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THE INTERNATIONAL MARKET FOR CORPORATE CONTROL

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The International Market for Corporate Control  
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### **ABSTRACT**

This paper documents a set of stylized facts about recent trends in cross-border M&A (CBMA) activity around the world. The facts focus on key features of CBMA such as (i) the magnitude; (ii) how it varies across industries and locations; (iii) how it compares to levels of greenfield FDI over time; (iv) horizontal (market access) versus vertical (integrating supply chains) transactions; (v) the mode of financing; (vi) diversifying transactions versus those in the same industry; (vii) patterns of control acquisition; and (viii) strategic versus financially motivated transactions. The paper also examines whether the nature of cross-border M&A activity differs across developed and emerging markets. Next, it considers the incentives for firms to buy firms in other countries and to sell divisions to foreign buyers and examines the evidence about post-acquisition outcomes. The paper concludes with a discussion of policy challenges that confront governments as they weigh the balance of national security concerns against a desire to increase foreign investment in their economies.

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## 1. Introduction

Global cross-border M&A volumes have witnessed unprecedented rates of growth over the past three decades. Since the 1990s, cross-border mergers and acquisitions account for a very significant fraction of foreign direct investment flows around the world. The value of cross-border transactions grew from US\$ 291.4 billion in 2001 to US\$ 728.5 billion in 2017. The growth in the number of deals is also striking- the number of cross-border M&A transactions worldwide rose from 4,163 in 2001 to 14,196 in 2017. The volume of worldwide cross-border M&A activity was 48% of total FDI in 2017.

While cross-border M&As share numerous features in common with domestic M&As, such as technological synergies and financing considerations, the international nature of these transactions generates many additional complexities. For example, cross-border M&As span both acquiring and target firm regulatory institutions and market frameworks that can vary significantly across countries. In the context of outsourcing production, “make versus buy” considerations for extending firm boundaries across borders also impact cross-border M&A activity.

Explanations for acquiring control across borders, therefore, lie at the intersection of organizational economics and trade. Here, costly financial contracting, non-verifiable monitoring of technologies deployed across borders especially in countries with weak investor protections form the basis for expanding the boundaries of the firm internationally (make) rather than contracting to suppliers outside the firm (buy). Similar to greenfield FDI projects, market access (horizontal) or integrating upstream and downstream component of supply chains across borders (vertical) motivations drive cross-border M&A activity.

This paper describes the market for international corporate control in three steps. It documents in some detail a set of facts about the ownership of firms across borders in recent decades. It also examines the incentives that drive firms to extend their boundaries across borders. Finally, it surveys the evidence about post-acquisition outcomes and concludes with some policy considerations.

The paper begins by documenting the magnitude of cross-border M&A activity, how it varies across industries and locations and compares to levels of greenfield FDI over time. The stylized facts provide an overview of cross-border M&As (CBMAs) across time; whether there are periods of merger waves as in the case of domestic M&As; and the regional distribution of CBMAs for acquirors and targets by the volume and value of

transactions. The facts focus on key features of CBMA such as (i) horizontal (market access) versus vertical (integrating supply chains) transactions; (ii) the mode of financing; (iii) diversifying transactions versus those in the same industry; (iv) patterns of control acquisition; and (v) strategic versus financially motivated transactions. It also examines whether the nature of cross-border M&A activity differs across developed and emerging markets.

Briefly, we see that M&A flows constitute a large part of overall FDI flows where the number of M&A transactions has tripled over the past two decades. Cross-border M&A activity is concentrated in relatively few countries, mainly US and Europe. Cross-border M&A deals occur in waves and megadeals on the rise. Most cross-border M&A deals involve private firms and private equity transactions have increased significantly over time. Finally, tax haven countries account for a significant share of cross-border M&A activity.

Next, we consider the incentives for firms to buy firms in other countries and to sell divisions to foreign buyers. Existing studies offer several reasons ranging from market seeking versus efficiency (cost reduction) motives to maintaining control over proprietary technologies in countries with weak contracting institutions. I examine rationales for establishing control through mergers and acquisitions, whether it be majority or full control when firms could easily outsource at an arms-length. Importantly, I discuss how these incentives differ from those that drive M&A activity within countries.

Also, financial considerations such as liquidity provision are often a determining factor in M&A transactions. Here, cheap financial capital based on acquiror-country valuations can drive international buying sprees. Alternatively, undervalued assets in target countries provide an important incentive for cross-border M&A activity. These factors can gain further importance during times of crisis when financial constraints bind.

The evidence suggests that cross-border M&A deals tend to create surplus value through various means – by increasing productivity, improving governance, and boosting stock prices. Cross-border M&A deals also take advantage of undervalued companies in target countries as well as cheap financing in acquiring countries. These factors also relate to other, commonly cited reasons why MNCs establish operations abroad, including those discussed in several other papers of this volume, such as developing global supply chains through vertically integrating M&As, expanding markets through horizontal M&As and profit shifting for tax purposes.

Finally, I survey the evidence on post-acquisition outcomes. When a firm based in one country buys a firm based in another, what happens to employment, investment, production, and other measurable aspects of firm activity in the two locations? These considerations are often politically-sensitive when firms acquire control of physical assets located outside their own countries. It is not surprising that public sentiment can run high when foreign firms gain corporate control of domestic assets.

The paper proceeds as follows. Section 2 describes M&As characteristics using Bureau Van Dijk's *Zephyr* database. The advantage of this source over other aggregated sources of FDI data is that the data give detailed transaction characteristics of individual M&A transactions. I provide a series of stylized facts about the frequency, timing, and composition of worldwide cross-border M&A trends over the last two decades. Section 3 examines the alternative motivations and explanations for these trends. Section 4 analyzes post-acquisition outcomes for several real variables such as employment, investment, and profitability. Section 5 outlines key policy issues that confront governments with respect to cross-border M&A transactions. Section 6 concludes.

## **2. Facts about Cross-Border Mergers and Acquisitions Around the World**

The paper bases its overview of the structure and evolution of cross-border M&As on Thomson's Bureau Van Dijk's *Zephyr* database, an extensive worldwide database of M&A transactions. The database includes information on mergers and acquisitions, initial public offerings, private equity, and venture capital deals and rumors. The data has global coverage with European transactions from as early as 1997, North American transactions from 2000, and other global regions from 2003 onwards. *Zephyr* aspires to be comprehensive in that no minimum deal value is applied. As of October 2018, there was information for more than 1.73 million deals, rumored, and actual transactions between 1/1/1997 and 12/31/2017.

A typical M&A search query combines variables for geography, timing, deal type, and deal value. This paper focuses on transactions that involve a cross-border target and are completed—not rumored, pending, postponed, or simply announced. The focus is on transactions with confirmation of completion and not assumed to be complete (assumed-completed is a data category). From a master sample of 1.21 million announced and completed deals, the cross-border sample consists of 223,405 completed acquisition

transactions. Of these transactions, 195,741 transactions are mergers, acquisitions, and minority stake investments. Excluded are IPOs, institutional buyouts, capital increases, joint ventures, management buy-ins and buy-outs, demergers, and share buybacks. The final sample consists of 166,311 transactions.

The firms in the final sample are both public and private acquirors and targets. The geographical setting included an extensive set of developed and emerging countries. An important advantage of the data is good coverage of private firm acquisitions that are generally not available in other cross-border M&A data sources. The sample includes majority and minority acquisitions, and mergers as well as exits via private equity transactions but excludes joint ventures, buyouts, privatizations, reverse mergers and restructurings. One limitation of the *Zephyr* database is that coverage of deal values begins in 2001, and it reports deal values for about 61% of the transactions. For approximately 45% of the sample, the data contain information about the mode of payment, such as cash, equity, debt, and so on.

Table 1 provides a broad overview of the data. The total value of deals in the sample is \$9.02 trillion, with a mean transaction value of \$97.9 million. The value of the largest deal is \$195.6 billion which is the Vodafone AirTouch takeover of the German telecommunications and engineering group Mannesmann AG based on a stock swap between the two firms. About a third of the firms are publicly listed—29.3% of acquirors and 26.3% of targets. Finally, there are 181 acquiror or source countries and 187 target or destination countries in the sample.

**Fact #1: Cross-border mergers and acquisitions comprise nearly 50% of FDI flows following the Global Financial Crisis.**

To highlight the importance of cross border mergers and acquisitions as a mode of entry into foreign markets, Figure 1 provides a snapshot of the composition of foreign direct investment into greenfield investments and M&A activity for 2017, the last year in our sample. Data from the Financial Times FDI market reports database provides information about the number and value of announced greenfield projects. Using individual transaction information from the *Zephyr* database, we can calculate the number and aggregate cross border M&A transactions.

In 2017, 54.4% of total FDI transactions were in the form of announced greenfield investments that comprise 50.2% of the total value of worldwide FDI. In contrast, the number of cross-border M&A transactions comprise 45.6% and 49.8% of the number and value of aggregate FDI. The numbers imply that cross-border M&A activity accounts for nearly half of all FDI transactions. Of the M&A transactions, the lion's share (99.9%) were in the form of acquisitions while the relatively uncommon mergers comprise the remainder.<sup>2</sup> Further acquirors gain majority if not full control of their cross-border targets in 5.8% and 27.1% of the transactions, respectively. 67% of transactions in 2017 involve acquisition stakes of 10%-49%, minority stakes classified as FDI, i.e., a 10% or greater stake.

Figures 2 and 3 plot the trends of announced greenfield projects and completed M&A transactions in terms of both numbers and value between 2003-2017. The data suggest that the value of announced greenfield projects peaked in 2007 and has not recovered to its pre-crisis peak thereafter. Mergers and acquisitions, in contrast, have risen steadily after the crisis, and the value of these transactions is roughly equal to those of announced greenfield projects by the end of the data sample period.

**Fact #2: The number of cross-border M&A transactions has tripled over the last two decades.**

Figure 2 shows that before the Global Financial Crisis (2000-2008), the total number of cross-border M&A transactions increased from about 4,500 to 8,500 transactions worldwide. M&A transactions fell by approximately 30 percent in 2009, mirroring the collapse in global trade in the aftermath of the crisis. The pace of M&A activity recovered and surpassed pre-crisis levels-in 2017; there were about 14,000 cross-border M&A transactions—more than triple the number of transactions at the beginning of the sample.

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<sup>2</sup> Zephyr's glossary defines merger as follows: "A true Merger is in reality actually quite rare and many acquisitions are incorrectly described as "mergers" in the press. In a true Merger, there is a one-for-one share swap for shares in the new company and the deal involves a 'merging of equals.' If the swap is not on equal terms, the deal would be coded as an Acquisition. However, in a true Merger, the original companies are entered into the deal record as the Acquiror and the Target (in no particular order). In the case of a 3-way (or more) merger, multiple companies can be entered in both Acquiror and Target fields. Where a Newco has been used, the Newco is added as the Acquiror and the newly merged company as the Target. The newly merged company name would be added to the comments. Mergers do often occur as 'partnerships' and are most typically carried out by organizations such as law firms and accountancy firms."

**Fact #3: A rising share of transactions are by Asian and Latin American acquirors, but the US and European companies still dominate the market for international corporate control.**

Figure 4.1 shows that in 2000, acquirors from Europe and the United States accounted for 91.2% (or 4,095 transactions) of all cross-border M&A activity. While there is a rising importance of emerging Asian and Latin American acquirors, European and US transactions continue to account for three-fifths (61%) of the transactions in 2017. This trend holds even though the number of transactions by Asia and Latin American acquirors increased eight-fold over the last two decades rising from 383 transactions in 2000 to 2,926 transactions in 2017.

In 2000, Asian transactions accounted for about 6.7% of the total. This proportion nearly quadrupled to 23% in 2017. Similarly, Latin American transactions rose from 1.97% to 10.5% of total transactions between 2000-2017. In addition, 2.3% of the transactions involved African countries in 2017. These numbers suggest that about 35% of the M&A transactions in 2017 involved a developing country target—a proportion that was less than 10% in 2000.

The United States and Europe also account for a bulk of the target firms in cross-border M&A transactions. Figure 4.2 shows that the United States, the United Kingdom, and Germany comprise 28.5% of target firms in cross-border M&A transactions. Including target firms from the Netherlands, France, Italy, Spain, Switzerland, Sweden, and Canada, the fraction rises to an impressive 79.2% of total cross-border M&A targets. India, China, and Russia account for 10.1% of target firms. Including targets from Hong Kong and Australia, the share of target firms from these 15 nations alone account for nearly 90% of all cross-border targets.

North American and European acquirors and targets also dominate the regional distribution of the total value of cross-border M&A activity. Figure 5.1 shows that North American and European acquirors account for 71% of the overall value of cross-border transactions. Acquiring firms from Asia and Latin America account for approximately a quarter (26%) of the total cross-border transactions by value. Similarly, Figure 5.2 shows that North American and European target firms are about 70% of total transactions by value, while Asian and Latin American targets account for 24% of the total value of transactions. The pattern of concentration in value is similar to that observed in the numbers



of transactions. North America and Europe appear to be the most active regions in the world through the lens of cross-border M&A activity.

**Fact #4: Cross-Border M&A Activity is highly concentrated among a small set of countries.**

Fact #3 and Fact #4 collectively suggest that cross-border activity is highly concentrated among a small set of countries. A predominantly large fraction of cross-border M&A activity in terms of both acquirors and targets are located in North America (the United States and Canada) and Europe, including the United Kingdom. The pattern in cross-border FDI flows in the form of M&A activity appears to mirror patterns in international trade between the two regions.

Strikingly, fifteen acquiror countries together account for 71% of the total number of cross-border transactions. Figure 6.1 shows that acquisitions from the United States and the United Kingdom alone account for 36% of overall cross-border M&A activity. Along with acquiring firms from Germany, France, the Netherlands, and Canada, these two countries account for 52.6% of worldwide cross-border M&A transactions. About 11% of the acquisitions originate from the British Virgin Islands, the Cayman Islands, Switzerland, Cyprus, Hong Kong, and Singapore—known for their tax haven status. Sweden, Japan, and Australia also rank in the list of top 15 acquiror nations.

Further, the top 15 nations comprise 73% and 70% of the total value of cross-border deals as acquirors and targets, respectively (Figures 6.1 and 6.2). Of these, the US and UK account for 32% and 26% of the total value as acquirors and targets, respectively. Other countries in the top 15, by the total value of deals, are from Europe (Germany, France, Spain, and the Netherlands), Asia (China, India, and Japan), tax haven countries (Luxembourg, Switzerland, Hong Kong, Singapore and Bermuda), Canada and Australia for acquirors.

Ten of the same countries also feature on the 15 most popular destination countries by value in terms of target location (Figure 6.2). The exceptions are Italy, India, Russia, Brazil, and Sweden that are on the list of top destinations in place of Bermuda, Canada, Japan, Hong Kong, and Singapore on the acquiror list. Once again, the concentration of cross-border M&A activity by value comprises a relatively small set of countries, albeit

most of the biggest economies in the world. What is worth noting is that there are over 180 acquiror and destination countries in the sample of transactions.

Figure 7 plots the value of transactions by acquiring and target firms from different countries. The picture shows a very high correlation between the total value of transactions by each country as acquiror and target. For example, firms from the US and UK account for a very high value of transactions as both acquirors and targets. In fact, for a sample of 179 countries, the correlation coefficient between the value transactions by acquiror and target status for each country is 0.959. The finding is robust to sample sizes restricted to 100, 50, or 40 countries-the correlation coefficient remains above 0.95. The figure suggests that countries where firms engage in high levels of M&A activity as acquirors are also very active destinations from where firms are acquired. Conversely, countries with lower levels of activity as acquirors also tend to have lower values as targets. It is not all that surprising that this pattern seems closely linked to country-GDP and consistent with the pattern of concentration documented above.

**Fact #5: The industrial composition of acquirors shows the rising global dominance of the services sector.**

Figures 8 and 9 show the overall industrial composition of targets and acquirors in cross-border M&A transactions. From the documentation in Zephyr, services include “Finance, insurance, real estate, and non-financial services”. Non-financial services include Travel Accommodations (hotels), recreational and vacation camps, industrial launderers, barber shops, tax preparatory services etc. In essence all industry SIC codes in the 6000-7000 range are classified as services.

Consolidated data from Figure 8 shows that the services sector accounts for 47% of the overall target values, while manufacturing and agriculture account for 38% and 14%, respectively. Similarly, Figure 9 shows that the share of total acquiror value from the services sector accounts for a predominant share (65%) of the transaction values while the manufacturing and agriculture account for 26% and 8% of acquiror value shares, respectively.

Over time, the data show a definite rise in the dominance of the services sector in cross-border transactions. From the acquiror side, services accounted for 52% of the total value at the beginning of the sample, rising to a massive 76% at the end of the sample in 2017. On average, the shares of acquirors from manufacturing and services are about 27%

and 62% between 2000-2017—the remaining acquirors are from agriculture and construction, utilities, and retail/wholesale trade. On the target side, the industrial composition is more evenly split between manufacturing (38%) and services (46%), on average, of total transaction values.

For developed countries, while targets are from both manufacturing (40%) and services (46%), acquirors are predominantly from services (63%) and about a third (27%) for manufacturing. In developing and emerging countries, both targets and acquirors fall into shares of 30%, 43% and 21% from manufacturing, services, and agriculture, respectively.

**Fact #6: A significant fraction of cross-border M&As involve industry diversification integrating global value chains across borders.**

Rationales for cross-border acquisitions rely on two main categories—horizontal M&A in the acquiring firm’s industry primarily for international market access and vertical M&A to integrate global supply chains across borders. Determining whether a transaction is horizontal or vertical depends on the extent to which acquisitions may or may not diversify lines of business for the acquiring multinational. A challenge of such analysis is, however, the crudeness of standard industry classifications. For example, for large firms that operate in multiple lines of business, it is not clear how to classify a firm based on industry.

To address this issue, Table 2 presents alternative measures of industrial diversification based on 6-digit, 5-digit, 4-digit, 3-digit and 2-digit industry classification (NAICS) of acquirors and targets, to get a more nuanced sense of the extent to which acquisitions might diversify. The first column focuses on the non-financial sector, i.e., transactions where the acquiring firm is from a manufacturing or primary industry. It is interesting to take note of the fact that as we move from finer to more aggregated degrees of industry classification, the fraction of transactions classified as diversifying falls steadily. At the 6-digit level of classification, nearly 50% of the transactions are outside the acquiror’s primary industry. This fraction falls to 17.8% when we consider a 2-digit industry classification. The pattern is even more stark for the financial sector where over 60% of the cross-border M&A transactions constitute industry-diversification at the 6-digit level, and the fraction is a mere 6.5% at the 2-digit level of classification.

SIC codes for classifying industries reveal a similar pattern--for a finer 4-digit industry classification--65% of the transactions are outside the acquiror's primary industry or diversifying transactions for the non-financial real sector. The fraction drops steadily from 60% (3-digit), 46% (2-digit) to 32% (1-digit) measures of industry classification. In the financial sector, the fraction ranges from 72% (4-digit) to 57% (2-digit) for diversifying transactions.

The pattern is consistent with the evidence in Alfaro and Charlton (2009), where data from Dun & Bradstreet (D&B), also presents a more comprehensive and nuanced picture of global multinational activity. The dataset included location, ownership, and detailed sector-level information (at the four-digit level) for each of more than 650,000 multinational subsidiaries in 400 industries and 90 countries. Given that we do not observe trade within multinational firms, the study uses a combination of four-digit sector-level information and input-output tables to distinguish horizontal and vertical FDI.

Similar to the evidence in Table 2, Alfaro and Charlton (2009) also find that at the two-digit industry level, a considerably higher fraction of relationships are classified as horizontal (subsidiaries in the same industry as their parents) rather than vertical (subsidiaries that supply their parents with inputs) FDI. However, disaggregating to the four-digit level reveals that many of the foreign subsidiaries in the same two-digit industry as their parents are located in sectors that produce highly specialized inputs for their parents' production.

The Davies and Markusen paper in this volume classifies MNE organizational structures according to whether the firm replicates significant amounts of activity across different countries (horizontal FDI) or whether the production process is integrated in stages across borders (vertical FDI). Alfaro and Charlton (2009) define vertical FDI as establishments owned by a foreign parent that produce intermediate inputs to the parent's production and export those inputs to the parent country whereas Alfaro et. al. (2018) use input-output matrices to characterize the upstream or downstream relatedness of activities within multinational firms. The M&A data in Zephyr also provide an unexplored avenue to view the vertical, horizontal and diversifying motivations of firms to make acquisitions across borders. Table 3 below shows a snapshot of the data to illustrate the different types of transactions that take place.

For example, Ruskii Alyumini Zao’s acquisition of Glencore International AG represents vertical integration where a Russian Alumina refining and primary aluminum production firm purchased a Swiss metal ore mining firm. Mitsubishi’s increasing interest in Chilean Anglo-American Sur Sa is an acquisition of a mining company by a metals wholesaler. On the other hand, in Deutsche Telekom AG’s acquisition of UK’s One-2-One is a diversifying transaction where a wired telecommunication carrier purchases a stake in a wireless telecommunications provider. The German Boehringer Ingelheim-French Merial Sas transaction in the pharmaceutical manufacturing sector appears to be a horizontal acquisition. Similarly, Walgreen’s acquisition of Alliance Boots is also a horizontal transaction in retail drug stores. In contrast, Roche’s 100% acquisition of Bermuda incorporated Corange Ltd., the parent company of Boehringer Mannheim and DePuy, was designed to position Roche as a global leader in diagnostics and also strengthen its pharmaceutical division, the foundation of Roche's operations. The transaction therefore appears to have both horizontal and vertical features.

Detailed information on a transaction by transaction basis of the precise nature of the acquisitions along with detailed input-output data would allow a more definitive characterization of the vertical, horizontal and diversifying motivations for the cross-border transactions. Simply viewing the transactions via the lens of NAICS codes suggests that vertical transactions differ in their four-digit NAICS codes. Horizontal transactions tend to differ in the fifth or sixth digit of their NAICS code. However, some of these horizontal transactions are also diversifying transactions within narrow industry codes such as wireless (NAICS code: 517312) and wired communications (NAICS code: 517311) or wineries (NAICS code: 312130) and distilleries (NAICS code: 312140). Therefore, the data highlight the fact that the distinguishing which transactions are strictly horizontal, i.e., to geographical diversification across markets, may not be straightforward as many of these transactions also comprise important industrial diversification features.

Table 3

Acquiror Company	Cntry	Target Company	Cntry	Deal value (Bn USD)	Target Code	TARGET Industry	Acq Code	ACQUIROR Industry
RUSSKII ALYUMINII ZAO	RU	GLENCORE INTERNATIONAL AG	CH	30	212299	All Other Metal Ore Mining	331313	Alumina Refining and Primary Aluminum Production
E.ON AG	DE	ELECTRA DE VIESGO SA	ES	16.03	221111	Hydroelectric Power Generation	221118	Other Electric Power Generation
DEUTSCHE TELEKOM AG	DE	ONE-2-ONE	GB	14.07	517312	Wireless Telecommunications Carriers	517311	Wired Telecommunications Carriers
BOEHRINGER INGELHEIM GMBH	DE	MERIAL SAS	FR	12	325411	Medicinal and Botanical Manufacturing	325412	Pharmaceutical Preparation Manufacturing
ENEL ENERGY EUROPE SRL	ES	ENERSIS SA	CL	10.44	221114	Solar Electric Power Generation	221118	Other Electric Power Generatio
ROCHE HOLDING AG	CH	CORANGE LTD	BM	10.96	325412	Pharmaceutical Preparation Manufacturing	541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)
RWE AG	DE	AMERICAN WATER WORKS COMPANY	US	8.6	221310	Water Supply and Irrigation Systems	221122	Electric Power Distribution
PERNOD RICARD SA	FR	SEAGRAM COMPANY LTD'S SPIRITS AN	CA	8.15	312130	Wineries	312140	Distilleries
WALGREEN COMPANY	US	ALLIANCE BOOTS GMBH	CH	6.67	446120	Cosmetics, Beauty Supplies, and Perfume Stores	446110	Pharmacies and Drug Stores
NESTLE SA	CH	GERBER PRODUCTS COMPANY INC.	US	5.5	311999	All Other Miscellaneous Food Manufacturing	311230	Breakfast Cereal Manufacturing
MITSUBISHI CORPORATION	JP	ANGLO AMERICAN SUR SA	CL	5.39	212230	Copper, Nickel, Lead, and Zinc Mining	423510	Metal Service Centers and Other Metal Merchant Wholesalers

Returning to Table 2, for the non-financial real sector, 64.2% or in nearly two-thirds of the transactions at the 4-digit NAICS level, acquiror and target firms share the same industry code. However, dis-aggregating to the 5-digit level, this fraction drops down to 56.7% and further to 50.7% at the 6-digit level. The pattern suggests that 7.5% and 13.5% of transactions that had the same industry-code at the 4-digit level have different industry codes at the 5-digit and 6-digit levels, respectively. As illustrated above, these differences at the 5- and 6-digit levels could correspond to diversifying acquisitions either across industries or geographies.

**Fact #7: Cross-border M&A transactions occur in waves.**

Similar to domestic M&A activity, previous studies using more aggregated data suggest that there were two waves of cross-border mergers and acquisitions (M&A) in the 1980s and 1990s. The first occurs between 1987-1990 and the second during the period of rapid globalization between 1996-2000 (Evenett, 2004). Transaction-level data from the last two decades confirm the wave nature of cross-border M&As. Figure 2 shows that cross-border M&As declined between 2000-2002 following the second wave. The third wave begins in 2002 and peaks in 2008—cross-border M&As increased by 247% over this period but collapse by 23% in 2009. The fourth wave takes place in the aftermath of the crisis, and the number of cross-border M&As in 2017 had increased by 404% compared to 2009. It also appears that successive waves of M&A have significantly higher numbers of transactions consistent with the evolution of global economic integration.

Evenett (2004) shows that the first wave of cross-border M&A, which took place from 1987 to 1990, reached a peak of \$135 billion in 1990—less than one-fourth the value of the second wave. Figure 3 shows the third and fourth waves in the value of cross-border M&A in parallel with the number of cross-border M&As (Fact #1). Globally, in nominal terms the value of cross border M&A declined to \$155 billion in 2003 from a peak value of approximately \$547 billion in 2000. As Figure 3 makes clear, the third wave peaked in 2007 at a pre-crisis value of \$705 billion. In nominal terms, cross-border M&A fell by 55% in 2009—similar to the collapse in global trade. The fourth wave occurs as cross-border M&As gradually recovers in the aftermath of the crisis to a peak value of \$935 billion in 2015. The value of cross-border M&A declined by approximately 30% in 2016 and 2017 coinciding with a period of uncertainty about global trade.

Theories that attempt to explain the wave phenomenon generally fall under the category of firms in industries reacting to various shocks in their operating environments. These shocks include deregulation; the emergence of new technologies, distribution channels, or substitute products; or a sustained rise in commodity prices in response to which firms within an industry acquire other firms (DePamphilis, 2009).<sup>3</sup> For example, Evenett (2004) suggests that the cross border mergers and acquisitions wave of the 1990s was dominated by service sector transactions—in particular three sectors ( transportation and communication; finance; and business services) accounted for about half of the value of all M&A from 1997 to 2000. He suggests that we can attribute this cross-border mergers and acquisitions wave to deregulation and technological advances in the telecommunications and business services sectors. In banking, consolidation in the form of strategic alliances took place in large numbers in the 1990s.

Extrapolated to the cross-border context, alternative explanations suggest that overvaluation (either price-to-earnings or market-to-book ratios) of firms in acquiror countries compared to firms in target countries can drive M&As to cluster in waves. Exchange rate appreciation in acquiror countries can also drive the attractiveness of asset valuations in target countries. Alternatively, cross-border M&A waves that accompany crises in emerging countries, such as in the aftermath of the Asian financial crisis, can make target country assets cheap for acquirors from countries not affected by the crisis. Interestingly, the Asian financial crisis was followed by massive liberalizations in the market for corporate control resulting in a wave of cross-border acquirors purchasing targets in crisis-ridden countries.

**Fact #8: Mega-deals in cross-border M&As are on the rise and also occur in waves.**

Transactions whose value exceeded one billion U.S. dollars or mega-deals have increased significantly over time. The number of mega-deals nearly doubled from 2000 to 2007, reaching a pre-crisis peak of 123 deals. In the aftermath of the crisis, the number of such deals recovers to an all-time high of 138 deals in 2015 (see Figure 10) and comes down in 2016 and 2017 consistent with the decline in overall cross-border M&A during these two

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<sup>3</sup> <https://understandingmnda.wordpress.com/article/why-merger-and-acquisition-waves-occur-2y7167181a2ns-19/>.

years. In nominal value terms, mega-deals account for a striking 60% and 53.4% of total cross-border M&A at their peak values in 2007 and 2015, respectively (see Figure 11). The year 2000 is marked by the most significant cross-border M&A transaction to date—Vodafone's acquisition of Mannesmann AG valued at \$195 billion accounts for 35% of the total value of cross-border M&A for the year and skewed the share of mega-deals to 72% of the total.

Table 4 lists the top-ten cross-border transactions completed over the sample period. All ten transactions involve developed market acquirors, and eight out of ten targets are also in developed markets. The exceptions are the Commonwealth Bank of Australia's acquisition of Indonesia's Pt. Bank Arta Niaga Kencana valued at \$50.7 billion and Hong Kong's Citic Pacific's acquisition of Citic Ltd. in China valued at \$38.1 billion. Target industries predominantly comprise information technology, financial services, and manufacturing, while acquiror industries also include transport and warehousing companies consistent with the rise of integrated global supply chains. During the internet boom of the late 1990s, Evenett (2004) found that the majority of mega-deals involved the service sector, notably the financial and telecommunications industries. In contrast, the industry-mix of acquirors and targets in mega-deals since 2000 includes firms from both services and manufacturing.

The average deal size in all cross-border transactions also more than doubled in nominal dollars from \$35.4 million in 2003 to a peak of nearly \$80 million in 2007. In the aftermath of the crisis, average transaction values ranged from \$45 million to \$61 million during 2009-2017.

Cross-border M&As have been used for corporate inversions for tax purposes where following the M&A deal, the acquiring firm incorporates in the foreign country (i.e., inverts) so as to avoid paying corporate taxes in the home country and to access cash accumulated abroad without paying repatriation taxes. For example, 40 percent of value of M&A deals by US companies in 2015 for tax inversion deals. In some cases, the newly acquired foreign subsidiary then acquires the original parent in the home country using its tax-advantaged cash and is recorded as inward FDI.

Note that the Medtronic transaction in the table represents a tax inversion to Ireland based on acquiring Covidien plc for \$42.9 billion in cash and stock. The tax inversion allowed Medtronic to relocate its legal headquarters to Ireland, while maintaining its



operational and executive headquarters in the U.S., thus allowing it to take advantage of the low corporate tax regime in Ireland and avoiding taxes on profits exceeding \$14 billion held overseas.

CITIC Limited is a conglomerate headquartered in Hong Kong whose shares trade on the Main Board of the Hong Kong Stock Exchange. It is majority-owned (58% of issued shares) by the Chinese state-owned CITIC Group. Its main lines of business are in financial services, resources and energy, manufacturing, engineering contracting, real estate and other businesses. In 2014, CITIC Pacific bought most of the assets from the parent company and issued new shares to the parent, making most of the assets of CITIC Group publicly listed. According to its 2014 annual report, CITIC Limited is one of the largest companies on the Hang Seng Index. “Formerly known as CITIC Pacific, our name changed to CITIC Limited when we acquired the businesses of CITIC Group in August 2014.”<sup>4</sup> The deal therefore facilitated CITIC’s listing in Hong Kong as part of the group’s long-term strategy to go public. A reason for choosing the Hong Kong Stock Exchange (HKSE) is that the central government (the controlling shareholder) encourages state-owned enterprises (SOEs) to list on overseas markets, especially the HKSE.

**Fact #9: Cross-Border Acquirors Tend to be Large.**

The median acquiror firm is five times larger than the median target firm. Median acquiror-firm assets are \$330 million while median-target firm assets are \$58 million. The median developed market acquiror has an asset size of \$359 million, while the median developed-market target asset size is \$62 million. For emerging markets, the median acquiror and target firm sizes are \$196 million and \$45 million, respectively.

For target assets, we can also use information about acquired stakes with transactions for whom we have deal values to compute, the target’s enterprise value at the time of the acquisition. The median target enterprise value for this sample is \$50 million. The median enterprise values for developed and emerging market targets are \$ 60 million and \$ 33.33 million, respectively.

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<sup>4</sup> <https://www1.hkexnews.hk/listedco/listconews/sehk/2015/0417/lt20150417394.pdf>

**Fact #10: For the most part, firms involved in cross-border M&A deals are privately-held.**

The vast majority of firms in cross-border transactions are private (Figure 12). Overall, 73.6% of the deals involve a private target, 69.9% involve a private acquiror, and 94.2% have either a private acquiror or target. In developed markets, 71.4% of the deals involve a private target, 70.0% involve a private acquiror, and 94.1% have either a private acquiror or target. In emerging markets, 81.4% of the deals involve a private target, 73.1% involve a private acquiror, and 97.5% have either a private acquiror or target.

**Fact #11: Cash is king.**

Cash is the predominant method of payment in cross-border M&A transactions (Figure 13). 94% of developed market acquirors and 95% of emerging market acquirors pay for target firms with cash. A very small fraction of transactions involve payment in stock (5% for developed and 3% for emerging markets) and, even fewer in debt instruments (1% for advanced and 2% for emerging markets). In contrast, Andrade, Mitchell, and Stafford (2001) report that 70% of M&A transactions by US firms in the 1990s involve stock financing, with 58% entirely stock financed. The proportion of all cash financed transactions in the US was only 17% in 1999.

However, more recent evidence shows that the number of merger and acquisition (M&A) transactions paid for entirely in stock in the U.S. market declined sharply after 2001 (de Bodt, Cousin and Roll, 2017) following regulatory changes in FASB accounting rules that abolished pooling and goodwill amortization. The authors show that in the past 25 years, U.S. merger and acquisition (M&A) transactions fully paid in stock have displayed a striking pattern: about half of all transactions featured this payment approach during the 1990s, but in value-based percentages, fully stock-paid transactions fell to around 10% in 2014. According to Thomson Reuters, approximately 33 percent of all deals in the second half of 2016 included some stock in the transaction.

**Fact #12: Private equity transactions have increased over time.**

There can be strategic or financial motivations for undertaking cross-border M&A transactions. Strategic motivations usually include market access across geographic regions, synergies between target and acquiror firms that involve cost-cutting or revenue

enhancement, vertical or horizontal integration of production processes, and so on. Financial transactions, in contrast, include groups of investors such as private equity (PE) firms. In contrast to strategic acquirors looking for organizational synergies to enhance profitability via M&A activity, private equity led investors usually acquire stakes in pursuit of a positive return on their investment and eventually looking to exit the investment at a significant profit. Before exit, PE acquirors can help target firms realize operational efficiencies and synergies as well as provide access to capital to help target firms grow.

Private equity transactions have increased significantly in both numbers and value in the cross-border market (Figure 14). The number of transactions doubled from approximately 1000 transactions in 2001 to nearly 2000 transactions in 2007—a pre-GFC peak in cross-border PE activity. The number increased in the aftermath of the GFC to over 3,300 transactions in 2015. With regard to value, the total value of PE transactions peaked from \$82 billion in 2000 to approximately \$250 billion in 2007. The value plummeted to \$76 billion in 2009 before rising steadily to over \$330 billion in 2015. Figure 15 presents private equity transactions as a % of all transactions, to amplify their growing import. Mirroring the patterns in overall cross-border M&A activity since 2016, both the numbers and value of PE transactions have declined. The pattern of control acquisition suggests that on average, PE investors, tend to acquire minority stakes. The primary method of payment in a sample of 26,881 transactions with available data is cash in an overwhelming 98% of the transactions.

Also notice that Fact #10 says that firms in cross border M&A are largely privately held, and Fact 12 says private equity transactions are increasing over time. To see whether these two facts are related, Table 5 presents confusion matrices to examine whether deal types and the public-private status of firms is systematically related. Panels A and B present the proportions by the frequency and deal values based on the acquiror's public-private status. Panel A shows that about 19% of the deals are private equity deals. Of these, approximately 75% (14.4/19) involve a private acquiror. Panel B shows that by deal value, nearly 40% of the deals are private-equity deals and 65% of them involve a private acquiror.

Panels C and D examine the same patterns based on the target's public-private status. By the number of transactions, private equity deals are once again about 19% of the transactions and by deal value nearly 35% of the deal value for the full sample. Panel C

shows that 78% of these private equity deals (by frequency) involve a private target while Panel D shows that approximately 68% of private-equity deals (by value) have a private target. However, these patterns of public and private ownership status are very similar for all other deals as well. Thus, there does not necessarily appear to be a strong relationship between private-equity deal status and the public-private status of either acquirors or targets. What remains striking is the proportion of private firms in the numbers of deals as well as overall deal values (Table 5, Column 3).

Table 5: Confusion Matrices of Private Equity Deal and Public-Private Firm Status.

Panel A (Frequency of Transactions)

	Private Equity Deal	All other deals	Total
Public Acquiror	4.6%	24.2%	28.9%
Private Acquiror	14.4%	56.8%	71.1%
Total	19.0%	81.0%	100.0%

Panel B (Deal Value)

	Private Equity Deal	All other deals	Total
Public Acquiror	13.8%	37.2%	51.0%
Private Acquiror	26.1%	22.9%	49.0%
Total	39.9%	60.1%	100.0%

Panel C (Frequency of Transactions)

	Private Equity Deal	All other deals	Total
Public target	4.1%	20.7%	24.8%
Private target	14.8%	60.4%	75.2%
Total	18.9%	81.1%	100.0%

Panel D (Deal Value)

	Private Equity Deal	All other deals	Total
Public target	10.9%	22.4%	33.3%
Private target	23.4%	43.3%	66.7%
Total	34.3%	65.7%	100.0%

Overall, the median deal value in transactions that involve a private target is \$6 million, \$10 million in deals that involve a private acquiror, and \$10 million in deals that have either a private acquiror or target. In developed markets, the median value of deals that involve a private target is \$8 million, \$13.5 million in involve a private acquiror, and \$12 million in deals that have either a private acquiror or target. In emerging markets, the median deal value in transactions that involve a private target is much smaller at \$1 million, \$3 million in deals that involve a private acquiror, and \$1.5 million in deals that have either a private acquiror or target.

The question also arises whether the big deals involve publicly held companies and the small ones privately held. The data suggest that there is no systematic relationship size of the deal and public-private status of firm. The data show both big and small firms in both big and small deals. Table 5, Panels A and B show the relationship between deal size and the public-private status of acquirors. Panel A shows the proportions of deals above and below median deal values and the public and private status of firms. For big deals (i.e., deal value > the median deal value), there appears to be an even split between public and private acquirors (Panel A, Column 1).

In small deals, the deals are tilted towards private firms with a 60-40 split (Panel A, Column 2). When big deals are classified as being in the third quartile (75<sup>th</sup> percentile and above) the split between public and private acquirors is once again 50-50 (Panel B, Column 1). For deals in the first quartile (25<sup>th</sup> percentile and below), private deals account for 56% of the number of small deals (Panel B, Column 2). Note that Zephyr records a large number of transactions as 0 (i.e., at a threshold below \$10 million), and these tiny deals get recorded in the below median cell and the below 25<sup>th</sup> percentile.

Table 6: Confusion Matrices of Deal Size and Public-Private Firm Status.

Panel A (Frequency of Transactions)

	Big Deal > median deal value	Small Deal <= median deal value	Total
Public	19.90%	23.40%	43.30%
Private	22.20%	34.50%	56.70%
Total	42.10%	57.90%	100.0%

Panel B (Frequency of Transactions)

	Big deal in 3 <sup>rd</sup> quartile (75 <sup>th</sup> percentile and above)	Small Deal in the 1 <sup>st</sup> quartile (25 <sup>th</sup> percentile and below)	Total
Public	9.80%	34.40%	44.20%
Private	11.10%	44.70%	55.80%
Total	20.90%	79.10%	100.0%

**Fact #13: Tax haven countries play a significant role in cross-border M&A transactions.**

Evidence suggests that tax haven countries host a significant fraction of FDI. Multinational firms use tax havens for tax planning purposes (Dharmapala, 2008)—and facilitate tax avoidance by allowing firms to shift taxable income out of high-tax jurisdictions as well as reducing the burden of foreign taxable income (Desai, Foley and Hines, 2006). Further, tax havens tend to be countries with better corporate governance practices (Dharmapala and Hines, 2009). Evidence also suggests that firms that use tax havens are the larger, more international firms, and those with extensive intra-firm trade and high R&D intensities (Desai, Foley and Hines 2006).

Relatedly, Dharmapala (2018) points to a wide-body of evidence that suggests that residence-based taxation of foreign income has significant effects on the ownership patterns and value of cross-border M&A. For example, Huizinga and Voget (2009) show that the prospect of international double taxation affects the parent-subsidiary structure of multinational firms created by cross-border mergers and acquisitions. Further, countries with a high international double taxation of foreign-source income attract a smaller numbers of parent firms and reduce the likelihood of that the country is chosen as a headquarter location following a cross-border M&A transaction. Moreover, higher repatriation taxes significantly increase the propensity of multinational firms to relocate their headquarters while evidence from a 2009 Japanese reform abolishing repatriation taxes significantly increased transactions with a Japanese acquiror (Voget 2011, Feld et. al., 2013).

There is, however, relatively little information about the use of tax havens in cross-border M&A transactions. The data in Figure 16 show that the role of tax havens rose significantly between 2000-2017. At the beginning of the sample, in the year 2000,

transactions that had either a target or an acquiror firms from tax haven countries accounted for 7% and 6% of the total number and value of cross-border transactions, respectively. On average, in the pre-GFC period, tax havens accounted for approximately 17% and 10% the value and number of cross-border M&A transactions. The data suggest that these fractions rose in the 2009-2017 post-GFC period--to 15% of the number of transactions and 30% of the value of total cross-border M&A transactions.

Figure 17 shows a bubble chart of the value of transactions that took place across different tax haven countries—the bubble size represents the significance of cross-border transactions based in tax havens appears to be increasing over time. The mean (median) firm size in terms of available data for pre-deal total asset values for acquiror and target firms in tax haven transactions is \$11.29 billion (\$330 million) and \$4.19 billion (\$195 million), respectively. This pattern is consistent with evidence that large firms tend to use tax havens. The industry composition suggests that 75% of the acquirors based in tax havens are from the financial sector, while 55% of targets domiciled in tax havens are from the non-financial real sector.

**Fact #14: The pattern of control acquisition in cross-border transactions varies across developed and emerging market acquirors.**

Similar to domestic M&A, when a firm makes an acquisition, it can take the form of a minority stake, a majority stake or full takeover of the target firm (Figure 18). Cross-border transactions by developed market acquirors involve acquisitions of minority stakes in approximately 55% of transactions when the target is located in a developed market and 57% of transactions when the target is located in an emerging market. About 40% of developed-developed market transactions involve the full purchase of the target while this is the case for 26% of developed-acquiror-emerging-target transactions. In emerging markets, developed market firms acquire majority control in 17% of transactions, while this fraction is only 5% in developed market transactions. Thus, the data suggest that developed market acquirors either acquire full control or minority stakes in developed-market targets while it is approximately a 60-40 split between minority stakes and majority/full acquisitions in emerging markets.

In contrast, the pattern of control acquisition appears different when the acquiring firm is from an emerging market. Emerging market acquirors tend to acquire minority stakes in about 60% of the transactions when the target firm is also from an emerging

market. A striking difference is that emerging market acquirors gain majority or full control in 60% of the transactions when the target is located in a developed market. Emerging market firms acquire full control of developed market acquirors in 49% of transactions.

The data show that on average, foreign firms acquire a 9% initial minority stake in target firms—the fraction ranges from 6% to 18.5% for developed and emerging market targets, respectively. Conditional on acquiring an initial stake, approximately 40% of transactions involve further acquisitions in the same target firm. There is a 60-40 mix in transactions that lead to additional minority or majority stakes. In transactions involving majority control, on average, 15% lead to additional stakes that fall shy of full control—22% of the transactions result in a complete transfer of ownership to the foreign acquiror.

Arguments for extending the boundaries of the firm across borders often rely on the degree of investor protection provided by institutions of varying quality across the globe as well as very different levels of capital market development. For example, Antras, Desai, and Foley (2009) show that in settings where monitoring is non-verifiable, multinational firms are more likely to establish their subsidiaries rather than license their proprietary technologies through arms-length transactions to unrelated third-parties. These arms-length transactions are more likely to occur in countries with stronger investor protections. Further, multinational parents decrease their ownership stakes, financing, and scale of operations in host economies with weaker institutional environments. The evidence from cross-border M&A transactions corroborates some of these patterns. The latter part of the paper explores the motivations for acquiring control in greater detail.



## **BREXIT: Implications for European M&A**

Given the looming disruptions from uncertainty about Britain exiting from the European Union, it is worth examining European M&A Activity in a little more detail. Panels A and B of Table 6 describe this activity in terms of both numbers and values of transactions. The table considers the EU (without the United Kingdom) as one large country to explicitly consider the importance of the UK in intra-European cross-border M&A activity.

Panel A presents information about the frequency of transactions between 2000-2017. The columns (targets) and rows (acquirors) classify countries/regions as the EU bloc (ex UK), the UK, Non-EU European countries, and the rest of the world. The diagonal elements of the table, therefore, represent domestic M&A activity for each of these classifications. The top left quadrant represents M&A activity between and within the EU and the UK. The patterns are striking. Intra-EU (domestic) M&A activity (~ 28,000 transactions), accounts for more than 60% of the approximately 44,000 total domestic and cross-border M&A transactions, and in about 35% of the transactions, one-party is from the EU and the other from the UK. When we focus on the 15,432 EU-UK cross-border transactions, we see that nearly 70% of the acquirors are domiciled in the UK, while EU acquirors account for 30% of the cross-border transactions with a target in the UK.

Together the data show that while a disproportionate fraction of European M&A activity is intra-European in nature, when we consider M&A flows between the EU and the UK, a significantly higher proportion of the acquirors are based in the UK. The overwhelming representation of the UK acquirors is also evident if we include Non-EU European countries in the mix. In cross-border transactions across Europe, nearly 40% of the acquirors and 15% of the targets are based in the UK. It is not clear how BREXIT will impact the nature of cross-border M&A flows in Europe. Worth noting is the fact that the UK acquirors account for 36% of the cross-border M&A flows from Europe to the rest of the world. Of note is the fact that 8,511 transactions involve pairs of firms from the US and the UK. There are 2,898 transactions between UK acquirers, and US targets—40% of outbound M&A from the UK to the rest of the world and 5,613 transactions involve US acquirers and UK targets—55% of inbound M&A into the UK from the rest of the world. Britain's partnerships with countries outside the EU-bloc will no doubt remain of significance.

Panel B shows the breakdown of M&A activity based on the value of the transactions. A similar picture of UK dominance on the acquiror-side emerges. While intra-EU M&A activity valued at \$1.33 trillion accounts for 66% of the total value of transactions, valued at \$487 billion, UK-based acquirors account for 75% of cross-border M&A activity between the UK and the EU-bloc. Including non-EU countries, UK acquirors account for 40% of the total value of cross-border transactions within Europe and 10% of the total value of cross-border transactions globally.

It is clear the UK has been an active destination for inbound M&A flows from around the world and also an important player on the acquiror side in cross-border M&As. What is less clear is what sorts of policies could come into play regarding the foreign direct investment flows in a post-Brexit world. In the EU, there is uncertainty about what type of regulatory equivalence will operate for the UK acquirors and targets and how free trade agreements will morph between the EU and UK. From a legal standpoint, takeover legislation, intellectual property rights protections, and employment and tax laws could all be affected by Brexit.

Foreign firms that used the UK as a gateway to access European markets may have to rethink their cross-border M&A strategies. Acquiring operations in an EU country may help international firms retain European market access but divert activity away from the UK. Conversely, the rapid depreciation of the British pound and post-referendum share prices may present opportunistic buying opportunities in the UK.

Ultimately, the nature of cross-border M&A activity involving the UK and the EU will depend on the exact form Brexit takes and the precise nature of the UK's arrangements with the EU. For example, if the UK follows the 'Norwegian model,' i.e., leaves the EU but joins the EEA and EFTA and allows for the free movement of capital, labor, and trade, it will retain access to the single market. This model also means that the EU Takeover Directive and EU Merger Regulations will continue to apply to UK-based firms.

Conversely, the "Swiss Model" that would require the UK to negotiate bilateral agreements with EU countries individually would afford the UK greater flexibility to change its laws but also impose a burden of changing the regulatory framework governing M&A activity on firms considering the UK as an FDI/ M&A investment destination. Complete exit from the EU and the single market would leave the UK relying on WTO rules to engage with the EU or negotiate an entirely new free trade agreement and imposes

the most significant uncertainty regarding the regulatory framework governing M&A activity involving the UK.<sup>5</sup>

### **3. Determinants of Cross-Border M&A**

When looking at the organization of firms across borders, a natural first-order question that arises is why MNEs exist at all or why firms choose to become MNEs. In theory, in a world of complete contracting, firms globalizing their operations could outsource production at various stages of the value chain to third-parties via arms-length contracts. Outsourcing is evident across numerous industries where segments of the production process are fragmented across suppliers and countries. Therefore, the rationale for keeping stages of production within the boundaries of the firm across borders must depend on what drives firms to maintain control over their international operations. Fact #14 suggests that the pattern of control acquisition in cross-border transactions varies across developed and emerging market acquirors.

Theories of firm organization often put forward contracting frictions as a primary rationale for extending firm boundaries. In the context of multinational firms, these contracting frictions can span vastly different institutional settings around the world—with varying investor and legal protections that lie at the heart of enforcing property rights agreements. These institutional differences can apply with particular force in industries which are R&D intensive or specialize in intangible asset production where the protection of intellectual property is of paramount importance. Multinational parents may, therefore, be more likely to share proprietary technologies and intangible assets when they acquire majority control of the target, especially in settings with non-verifiable monitoring and weak investor protection.

Similar to domestic M&A, in theory, the potential for synergies or the creation of surplus-value is an important rationale for firms acquiring targets across borders. If foreign owners are more efficient at running the domestic firms, the transfer of ownership from domestic to foreign hands can lead to efficiency gains and be welfare-improving (Krugman 1998). Therefore, the question arises of whether the transfer of ownership from domestic to

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<sup>5</sup> For an excellent summary of legal issues, see “What could Brexit mean for M&A?” <https://www.pillsburylaw.com/images/content/1/0/v2/104451/AcquisitionsDaily-Pearse-July152016.pdf>

foreign hands through cross-border mergers and acquisitions generates surplus value. Alternatively, how profitable are these transactions? Several studies examine this question.

Borrowing from a vast literature on mergers and acquisitions in corporate finance, Chari (2007) turns to the stock market for an answer to this question. Since stock prices represent the present discounted value of expected future cash flows, changes in stock prices provide estimates of surplus-value creation at the time of foreign acquisition announcements. In particular, on the date of a foreign M&A transaction announcement, changes in acquiror- and target-firm stock prices reveal information about the potential wealth creation from the transaction. Changes in market-weighted joint returns for acquirors and targets can, therefore, serve as summary statistics for value creation through M&A activity (Andrade, Mitchell and Stafford, 2001)—in other words, help assess the profitability of M&As.

The advantage of using announcement returns lies in the fact that the effects on productivity or other measures of economic output may occur over many years. The stock market, in contrast, seeks to assess the discounted value of future cash flows and provides an immediate indicator of whether these investments are expected to generate value for the firm's shareholders.

Buiter (2006) argues that FDI flows are extraordinarily productive and profitable because these investments come bundled with unique technical and managerial skills and knowledge. Therefore, the cumulated historical value of these cross-border M&A flows is likely but a small fraction of the fair value or fundamental value today of the equity claims on the assets abroad. Surplus value creation (or profitability) through the transfer of control is likely to be high if the investing country is very different from the recipient country, for example, flows from developed markets to risky emerging markets. However, putting a firm figure on the value of these flows is a daunting challenge (Buiter, 2006). Using abnormal announcement returns associated with M&A transactions, we can estimate the market-capitalized returns generated by developed-market cross-border M&A flows to emerging markets.

In Chari (2007), I focus on developed to emerging market cross-border M&A flows and use a transaction level dataset (the Securities Data Corporation (SDC) Thompson's International Mergers and Acquisitions database) to identify the M&A transactions over the period 1988-2003. Similar to the Zephyr database, the SDC data provide information about

the transacting parties, the dates the acquisitions were announced and completed, the stakes sought by the acquiring firms, and a variety of other transaction characteristics such as deal size and method of payment. The stock price information comes from Datastream, Bloomberg, and national stock exchanges.

The data confirm the view that foreign acquisitions in emerging markets create surplus value. On average, following a foreign acquisition announcement, market-capitalization-weighted joint returns for targets and acquirors show a statistically significant increase of 5.8% when majority control is acquired. The joint-return increases are robust to the inclusion of controls for country, time, industrial diversification, method of payment effects, as well as acquiror- and target-firm characteristics such as size and liquidity. The findings are consistent with studies that conclude that FDI results in improvements in productivity (Aitkin and Harrison, 1999) and that the concentration of productivity gains resulting from FDI is in plants where multinational firms acquire majority or full ownership (Perez-Gonzalez, 2004).

The findings also suggest that acquiring majority control may be a necessary prerequisite to undertaking productivity improvements, especially in settings where it is difficult to write or enforce complete contracts. Since problems of ineffective monitoring and incomplete contracting are especially relevant in the context of emerging markets, by acquiring majority control, developed-market acquirors in effect extend the boundaries of the firm across borders to encompass the emerging-market targets.

Similarly, in Chari, Ouimet, and Tesar (2010), we examine shareholder value gains from cross-border mergers and acquisitions (CBMAs) involving developed country acquirors and emerging market targets. For a sample of 390 transactions, we find that market-adjusted returns amount to a total of USD 111.5 billion for acquiring firm shareholders. On average, acquirors realize a positive return of 4.43 percent when they announce the acquisition of control of a public target from an emerging market. The median net return (acquiror's dollar value gain/transaction value) is 1.37 when control of an emerging market target transfers to a developed market acquiror. The study finds that improved governance (via control rights) and the transfer of intangibles such as R&D or brand value from acquirors to targets explain the revaluation in acquiror stock prices and the resulting dollar value gains in emerging market transactions.

Another set of explanations for cross-border M&As focus on imperfect capital market integration across countries where multinational firms with deep pockets can make purchases around the world, especially when foreign assets are available cheaply. These explanations rely on financial frictions in international capital markets as determinants of cross-border M&A. For example, Erel, Liao, and Weisbach (2015) examine differences in valuations between acquiror and target firms, which can vary substantially over time or any pair of countries via fluctuations in exchange rates and stock market movements. The authors find that countries with appreciated currencies are more likely to have acquiring firms while countries whose firms in countries where currencies have depreciated are more likely to be targets. Valuation differences may also explain the wave nature of M&A activity (Fact # 7).

Baker, Wurgler, and Foley (2009) suggest a role for cross-border arbitrage by multinational firms. The study finds that FDI flows increase sharply with source-country stock market valuations and suggest a “cheap financial capital” channel in which FDI flows in part reflect the use of relatively low-cost capital available to overvalued parents in their own countries. Similarly, Erel et al. (2015) find that firms in countries with high-performing stock markets are more likely to be buyers while those in countries with relatively poor-performing stock market tend to be targets.

Blonigen, Fontagne, Sly, and Toubal (2012) also find a valuation effect that drives cross-border M&A such that productivity losses among target firms provide an opportunity for multinational acquirors to obtain desired assets relatively cheaply. Finally, Erel et al. (2014) provide evidence that both foreign and domestic acquisitions ease financial frictions in target firms in a large sample of European acquisitions. They find that the investment levels of the target firms increase significantly following an acquisition.

Studies of cross-border M&As that examine financial frictions also focus on a "cheap assets" channel. Labeled "fire-sale FDI," countries with financial crises provide ample opportunity to purchase liquidity-constrained and otherwise stressed assets at bargain prices. To explain the surge in foreign acquisitions of Asian firms during the 1997–98 financial crisis at a time when portfolio investors were fleeing from Asia, Krugman (1998) first put forward the idea of fire-sale foreign direct investment. Krugman provides anecdotal evidence from the financial press that sharp nominal exchange rates depreciations combined with a rapid deterioration in domestic macroeconomic conditions led to severe

liquidity constraints for domestic firms. As a result, distressed domestic firms were purchased by foreign investors at discounted prices or fire-sale prices. Motivated by this idea, Aguiar and Gopinath (2005) find evidence of fire-sale FDI in East Asia during the Asian Financial crisis. Specifically, countries that experience dramatic reversals in portfolio equity and debt flows simultaneously experience an increase in foreign acquisitions, in particular of liquidity-constrained firms.

Acharya and Shin (2009) develop a theoretical model that explains an inflow of FDI and outflow of foreign portfolio investment during financial crises. They show that the transfer of control in the form of direct ownership of failed firms' assets can circumvent agency problems, but during crises, efficient owners (e.g., other domestic firms) also face financing constraints. The result is a transfer of ownership to foreign firms at fire-sale prices. Their model predicts that such fire-sale FDI is associated with flipping acquired firms back to domestic owners once the crisis abates.

However, the evidence regarding fire-sale FDI is mixed. In Chari (2007), I use stock returns to address the question of whether foreign acquirors took advantage of cash-strapped targets during crisis periods. By exploiting the cross-time variation in acquiring firm returns, I investigate whether the gains to acquiring firms increase significantly during crisis periods in comparison to periods of relative calm. The results show that crisis periods do not coincide with a period of substantially higher acquiror returns suggesting that it is not clear that the developed-market acquisitions represent fire-sales by firms in emerging markets. Note that the crisis periods (especially in Asia) coincide with the deregulation of the market for corporate control—several countries liberalized their M&A laws making it easier for foreign companies to acquire domestic firms under the policy direction of the IMF. Therefore, it is important to recognize that crisis period returns also reflect the liberalization measures implemented during this time.

Similarly, Alquist, Mukherjee, and Tesar (2016) develop a model of cross-border mergers and acquisitions to compare acquisitions undertaken during financial crises with acquisitions made during non-crisis periods. The study provides two motivations for foreign acquisitions. First, a liquidity motive where foreign firm acquisitions relax the target credit constraints. Second, a synergistic motive where acquisitions exploit operational synergies between the target and the acquiror. The authors suggest that during crises, credit conditions tighten in the target economy and the liquidity motive dominates. Their model

predicts that during crisis relative to non-crisis periods, (1) foreign acquisitions are more likely; (2) proportions of foreign acquisitions that involve industry diversification are higher; (3) average ownership stakes are lower; and (4) acquisition duration is lower (i.e., acquisition stakes are more likely to be flipped). Their empirical analysis finds support for the first prediction but not for the remaining three. These results therefore suggest that foreign acquisitions in emerging markets do not differ in these important ways between crisis and normal periods.<sup>6</sup>

A final set of explanations about the determinants of cross-border M&A activity focuses explicitly on institutions and corporate governance concerns. As suggested earlier in this section, legal and institutional features can have a significant impact on the property rights setting and the incomplete contracting problem. In Chari et al. (2009) we examine whether the ability of developed-market acquirors to bring better institutional practices to emerging-market targets may drive up expected future cash flows if the target is acquired and becomes bonded to better institutions (Coffee 1999). We use the legal and institutional measures as proposed by La Porta et al. (1998) for the countries in our sample as proxies for institutional differences between countries.

The study finds that acquirors from countries with better investor protection experience significant gains when majority control of a target located in a country with weak investor protection is announced. However, these gains only occur when the acquiror attains control of the target. The results are consistent with our hypothesis that, with control, acquirors can bond target firms to the institutions in their home countries, leading to the creation of shareholder value.

Other international M&A studies focus on the gains to target firms when they are acquired by firms operating in an environment with better investor protection. For example, Rossi and Volpin (2004) show that firms in countries with inadequate investor protection are more likely to be targets in cross-border acquisitions. Bris and Cabolis (2008) find that target abnormal returns increase with better shareholder protection and accounting standards in the acquiror's country of origin for wholly-acquired targets using a sample of developed- and emerging-market transactions.

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<sup>6</sup> Using data on M&A transactions from 27 EU countries from 1999 to 2012, Wietzel, Kling, and Gerritson (2014) find little evidence for 'fire-sale FDI' suggesting an integrated European market without significant financial frictions. Similarly, Stoddard and Noy (2015) find that financial crises have a significant adverse impact on FDI flows and M&A activity. They also do not find empirical evidence of fire-sale FDI.



While there are numerous reasons for firms to make cross-border acquisitions, a few major themes broadly summarize the nature of these transactions. First, factors that drive control acquisition referred to in Fact #14 in a cross-border context are key and fall under the rationales of protecting intellectual property or improving corporate governance structures especially in countries with weak institutions. Second, valuation differences between acquiror and target firm countries referred to in Fact #7 either due to stock market valuations or exchange rates in source countries (booms or appreciations) or destination countries (most frequently crises and depreciations). Finally, the rules of the game (deregulation or protectionism) or changes in regulatory frameworks lead to significant changes in the ownership patterns of firms across borders and the organization of global supply chains.

#### **4. Post-Acquisition Outcomes**

In the context of foreign acquisition of domestic targets, it is important to examine whether foreign ownership leads to improvements in firm-profitability or plant-productivity.<sup>7</sup>

Studies about the effects of FDI focus on plant-level productivity measures, such as total factor productivity (TFP) or labor productivity (output per worker). Antras, Desai, and Foley (2009) document the productivity-improving role of US multinational firms.

Fukao et al. (2006) show that Japanese target firms that were foreign investment recipients experienced rapid improvements in productivity and profitability compared to those acquired by domestic firms. Akben-Selçuk (2008) finds the same using data on Turkish firms. Doms and Jensen (1998) also find that foreign-owned companies in their sample are more productive than domestic-owned ones. Studies of industrial country firm acquisitions of developing country targets indicate that both parties experience valuation improvements following the transactions (Chari, Ouimet, and Tesar, 2009). In the developed-market context, Girma and co-authors in a series of papers concentrating on

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<sup>7</sup> See, for example, Caves, 1996; Aitken and Harrison, 1999; Perez-Gonzales, 2004; Arnold and Javorcik, 2005; and Petkova, 2008. Aitken and Harrison (1999) conclude from a sample of Venezuelan firms that foreign ownership is correlated with productivity improvements. Arnold and Javorcik (2005) use Indonesian plant-level data and find that foreign ownership leads to significant improvements in productivity in the year of acquisition as well as in subsequent years. Petkova (2008) conducts a study using Indian plant-level data and concludes that foreign-owned plants experience improvements in productivity three years following foreign investment. In the literature concerned with spillovers from FDI, Aitken, and Harrison (1999) find adverse effects on domestic firm productivity from FDI, Javorcik (2004) identifies positive FDI spillovers effects on domestic firms through backward linkages.

acquisition targets in the United Kingdom document improvements in growth rates of firm performance following foreign acquisitions.

The most direct test of the post-acquisition performance of developed-market acquisitions is to examine the return on assets (ROA) of targets following the acquisition. In Chari et al. (2009) we investigate a change in ROA in the second year following cross-border acquisition for a sample of developed and emerging market targets and find that there is a correlation between the transfer of majority control of emerging market targets and higher post-acquisition ROA.<sup>8</sup> We also find that (i) stock-financed acquisitions are associated with lower accounting returns; (ii) transactions where the acquiror comes from an industry with high patent-intensity correlate with higher accounting returns; (iii) compared to developed-market targets, the acquisition of control of emerging-market targets is associated with higher accounting returns.

Following heightened interest in a spate of emerging market acquisitions of US firms, in Chari, Chen, and Dominguez (2012) we analyze the performance of firms that are acquired by firms located in emerging markets. We examine stock market, accounting measures, and employment outcomes. In the study, abnormal announcement returns provide a forward-looking estimate of expected shareholder value creation. We also examine changes in other aspects of target-firm operations, such as property, plant and equipment, employment, and sales following the acquisition. Post-acquisition, we evaluate changes in accounting measures of performance such as profitability, investment, and sales as well as employment outcomes in US targets that are the subject of emerging market acquisitions.

Our results suggest that emerging-market firms tend to acquire public targets with relatively high levels of sales, employment, and total assets. We also find that the stock price response of target firms is positive and significant around the time of the acquisition announcement. On average, target stock price returns on a cumulated basis over a three-day window around the acquisition announcement date increase by 8 percent. This abnormal return remains significant and positive for extended windows of 10 and 21 business days. Consistent with the positive announcement returns, we find that after the acquisition the

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<sup>8</sup> Standard accounting rules stipulate that firms must include the profits or losses of any majority-owned subsidiaries in their consolidated accounting statements. Thus, in cases of control acquisition, the acquiror's accounting performance includes the target's performance.

profitability of acquired targets improves. The target firm's ROA increases by 7 percent in the five years following the acquisition.

We also find strong evidence that the acquiring firms undertake significant restructuring of the target firms. Measures of employment, sales, and plant, property, and equipment (PP&E) in the target firms all decline in the post-acquisition years. This pattern of increasing profits (income/assets) but declining sales are consistent with post-acquisition firm-efficiency improvements. For instance, if acquiring firms shut down or get rid of unprofitable divisions, declining target sales will be accompanied by rising profits. The decline in employment and net PP&E we observe, also suggest downsizing to improve overall profitability as a percent of assets.

The downsizing of employment is consistent with a comparative input cost hypothesis given that emerging-market acquirors may take advantage of the low wages in their home countries by cutting labor-intensive activities in the United States following an acquisition. Whereas industrial country acquirors often seek out emerging markets for their lower labor costs, we find that emerging market acquirors can relocate (or in-source) manufacturing activity while keeping existing distribution networks in the host country of the acquired business.

Chen (2011) explores whether the acquiror-country of origin of the acquiror matters for post-acquisition target performance. Compared with domestic acquisitions, Chen finds that target firms acquired by foreign firms experience higher returns on assets. However, the channels of performance improvement vary across foreign acquiror types. Emerging market acquisitions lead to reductions in sales and employment, whereas acquisitions by industrial country firms increase sales and employment in targets. The results of this study show that targets experience similar patterns in performance improvements and restructuring processes after being acquired by emerging market firms as the Chari et al. (2012) study.

There is a wide body of literature that documents the economy-wide effects of FDI and economic growth (See Alfaro and Johnson, 2012 for a nice survey). The evidence suggests that FDI can affect target sectors vis competition, technology diffusion, etc. and the beneficial effects generally depend on the strength of local institutions. It is possible that cross-border M&A activity also generates these types of positive externalities.

In general, a wide body of evidence suggests that in the international context, mergers and acquisitions are key drivers of productivity improvements in target firms with spillovers to other firms in the destination countries. This evidence is generally consistent with the broader evidence related to the productivity enhancing role of foreign direct investment or the “good cholesterol” in international capital flows. The patterns regarding productivity improvement also stand in contrast to purely domestic M&A activity where the evidence about value creation is more mixed. What is consistent across cross-border and domestic M&A with respect to post-acquisition outcomes is the reorganizations that follow in terms of employment and capital investment fundamentally changing the structure of the merged firms and the industries to which they belong.

## 5. Policy Considerations

A rapid increase in foreign acquisitions often engenders a heated debate in host countries. Popular sentiment is of the view that foreign investments through acquisitions merely involve a transfer of existing assets from domestic to foreign hands and are of little value to the host nation.<sup>9</sup> For instance, in the aftermath of the East Asian crisis, following a spate of foreign acquisitions, Prime Minister Mahathir of Malaysia famously proclaimed, “If we are not careful, we will be re-colonized.”<sup>10</sup> Furthermore, if foreign acquisitions coincide with crisis periods in the host nations, these transactions have had the added controversy of domestic firms being forced to liquidate assets at fire-sale prices (Krugman 1998).

In the United States, a spate of acquisitions by foreign firms also leads to consternation in policy circles. For example, the proposed acquisition of commercial operations at six U.S. ports by Dubai Ports World in 2006, and the 2005 acquisition bid by CNOOC, the Chinese state-owned oil company, to take over Unocal met with considerable resistance in Washington and were ultimately thwarted, in Unocal’s case in favor of Chevron’s lower offer of US\$17.4 billion. Another example of a high-profile emerging market acquisition was the Indian Tata Motors 2008 purchase of Ford’s Jaguar and Land Rover divisions.

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<sup>9</sup> "When Japanese-owned Bridgestone takes control over the U.S. firm Firestone.....in such an acquisition there is no investment expenditure; merely an international transfer in the title of corporate assets." See K. A. Froot, "Japanese Foreign Direct Investment," [NBER Working Paper No. 3737](#), June 1991, and in *U.S.-Japan Economic Forum*, Vol. 1, M. Feldstein and Y. Kosai, eds., National Bureau of Economic Research and Japan Center for Economic Research, 1991.

<sup>10</sup> Televised speech, Oct 1998.

More recently, in 2013, China's biggest pork producer, Shuanghui International acquired Smithfield Foods, the nearly 100-year old Virginia-based meat giant, for \$4.7 billion in cash.

Policy implications stemming from cross-border M&A activity therefore arise from two separate concerns. When foreign firms try and acquire domestic natural resources or critical technology, it is legitimate to ask whether national security may be compromised by a transfer of domestic assets to foreign control. On the other hand, if national security is not at risk, nationalist sentiments such as those expressed by Prime Minister Mahathir often play a role in whether cross-border acquisitions are successfully completed or derailed.

An interesting study by Dinc and Erel (2013) examines the impact of economic nationalism on cross-border mergers and acquisitions. Using data from the European Union for over ten years, the study documents government reactions to significant corporate M&A attempts. The paper presents compelling evidence for widespread economic nationalism in where governments prefer that firms remain domestically-owned rather than be acquired by foreigners. Moreover, these preferences are stronger in countries with active far-right parties and weak governments. The study shows that nationalist government reactions not only affect the outcome of targeted M&A transactions but also deter future foreign investment in these countries.

The United States remains the largest recipient of FDI flows in the world. It is also the largest source country in terms of direct investment abroad. In 2017, the total stock of FDI in the United States was \$4.03 trillion and U.S. direct investment abroad was \$6.01 trillion (BEA). Historically, the U.S. has therefore taken an "open and rules-based" approach to foreign investment flows and more or less allowed the market to determine the extent and nature of these flows. However, increasingly foreign acquisitions considered threats to either national security about critical technologies or natural resources are under review by the committee on foreign investment in the United States (CFIUS).

Considering economic threats under the umbrella of national security has also increased in importance. Congressional scrutiny of the review process at CFIUS has increased with the emergence of state-owned enterprises as acquirors where foreign governments have "substantial interests" as well as attempted foreign acquisitions of sensitive and critical technologies. These transactions are subject to CFIUS review to determine whether a transaction threatens to impair the national security, or the foreign

entity is controlled by a foreign government such that it represents a strategic geopolitical calculus rather than purely commercial interest, or it would result in control of any “critical infrastructure that could impair the national security.”<sup>11</sup> CFIUS regulations apply directly to cross-border M&A. Between 2008-2015, CFIUS received 925 notices from foreign investors of plans to acquire, take over, or merge with a U.S. firm.

In 2018, the CFIUS statute was amended through the Foreign Investment Risk Review Modernization Act (FIRRMA) and expanded the scope of “covered” transactions subject to CFIUS review to include, for example, the foreign purchases of distressed assets or bankrupt firms to acquire critical technologies. It is worth noting that to date, spanning three administrations, only six foreign M&A transactions were blocked by presidential action based on CFIUS recommendations—five of the six involved Chinese acquirors.

Fundamental policy issues therefore arise in the context of how to weigh the benefits of foreign investment in the domestic economy with national security interests. Evidence suggests that foreign investment can create jobs, spur local investment, and contribute to tax revenues which matters at the state, local, and federal levels. Strategically, the question also arises of how the United States, the biggest beneficiary of inward foreign direct investment, can protect its national security interests while promoting a liberalized international economic order that facilitates US investment abroad and encourages the free movement of capital across other countries' borders.

At the same time, how should policymakers determine whether foreign investment in an industry (critical or not) is too high or too concentrated? Do these concerns outweigh the functioning of a free and efficient market for international corporate control? Another challenge is about how national security should be defined in a rapidly evolving global economic and technological landscape. These are some of the open policy questions that will directly impact the nature of cross-border M&A, for which easy answers will be hard to come by, and in all likelihood continue to be handled on a case by case basis rather than by policy decree.

While CFIUS scrutiny has gained importance in the United States, European Union (EU) antitrust issues have also heated up. Planned mergers and acquisitions of firms that do significant business in the EU must be notified to the European Commission if the

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<sup>11</sup> Pg. 22. The Committee on Foreign Investment in the United States (CFIUS)  
<https://fas.org/sgp/crs/natsec/RL33388.pdf>.

combined businesses exceed certain revenue thresholds.<sup>12</sup> If the EC concludes that a merger would distort competition, it may block it unless the companies propose remedies. More than 7,500 cases have been referred to the Commission since 1990 and 30 cases blocked on anti-competitive grounds.

In 2019, for example, the proposed merger between rail manufacturers Reuters Siemens and Alstom was derailed after EU regulators blocked the deal, leading to calls from Germany and France for an overhaul of EU competition policy to better meet global challenges such as competition from China. Other examples include the prohibition of a joint venture between Tata Steel and ThyssenKrupp and rejecting a bid by the German copper company Wieland-Werke AG to buy a business unit from Aurubis, Europe's biggest copper smelter as anti-competitive and that would lead to increased prices for different types of steel and copper, respectively.

The EU's merger review process has been the subject of controversy given instances of mergers that were approved by other regulatory authorities (such as USDOJ in the case of the \$42 billion acquisition of Honeywell by General Electric in 2001) but blocked by the Commission. Critics argue that the merger policy is used for advancing protectionist industrial policy rather than competition (Bradford et. al., 2018).<sup>13</sup> US officials have leveled charges that the Commission deviates from the norm that "the antitrust laws protect competition, not competitors" and accuse the Commission of "using its merger-review process as a tool to protect and promote European industry at the expense of U.S. competitors." US tech giants such as Apple, Google, Facebook, chipmaker Broadcom and Amazon have faced high-profile investigations and/or subject to hefty fines by the Commission for anti-trust violations. Looking ahead, antitrust considerations no doubt loom large in the context of cross-border M&A in the European Union.

More generally, a broad range of public policy issues surrounding cross-border M&A arise as governments weigh the balance of the potential benefits of M&A activity (e.g., increased productivity growth, inward flows of capital financing, technological diffusion) against the potential costs (loss of markets to foreign firms, a loss of corporate

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<sup>12</sup> The EC enforces merger control in the EU, on the basis of the Merger Regulation. [https://ec.europa.eu/competition/mergers/legislation/regulations.html#merger\\_reg](https://ec.europa.eu/competition/mergers/legislation/regulations.html#merger_reg)

<sup>13</sup> <https://promarket.org/european-union-use-antitrust-power-protectionism/>

control, national security concerns, and greater market concentration). Here, as we see in many an instance, some countries welcome greenfield investment, but not foreign firms taking over their domestic companies.

## **6. Concluding Remarks**

This paper documents a series of facts about recent trends in cross-border M&A activity around the world. The facts depict several salient features about the international market for corporate control. Transactions-level data show that over the last two decades, cross-border mergers and acquisitions comprise nearly 50% of FDI flows following the Global Financial Crisis. The number of cross-border M&A transactions has tripled over the last two decades. Interestingly, cross-border M&A activity is highly concentrated among a small set of countries. In particular, both in numbers and value of transactions, the United States and Europe dominate the market for international corporate control.

The industrial composition of acquirors shows the rising global dominance of the services sector. Further, a significant fraction of cross-border M&As involve industry diversification integrating global value chains across borders. Similar to domestic M&As, cross-border M&A transactions occur in waves—over the last two decades, there were two waves, one that peaked in 2007 before the global financial crisis and a second that peaked in 2015. Successive waves are bigger in terms of the numbers of transactions, and the value of transactions increases dramatically. The last decade also saw the rise of mega-deals or, deals greater than \$10 billion, in cross-border M&As.

Acquirers in cross-border M&As tend to be large, relative to target firms. The median acquiror firm is five times larger than the median target firm. For the most part, firms involved in cross-border M&A deals are privately-held and cash is the predominant form of payment in these transactions. The importance of private equity transactions in cross-border M&A has increased over time and around the globe. Further, a group of tax haven countries play a significant role in cross-border M&A transactions.

The data show that the pattern of control acquisition in cross-border transactions varies across developed and emerging market acquirors. Alternative motivations and incentives for acquiring control across borders range from extending the boundaries of the firm to encompass foreign targets in settings of unverifiable and costly monitoring, to providing liquidity to financially constrained firms. The evidence on post-acquisition



outcomes suggests that by and large target profitability improves following acquisitions and the acquisitions seem to create significant surplus value. However, it is also the case that if foreign acquirors undertake significant restructuring of target firms, there can be an impact on employment and investment. The paper concludes with a discussion of policy implications as policy makers weigh national security concerns with a desire to increase foreign investment in their economies.

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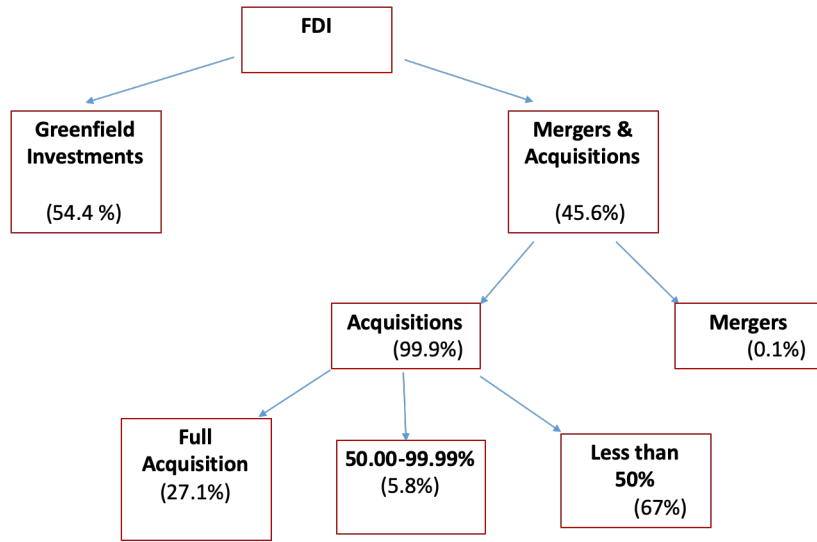
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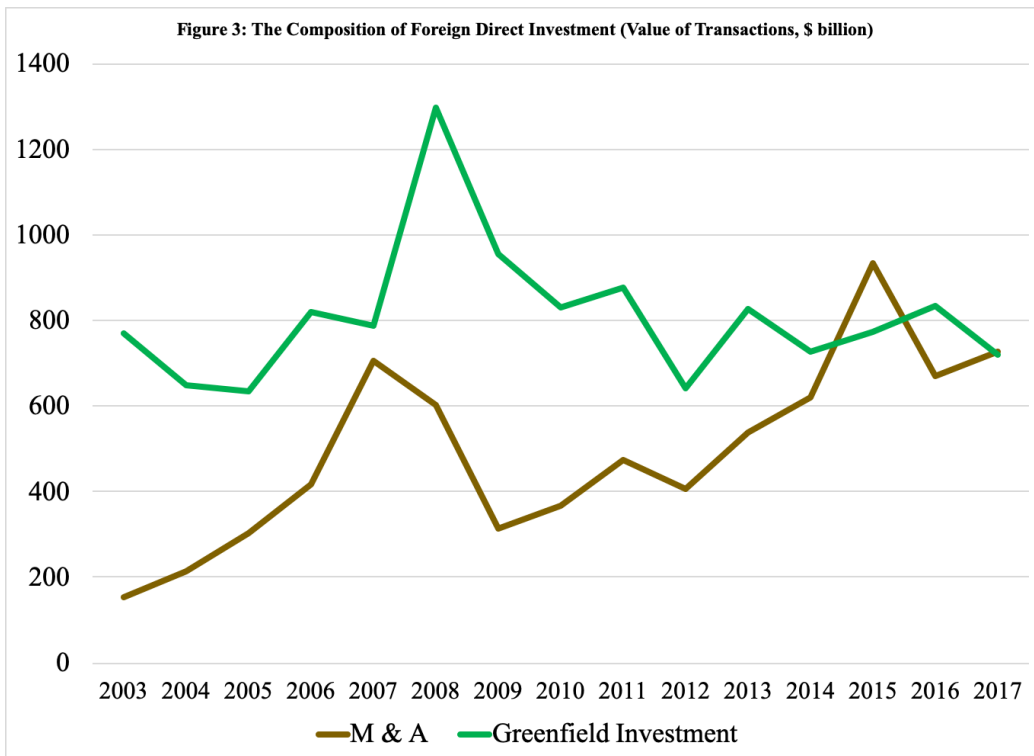
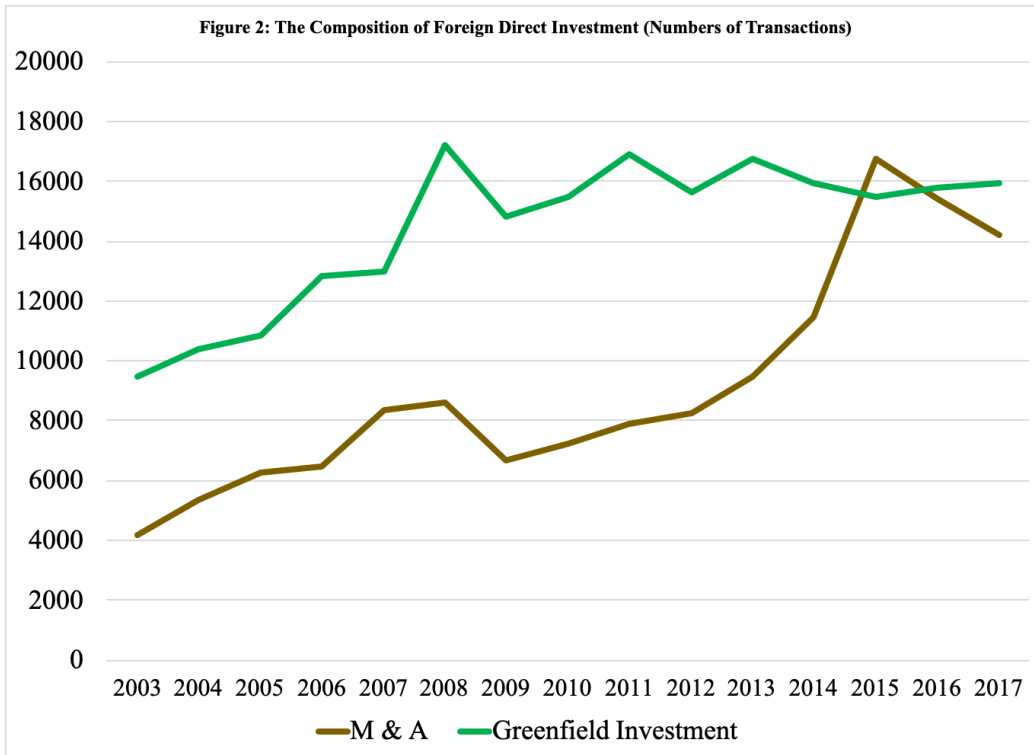
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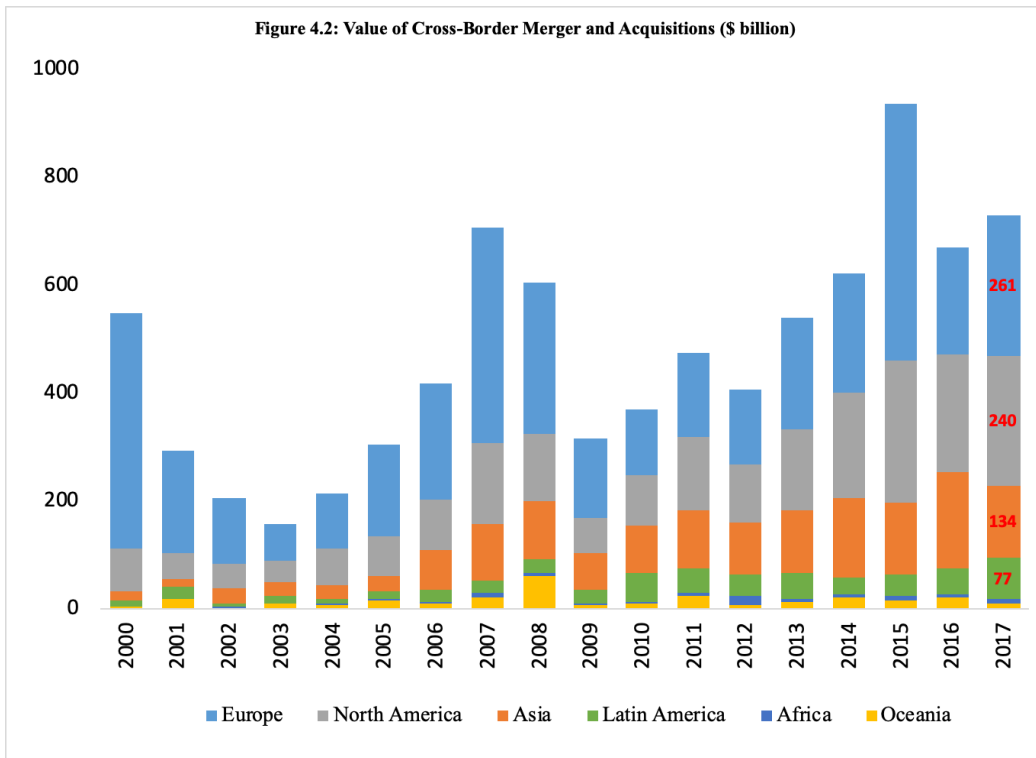
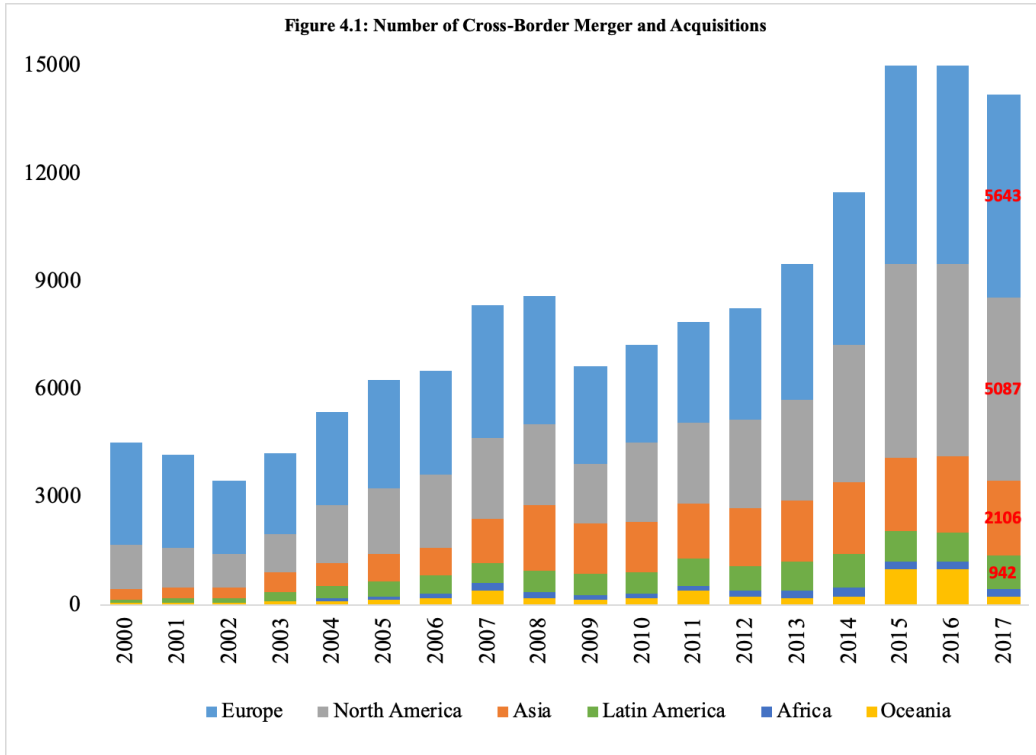
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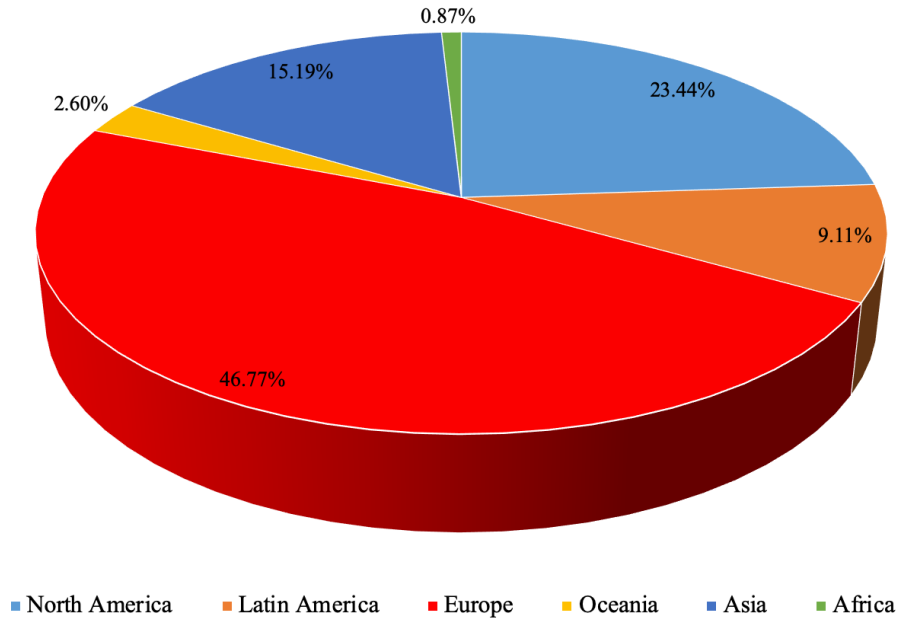
**Figure 1: Snapshot of FDI Composition (2017)**  
**Number of Transactions (%)**



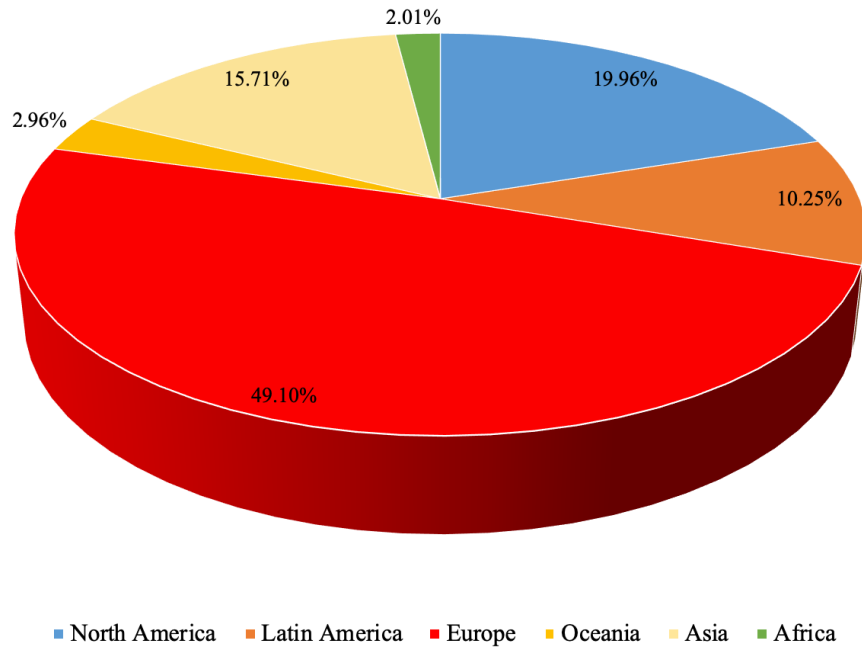




**Figure 5.2 Regional Distribution of Target**  
(percent of total value of cross-border deals)

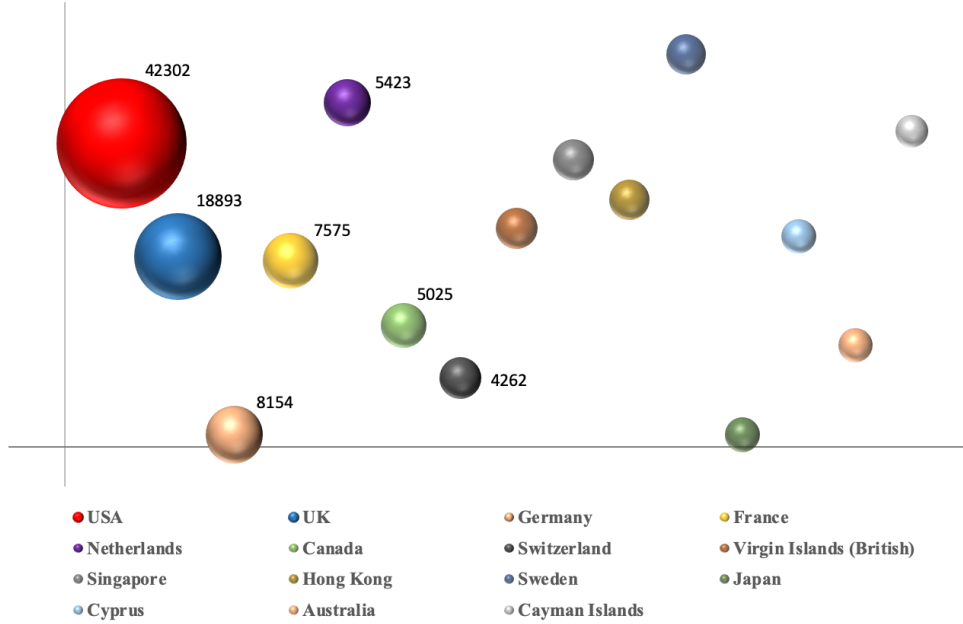


**Figure 5.1 Regional Distribution of Acquiror**  
(percent of total value of cross-border deals)



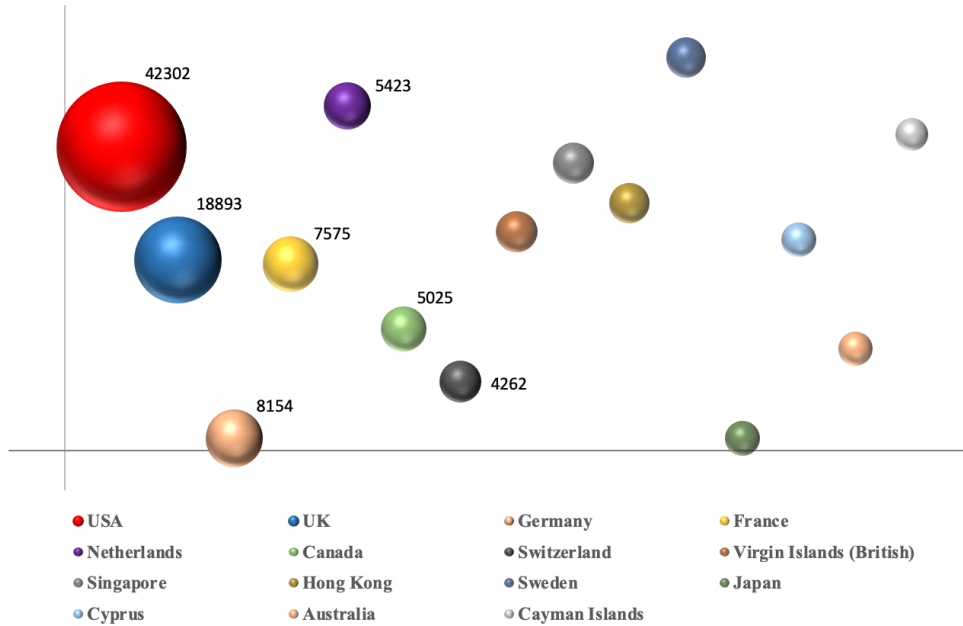


**Figure 6.1: Total Number of Cross-Border Merger and Acquisitions by Acquiror country  
(Bubble size represents number of transactions of each Acquiror country)**



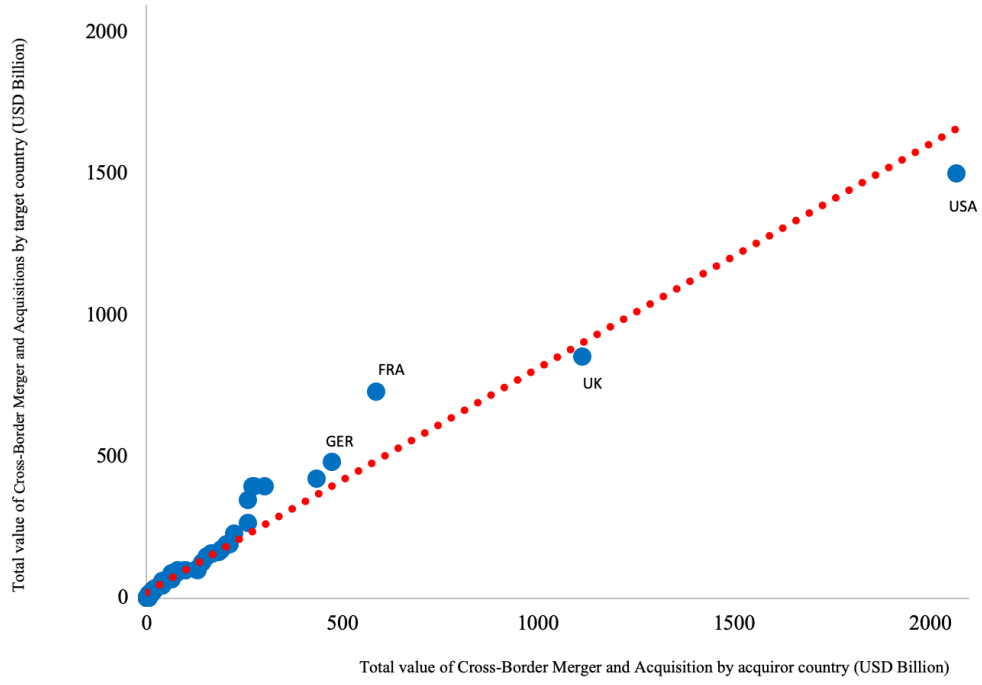
*\*Y-axis values were randomly chosen to create gaps between bubbles for visual purposes and has no economic significance*

**Figure 6.1: Total Number of Cross-Border Merger and Acquisitions by Acquiror country  
(Bubble size represents number of transactions of each Acquiror country)**



*\*Y-axis values were randomly chosen to create gaps between bubbles for visual purposes and has no economic significance*

Figure 7: Correlation between Acquiror and Target values by country



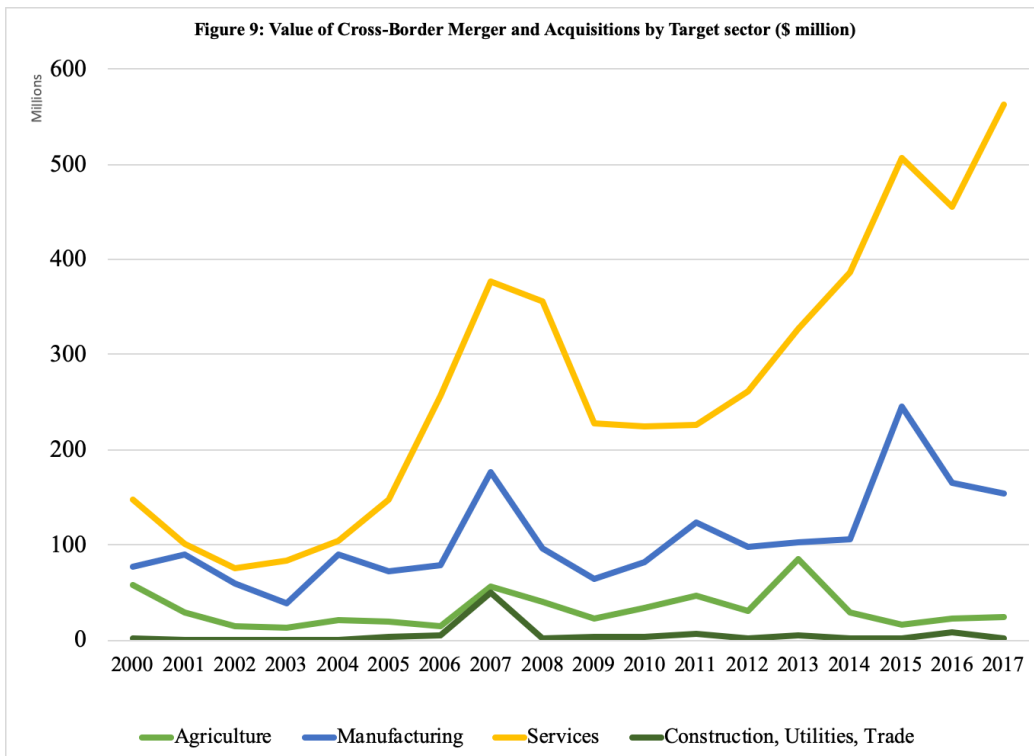
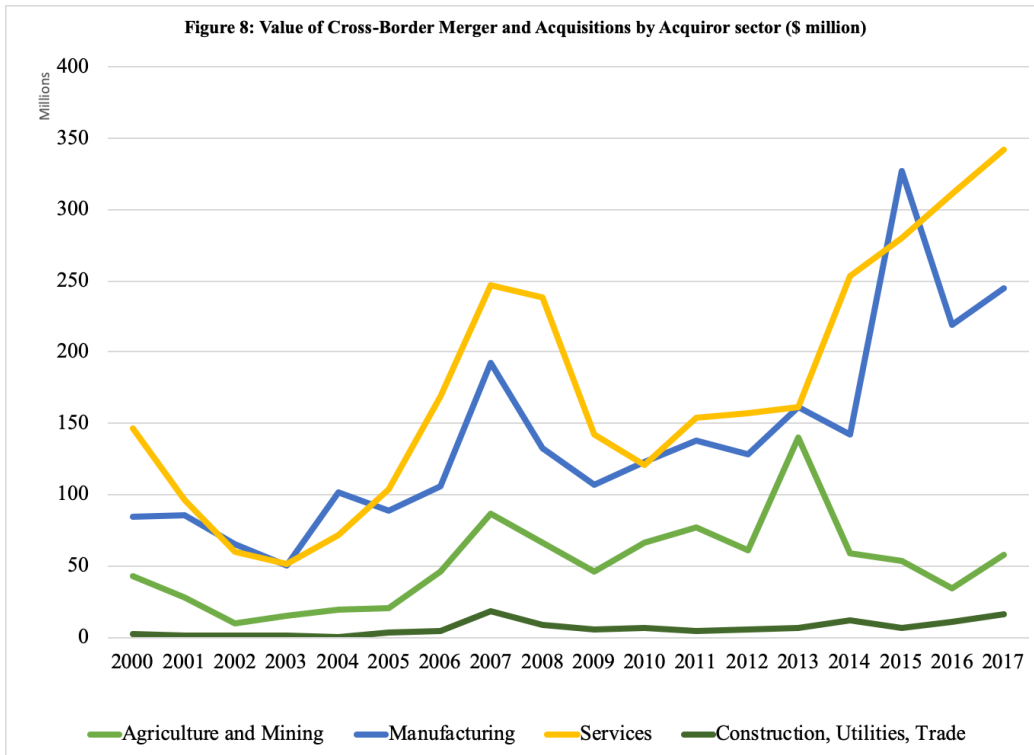
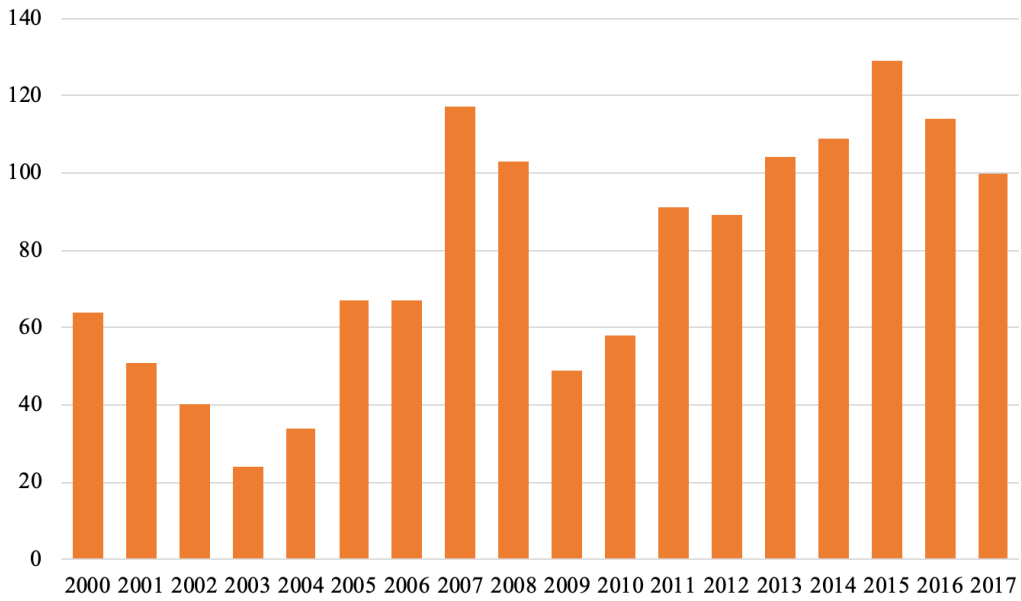
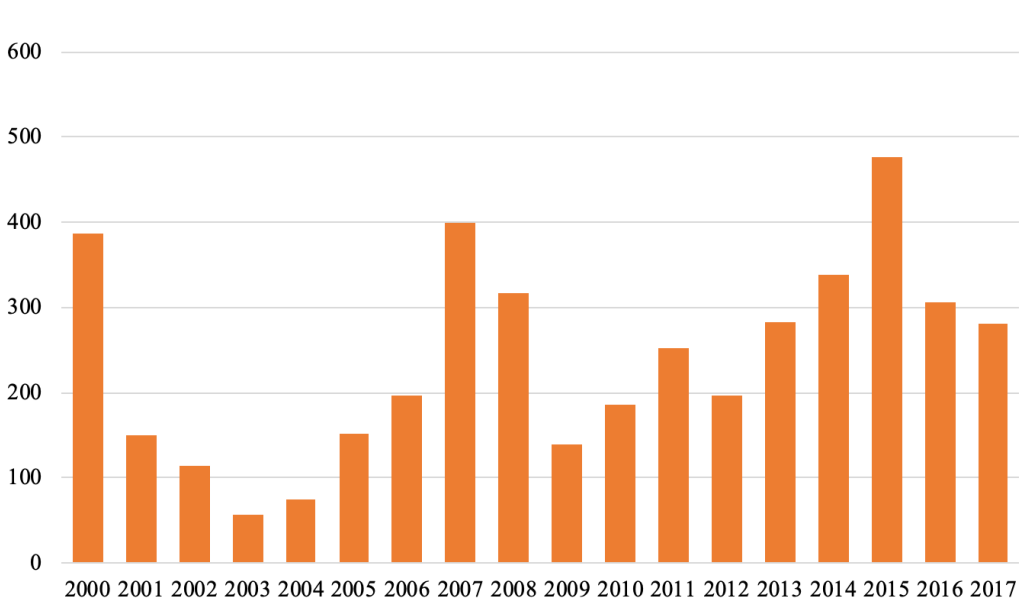


Figure 10: Number of Megadeals



Megadeals defined as those transactions greater than USD 1 billion

Figure 11: Value of Megadeals (\$, billion)



Megadeals defined as those transactions greater than USD 1 billion

Figure 12: Public-Private Status of Firms in Cross-Merger and Acquisitions

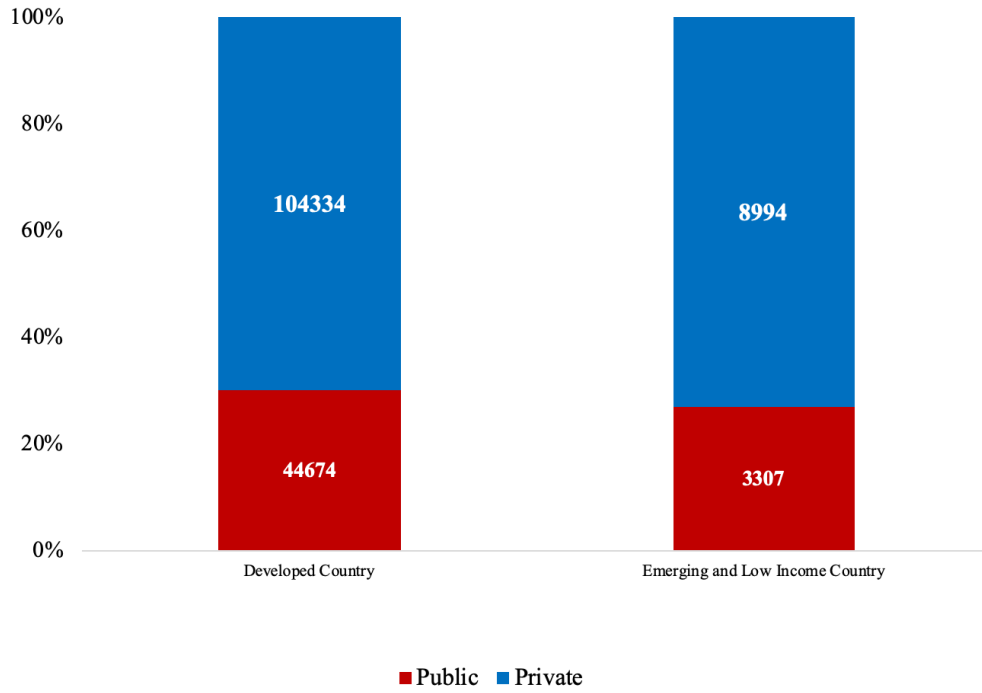
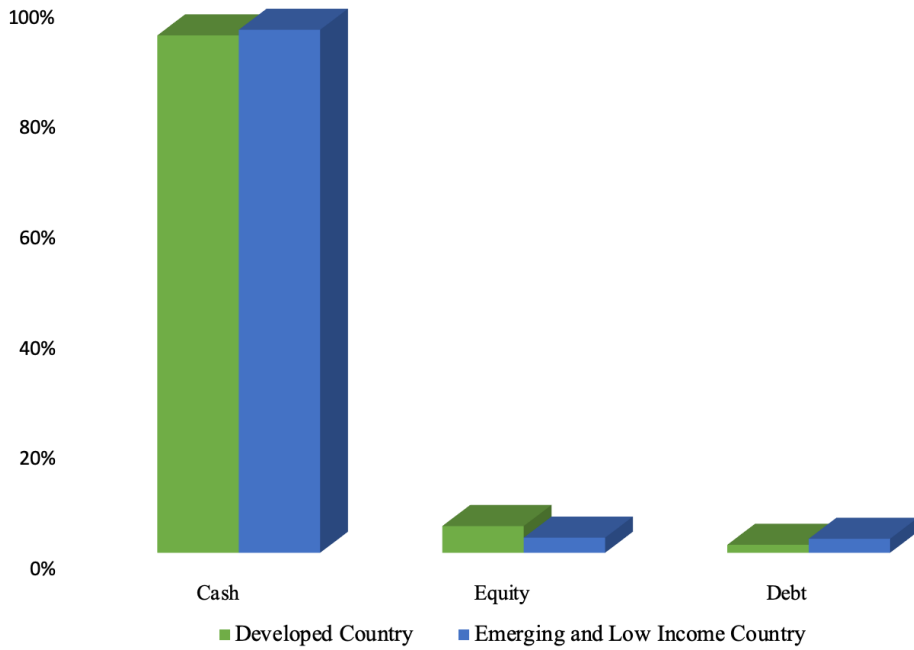
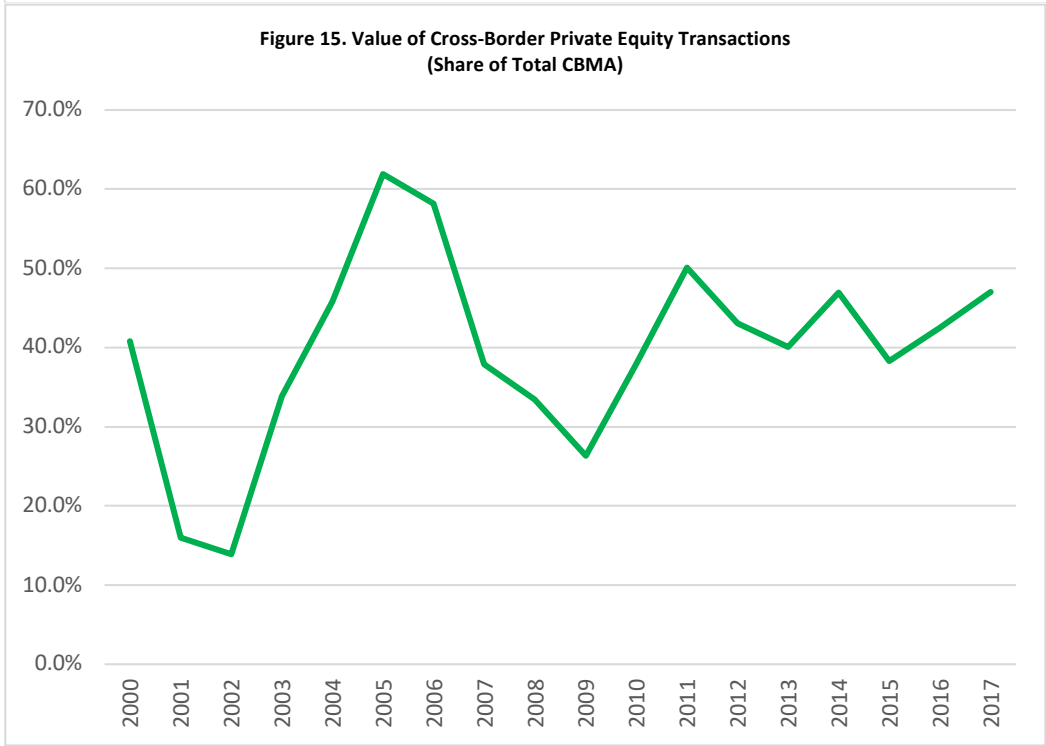
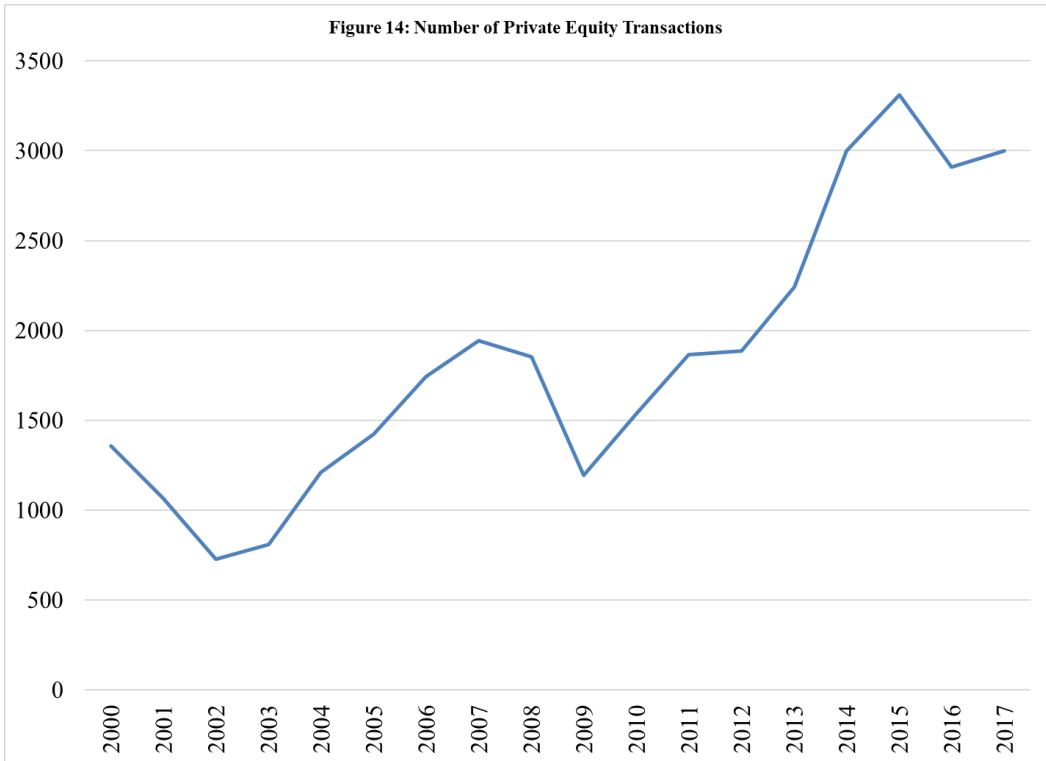
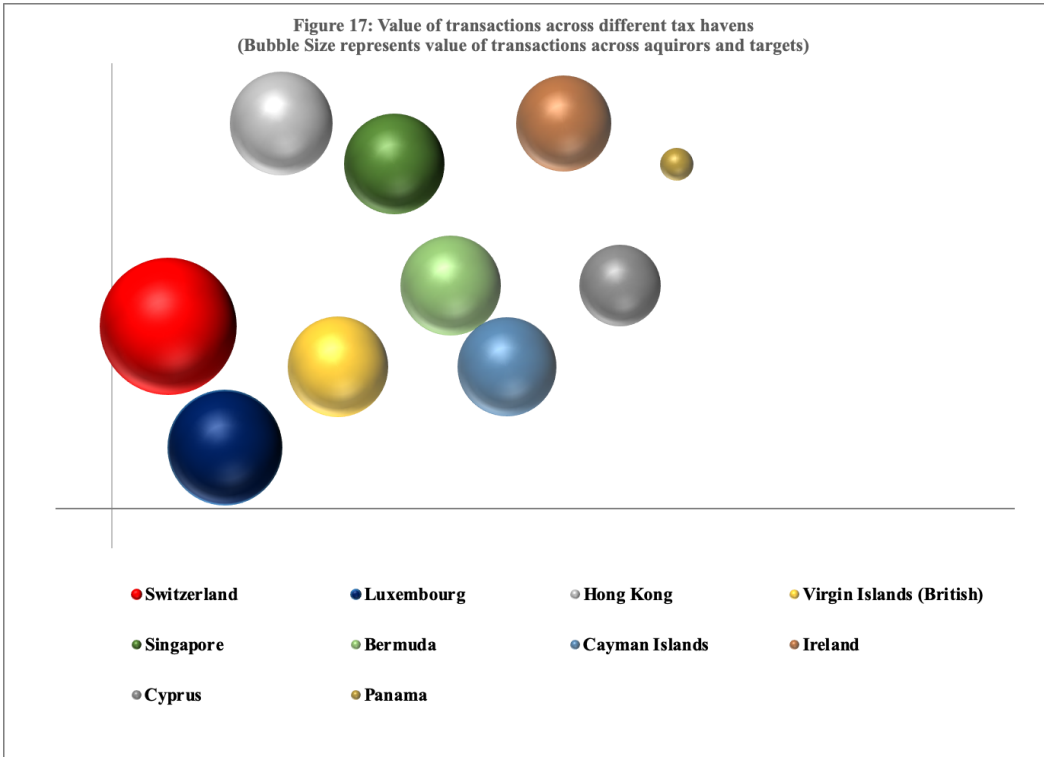
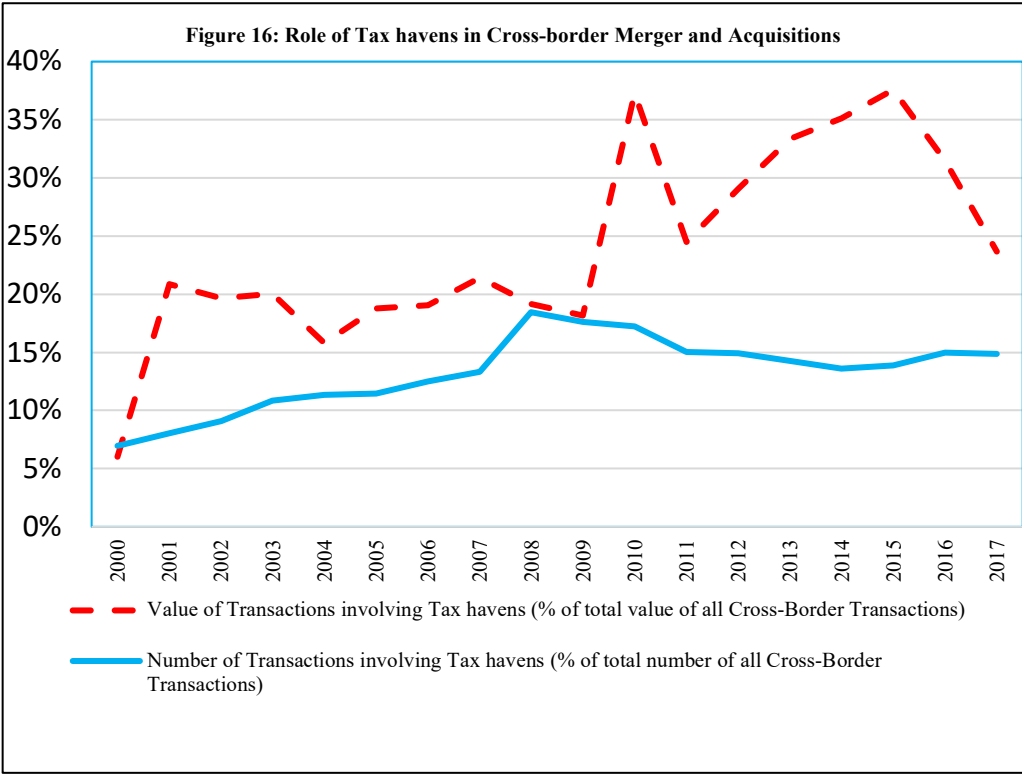


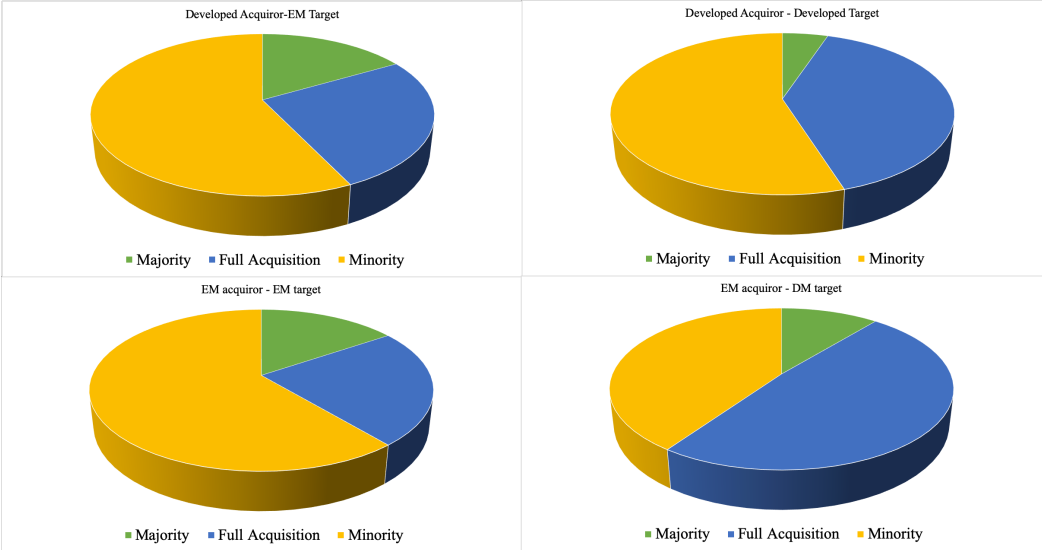
Figure 13: Method of Financing







**Figure 18: The Pattern of Control Acquisition in Emerging & Developed Economies**





No. of completed cross-border transactions (1997-2018)	166,312
Total Value of Deals (USD Billions)	9,016
Mean of Total value of deals (USD Millions)	98
Value of Largest Deal (USD Billions)	196
Share of publicly-listed acquirors	29.3%
Share of publicly-listed targets	26.3%
No. of Acquiror Countries	181
No. of Target Countries*	187

\*Excludes island states with total deal value of less than USD 1 billion

	<b>Non-Financial Real</b>	
	<b>Sector</b>	<b>Financial Sector</b>
2 digit	17.8%	6.5%
3 digit	26.2%	55.4%
4 digit	35.8%	52.2%
5 digit	43.3%	39.8%
6 digit	49.3%	62.9%

Table 4

Year	Acquiring firm	Target Firm	Acquiring Country	Target Country	Deal Value (USD Bn)	Target Industry	Acquirer Industry
2000	VODAFONE AIRTOUCH PLC	MANNESMANN AG	UK	Germany	195.64	Information	Information
2015	ALTICE NV	ALTICE SA	Netherlands	Luxembourg	67.88	Finance and Insurance	Finance and Insurance
2015	MEDTRONIC HOLDINGS LTD	MEDTRONIC INC.	Ireland	USA	60.75	Manufacturing	Manufacturing
2008	COMMONWEALTH BANK of AUSTRALIA LTD	PT BANK ARTA NIAGA KENCANA TBK	Australia	Indonesia	52.33	Finance and Insurance	Finance and Insurance
2007	ACCIONA SA	ENDESA SA	Spain	Spain	45.59	Utilities	Transportation and Warehouse
2016	TEVA PHARMACEUTICAL INDUSTRIES LTD	ALLERGAN PLC'S ACTAVIS GLOBAL GENERIC PHARMACEUTICALS	Israel	Ireland	40.5	Manufacturing	Manufacturing
2014	CITIC PACIFIC LTD	CITIC LTD	Hong Kong	China	36.98	Finance and Insurance	Companies and Enterprise
2018	LINDE PLC	LINDE AG	Ireland	Germany	33.19	Manufacturing	Transportation and Warehouse
1999	ZENECA GROUP PLC	ASTRA AB	UK	Sweden	30	Manufacturing	Manufacturing
2000	BP AMOCO PLC	ATLANTIC RICHFIELD COMPANY	UK	USA	27.73	Mining	Mining

**Panel A: Number of M&A Transactions**

<b>Acquiror Region</b>	<b>Target Region</b>				<b>Total</b>
	<b>European Union (Ex UK)</b>	<b>United Kingdom</b>	<b>Non-EU</b>	<b>Rest of the World</b>	
European Union (Ex UK)	27,658	4,662	5,892	13,121	51,333
United Kingdom	10,770	1,130	889	7,410	20,199
Non-EU	4,883	785	1,460	2,451	9,579
Rest of the World	20,602	10,188	3,457	69,219	103,466
<b>Total</b>	<b>63,913</b>	<b>15,386</b>	<b>9,424</b>	<b>77,589</b>	<b>166,312</b>

**Panel B: Total Value of M&A Transactions (\$ Billion)**

<b>Acquiror Region</b>	<b>Target Region</b>				<b>Total</b>
	<b>European Union (Ex UK)</b>	<b>United Kingdom</b>	<b>Non-EU</b>	<b>Rest of the World</b>	
European Union (Ex UK)	1,337	164	329	930	2,760
United Kingdom	487	34	49	405	976
Non-EU	162	34	92	219	507
Rest of the World	1,069	510	270	3,165	5,014
<b>Total</b>	<b>3,055</b>	<b>742</b>	<b>540</b>	<b>4,679</b>	<b>9,016</b>

**BREXIT Table**