-M&As Ratio*. In untabulated tests, we find that when the acquirer country has greater financial freedom than the target country, domestic institutional investors in target countries have no significant influence on the *CBMAs-to-all-M&As Ratio*, which is consistent with the result that the positive coefficient on the interaction term between Financial Freedom-D and domestic IO is only slightly greater in magnitude than the negative coefficient of domestic IO. Taken together, we conclude that when the acquirer country has greater financial freedom than the target country, domestic institutional investors in target countries have significantly less negative influence on the *CBMAs-to-all-M&As Ratio* than when the acquirer country does not have greater financial freedom than the target country.

In the regression of the *CBMAs-to-all-Firms Ratio* in Column (4), the coefficient on the domestic IO is not significantly different from zero, suggesting that when the acquirer country

does not have greater financial freedom than the target country, domestic institutional investors in target countries have no influence on the *CBMAs-to-all-Firms Ratio*. Given this result, the positive coefficient on the interaction term between Financial Freedom-D and domestic IO implies that when the acquirer country has greater financial freedom than the target country, domestic institutional investors in target countries are more effective facilitators for cross-border M&As, as measure by the *CBMAs-to-all-Firms Ratio*.

Based on the results in Columns (1) and (4), we infer that when the acquirer country does not have greater financial freedom than the target country, domestic institutional investors in target countries may facilitate domestic M&As but not cross-border M&As, resulting in the negative influence on the *CBMAs-to-all-M&As Ratio*, as shown in Column (1). When the acquirer country has greater financial freedom than the target country, domestic institutional investors in target countries facilitate not only cross-border M&As, as shown in Column (4), but also possibly domestic M&As, contributing to the result in Column (1) that domestic institutional investors in target countries do not have any influence on the *CBMAs-to-all-M&As Ratio* when the acquirer country has greater financial freedom than the target country.

Similarly, the results in Columns (2) and (5) suggest that when the acquirer country does not have greater investment freedom than the target country, domestic institutional investors in target countries may facilitate domestic M&As but not cross-border &As, resulting in the domestic institutional ownership's negative influence on the *CBMAs-to-all-M&As Ratio*, as suggested by the negative coefficient on domestic IO in Column (2). When the acquirer country has greater investment freedom than the target country, domestic institutional investors in target countries facilitate not only cross-border M&As, as shown in Column (5), but also possibly domestic M&As, contributing to the result in Column (2) that domestic institutional investors in target countries do

not affect the *CBMAs-to-all-M&As Ratio* when the acquirer country has greater investment freedom than the target country.

The results in Columns (3) and (6) regarding the differential impacts of domestic institutional ownership on the cross-border activity conditional on the relative investor protection between the acquirer and target countries are similar but weaker than the results regarding financial freedom and investment freedom. However, we find strong differential impacts of foreign institutional ownership on the cross-border M&A activity conditional on the relative investor protection between the acquirer and target countries. Specifically, when the acquirer country provides stronger investor protection than the target country, foreign institutional investors in target countries have positive influence on both the *CBMAs-to-all-M&As Ratio* and the *CBMAs-to-all-Firms Ratio*. The results are consistent with Ferreira et al. (2010).

Recall that to measure country-level investor protection, Rossi and Volpin (2004) and Ferreira et al. (2010) use the product of the index of anti-director rights and the rule of law index, and Bris and Cabolis (2008) use the product of the anti-director rights index and the efficiency of legal system. The values of all their index components are from La Porta et al. (1998) and they are all time-invariant for each country. In untabulated results, I replace my index of investor protection with those used in Rossi and Volpin (2004), Ferreira et al. (2010), and Bris and Cabolis (2008). I do not find any evidence that foreign institutional investors are more efficient facilitators for cross-border M&As when the acquirer country provides stronger investor protection than the target country, which underscores the importance of using the updated index values for future research on cross-border M&As.

In summary, I conclude from Table 8 that foreign institutional investors facilitate cross-border M&As when the acquirer country provides stronger investor protection than the target country;

domestic institutional investors help increase the volume of cross-border M&As when the acquirer country has greater financial freedom or investment freedom than the target country.

As a robustness check, I add withdrawn deals into the sample and run the same regressions as in Tables 7 and 8. Including withdrawn deals may change the value of the *CBMAs-to-all-M&As Ratio*. For instance, the inclusion of withdrawn deals increases the average *CBMAs-to-all-M&As Ratio* by 10% for Austria but reduces the same ratio by about 15% for Poland. In untabulated results, using a sample of completed and withdrawn deals, I continue to find evidence that domestic institutional investors can facilitate cross-border M&As more effectively when the acquirer country has greater financial freedom or stronger investor protection than the target country. Foreign institutional investors can facilitate cross-border M&As more effectively when the acquirer country has stronger investor protection than the target country.

## Chapter 6

### Conclusion

The average foreign and domestic institutional ownerships across the 26 countries in my sample increase by about 35% and 36%, respectively, from the period 2000-2005 to the period 2006-2012. Meanwhile, the annual average number of cross-border M&A transactions per country does not increase during the same time period. Using cross-border and domestic M&As from 26 countries between 2000 and 2012, I examine the role of foreign and domestic institutional ownerships in cross-border M&As.

While Ferreira et al. (2010) mainly examine the role of foreign institutional investors in cross-border M&As, they report that domestic institutional ownership is negatively associated with the intensity of cross-border M&A activity. In this study, I conduct a more comprehensive analysis of the role of domestic institutional investors in both domestic and cross-border M&As. I find that domestic institutional investors facilitate both domestic and cross-border M&As. Moreover, I find that domestic institutional investors facilitate domestic M&As more efficiently than cross-border M&As, which contributes to the negative correlation between domestic institutional ownership and the ratio of cross-border M&As to the sum of the domestic and cross-border M&As, as reported in Ferreira et al. (2010). I provide a detailed discussion about how different measures of the cross-border M&A activity lead to seemingly inconsistent conclusions.

I also find that domestic institutional investors can facilitate cross-border M&As more effectively when the acquirer country has greater financial freedom than the target country. The finding suggests that cross-border M&As may help firms in a country with less financial freedom to alleviate

the problem of financial constraints. Moreover, I find that greater freedom of the press in the target country is positively associated with both volume and intensity of cross-border M&As.

I argue that ZIP regressions are a more appropriate method to examine the determinants of the volume and intensity of cross-border M&A activity, as the dependent variable can be zero for about 90% of the observations. A ZIP model can address the estimation problem caused by the excessive zeros in the dependent variable. I find that OLS regressions tend to overestimate the positive impact of foreign institutional ownership on the volume and intensity of cross-border M&A activity.

Lastly, in country-pair regressions, I surprisingly find no influence of foreign institutional ownership from a specific acquirer country on the probability that a cross-border merger has the acquirer from the same foreign country. To put it more intuitively, for instance, if UK has a higher institutional ownership in Japan, it does not increase the probability that a *cross-border merger* in Japan has a UK acquirer. To illustrate with the same hypothetical example, the main finding in Ferreira et al. (2010) suggest that if UK has a higher institutional ownership in Japan, it increases the probability that a *merger* in Japan has a UK acquirer. While the two arguments are seemingly inconsistent with each other, the key difference is how to measure the probability of a cross-border merger. My new finding makes us re-evaluate how effectively foreign institutional investors can increase the probability that a cross-border merger has the acquirer from the same foreign country as the institutional investors. Future research may shed more light on this issue.

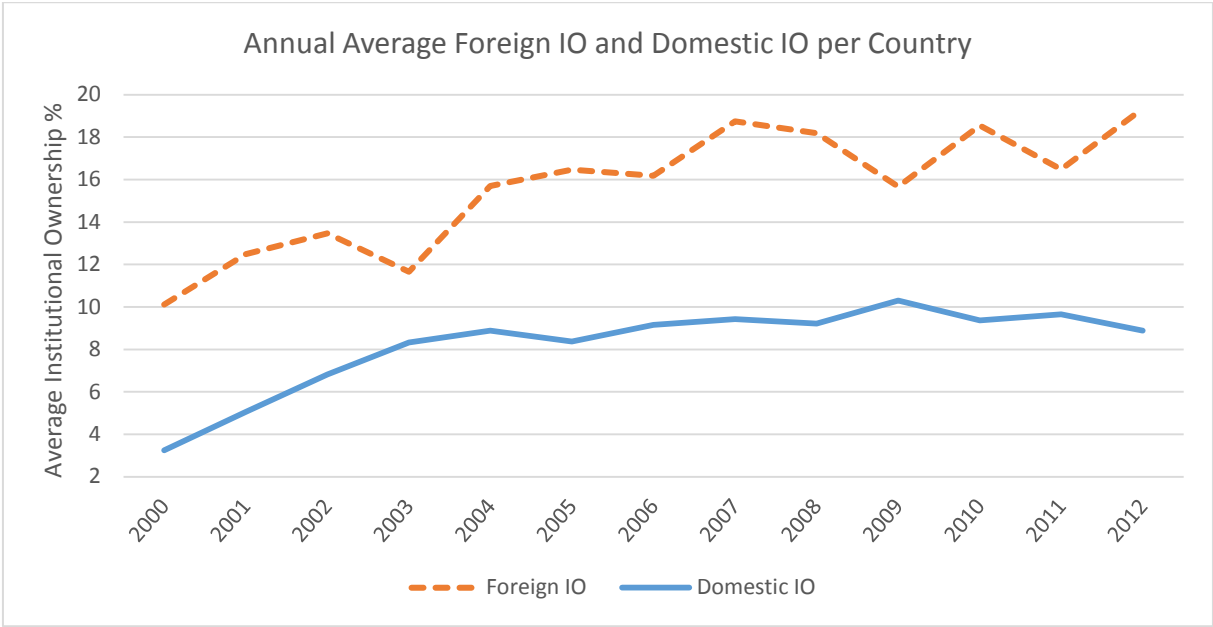
Appendix 1  
Figures



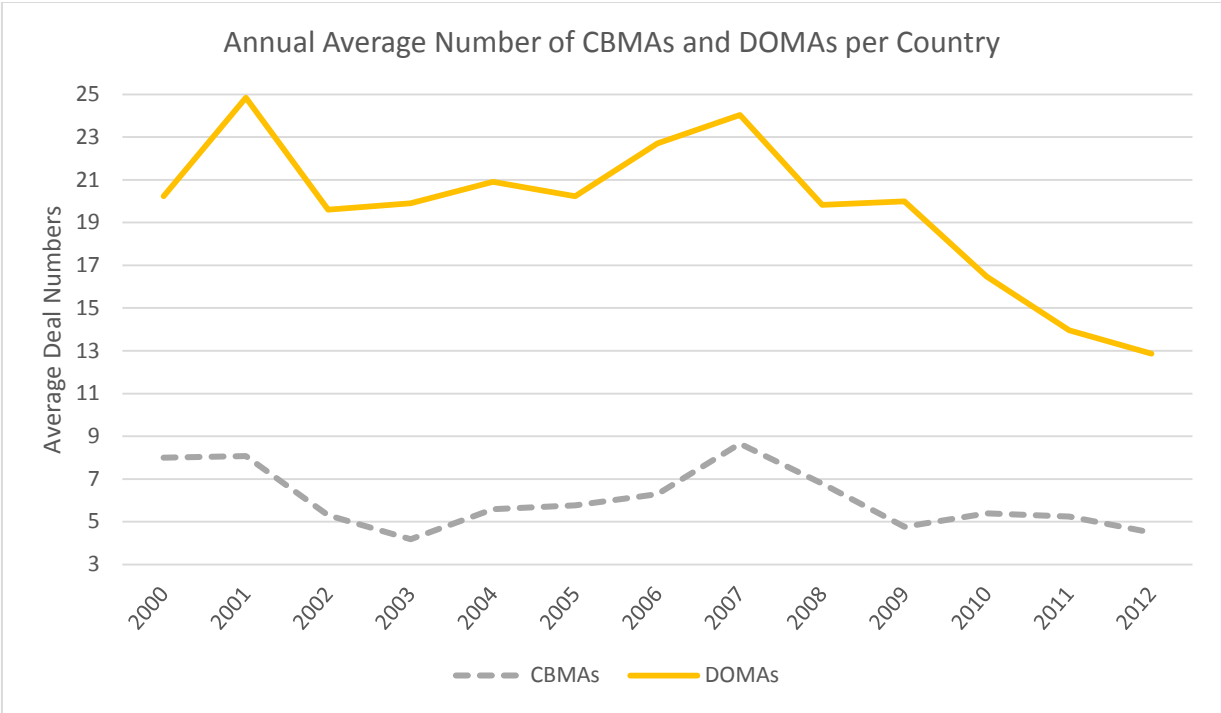
**Figure 1. Average Foreign and Domestic Institutional Ownership and Number of Domestic and Cross-border M&As per Country**

The horizontal axis denotes years. Graph A depicts the average foreign institutional ownership (foreign IO) and domestic institutional ownership (domestic IO) across the 26 countries in the sample. Graph B depicts the annual average number of completed domestic M&As (DOMAs) and number of completed cross-border M&As (CBMAs) across the 26 countries in the sample.

Graph A. Average foreign institutional ownership (foreign IO) and domestic institutional ownership (domestic IO) per country



Graph B. Annual average number of completed cross-border M&As (CBMAs) and domestic M&As (DOMAs) per country



## Appendix 2

### Tables

**Table 1: Descriptions of Variables**

Variable	Definition	Data source
<i>Country-Level Variable</i>		
Foreign IO ( $i,t$ )	Foreign Institutional Ownership: Stock holdings in country $i$ by institutions domiciled in a country different from country $i$ where the firm is incorporated as a percentage of the market capitalization of country $i$	FactSet LionShares
Domestic IO ( $i,t$ )	Domestic Institutional Ownership: Stock holdings in country $i$ by institutions domiciled in the same country $i$ where the firm is incorporated as a percentage of the market capitalization of country $i$	FactSet LionShares
CBMAs-to-all-M&As Ratio ( $i,t$ )	Number of completed cross-border M&A deals in which the target is from country $i$ and the acquirer is from a foreign country scaled by the number of completed domestic and cross-border M&A deals in target country $i$ in year $t$	SDC database
CBMAs-to-all-Firms Ratio ( $i,t$ )	Number of completed cross-border M&A deals in which the target is from country $i$ and the acquirer is from a foreign country scaled by the number of listed companies in country $i$ in year $t$	SDC database and World Bank: Global Financial Development Database
DOMAs-to-all-Firms Ratio ( $i,t$ )	Number of completed domestic M&A deals in target country $i$ scaled by the number of listed companies in country $i$ in year $t$	SDC database and World Bank: Global Financial Development Database
M&As-to-all-Firms Ratio ( $i,t$ )	Number of completed domestic and cross-border M&A deals in which the target is from country $i$ scaled by the number of listed companies in country $i$ in year $t$	SDC database and World Bank: Global Financial Development Database
Anti-Director-Right Index	Anti-Director-Right Index, which ranges from 1 to 5. A higher value means stronger shareholder protection.	Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008)
Corporate Tax	Corporate tax rate of a country	Tax Foundation (taxfoundation.org)
Financial Freedom	Financial freedom is an indicator of banking efficiency as well as a measure of independence from government control and interference in the financial sector within a country. The index scores an economy's financial freedom by looking at five broad areas: the extent of government regulation of financial services, the degree of state intervention in banks and other financial firms through direct and indirect ownership, government influence on the allocation of credit, the extent of financial and capital market development, and openness to foreign competition. Index value ranges from 0 to 100. A score of 100 indicates the greatest financial freedom.	Heritage Foundation
GDP growth	Annual percentage growth rate of GDP (%)	World Bank
Investment Freedom	The index evaluates a variety of regulatory restrictions that typically are imposed on investment, including national treatment of foreign investment, policy implementation and bureaucracy, restrictions on land ownership, sectoral investment restrictions, expropriation	Heritage Foundation

	of investments without fair compensation, foreign exchange controls and capital controls. Index value ranges from 0 to 100. A score of 100 indicates the greatest investment freedom.	
Investor Protection	A product of the <i>Anti-Direct-Right Index</i> and the <i>Rule of Law index</i> . A higher value means stronger investor protection.	Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008) and Kaufmann, Kraay, and Mastruzzi (2011)
Log(GDP p.c.)	Logarithm of gross domestic product per capita of a country	World Bank
Market Return	Stock market index return (Datastream Code: RI)	Datastream
Openness	Sum of exports and imports of goods and services as a percentage of GDP	World Bank
Press Freedom	This index covers various media platforms, including print outlets, broadcast stations, news websites, blogs on public affairs, and social media. Index value ranges from 0 to 100. A country with more freedom of the press has a higher value.	Freedom House
Rule of Law	Index value ranges from -0.25 to 2.5. A higher value means stronger rule of law.	Kaufmann, Kraay, and Mastruzzi (2011)
Stock Mkt. Cap.	Total value of all listed shares in a stock market as a percentage of GDP.	World Bank: Global Financial Development Database
Stock Mkt. Turnover	Total value of shares traded during the period divided by the average market capitalization for the period.	World Bank: Global Financial Development Database

*Cross-Country Variable*

Cross-country Foreign IO ( $i,j,t$ )	Stock holdings in target country $i$ by institutions domiciled in acquirer country $j$ ( $i \neq j$ ) as a percentage of the market capitalization of country $i$	FactSet LionShares
Cross-country R-Foreign IO ( $i,j,t$ )	Stock holdings in acquirer country $j$ by institutions domiciled in target country $i$ ( $j \neq i$ ) as a percentage of the market capitalization of country $j$	FactSet LionShares
CBMAs-to-all-M&As Ratio ( $i,j,t$ )	Number of completed cross-border M&A deals in which the target is from country $i$ and the acquirer is from country $j$ ( $i \neq j$ ) scaled by the number of completed domestic and cross-border M&A deals with target firm from country $i$ in year $t$	SDC database
CBMAs-to-all-Firms Ratio ( $i,j,t$ )	Number of completed cross-border M&A deals in which the target is from country $i$ and the acquirer is from country $j$ ( $i \neq j$ ) scaled by the number of listed companies in country $i$ in year $t$	SDC database and World Bank: Global Financial Development Database
M&As-to-all-Firms Ratio ( $i,j,t$ )	Number of completed domestic and cross-border M&A deals in which the target is from country $i$ and the acquirer is from country $j$ ( $i \neq j$ ) scaled by the number of listed companies in country $i$ in year $t$	SDC database and World Bank: Global Financial Development Database
CBMAs-to-all-CBMAs Ratio ( $i,j,t$ )	Number of completed cross-border M&A deals in which the target is from country $i$ and the acquirer is from country $j$ ( $i \neq j$ ) scaled by the number of completed cross-border M&A deals in which the target firm is from country $i$ in year $t$	SDC database
Bilateral Investment Treaty-D	Dummy variable that equals one if the target and the acquirer countries have a bilateral investment treaty, zero otherwise.	United Nations Conference on Trade and Development
Bilateral Trade	Value of imports by country $i$ from country $j$ over the total value of imports by country $i$	UN Comtrade Database ( <a href="https://comtrade.un.org/data/">https://comtrade.un.org/data/</a> )

Cross-country GDP growth ( $j-i$ )	GDP growth of acquirer nation $j$ – GDP growth of target nation $i$ .	World Bank Development Indicators
Cross-country Log(GDP p.c.) ( $j-i$ )	Log(GDP per capita of acquirer nation $j$ ) – Log(GDP per capita of target nation $i$ ).	World Bank Development Indicators
Cross-country Stock Mkt. Cap. ( $j-i$ )	Stock market capitalization of listed shares over GDP in acquirer nation $j$ – Stock market capitalization of listed shares over GDP in target nation $i$	World Bank Development Indicators
Cross-country Stock Mkt. turnover ( $j-i$ )	Stock market turnover of an acquirer nation $j$ – Stock market turnover of an acquirer nation $i$	World Bank Development Indicators
Cross-country Mkt. return ( $j-i$ )	Stock market index return of acquirer nation $j$ - Stock market index return of target nation $i$	Datastream
Cross-country Corporate tax ( $j-i$ )	Corporate tax rate in acquirer nation $j$ – corporate tax rate in target nation $i$	Tax Foundation (taxfoundation.org)
Cross-country Investor Protection ( $j-i$ )	Investor Protection of acquirer nation $j$ - Investor Protection of target nation $i$	Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008)
Cross-country Investment Freedom ( $j-i$ )	Investor Freedom of acquirer nation $j$ - Investor Freedom of target nation $i$	Heritage Foundation
Cross-country Financial Freedom ( $j-i$ )	Financial Freedom of acquirer nation $j$ - Financial Freedom of target nation $i$	Heritage Foundation
Cross-country Press Freedom ( $j-i$ )	Press Freedom of acquirer nation $j$ - Press Freedom of target nation $i$	Freedom House
Double Taxation Treaty-D	Dummy variable that equals one if the target and the acquirer countries have a double taxation treaty, zero otherwise. To make sure the provision is effective, the effective date of each treaty is crosschecked between two databases: OECD and IBFD. Only the treaty with both “Income” and “Capital gain” provisions is selected.	Organization for Economic Co-operation and Development (OECD) and International Bureau of Fiscal Documentation (IBFD)
Financial Freedom-D	Dummy variable that equals one if the acquirer country has greater financial freedom than the target country, zero otherwise.	Heritage Foundation
Investment Freedom-D	Dummy variable that equals one if the acquirer country has greater investment freedom than the target country, zero otherwise.	Heritage Foundation
Investor Protection-D	Dummy variable that equals one if the acquirer country provides stronger investor protection than the target country, zero otherwise.	Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008) and Kaufmann, Kraay, and Mastruzzi (2011)
Law Origin-D	Dummy variable that equals one if the target and the acquirer countries have the same legal origin (English, French, German, and Scandinavian), zero otherwise.	Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008)
Same Region-D	Dummy variable that equals one if the target and the acquirer countries are in the same broadly defined region (i.e., East Asia & Pacific, Europe & Central Asia, North America, South Asia, and Sub-Saharan Africa), zero otherwise.	World Factbook

**Table 2. Number of Cross-Border and Domestic M&As by Target Country**

This table reports the number of cross-border M&As and the number of domestic M&As by the target country over the entire sample period 2000-2012 and two sub-periods: 2000-2005 and 2006-2012. The numbers within parentheses are the annual average numbers of deals.

Country Name	Number of Completed Cross-Border M&As			Number of Completed Domestic M&As		
	2000 - 2012	2000 - 2005	2006 - 2012	2000 - 2012	2000 - 2005	2006 - 2012
Australia	129 (9.92)	41 (3.15)	88 (6.77)	366 (28.15)	151 (11.62)	215 (16.54)
Austria	9 (0.69)	3 (0.23)	6 (0.46)	7 (0.54)	3 (0.23)	4 (0.31)
Belgium	15 (1.15)	7 (0.54)	8 (0.62)	6 (0.46)	5 (0.38)	1 (0.08)
Canada	318 (24.46)	141 (10.85)	177 (13.62)	962 (74.00)	353 (27.15)	609 (46.85)
Switzerland	28 (2.15)	10 (0.77)	18 (1.38)	27 (2.08)	13 (1.00)	14 (1.08)
Germany	67 (5.15)	46 (3.54)	21 (1.62)	63 (4.85)	41 (3.15)	22 (1.69)
Denmark	22 (1.69)	11 (0.85)	11 (0.85)	25 (1.92)	14 (1.08)	11 (0.85)
Spain	14 (1.08)	9 (0.69)	5 (0.38)	26 (2.00)	15 (1.15)	11 (0.85)
Finland	11 (0.85)	7 (0.54)	4 (0.31)	16 (1.23)	9 (0.69)	7 (0.54)
France	67 (5.15)	42 (3.23)	25 (1.92)	121 (9.31)	72 (5.54)	49 (3.77)
UK	231 (17.77)	109 (8.38)	122 (9.38)	338 (26.00)	193 (14.85)	145 (11.15)
Greece	8 (0.62)	4 (0.31)	4 (0.31)	36 (2.77)	19 (1.46)	17 (1.31)
Hong Kong	27 (2.08)	8 (0.62)	19 (1.46)	24 (1.85)	12 (0.92)	12 (0.92)
India	20 (1.54)	9 (0.69)	11 (0.85)	117 (9.00)	38 (2.92)	79 (6.08)
Ireland	11 (0.85)	4 (0.31)	7 (0.54)	4 (0.31)	3 (0.23)	1 (0.08)
Italy	15 (1.15)	8 (0.62)	7 (0.54)	43 (3.31)	22 (1.69)	21 (1.62)
Japan	17 (1.31)	12 (0.92)	5 (0.38)	603 (46.38)	273 (21.00)	330 (25.38)
Luxembourg	6 (0.46)	2 (0.15)	4 (0.31)	0 (0.00)	0 (0.00)	0 (0.00)
Netherlands	43 (3.31)	28 (2.15)	15 (1.15)	19 (1.46)	11 (0.85)	8 (0.62)
Norway	50 (3.85)	19 (1.46)	31 (2.38)	37 (2.85)	15 (1.15)	22 (1.69)
Poland	26 (2.00)	14 (1.08)	12 (0.92)	37 (2.85)	6 (0.46)	31 (2.38)
Portugal	8 (0.62)	7 (0.54)	1 (0.08)	5 (0.38)	2 (0.15)	3 (0.23)
Singapore	31 (2.38)	8 (0.62)	23 (1.77)	36 (2.77)	25 (1.92)	11 (0.85)
Sweden	42 (3.23)	22 (1.69)	20 (1.54)	71 (5.46)	34 (2.62)	37 (2.85)
US	583 (44.85)	301 (23.15)	282 (21.69)	2873 (221.00)	1620 (124.62)	1253 (96.38)
South Africa	24 (1.85)	11 (0.85)	13 (1.00)	49 (3.77)	33 (2.54)	16 (1.23)
Average per country	70.08 (5.39)	33.96 (2.61)	36.12 (2.78)	227.35 (17.49)	114.69 (8.82)	112.65 (8.67)

**Table 3. Domestic and Foreign Institutional Ownership by Target Country**

This table reports the average domestic and foreign institutional ownerships as a percentage of market capitalization for each of the 26 countries during the sample period from 2000 to 2012, as well as the two sub-periods: 2000-2005 and 2006- 2012. The last two columns report the change in domestic and foreign institutional ownerships from the period 2000-2005 to the period 2006-2012.

Country Name	Institutional Ownership (%)						Change in Institutional Ownership (%)	
	2000 - 2012		2000 - 2005		2006 - 2012		from 2000 - 2005 to 2006 - 2012	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Australia	2.02	10.86	0.91	7.97	2.97	13.34	2.06	5.37
Austria	1.13	11.56	0.69	7.91	1.51	14.68	0.82	6.77
Belgium	1.57	10.49	1.86	5.98	1.33	14.35	-0.53	8.37
Canada	26.30	20.52	23.19	17.50	28.97	23.11	5.78	5.61
Switzerland	3.16	29.47	2.40	27.24	3.82	31.39	1.42	4.15
Germany	6.79	15.94	7.09	10.42	6.54	20.67	-0.55	10.25
Denmark	6.34	14.04	5.92	9.48	6.71	17.95	0.79	8.47
Spain	1.95	13.73	2.21	12.79	1.73	14.54	-0.48	1.75
Finland	6.10	27.84	3.28	29.60	8.51	26.34	5.23	-3.26
France	7.58	16.43	6.47	14.02	8.54	18.50	2.07	4.48
UK	11.47	15.87	8.98	12.56	13.61	18.71	4.63	6.15
Greece	0.37	10.42	0.17	5.94	0.54	14.27	0.37	8.33
Hong Kong	1.98	8.47	1.26	5.71	2.60	10.83	1.34	5.12
India	2.47	9.93	1.04	9.02	3.71	10.71	2.67	1.69
Ireland	0.54	56.71	0.55	51.41	0.53	61.26	-0.02	9.85
Italy	1.98	13.19	2.58	10.04	1.47	15.89	-1.11	5.85
Japan	3.10	8.63	1.82	6.40	4.21	10.53	2.39	4.13
Luxembourg	0.43	17.28	0.68	13.91	0.21	20.17	-0.47	6.26
Netherlands	2.10	31.39	1.49	27.48	2.61	34.74	1.12	7.26
Norway	7.62	13.13	6.20	11.93	8.84	14.17	2.64	2.24
Poland	10.56	8.60	1.65	9.01	18.19	8.25	16.54	-0.76
Portugal	1.31	9.95	1.42	8.89	1.22	10.85	-0.20	1.96
Singapore	1.74	12.85	1.04	12.65	2.34	13.02	1.30	0.37
Sweden	17.37	13.08	14.08	11.59	20.18	14.35	6.10	2.76
US	63.03	6.19	61.75	4.40	64.13	7.73	2.38	3.33
South Africa	3.71	11.98	2.51	8.01	4.73	15.38	2.22	7.37
Average per country	7.41	16.10	6.20	13.53	8.45	18.30	2.25	4.76

**Table 4. Average Country-Specific Characteristics**

This table provides the average country-level investor protection, investment freedom, financial freedom, and press freedom. Investor protection is the product of *Anti-Director Rights Index* (DLLS 2008) and *Rule of Law* (KKM 2011). The range of *Anti-Director Right Index* is from 1 to 5. The range of *Rule of Law* is from -2.5 to 2.5. A higher value indicates stronger investor protection. Investment freedom, financial freedom, and press freedom all range from 0 to 100. A higher value indicates greater freedom. Table 1 has the definitions of all the variables.

Country name	Investor Protection	Investment Freedom	Financial Freedom	Press Freedom
Australia	7.00	73.85	90.00	82.00
Austria	4.64	71.92	70.00	79.00
Belgium	3.95	84.62	72.31	89.38
Canada	6.94	59.62	73.85	82.38
Switzerland	5.54	72.31	83.08	88.85
Germany	5.77	85.77	53.85	84.08
Denmark	7.65	78.46	86.92	89.46
Spain	5.88	73.08	74.62	78.31
Finland	6.80	72.69	71.54	90.00
France	4.91	55.38	58.46	79.08
UK	8.34	82.31	87.69	81.15
Greece	1.46	55.38	50.00	70.54
Hong Kong	7.08	90.00	90.00	53.62
India	0.31	40.38	33.08	62.00
Ireland	8.21	88.85	84.62	84.23
Italy	1.03	71.15	63.85	68.62
Japan	5.73	56.15	46.92	79.54
Luxembourg	3.61	89.62	83.85	88.00
Netherlands	4.40	88.46	86.92	87.00
Norway	6.66	56.54	53.08	90.46
Poland	1.11	59.23	61.54	78.08
Portugal	2.79	70.00	53.08	84.46
Singapore	8.03	84.23	61.54	32.77
Sweden	6.58	83.85	80.00	90.23
US	4.67	73.08	81.54	83.38
South Africa	0.45	56.54	57.69	71.69



### **Table 5. Summary Statistics of Country-Level Variables**

This table presents summary statistics of some country-level variables based on the domestic and cross-border M&A deals completed in 26 countries during the period 2000-2012. Panel A reports summary statistics for the entire sample. The number of observations is 388 for the following two variables: CBMAs-to-all-Firms Ratio ( $i,t$ ) and DOMAs-to-all-Firms Ratio ( $i,t$ ). The number of observations is 299 for the other three variables: CBMAs-to-all-M&As Ratio ( $i,t$ ), Foreign IO ( $i,t$ ), and Domestic IO ( $i,t$ ). The number of observations is smaller for CBMAs-to-all-M&As Ratio ( $i,t$ ) because some countries do not have any M&A transaction among public firms in some year. In Panels B-E, the sample is divided into two sub-samples based on the median level of investor protection, investment freedom, financial freedom, and press freedom, respectively. A target country belongs to the subsample of strong investor protection, more investment freedom, more financial freedom, or more press freedom if it has the corresponding index value greater than the median in a year. The significance of any difference in means is tested with Student's t test, and the significance of any difference in medians is assessed by the Wilcoxon rank-sum test (Mann-Whitney test). Table 1 has the definitions of all the variables. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	CBMAs-to-all-M&As Ratio( <i>i,t</i> )(%)	CBMAs-to-all-Firms Ratio( <i>i,t</i> )(%)	DOMAs-to-all-Firms Ratio( <i>i,t</i> )(%)	Foreign IO ( <i>i,t</i> )(%)	Domestic IO ( <i>i,t</i> )(%)
<b>A. Full sample</b>					
mean	40.66	7.40	10.12	15.56	8.13
median	37.93	5.39	8.03	13.20	3.13
std. dev.	29.91	9.35	10.67	10.30	13.48
<b>B. Investor Protection</b>					
Strong Protection					
mean	41.40	7.90	10.93	17.88	7.61
median	38.46	5.84	9.22	13.99	4.21
Weak Protection					
mean	39.93	6.90	9.30	13.26	8.64
median	33.33	3.89	6.38	11.30	2.58
Dif. in mean: Strong – Weak	1.46	0.99	1.63*	4.62***	-1.03
Dif. in median: Strong – Weak	5.13	1.95**	2.84***	2.69***	1.63***
<b>C. Investment Freedom</b>					
More Freedom					
mean	50.04	7.91	7.49	19.06	8.56
median	50.00	5.53	4.07	14.31	2.72
Less Freedom					
mean	34.80	7.04	11.95	13.37	7.86
median	31.86	5.35	9.89	11.52	3.41
Dif. in mean: More – Less	15.24***	0.87	-4.45***	5.69***	0.70
Dif. in median: More – Less	18.14***	0.19	-5.82***	2.79***	-0.69
<b>D. Financial Freedom</b>					
More Freedom					
mean	44.79	8.12	10.75	19.21	11.18
median	38.96	5.83	8.13	14.54	3.34
Less Freedom					
mean	38.12	6.93	9.70	13.31	6.25
median	33.33	4.44	8.00	12.09	3.05
Dif. in mean: More – Less	6.67**	1.19	1.05	5.90***	4.93***
Dif. in median: More – Less	5.62*	1.38	0.13	2.45***	0.29**
<b>E. Press Freedom</b>					
More Freedom					
mean	50.08	10.56	11.19	18.93	9.68
median	50.00	7.50	8.00	14.27	4.04
Less Freedom					
mean	32.37	4.24	9.05	12.60	6.76
median	28.57	3.09	8.06	12.46	2.81
Dif. in mean: More – Less	17.71***	6.33***	2.14**	6.33***	2.92**
Dif. in median: More – Less	21.43***	4.41***	-0.06	1.81***	1.23*

**Table 6. Country-Level Regressions: Ordinary Least Squares and Zero-Inflated Poisson Models**

This table presents estimates of panel regressions of M&A ratios by target country and year. The dependent variables are *CBMAs-to-all-M&As Ratio (i,t)*, *CBMAs-to-all-Firms Ratio (i,t)*, *DOMAs-to-all-Firms Ratio (i,t)*, and *M&As-to-all-Firms Ratio (i,t)*. The sample covers 26 countries over the period of 2000 to 2012. Panel A presents the estimation results of ordinary least squares (OLS) regressions. Panel B presents the estimation results of Zero-Inflated Poisson (ZIP) regressions. Robust standard errors adjusted for country clustering are within parentheses. Table 1 has the definitions of all the variables. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

**Panel A: Ordinary Least Squares**

Variable	<i>CBMAs-to-all-M&amp;As Ratio (i,t)</i>			<i>CBMAs-to-all-Firms Ratio (i,t)</i>			<i>DOMAs-to-all-Firms Ratio (i,t)</i>			<i>M&amp;As-to-all-Firms Ratio (i,t)</i>		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Foreign IO ( <i>i,t</i> )	0.403** (0.163)	0.486*** (0.172)	0.459*** (0.147)	0.150*** (0.046)	0.143** (0.059)	0.153*** (0.053)	0.016 (0.049)	-0.004 (0.047)	0.008 (0.055)	0.166** (0.073)	0.138* (0.081)	0.161* (0.086)
Domestic IO ( <i>i,t</i> )	-0.201* (0.110)	-0.197* (0.111)	-0.211** (0.092)	0.068 (0.040)	0.064 (0.040)	0.068 (0.040)	0.490*** (0.056)	0.492*** (0.050)	0.491*** (0.055)	0.558*** (0.085)	0.556*** (0.076)	0.558*** (0.085)
Log(GDP p.c.) ( <i>i,t</i> )	-3.617 (3.220)	-0.075 (3.191)	-0.615 (3.323)	0.864 (1.139)	0.778 (0.813)	0.982 (0.991)	3.186*** (0.580)	2.616*** (0.818)	2.862*** (0.756)	4.051*** (1.234)	3.393*** (0.972)	3.845*** (1.115)
GDP Growth ( <i>i,t</i> )	-0.067 (0.751)	0.164 (0.771)	0.239 (0.743)	-0.295 (0.275)	-0.246 (0.276)	-0.282 (0.282)	-0.043 (0.209)	-0.001 (0.182)	-0.079 (0.192)	-0.339 (0.413)	-0.247 (0.369)	-0.361 (0.406)
Mkt. Return ( <i>i,t</i> )	0.036 (0.191)	0.055 (0.190)	0.063 (0.192)	0.079* (0.046)	0.083 (0.050)	0.080* (0.046)	0.068 (0.049)	0.067 (0.050)	0.065 (0.049)	0.147* (0.079)	0.149* (0.085)	0.145* (0.078)
Stock Mkt. Cap. ( <i>i,t</i> )	-0.087*** (0.028)	-0.081*** (0.022)	-0.085*** (0.024)	-0.022** (0.008)	-0.022*** (0.007)	-0.022** (0.008)	0.009 (0.007)	0.011 (0.007)	0.008 (0.007)	-0.013 (0.010)	-0.011 (0.011)	-0.013 (0.010)
Stock Mkt. Turnover ( <i>i,t</i> )	0.024 (0.028)	0.041 (0.025)	0.038 (0.027)	0.008 (0.016)	0.007 (0.014)	0.009 (0.016)	-0.007 (0.015)	-0.014 (0.015)	-0.009 (0.015)	0.001 (0.027)	-0.007 (0.026)	0.000 (0.028)
Openness ( <i>i,t</i> )	0.226*** (0.039)	0.242*** (0.040)	0.234*** (0.038)	0.032** (0.012)	0.027*** (0.008)	0.032** (0.012)	-0.030** (0.014)	-0.040*** (0.012)	-0.030** (0.014)	0.002 (0.019)	-0.013 (0.014)	0.002 (0.018)
Press Freedom ( <i>i,t</i> )	1.038*** (0.247)	1.077*** (0.246)	1.044*** (0.237)	0.176*** (0.059)	0.163*** (0.047)	0.175*** (0.060)	-0.095 (0.076)	-0.109 (0.077)	-0.092 (0.073)	0.081 (0.072)	0.054 (0.068)	0.083 (0.068)
Financial Freedom ( <i>i,t</i> )	0.033 (0.148)		0.069 (0.141)	-0.017 (0.058)		-0.016 (0.061)	0.020 (0.062)		0.016 (0.059)	0.002 (0.088)		0.000 (0.088)
Investment Freedom ( <i>i,t</i> )	0.077 (0.168)		0.077 (0.172)	-0.043 (0.061)		-0.043 (0.062)	-0.103* (0.056)		-0.103* (0.055)	-0.146 (0.092)		-0.146 (0.092)
Investor Protection ( <i>i,t</i> )		-1.735 (1.199)	-1.844 (1.206)		-0.110 (0.275)	-0.072 (0.324)		0.160 (0.348)	0.197 (0.337)		0.051 (0.462)	0.125 (0.490)
Constant	-32.676 (29.323)	-61.186** (27.489)	-60.977** (26.777)	-12.452 (8.396)	-13.637 (8.329)	-13.467 (7.902)	-6.137 (5.803)	-4.437 (6.056)	-3.346 (6.377)	-18.589* (10.326)	-18.073 (11.089)	-16.813 (10.928)
Clustering control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	299	299	299	338	338	338	338	338	338	338	338	338
Number of Zeros	39	39	39	78	78	78	75	75	75	39	39	39
Adjusted R-squared	0.314	0.325	0.322	0.143	0.142	0.141	0.538	0.531	0.537	0.363	0.355	0.361

Panel B: Zero-Inflated Poisson

Variable	CBMAs-to-all-M&As Ratio ( <i>i,t</i> )			CBMAs-to-all-Firms Ratio ( <i>i,t</i> )			DOMAs-to-all-Firms Ratio ( <i>i,t</i> )			M&As-to-all-Firms Ratio ( <i>i,t</i> )		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Foreign IO ( <i>i,t</i> )	0.011* (0.007)	0.011 (0.008)	0.011* (0.007)	0.023** (0.009)	0.021* (0.011)	0.022** (0.010)	-0.008 (0.007)	-0.013* (0.007)	-0.015* (0.008)	0.002 (0.006)	-0.001 (0.007)	-0.001 (0.008)
Domestic IO ( <i>i,t</i> )	-0.009** (0.004)	-0.009** (0.005)	-0.009*** (0.003)	0.014** (0.007)	0.014** (0.007)	0.015** (0.007)	0.023*** (0.006)	0.024*** (0.006)	0.025*** (0.006)	0.022*** (0.006)	0.023*** (0.005)	0.024*** (0.007)
Log(GDP p.c.) ( <i>i,t</i> )	-0.079 (0.137)	-0.040 (0.131)	-0.073 (0.146)	0.422** (0.197)	0.455** (0.185)	0.407** (0.200)	0.623*** (0.058)	0.485*** (0.078)	0.525*** (0.069)	0.542*** (0.061)	0.477*** (0.083)	0.487*** (0.073)
GDP Growth ( <i>i,t</i> )	-0.013 (0.017)	-0.010 (0.022)	-0.013 (0.017)	-0.007 (0.032)	-0.003 (0.040)	-0.007 (0.032)	0.035* (0.021)	0.021 (0.014)	0.036 (0.023)	0.034* (0.018)	0.029 (0.019)	0.035* (0.020)
Mkt. Return ( <i>i,t</i> )	0.001 (0.004)	-0.000 (0.004)	0.001 (0.004)	0.015** (0.006)	0.012* (0.007)	0.014** (0.007)	0.013*** (0.004)	0.013*** (0.004)	0.013*** (0.004)	0.013*** (0.003)	0.012*** (0.003)	0.012*** (0.003)
Stock Mkt. Cap. ( <i>i,t</i> )	-0.002* (0.001)	-0.002** (0.001)	-0.002* (0.001)	-0.003* (0.002)	-0.003* (0.002)	-0.003* (0.002)	0.001 (0.002)	-0.000 (0.001)	0.001 (0.002)	-0.000 (0.001)	-0.001 (0.001)	-0.000 (0.001)
Stock Mkt. Turnover ( <i>i,t</i> )	0.001** (0.001)	0.002*** (0.001)	0.001** (0.001)	-0.002 (0.002)	-0.001 (0.001)	-0.002 (0.002)	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)	-0.003** (0.002)	-0.003** (0.001)	-0.003** (0.002)
Openness ( <i>i,t</i> )	0.005*** (0.001)	0.006*** (0.001)	0.005*** (0.001)	0.003 (0.002)	0.004* (0.002)	0.003 (0.002)	-0.005*** (0.002)	-0.005*** (0.002)	-0.005*** (0.002)	-0.002 (0.001)	-0.001 (0.001)	-0.002 (0.001)
Press Freedom ( <i>i,t</i> )	0.023*** (0.006)	0.026*** (0.008)	0.023*** (0.006)	0.026*** (0.010)	0.030*** (0.011)	0.026*** (0.010)	0.002 (0.010)	-0.001 (0.008)	0.000 (0.009)	0.012 (0.009)	0.012 (0.008)	0.012 (0.008)
Financial Freedom ( <i>i,t</i> )	0.003 (0.006)		0.003 (0.006)	0.003 (0.008)		0.003 (0.008)	-0.005 (0.008)		-0.006 (0.008)	-0.002 (0.007)		-0.003 (0.007)
Investment Freedom ( <i>i,t</i> )	0.007* (0.004)		0.007 (0.004)	0.010 (0.007)		0.010 (0.007)	-0.004 (0.004)		-0.004 (0.004)	0.001 (0.004)		0.001 (0.004)
Investor Protection ( <i>i,t</i> )		0.011 (0.047)	-0.003 (0.034)		0.029 (0.071)	0.011 (0.057)		0.046 (0.041)	0.076 (0.052)		0.030 (0.039)	0.039 (0.049)
Constant	-3.056*** (0.918)	-3.198*** (0.916)	-3.090*** (0.963)	-9.963*** (1.518)	-10.121*** (1.456)	-9.873*** (1.514)	-7.869*** (0.795)	-6.675*** (0.681)	-6.968*** (0.704)	-8.024*** (0.755)	-7.474*** (0.704)	-7.593*** (0.695)
<b>Logit</b>												
Openness ( <i>i,t</i> )	-0.145*** (0.031)	-0.147*** (0.030)	-0.145*** (0.031)	0.001 (0.002)	0.000 (0.003)	0.001 (0.002)	0.005*** (0.002)	0.005*** (0.002)	0.006*** (0.002)	0.007** (0.003)	0.008* (0.004)	0.008* (0.005)
Constant	2.060* (1.185)	2.107* (1.173)	2.056* (1.180)	-2.755*** (0.642)	-2.796*** (0.707)	-2.762*** (0.655)	-4.114*** (0.607)	-4.199*** (0.565)	-4.588*** (0.582)	-5.046*** (1.292)	-5.520*** (1.780)	-5.673*** (2.066)
Clustering control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	299	299	299	338	338	338	338	338	338	338	338	338
Number of Zeros	39	39	39	78	78	78	75	75	75	39	39	39
McFadden R-squared	0.703	0.699	0.703	0.595	0.590	0.595	0.875	0.873	0.876	0.871	0.871	0.871

**Table 7. Country-Pair Regressions: Ordinary Least Squares and Zero-inflated Poisson Models**

This table presents estimates of panel regressions of M&A ratios by target-acquirer country-pairs and year. The dependent variables are *CBMAs-to-all-M&As Ratio* ( $i,j,t$ ), *CBMAs-to-all-Firms Ratio* ( $i,j,t$ ), *M&As-to-all-Firms Ratio* ( $i,j,t$ ), and *CBMAs-to-all-CBMAs Ratio* ( $i,j,t$ ). The sample covers 26 countries over the period of 2000 to 2012. Panel A presents the estimation results of ordinary least squares (OLS) regressions. Panel B presents the estimation results of Zero-Inflated Poisson (ZIP) regressions. Adjusted R-squared and McFadden R-squared are reported for the OLS and ZIP regressions, respectively. Robust standard errors adjusted for country-pair clustering are within parentheses. Table 1 has the definitions of all the variables. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Ordinary Least Squares

Variables	CBMAs-to-all-M&As Ratio ( $i,j,t$ )			CBMAs-to-all-Firms Ratio ( $i,j,t$ )			M&As-to-all-Firms Ratio ( $i,j,t$ )			CBMAs-to-all-CBMAs Ratio ( $i,j,t$ )		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Foreign IO ( $i,j,t$ )	0.2837*** (0.0997)	0.2726*** (0.0975)	0.2758*** (0.0976)	0.0558** (0.0252)	0.0540** (0.0248)	0.0542** (0.0248)	0.0656 (0.0508)	0.0938* (0.0506)	0.0901* (0.0510)	0.5784 (0.3637)	0.5611 (0.3597)	0.5676 (0.3604)
Domestic IO ( $i,t$ )	0.0004 (0.0041)	0.0036 (0.0041)	0.0032 (0.0042)	0.0039*** (0.0011)	0.0046*** (0.0011)	0.0046*** (0.0011)	0.5761*** (0.0144)	0.5653*** (0.0145)	0.5655*** (0.0145)	0.0371*** (0.0130)	0.0421*** (0.0130)	0.0410*** (0.0129)
Cross-country Log(GDP p.c.) ( $j-i$ )	0.0273 (0.0725)	0.1391* (0.0752)	0.0618 (0.0927)	-0.0238* (0.0139)	-0.0022 (0.0157)	-0.0073 (0.0194)	-1.7201*** (0.2144)	-2.0512*** (0.2268)	-1.9639*** (0.2518)	0.2136 (0.1677)	0.3772** (0.1714)	0.2090 (0.2055)
Cross-country GDP Growth ( $j-i$ )	0.0082 (0.0268)	0.0065 (0.0266)	-0.0017 (0.0280)	0.0068 (0.0052)	0.0067 (0.0052)	0.0062 (0.0055)	0.1727*** (0.0483)	0.1734*** (0.0485)	0.1825*** (0.0491)	0.0922 (0.0599)	0.0866 (0.0597)	0.0686 (0.0619)
Cross-country Mkt. Return ( $j-i$ )	0.1033 (0.4545)	0.1333 (0.4540)	0.0713 (0.4621)	-0.0774 (0.0902)	-0.0696 (0.0896)	-0.0737 (0.0901)	-7.0947*** (0.9603)	-7.2153*** (0.9513)	-7.1439*** (0.9437)	-0.3489 (0.9938)	-0.3518 (0.9924)	-0.4514 (1.0034)
Cross-country Mkt. Cap. ( $j-i$ )	0.0007 (0.0007)	0.0006 (0.0007)	0.0005 (0.0007)	0.0002* (0.0001)	0.0002* (0.0001)	0.0002* (0.0001)	0.0078*** (0.0020)	0.0078*** (0.0020)	0.0078*** (0.0020)	0.0018 (0.0016)	0.0017 (0.0016)	0.0015 (0.0016)
Cross-country Stock Mkt. Turnover ( $j-i$ )	0.0034** (0.0015)	0.0039** (0.0015)	0.0035** (0.0016)	0.0006** (0.0003)	0.0007** (0.0003)	0.0006** (0.0003)	-0.0029 (0.0033)	-0.0040 (0.0033)	-0.0034 (0.0034)	0.0077** (0.0030)	0.0086** (0.0030)	0.0076** (0.0030)
Corporation Tax ( $j-i$ )	0.0280** (0.0118)	0.0206* (0.0119)	0.0238** (0.0118)	0.0060** (0.0027)	0.0048* (0.0026)	0.0051* (0.0026)	0.1091** (0.0272)	0.1278** (0.0268)	0.1233*** (0.0276)	0.0519** (0.0237)	0.0409* (0.0233)	0.0480** (0.0235)
Law Origin-D	0.8001*** (0.2491)	0.7791*** (0.2443)	0.7767*** (0.2440)	0.1153* (0.0588)	0.1111* (0.0580)	0.1112* (0.0580)	-1.3986** (0.5464)	-1.3335** (0.5394)	-1.3354** (0.5402)	2.0516*** (0.5848)	2.0183*** (0.5772)	2.0074*** (0.5764)
Press Freedom ( $j-i$ )	-0.0035 (0.0038)	-0.0069* (0.0039)	-0.0070* (0.0039)	-0.0010 (0.0006)	-0.0015** (0.0007)	-0.0015** (0.0007)	-0.0733** (0.0108)	-0.0648*** (0.0108)	-0.0649*** (0.0107)	0.0098 (0.0085)	0.0042 (0.0084)	0.0045 (0.0084)
Bilateral Trade	0.3027*** (0.0608)	0.3130*** (0.0615)	0.3119*** (0.0611)	0.0619*** (0.0114)	0.0639*** (0.0112)	0.0638*** (0.0113)	0.0385 (0.0431)	0.0080 (0.0439)	0.0095 (0.0435)	0.7030*** (0.0858)	0.7195*** (0.0851)	0.7172*** (0.0856)
Same Region-D	0.1838 (0.2026)	0.1785 (0.2008)	0.1776 (0.2005)	-0.0285 (0.0436)	-0.0290 (0.0434)	-0.0288 (0.0436)	0.6769 (0.5334)	0.6850 (0.5200)	0.6810 (0.5189)	-0.2527 (0.4672)	-0.2734 (0.4655)	-0.2664 (0.4680)
Bilateral Investment Treaty-D	-0.1975 (0.1887)	-0.1958 (0.1884)	-0.1973 (0.1876)	-0.0778** (0.0338)	-0.0754** (0.0333)	-0.0753** (0.0333)	-3.6568*** (0.5007)	-3.6945*** (0.4921)	-3.6958*** (0.4916)	-0.3626 (0.4959)	-0.3549 (0.4948)	-0.3633 (0.4924)
Double Taxation Treaty-D	-0.1083 (0.2167)	-0.1171 (0.2140)	-0.1115 (0.2138)	0.0368 (0.0458)	0.0344 (0.0456)	0.0345 (0.0456)	0.4192 (0.4823)	0.4562 (0.4703)	0.4550 (0.4701)	-0.5205 (0.4158)	-0.5389 (0.4152)	-0.5393 (0.4155)
Cross-country Financial Freedom ( $j-i$ )	0.0073 (0.0050)	0.0170*** (0.0057)	0.0164*** (0.0058)	0.0032*** (0.0011)	0.0050*** (0.0012)	0.0050*** (0.0013)	0.0344** (0.0145)	0.0061 (0.0141)	0.0069 (0.0140)	0.0292*** (0.0106)	0.0442*** (0.0121)	0.0428*** (0.0123)
Cross-country Investment Freedom ( $j-i$ )		-0.0239*** (0.0059)	-0.0241*** (0.0059)		-0.0044*** (0.0011)	-0.0044*** (0.0011)		0.0679*** (0.0119)	0.0680*** (0.0119)		-0.0365*** (0.0116)	-0.0369*** (0.0115)
Cross-country Investor Protection ( $j-i$ )			0.0461 (0.0350)		0.0031 (0.0060)	0.0031 (0.0060)			-0.0533 (0.0784)			0.1006 (0.0755)
Constant	0.3084 (0.2889)	0.2849 (0.2898)	0.2859 (0.2898)	0.1342** (0.0583)	0.1288** (0.0581)	0.1288** (0.0581)	20.3079*** (0.6687)	20.3911*** (0.6630)	20.3913*** (0.6625)	1.5368** (0.6219)	1.6287*** (0.6215)	1.6439*** (0.6209)
Clustering control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,470	7,470	7,470	8,444	8,444	8,444	8,444	8,444	8,444	6,495	6,495	6,495
Number of zeros	6,654	6,654	6,654	7,628	7,628	7,628	974	974	974	5,679	5,679	5,679
Adjusted R-squared	0.0885	0.0910	0.0912	0.0847	0.0866	0.0865	0.365	0.370	0.370	0.127	0.128	0.128

**Panel B: Zero-Inflated Poisson**

Variables	CBMAs-to-all-M&As Ratio ( $i,j,t$ )			CBMAs-to-all-Firms Ratio ( $i,j,t$ )			M&As-to-all-Firms Ratio ( $i,j,t$ )			CBMAs-to-all-CBMAs Ratio ( $i,j,t$ )		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Foreign IO ( $i,j,t$ )	0.0296* (0.0156)	0.0262* (0.0153)	0.0292* (0.0154)	0.0267 (0.0163)	0.0233 (0.0160)	0.0266* (0.0161)	-0.0105 (0.0148)	-0.0106 (0.0154)	-0.0158 (0.0163)	0.0174 (0.0146)	0.0147 (0.0143)	0.0190 (0.0146)
Domestic IO ( $i,t$ )	-0.0031 (0.0044)	-0.0031 (0.0042)	-0.0076** (0.0037)	0.0148** (0.0060)	0.0149*** (0.0058)	0.0087* (0.0053)	0.0220*** (0.0013)	0.0219*** (0.0013)	0.0231*** (0.0014)	0.0100** (0.0047)	0.0102** (0.0043)	0.0058 (0.0036)
Cross-country Log(GDP p.c.) ( $j-i$ )	0.1060 (0.0673)	0.1481** (0.0697)	0.0164 (0.1050)	-0.1213 (0.1113)	-0.0667 (0.1151)	-0.2253 (0.1457)	-0.1836*** (0.0311)	-0.1934*** (0.0297)	-0.1478*** (0.0366)	0.1932*** (0.0585)	0.2210*** (0.0592)	0.0774 (0.0926)
Cross-country GDP Growth ( $j-i$ )	0.0222 (0.0235)	0.0152 (0.0227)	0.0086 (0.0234)	0.0095 (0.0288)	0.0024 (0.0281)	-0.0076 (0.0286)	0.0021 (0.0040)	0.0023 (0.0040)	0.0057 (0.0039)	0.0221 (0.0221)	0.0159 (0.0214)	0.0102 (0.0214)
Cross-country Mkt. Return ( $j-i$ )	-0.2821 (0.2651)	-0.2462 (0.2751)	-0.2772 (0.2768)	-0.6573** (0.3343)	-0.5914* (0.3447)	-0.6219* (0.3486)	-0.3296*** (0.0624)	-0.3389*** (0.0632)	-0.3009*** (0.0666)	0.0391 (0.2683)	0.0490 (0.2726)	0.0257 (0.2677)
Cross-country Mkt. Cap. ( $j-i$ )	0.0025*** (0.0008)	0.0022*** (0.0008)	0.0021*** (0.0008)	0.0034*** (0.0009)	0.0031*** (0.0008)	0.0030*** (0.0008)	0.0002 (0.0002)	0.0002 (0.0002)	0.0003 (0.0002)	0.0023*** (0.0008)	0.0021*** (0.0007)	0.0019*** (0.0007)
Cross-country Stock Mkt. Turnover ( $j-i$ )	0.0002 (0.0006)	0.0010 (0.0006)	0.0009 (0.0006)	0.0015** (0.0007)	0.0022*** (0.0007)	0.0019*** (0.0006)	0.0015*** (0.0003)	0.0015*** (0.0003)	0.0017*** (0.0002)	0.0017*** (0.0005)	0.0017*** (0.0005)	0.0015*** (0.0005)
Cross-country Corporation Tax ( $j-i$ )	0.0556*** (0.0084)	0.0458*** (0.0080)	0.0481*** (0.0078)	0.0546*** (0.0109)	0.0445*** (0.0111)	0.0485*** (0.0107)	-0.0084*** (0.0028)	-0.0076*** (0.0028)	-0.0095*** (0.0027)	0.0437*** (0.0076)	0.0366*** (0.0072)	0.0386*** (0.0070)
Law Origin-D	0.7238*** (0.1553)	0.6836*** (0.1491)	0.6029*** (0.1520)	0.6036*** (0.1909)	0.5554*** (0.1844)	0.4677*** (0.1813)	-0.2076*** (0.0655)	-0.2070*** (0.0650)	-0.1780*** (0.0647)	0.7354*** (0.1539)	0.7078*** (0.1426)	0.6199*** (0.1406)
Cross-country Press Freedom ( $j-i$ )	0.0049 (0.0042)	0.0023 (0.0039)	0.0017 (0.0039)	-0.0017 (0.0048)	-0.0040 (0.0045)	-0.0050 (0.0047)	-0.0028** (0.0012)	-0.0025** (0.0012)	-0.0023** (0.0012)	0.0074* (0.0041)	0.0055 (0.0040)	0.0056 (0.0038)
Bilateral Trade	0.0085 (0.0067)	0.0125** (0.0064)	0.0181*** (0.0070)	0.0113 (0.0088)	0.0159* (0.0085)	0.0234** (0.0093)	0.0096* (0.0053)	0.0096* (0.0055)	0.0103* (0.0056)	0.0169** (0.0069)	0.0196** (0.0063)	0.0253*** (0.0065)
Same Region-D	0.2353 (0.2068)	0.1740 (0.1858)	0.0854 (0.1846)	0.2455 (0.2764)	0.1747 (0.2484)	0.0465 (0.2460)	-0.0058 (0.0688)	0.0036 (0.0689)	0.0075 (0.0659)	0.0509 (0.2271)	0.0187 (0.2013)	-0.0627 (0.1907)
Bilateral Investment Treaty-D	-0.3390 (0.3549)	-0.2487 (0.3353)	-0.3373 (0.3066)	-0.6049 (0.4503)	-0.4776 (0.4288)	-0.5903 (0.3747)	-0.3974*** (0.0730)	-0.3898*** (0.0730)	-0.3943*** (0.0684)	-0.4012 (0.3361)	-0.3429 (0.3205)	-0.4288 (0.3032)
Double Taxation Treaty-D	0.3441* (0.1781)	0.3308** (0.1675)	0.3040* (0.1687)	0.3509* (0.1913)	0.3409* (0.1795)	0.2936 (0.1813)	0.0086 (0.0473)	0.0075 (0.0468)	0.0144 (0.0439)	0.2633 (0.1621)	0.2512 (0.1546)	0.2192 (0.1524)
Cross-country Financial Freedom ( $j-i$ )	0.0076** (0.0030)	0.0125*** (0.0031)	0.0119*** (0.0031)	0.0084** (0.0035)	0.0125*** (0.0036)	0.0118*** (0.0034)	0.0002 (0.0011)	-0.0005 (0.0011)	-0.0000 (0.0012)	0.0070** (0.0027)	0.0108*** (0.0028)	0.0101*** (0.0027)
Cross-country Investment Freedom ( $j-i$ )		-0.0148*** (0.0032)	-0.0157*** (0.0030)		-0.0143*** (0.0035)	-0.0153*** (0.0033)		0.0020* (0.0011)	0.0018* (0.0010)		-0.0112*** (0.0029)	-0.0121*** (0.0027)
Cross-country Investor Protection ( $j-i$ )			0.0809** (0.0336)			0.1038*** (0.0357)			-0.0276*** (0.0099)			0.0846*** (0.0303)
Constant	-4.2602*** (0.2061)	-4.2198*** (0.1890)	-4.1069*** (0.1826)	-5.6438*** (0.3029)	-5.6287*** (0.2797)	-5.4760*** (0.2685)	-1.7615*** (0.0580)	-1.7712*** (0.0586)	-1.8056*** (0.0607)	-3.3020*** (0.2357)	-3.2798*** (0.2135)	-3.1764*** (0.2068)

**Logit**

R-Foreign IO ( $j,i,t$ )	-0.2071*** (0.0565)	-0.1985*** (0.0517)	-0.2199*** (0.0586)	-0.2780*** (0.0804)	-0.2665*** (0.0757)	-0.3124*** (0.1013)	-1.3904 (1.6983)	-1.4382 (1.9002)	-0.9398 (0.5901)	-0.1492*** (0.0448)	-0.1448*** (0.0421)	-0.1599*** (0.0444)
Bilateral Trade	-0.8469*** (0.1822)	-0.8720*** (0.1817)	-0.8349*** (0.1705)	-0.5177*** (0.1161)	-0.5217*** (0.1318)	-0.4914*** (0.1315)	-0.0311 (0.0739)	-0.0328 (0.0821)	-0.0392 (0.0732)	-1.0211*** (0.2482)	-0.9967*** (0.2314)	-0.9981*** (0.2248)
Same Region-D	0.5275 (0.3615)	0.4998 (0.3474)	0.4075 (0.3528)	0.3737 (0.3337)	0.3132 (0.3249)	0.1919 (0.3217)	0.1535 (0.8489)	0.1825 (0.8666)	-0.1515 (0.5915)	0.8464** (0.3656)	0.8391** (0.3498)	0.7460** (0.3571)
Bilateral Investment Treaty-D	0.1215 (0.5069)	0.2796 (0.4857)	0.1908 (0.4558)	0.1979 (0.4864)	0.3531 (0.4629)	0.2519 (0.3981)	0.3344 (0.4880)	0.3331 (0.4988)	0.4856 (0.3864)	0.2736 (0.5534)	0.3634 (0.5227)	0.3040 (0.5075)
Double Taxation Treaty-D	0.3280 (0.3351)	0.3075 (0.3208)	0.2784 (0.3306)	0.1985 (0.2926)	0.1950 (0.2829)	0.1403 (0.2841)	-2.0310 (3.2285)	-1.9559 (3.0964)	-12.4813 (23.9479)	0.4316 (0.3053)	0.4365 (0.2964)	0.4231 (0.3030)

Constant	1.5989*** (0.2536)	1.5941*** (0.2512)	1.6268*** (0.2528)	1.6922*** (0.2710)	1.6746*** (0.2620)	1.7590*** (0.2661)	-3.6773*** (0.2972)	-3.6859*** (0.2994)	-3.8694*** (0.3153)	1.3340*** (0.2787)	1.2995*** (0.2696)	1.3388*** (0.2646)
Clustering control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,470	7,470	7,470	8,444	8,444	8,444	8,444	8,444	8,444	6,495	6,495	6,495
Number of zeros	6,654	6,654	6,654	7,628	7,628	7,628	974	974	974	5,679	5,679	5,679
McFadden R-squared	0.352	0.359	0.362	0.303	0.309	0.314	0.839	0.840	0.841	0.373	0.378	0.382
Wald Chi-square	1170	1174	1241	1048	1076	1099	9455	9801	9396	1077	1149	1334



**Table 8. Country-Pair Zero-Inflated Poisson Regressions with Interaction Terms between Institutional Ownership and Country Characteristics**

This table presents estimates of panel regressions of cross-border M&A country-pairs in each year using the Zero-inflated Poisson (ZIP) regression model. The dependent variables are *CBMAs-to-all-M&As Ratio* ( $i,j,t$ ) and *CBMAs-to-all-Firms Ratio* ( $i,j,t$ ). The sample period is from 2000 to 2012. *Investment Freedom-D*, *Financial Freedom-D*, and *Investor protection-D* are dummy variables that equal one if the acquirer country has greater investment freedom, greater financial freedom, or stronger investor protection than the target country, respectively, zero otherwise. Robust standard errors adjusted for country-pair clustering are within parentheses. Table 1 has the definitions of all the variables. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Variables	<i>CBMAs-to-all-M&amp;As Ratio</i> ( $i,j,t$ )			<i>CBMAs-to-all-Firms Ratio</i> ( $i,j,t$ )		
	(1)	(2)	(3)	(4)	(5)	(6)
Foreign IO ( $i,j,t$ )	0.0320** (0.0156)	0.0276* (0.0154)	0.0230 (0.0151)	0.0285* (0.0161)	0.0250 (0.0158)	0.0206 (0.0159)
Domestic IO ( $i,t$ )	-0.0106*** (0.0033)	-0.0102*** (0.0037)	-0.0140** (0.0070)	0.0050 (0.0052)	0.0060 (0.0057)	0.0001 (0.0094)
Cross-country Financial Freedom ( $j-i$ )		0.0113*** (0.0030)	0.0122*** (0.0032)		0.0121*** (0.0033)	0.0126*** (0.0036)
Cross-country Investment Freedom ( $j-i$ )	-0.0135*** (0.0031)		-0.0138*** (0.0031)	-0.0135*** (0.0037)		-0.0132*** (0.0034)
Cross-country Investor Protection ( $j-i$ )	0.0886*** (0.0340)	0.0837** (0.0332)		0.1102*** (0.0353)	0.1066*** (0.0351)	
Financial Freedom-D	-0.0344 (0.1784)			-0.1366 (0.2343)		
Financial Freedom-D*Foreign IO ( $i,j,t$ )	0.0145 (0.0115)			0.0008 (0.0149)		
Financial Freedom-D*Domestic IO ( $i,t$ )	0.0111*** (0.0036)			0.0152*** (0.0047)		
Investment Freedom-D		-0.8030*** (0.1680)			-0.8644*** (0.2160)	
Investment Freedom-D*Foreign IO ( $i,j,t$ )		0.0063 (0.0118)			-0.0082 (0.0157)	
Investment Freedom-D*Domestic IO ( $i,t$ )		0.0086* (0.0049)			0.0118** (0.0056)	
Investor Protection-D			-0.1152 (0.1833)			-0.1198 (0.2413)
Investor Protection-D*Foreign IO ( $i,j,t$ )			0.1219*** (0.0391)			0.1300*** (0.0438)
Investor Protection-D*Domestic IO ( $i,t$ )			0.0124* (0.0067)			0.0165** (0.0084)
Cross-country Log(GDP p.c.) ( $j-i$ )	0.0851 (0.1014)	-0.0253 (0.0987)	0.0658 (0.0792)	-0.1428 (0.1474)	-0.2961** (0.1437)	-0.1833 (0.1144)
Cross-country GDP Growth ( $j-i$ )	0.0175 (0.0232)	0.0121 (0.0244)	0.0192 (0.0214)	0.0041 (0.0279)	-0.0006 (0.0286)	0.0085 (0.0265)
Cross-country Mkt. Return ( $j-i$ )	-0.1974 (0.2520)	-0.3711 (0.2696)	-0.2172 (0.2606)	-0.5070 (0.3139)	-0.7420** (0.3288)	-0.5901* (0.3219)
Cross-country Mkt. Cap. ( $j-i$ )	0.0028*** (0.0008)	0.0021*** (0.0008)	0.0020*** (0.0008)	0.0038*** (0.0008)	0.0029*** (0.0009)	0.0028*** (0.0008)
Cross-country Stock Mkt. Turnover ( $j-i$ )	0.0010* (0.0006)	0.0006 (0.0006)	0.0009 (0.0006)	0.0022*** (0.0007)	0.0018*** (0.0006)	0.0021*** (0.0006)
Cross-country Corporation Tax ( $j-i$ )	0.0467*** (0.0077)	0.0499*** (0.0077)	0.0450*** (0.0080)	0.0472*** (0.0102)	0.0496*** (0.0110)	0.0444*** (0.0110)
Law Origin-D	0.6285*** (0.1479)	0.6244*** (0.1456)	0.6264*** (0.1434)	0.4753*** (0.1823)	0.4675*** (0.1812)	0.4681*** (0.1759)
Cross-country Press Freedom ( $j-i$ )	0.0056 (0.0038)	0.0027 (0.0042)	0.0027 (0.0039)	-0.0015 (0.0046)	-0.0040 (0.0048)	-0.0044 (0.0047)
Bilateral Trade	0.0134** (0.0065)	0.0174** (0.0068)	0.0210*** (0.0070)	0.0219** (0.0096)	0.0267** (0.0104)	0.0273*** (0.0092)
Same Region-D	0.1377 (0.1895)	0.1026 (0.1929)	0.1093 (0.1728)	0.0324 (0.2562)	0.0470 (0.2597)	0.0804 (0.2256)
Bilateral Investment Treaty-D	-0.3753 (0.3136)	-0.2975 (0.2974)	-0.1160 (0.3305)	-0.6690* (0.4025)	-0.5328 (0.4050)	-0.3407 (0.4067)
Double Taxation Treaty-D	0.3419**	0.3646**	0.2910*	0.3470*	0.3607**	0.2582

	(0.1723)	(0.1683)	(0.1614)	(0.1968)	(0.1829)	(0.1773)
Constant	-4.1070***	-3.9477***	-4.2190***	-5.4538***	-5.3369***	-5.6034***
	(0.1709)	(0.1916)	(0.1955)	(0.2541)	(0.2938)	(0.2772)
<b>Logit</b>						
R-Foreign IO ( $j,i,t$ )	-0.2167***	-0.2146***	-0.2127***	-0.3136***	-0.2979***	-0.3126***
	(0.0571)	(0.0581)	(0.0596)	(0.0977)	(0.1027)	(0.1115)
Bilateral Trade	-0.8331***	-0.8367***	-0.9755***	-0.5159***	-0.5467***	-0.5270***
	(0.1767)	(0.1572)	(0.2407)	(0.1717)	(0.1898)	(0.1495)
Same Region-D	0.4437	0.4812	0.4537	0.1440	0.2625	0.2346
	(0.3565)	(0.3516)	(0.3623)	(0.3419)	(0.3461)	(0.3246)
Bilateral Investment Treaty-D	0.1506	0.1894	0.4703	0.1492	0.2387	0.4263
	(0.4667)	(0.4439)	(0.4937)	(0.4354)	(0.4414)	(0.4359)
Double Taxation Treaty-D	0.3313	0.3414	0.2170	0.2164	0.2161	0.0514
	(0.3275)	(0.3276)	(0.3430)	(0.2974)	(0.3007)	(0.3005)
Constant	1.5634***	1.5705***	1.5860***	1.7262***	1.7091***	1.6589***
	(0.2519)	(0.2587)	(0.2595)	(0.2815)	(0.2815)	(0.2584)
Clustering control	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,470	7,470	7,470	8,444	8,444	8,444
Number of zeros	6,654	6,654	6,654	7,628	7,628	7,628
McFadden R-squared	0.362	0.364	0.368	0.314	0.318	0.320
Wald Chi-square	1403	1246	1365	1187	1202	1006

## References

- Alfaro, L., Chanda, A., Kalemli-Ozcan, S., Sayek, S., 2004. FDI and economic growth: the role of local financial markets. *Journal of international economics* 64, 89-112.
- Aggarwal, R., Erel, I., Ferreira, M., Matos, P., 2011. Does governance travel around the world? Evidence from Institutional Investors. *Journal of Financial Economics* 100, 154-181.
- Aggarwal, R., Klapper, L., Wysocki, P.D., 2004. Disclosure quality and emerging market mutual fund investment. *World Bank Research Paper*, 1-38.
- Ahern, K.R., Daminelli, D., Fracassi, C., 2015, Lost in translation? The effect of cultural values on mergers around the world. *Journal of Financial Economics* 117, 165-89.
- Barthel, F., Busse, M., Neumayer, E., 2010. The impact of double taxation treaties on foreign direct investment: evidence from large dyadic panel data. *Contemporary Economic Policy* 28, 366-377.
- Bartram, S.M., Griffin, J.M., Lim, T.H., Ng, D.T., 2015. How important are foreign ownership linkages for international stock returns? *Review of Financial Studies* 28, 3036-3072.
- Beccalli, E., Frantz, P., 2013. The determinants of mergers and acquisitions in banking. *Journal of Financial Services Research* 43, 265-291.
- Beck, T., Demirgüç-Kunt, A., Maksimovic, V., 2004. Bank competition and access to finance: International evidence. *Journal of Money, Credit and Banking* 36, 627-648.
- Bengoa, M., Sanchez-Robles, B., 2003. Foreign direct investment, economic freedom and growth: new evidence from Latin America. *European Journal of Political Economy* 19, 529-945.
- Berggren, N., Jordahl, H., 2006. Free to trust: Economic freedom and social capital. *Kyklos* 59, 141-169.

- Borensztein, E., De Gregorio, J., Lee, J.W., 1998. How does foreign direct investment affect economic growth? *Journal of international Economics* 45, 115-135.
- Bris, A., Cabolis, C., 2008. The value of investor protection: Firm evidence from cross-border mergers. *Review of Financial Studies* 21, 605-648.
- Brunetti, A., Weder, B., 2003. A free press is bad news for corruption. *Journal of Public Economics* 87, 1801-1824.
- Buch, C.M., DeLong, G., 2004. Cross-border bank mergers: What lures the rare animal? *Journal of Banking and Finance* 28, 2077-2102.
- Cameron, A., Trivedi, P., 1998. *Regression analysis of count data*. Cambridge University Press: Cambridge, U.K.
- Campello, M., Graham, J.R., Harvey, C.R., 2010. The real effects of financial constraints: Evidence from a financial crisis. *Journal of financial Economics* 97, 470-487.
- Chen, H.C., Hao, Q., 2011. Insider trading law enforcement and gross spreads of ADR IPOs. *Journal of Banking & Finance* 35, 1907-1917.
- De Haan, J., Sturm, J.E., 2000. On the relationship between economic freedom and economic growth. *European Journal of Political Economy* 16, 215–241.
- Di Giovanni, J., 2005. What drives capital flows? The case of cross-border M&A activity and financial deepening. *Journal of International Economics* 65, 127-149.
- Dinç, I.S., Erel, I., 2013. Economic nationalism in mergers and acquisitions. *Journal of Finance*. 68, 2471-2514.
- Dittmar, A.K., Dittmar, R.F., 2008. The timing of financing decisions: An examination of the correlation in financing waves. *Journal of Financial Economics* 90, 59-83.

- Djankov, S., La Porta, R., Lopez-de-Silanes, F., Shleifer, A., 2008. The law and economics of self-dealing. *Journal of Financial Economics* 88, 430-465.
- Erel, I., Liao, R., Weisbach, M., 2012. Determinants of cross-border mergers and acquisitions. *Journal of Finance* 67, 1045-1082.
- Easton, S.T., Walker, M.A., 1997. Income, growth, and economic freedom. *The American Economic Review* 87, 328-332.
- Ferris, S.P., Jayaraman, N., Sabherwal, S., 2013. CEO overconfidence and international merger and acquisition activity. *Journal of Financial and Quantitative Analysis* 48, 137-164.
- Ferreira, M., P. Matos. 2008. The colors of investors' money: The role of institutional investors around the world? *Journal of Financial Economics* 88, 499-533.
- Ferreira, M., Massa, M., Mato, P., 2010. Shareholders at the gate? Institutional investors and cross-border mergers and acquisitions. *Review of Financial Studies* 23, 601-644.
- Frankel, J.A., Romer, D., 1999. Does trade cause growth? *American Economic Review* 89, 379-399.
- Giles, D., 2010. Notes on the Zero-Inflated Poisson Regression Model. Retrieved April 21, 2017, from <http://web.uvic.ca/~dgiles/downloads/count/zip.pdf>
- Harrison, A., 1996. Openness and growth: A time-series, cross-country analysis for developing countries. *Journal of Development Economics* 48, 419-447.
- Heckelman, J.C., Stroup, M.D., 2000. Which Economic Freedoms Contribute to Growth? *Kyklos* 53, 527-544.
- Herzer, D., 2012. How does foreign direct investment really affect developing countries' growth? *Review of International Economics* 20, 396-414.

- Iliev, P., Lins, K.V., Miller, D.P., Roth, L., 2015. Shareholder voting and corporate governance around the world. *Review of Financial Studies* 28, 2167-2202.
- Kang, N.H., Johansson, S., 2000. Cross-border mergers and acquisitions: Their role in industrial globalization. OECD Science, Technology and Industry Papers, OECD Publishing, Paris.
- Kaufmann, D., Kraay, A., Mastruzzi, M., 2011. The worldwide governance indicators: methodology and analytical issues. *Hague Journal on the Rule of Law* 3, 220-246.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W., 1998. Law and finance. *Journal of Political Economy* 106, 1113-1155.
- Lin, C., Massa, M., Zhang, H., 2014. Mutual funds and information diffusion: The role of country-level governance. *Review of Financial Studies* 27, 3343-3387.
- Long, J.S., 1997. *Regression Models for Categorical and Limited Dependent Variables*, Advanced Quantitative Techniques in the Social Sciences, Volume 7. Sage Publications.
- Long, J.S. and Freese, J., 2006. *Regression models for categorical dependent variables using Stata*. Stata press.
- Love, I., 2003. Financial development and financing constraints: International evidence from the structural investment model. *Review of Financial studies* 16, 765-791.
- Maksimovic, V., Phillips, G., 2001. The market for corporate assets: Who engages in mergers and asset sales and are there efficiency gains? *Journal of Finance* 56, 2019-2065.
- Manichaikul, A., 2007. Lecture 15: Poisson assumptions, offsets, and relative risk. Retrieved April 21, 2017, from <http://people.virginia.edu/~am3xa/BiostatII/notes/notes15.pdf>
- Meyer, K.E., Estrin, S., Bhaumik, S.K., Peng, M.W., 2009. Institutions, resources, and entry strategies in emerging economies. *Strategic Management Journal* 30, 61-80.

- Meyer, K.E., Sinani, E., 2009. When and where does foreign direct investment generate positive spillovers? A meta-analysis. *Journal of International Business Studies* 40, 1075-1094.
- Nadolska, A., Barkema, H.G., 2007. Learning to internationalise: The pace and success of foreign acquisitions. *Journal of International Business Studies* 38, 1170-1186.
- Pasiouras, F., Tanna, S., Gaganis, C., 2011. What drives acquisitions in the EU banking industry? The role of bank regulation and supervision framework, bank specific and market specific factors. *Financial Markets, Institutions & Instruments* 20, 29-77.
- Pevzner, M., Xie, F., Xin, X., 2015. When firms talk, do investors listen? The role of trust in stock market reactions to corporate earnings announcements. *Journal of Financial Economics* 117, 190-223.
- Qi, Y., Roth, L., Wald, J., 2010. Political rights and the cost of debt. *Journal of Financial Economics* 95, 202-226.
- Rodriguez, G., 2007, Chapter 4: Poisson models for count data. Retrieved April 21, 2017, from <http://www.data.princeton.edu/wws509/notes/c4.pdf>
- Rossi, S., Volpin, P., 2004. Cross-country determinants of mergers and acquisitions. *Journal of Financial Economics* 74, 277-304.
- Shimizu, K., Hitt, M.A., Vaidyanath, D., Pisano, V., 2004. Theoretical foundations of cross border mergers and acquisitions: A review of current research and recommendations for the future. *Journal of International Management* 10, 307-353.
- Shleifer, A., Vishny, R.W., 1992. Liquidation values and debt capacity: A market equilibrium approach. *Journal of Finance* 47, 1343-1366.
- Shleifer, A., Vishny, R.W., 2003. Stock market driven acquisitions. *Journal of Financial Economics* 70, 295-311.

Silva, J., Tenreyro, S., 2006. The log of gravity. *The Review of Economics and Statistics* 88, 641-658.

Silva, J., Tenreyro, S., 2011. Further simulation evidence on the performance of the Poisson pseudo-maximum likelihood estimator, *Economics Letters* 112, 220-222.