The Hidden Costs of Being Public
Evidence from Multinational Firms operating in Emerging Markets

Pablo Slutzky*

May 12th, 2018

Abstract

This paper studies how firms deal with business regulations that limit their operations. I first exploit a natural experiment to show that the ownership structure of a firm affects its degree of compliance with regulations, with publicly listed firms complying more than privately held ones. Then I show that this differential compliance imposes a burden on listed firms that helps explain the patterns of M&A activity in emerging markets. When the level of market regulations increases, private firms acquire listed ones, and when the level decreases the results are reversed. I find that this effect is stronger for listed firms that are subject to stricter auditing and enforcement standards, suggesting that scrutiny plays an important role. Taken together, these results uncover an additional cost faced by listed companies, identify a new driver of M&A transactions in emerging markets, and show evidence that high levels of regulation lead to opaque corporate structures.

JEL Classification: G32, G34, G38

Keywords: IPO, International Finance, Mergers and Acquisitions, Ownership Structure.

*Assistant Professor, Department of Finance, University of Maryland, R. H. Smith School of Business. pslutzky@rhsmith.umd.edu. I am indebted to Charles Calomiris, Mauricio Larrain, and Daniel Wolfenzon for their continuous support. I am also grateful to Emily Breza, Murillo Campello, Francesco D'Acunto, Marco DiMaggio, Mike Faulkender, Andrew Hertzberg, Gur Huberman, Amit Khandelwal, Nagpurnanand R. Prabhala, Jonah Rockoff, Paul Tetlock, Stefan Zeume (discussant), and seminar and conference participants at Alberta School of Business, BlackRock, Columbia Business School, the Federal Reserve Board, FMA, FRA, HBS, LBS, MFA, MIT, Notre Dame (Mendoza), the Ohio State University (Fisher), Texas A&M (Mays), University of Maryland (R. H. Smith), UNC (Kenan-Flagler), University of Rochester (Simon), and Yale for helpful comments. Financial support from the Deming Center Doctoral Fellowship and the Paul and Sandra Montrone Doctoral Fellowship is gratefully acknowledged. All errors and omissions are my own. An earlier draft of this paper circulated under the title "Doing Business in Emerging Markets - The Benefits of Being Private"

1 Introduction

Firms are becoming reluctant to go or remain public (Kamar et al. (2008), Gao et al. (2013), and Doidge et al. (2017), among others). Much of the existing research argues this decline responds to an increase in the costs of being listed following enactment of regulations that only apply to public firms, e.g. the Regulation Fair Disclosure in 2000, the Sarbanes-Oxley Act in 2002, and the Global Analyst Research Settlement in 2003. In contrast, I argue that even laws and regulations that apply to both private and listed firms –such as the Foreign Corrupt Practices Act– have greater detection likelihood among listed firms, thus also imposing a higher burden on listed firms.[1]

To support the argument that universal regulations increase the costs of compliance disproportionately, I investigate whether listed multinational firms face a differential cost of doing business in markets that impose business-unfriendly regulations, vis-à-vis similar but private multinational firms. I show that the listing status of a firm affects its decision to comply with regulations in emerging markets, with listed firms complying more than privately held ones. I then show that the differential cost imposed by higher compliance is so impactful that it shapes the pattern of Mergers and Acquisitions (M&A) transactions. In particular, in countries that impose business-unfriendly regulations, private firms acquire operations from listed ones; and in countries that become less business-unfriendly, listed firms acquire operations from private ones. My analysis uncovers an additional and significant cost faced by listed firms that operate in emerging markets, which contributes to explain the increasing reluctance in going public.

Testing the drivers of compliance is difficult. When firms bypass regulations they do their best to hide their actions. I overcome this problem by focusing on a specific event that facilitates a natural mechanism by which firms may circumvent the regulation: a ban on profits repatriation. In 2012, the Argentine government banned companies from transferring funds abroad from their domestic operations. Despite this limitation, companies trying to repatriate capital could still overprice products they import from their headquarters or affiliates. For instance, consider a firm that

[1] Intrinsically, listed firms are overseen by a larger number of agencies and auditors than private firms, which might translate into a higher probability of being detected bypassing regulations or paying bribes. Consistent with this idea, while the Foreign Corrupt Practices Act (FCPA) applies to all types of firms, we find that the ten largest enforced cases involve exclusively listed firms.

pays $10 for a good imported from its headquarters (the *transaction* price), sells the good for $15 in the local market (the *retail market* price) and transfers the $5 in profits to its headquarters afterwards. Once transfers are banned, the firm could pay $15 instead of $10 for the same imported good while keeping the retail market price at $15, thus repatriating the profits hidden in the transaction price. My detailed and confidential dataset allows me to trace the transaction price for a good before and after the regulation.

Naturally, a higher post-regulation price is not sufficient evidence of deliberate overpricing. The transaction price could have gone up in response to inflation in the country where the good is produced, or to changes in the quality of the good, among other reasons. To overcome this identification problem, I focus on a specific industry: the automotive aftermarket.[2] This industry has the peculiarity of having two different types of firms importing exactly the same goods produced by the same foreign manufacturers: i) affiliates of the manufacturer, and ii) independent distributors that sell spare parts to end users or auto repair shops. My empirical strategy exploits this peculiarity and uses a Difference-in-Differences (DiD) setting to compare the transaction price for affiliates of the manufacturer, and for third parties, before and after the regulation. The transaction price paid by the third party is used to control for price changes that respond to reasons other than capital repatriation, since it is subject to market conditions.[3] Due to the granularity of the dataset, I can trace and compare transactions that involve a good, identified at a very detailed level. For instance, a unique good might be an Iveco engine, model 504170202, with a capacity of 5,880 cm3 and 154 kW of power manufactured by Iveco in Brazil. Exploiting the richness of the setting and the data, I study whether listed and private firms exploit the overpricing mechanism to repatriate capital.

I find that after the regulation, private firms overprice imports by almost 10% and manage to repatriate up to 46% of the profits that would have otherwise remained locked-in in the Argentine subsidiary. Listed companies do not exploit this mechanism, showing that listing status affects compliance. I examine and reject four alternative explanations for the findings to rule out that other characteristics —rather than listing status— are the drivers of the results. First, since listed firms are usually larger than private ones, I study listed firms of comparable size to that of private firms in

[2] This includes parts for replacement or repair of worn or damaged components.

[3] As Lall (1973) explains, in transactions between unrelated firms each party tries to maximize its profits at the expense of the other party.

the sample. Second, since listed firms have generally a more dispersed ownership structure, it could be that this factor is the driver of the results, since it affects the coordination of illicit actions, differences in political connectedness, and risk aversion. I study listed firms with concentrated ownership, and find that they do not overprice imports. Third, to rule out visibility as the driver of the results, I categorize firms into those that are more visible and those that are less visible, and rule out this characteristic as the driver. Last, since changes in taxes and tariffs can be correlated with listing status, it could be that these changes affect firms' opportunities. I control for these changes and find that they do not alter my results.

One potential concern with my empirical strategy is that listing status could be endogenous. Anticipating their elusion of a regulation, firms could voluntarily delist to reduce reporting requirements. In this case, we would find that private firms' degree of compliance with regulations is lower than that of listed firms. However, causality would go in the opposite direction. In my analysis this situation is unlikely, since the kind of firm I study is the global Multinational Company (MNC) that operates in Argentina but is domiciled and listed abroad. Such firms would hardly change their listing status in response to a regulation in the Argentine market, since it constitutes only 0.87% of global GDP.

My methodology is free from a number of limitations of papers in the literature. Some papers use analysts' assessments of compliance,[4] limiting the analysis to publicly listed companies and potentially suffering from subjectivity. Other papers use Internal Revenue Service (IRS) based measures of firms' tax evasion,[5] but since audits are not random, sample selection bias could affect the results. I use an objective measure of compliance (the overpricing of imported goods) and analyze all the import transactions made by both listed and private firms in a specific industry.

Having established that listed firms comply more than private ones, the next step is to test whether the magnitude of the differential compliance cost imposed by higher compliance rates is economically significant. The main empirical challenge here is that the cost is firm-time-regulation specific, and for that reason it is empirically unfeasible to measure. I take an alternative route and show that changes in the levels of market regulations impose compliance costs of such magnitude

[4]Papers such as Klapper and Love (2004) and Durnev and Kim (2005).
[5]Papers such as Hanlon et al. (2005) and DeBacker et al. (2015).

that they shape the patterns of M&A transactions. After the regulation, private firms acquired listed ones at an extraordinary pace, while listed firms stopped acquiring private ones. This suggests that regulation increases the cost of being public. To further test whether this pattern was a response to the regulation under study, I construct a measure of industry exposure to the regulation, denoting the percentage of earnings that each industry was repatriating before the regulation. I find that global listed firms in industries more exposed to the regulations often sold their Argentine operations in the aftermath of the ban, while private global firms in the same industries did not. This suggests that sale patterns responded to the regulation under study and to the differential compliance costs that listed firms faced. It also suggests that compliance costs can be large enough to trigger the divestiture of subsidiaries.

To assess the external validity of the mechanism I uncover, I analyze the response of M&A transactions in all Emerging Markets (EM) to changes in the regulatory intensity of each country. I show that the previous finding is not specific to the Argentine market but is common across EM. When a country becomes business-unfriendly we should expect private firms to acquire listed ones, since the former can reduce the regulatory burden and increase the value of a listed firm. In contrast, when a country becomes less regulated, the benefit of being public should outweigh the effect of the now lower compliance cost, and we should expect listed firms to acquire private ones.[6] To measure the level of regulation in each country, I use the index of Economic Freedom developed by Gwartney et al. (2015). The index *"measures the degree to which the policies and institutions of countries are supportive of economic freedom"*. For each country-year, the report provides five different measures of economic freedom[7] and then combines them to provide an overall index. This index is close to my notion of an unregulated market: one in which free competition is the rule.[8] I analyze patterns in M&A transactions in 59 EM in response to changes in the regulatory environment between 2001

[6]It could be argued that a firm could voluntarily delist or go public in response to changes in the regulatory environment. However, it is unlikely that a global firm would change its listing status in response to regulations in one of the emerging markets where it operates, especially because these markets usually represent a small fraction of the company's operations.

[7]Size of Government, Legal Structure and Security of Property Rights, Access to Sound Money, Freedom to Trade Internationally, and Regulation of Credit, Labor, and Business.

[8]Gwartney et al. (2015) state that *"In order to receive a high Economic Freedom of the World rating, a country must provide secure protection of privately owned property, even-handed enforcement of contracts, and a stable monetary environment. It also must keep taxes low, refrain from creating barriers to both domestic and international trade, and rely more fully on markets rather than government spending and regulation to allocate goods and resources. In many ways, a country's Economic Freedom of the World summary rating is a measure of how closely its institutions and policies compare with the idealized structure implied by standard textbook analysis of microeconomics"*.

and 2014. Like Alesina and Dollar (2000), I construct regulatory and deregulatory "episodes",[9] and show that after a regulatory episode (i.e., increase in regulatory burden) the percentage[10] of transactions between private acquirers and listed targets increases by between 5 and 28 percentage points, while the percentage of transactions between listed acquirers and private targets decreases by between 5 and 14 percentage points. In contrast, after a deregulatory episode these results are reversed.

To further support my interpretation and to pin down the driver of compliance, I perform additional tests exploiting several sources of heterogeneity. First, I exploit differences in the markets where firms are listed. A potential explanation for the behavior of listed firms is that they are subject to stricter scrutiny, increasing the conditional probability of being caught bypassing regulations. To test this explanation, I analyze differences in the strictness of the auditing and enforcement standards to which listed firms are subject. If stricter monitoring drives compliance, the M&A patterns should be larger and more significant in transactions that involve listed firms under stricter scrutiny than for those that involve firms under more lenient scrutiny, even when these firms operate in the same market. Indeed, I find that they are. Second, and to support the idea that differential cost of compliance drives the results, I test the effect of changes in the regulatory environment on the percentage of transactions where private firms acquire other private firms, and on the percentage of transactions where listed firms acquire other listed firms. I find no effect. In addition, I analyze M&A transactions of firms operating in Developed Markets (DM).[11] Since non-compliers have to perceive a substantial probability of getting away with bypassing regulations —and in DM, enforcement and scrutiny are stricter even for private firms— the patterns should not be present when analyzing M&A transactions of firms operating in those markets. I find that the patterns are absent in DM. Furthermore, I find that the patterns are only present in industries more prone to bribery, suggesting that the advantage that private firms have over listed ones lies in the ability to "grease the wheels" to bypass regulations in EM.[12]

[9] An episode indicates a change of at least one standard deviation in the level of Economic Freedom.

[10] I use the percentage of transactions of each type over the total number of transactions for that country-year to control for waves of transactions that might affect the results.

[11] As opposed to the previous case, where I analyzed firms operating in EM but compared those listed in EM with those listed in DM.

[12] Results are not reported here due to space limit.

I also rule out a set of alternative explanations for my results. First, since listed firms generally have a more dispersed ownership than private ones, the former might be willing to take more risky projects. If the measure of economic freedom is correlated with measures of risk, it could be that the M&A patterns respond to differences in risk aversion and not to compliance costs. I repeat the analysis replacing the economic freedom index with the Political Risk Index developed by the Political Risk Services Group. The index includes information on 12 risk factors that address not only political risk but also different kinds of risk associated with political institutions, such as religious and ethnic tensions. I find no significant results, thereby ruling out that differences in risk aversion drive the results. Second, in order to rule out results driven by spurious correlation, I run a placebo test by randomizing episodes' dates, and find no results.

This paper contributes to several strands of literature. First, it contributes to the literature on the costs of being public and the drivers of the going/staying public decision. Companies that go public incur significant one-time direct costs, such as underwriting and lawyers fees, as well as recurring costs, such as auditing, reporting, and stock exchange fees (Ritter (1987) and Lee et al. (1996)). In addition, they face new compliance costs, such as those associated with the Sarbanes-Oxley Act (Engel et al. (2007) and Kamar et al. (2008)). My paper uncovers another cost: the additional cost of compliance with regulations that are not specific to listed firms. When confronted with a regulation that limits operations, private firms manage to reduce the burden imposed on them, while listed firms shoulder the full-burden cost. The evidence presented suggests that the differential cost that listed firms pay is so great that it shapes M&A patterns. A related literature studies the determinants of the decline in the number of listed firms and focuses on changes in the economy such as technological and financial development (Gao et al. (2013) and Doidge et al. (2017), among others). My paper points out another potential factor explaining this pattern, the increased differential cost of doing business in EM.

This paper also contributes to the literature on determinants of M&A activity. The literature cites several drivers of M&A transactions, including but not limited to stock market misvaluations (Shleifer and Vishny (2003), Rhodes-Kropf et al. (2005)), CEO overconfidence (Malmendier and Tate (2008)), and risk diversification (Thijssen (2008)).[13] Factors in cross-country M&A include but

[13]Unlike studies such as Engel et al. (2007) and Kamar et al. (2008) who analyze the impact of the Sarbanes-Oxley

are not limited to stock market capitalization, exchange rate, differences in accounting standards, shareholder protection, and governance regimes of target and acquirer companies (Rossi and Volpin (2004), Di Giovanni (2005), Rossi and Volpin (2007), Siegel et al. (2011), and Erel et al. (2012)). Within this literature the closest papers to mine are Mitchell and Mulherin (1996) and Harford (2005), who find that regulatory shocks play an important role in merger waves, and Maksimovic et al. (2013), who analyze the different behaviors and performance of private and listed U.S. firms during merger waves. However, no paper in this literature seems to use the combination of regulatory shocks with firms' ownership structure to explain acquisitions.

In addition, this paper relates the literature on the economics of crime that started with the seminal papers by Becker (1968) and Allingham and Sandmo (1972). In the last decade literature on the determinants of corporate illegal behavior has re-emerged; some link firms' characteristics with measures of compliance and governance in EM, while others estimate the firm value created by bribery. My study contains several key differences. First, I do not rely on information reported by the regulating authority (Hanlon et al. (2005), DeBacker et al. (2015)). The regulatory authority's capacity to detect violations is not perfect and thus might incorporate selection bias. Because I use a dataset that includes all the import transactions made by all firms in a specific industry, my analysis is not subject to this selection bias. Second, I do not rely on subjective measures of compliance based on analysts' opinions (Klapper and Love (2004), Durnev and Kim (2005)). I overcome the subjectivity problem by using the overpricing of imported goods as my measure of compliance. Third, I do not use stock market prices or analysts' opinions as key inputs (Dyck and Zingales (2004), Klapper and Love (2004), Durnev and Kim (2005), Zeume (2017), and Karpoff et al. (2014)), which would restrict the analysis to listed firms. By including all firms (listed and private) within an industry, I can study the role of ownership structure in illicit behavior.

This paper also relates to a strand of the accounting literature that finds differences in the decisions made by private and listed firms. Papers such as Cloyd et al. (1996), Mills and Newberry (2001), and Burgstahler et al. (2006), among others, find that private and listed firms choose different financial accounting methods when faced with multiple alternatives. A key distinction

Act on the decision to go private, I analyze the response to regulations that target both listed and private firms and show that they impose a differential burden on listed firms.

with my study is that in previous studies the available options are licit and accounting rules are ambiguous, while in my setting one alternative is unquestionably illicit. In addition, in this set of papers the choices lead to different key financial results such as reported net income, making it hard to isolate drivers other than listing status -such as compensation schemes and capital market consequences- that might vary between private and listed firms.

Lastly, this paper contributes to the literature on International Capital Flows. Several papers have looked at the effect that corruption, political risk, and regulations have on foreign direct investment (Hines (1995), Wei (2000a), Wei (2000b), Smarzynska and Wei (2000), Wei and Wu (2002), and Busse and Hefeker (2007)) and on MNCs' strategic decisions such as changes in leverage, dividends remittance, and profit allocation (Desai et al. (2004), Desai et al. (2006), and Desai et al. (2008)). However, to the best of my knowledge, there are no papers in this literature that analyze global firms' divestiture in response to regulatory shocks.

In summary, my paper makes five contributions. First, it uncovers an undocumented cost faced by listed companies that operate in EM: the differential cost of compliance with regulations that target all firms. Second, it identifies the ownership structure of firms as a key factor shaping the pattern of M&A in EM. Third, it overcomes objectivity, data limitation, and sample selection problems and shows that the ownership structure of a firm impacts its decision on whether to comply or bypass regulations, with listed firms complying more than private ones. Fourth, it shows that an increase in the level of regulations attracts firms with more opaque corporate structures, shedding light on a new type of adverse selection problem. Fifth, it documents a novel type of market response intended to reduce the impact of regulations.

The remainder of the paper proceeds as follows. Section 2 tests whether listed firms comply more with regulations than private ones. Section 3 tests whether the differential compliance cost faced by listed firms is significant, first by analyzing M&A in Argentina, and then across EM. Section 4 concludes.

2 Testing Compliance Rates across Firms

The task of measuring compliance rates is difficult by nature. Firms do not report when they bypass regulations; therefore data is not readily available. One exception is the World Business Environment Survey (WBES) conducted by the World Bank to collect information from firms on the state of the non-governmental sector across countries. This survey includes questions related to compliance and corruption, such as whether it is common for firms to make additional payments to do business, or what the percentage of its activity is kept "off the books". However, this survey does not include information on the listing status of the respondents' firms. While other papers try to overcome this problem by using analysts' opinions, rankings, or audits data, they suffer from subjectivity, are limited to listed firms only, or can be affected by sample selection bias. To overcome these difficulties, I use a confidential and novel dataset on international trade, and take advantage of a regulation imposed by the Argentine government in 2012 that banned companies from transferring money abroad from their Argentine operations. This setting provides an ideal natural experiment to test compliance rates, since it opens a mechanism by which firms can bypass the regulation: the overpricing of imports.

2.1 The Institutional Setting

In 2011, several macroeconomic conditions combined to cause a sharp decline in international reserves at the Central Bank of Argentina (see Figure 1). A group of factors affected the flow of funds to and from Argentina, including the drop in international soy prices, the depreciation of the Brazilian Real (which reduced the demand for Argentine goods in the Brazilian market), and the specter of inflation. To stop the increasing outflow of capital, the Argentine government initiated a capital controls program to limit foreign currency exchange. In October 2011 it launched the Exchange Transactions Consultation Program (Programa de Consulta de Operaciones Cambiarias) under Rule A5239. According to this measure, individuals who wanted to exchange currency had to complete a request, and the government, through the fiscal authority AFIP (its Spanish acronym), would then approve or reject the request. The decision was to be based on income, credit card bal-

ances, rent expenses, and other personal factors. This market restriction spawned the creation of a black market for US dollars, in which the foreign currency was traded at a significant premium,[14] as illustrated in Figure 2.

In November 2011, the measures were expanded to include companies' transfers. If the amount to be transferred exceeded USD 500,000, the company had to ask for authorization from the Central Bank. However, no request has ever been authorized by the Central Bank. In practice, companies were transferring amounts slightly under the threshold each day (e.g. USD 490.000) until they reached the total amount desired. In February 2012, these measures were tightened with Rule A5264. Companies were now banned from exchanging currency to transfer royalties and earnings abroad. Furthermore, a transfer of any amount required the Central Bank's authorization, and was seldom granted.[15] Figure 3 plots the amount of royalties and earnings that were transferred abroad between 2008 and 2012, and shows that after Rule A5264 the transfers declined by more than 94%.

The aforementioned regulation opens a natural mechanism whereby firms may circumvent the regulation. Several studies argue that firms use international trade as a mechanism to export capital. As explained by Lall (1973), when the remittance of royalties and profits are controlled, the overpricing (or transfer mispricing) mechanism provides an alternative channel for repatriation of capital. Through the purchase of overpriced goods, the buyer transfers funds to the seller. The mechanism exploited by firms to export capital[16] can be better understood with an example.[17] Suppose that firm XYZ is a MNC headquartered in the US with subsidiaries in Argentina and Mexico. Before the introduction of the regulation, the Argentine subsidiary could import goods from the Mexican subsidiary for $10 (1a and 1b), sell them in the local market for $15 (2a and 2b), and transfer the profit of $5 to the headquarters (3), as shown in Figure A1a.

Facing the ban on international transfers, companies might partake in transfer mispricing, a practice that takes the form illustrated in Figure A1b. In this example the Argentine subsidiary pays a higher price for the imported good to the Mexican subsidiary (1a and 1b), makes no profit

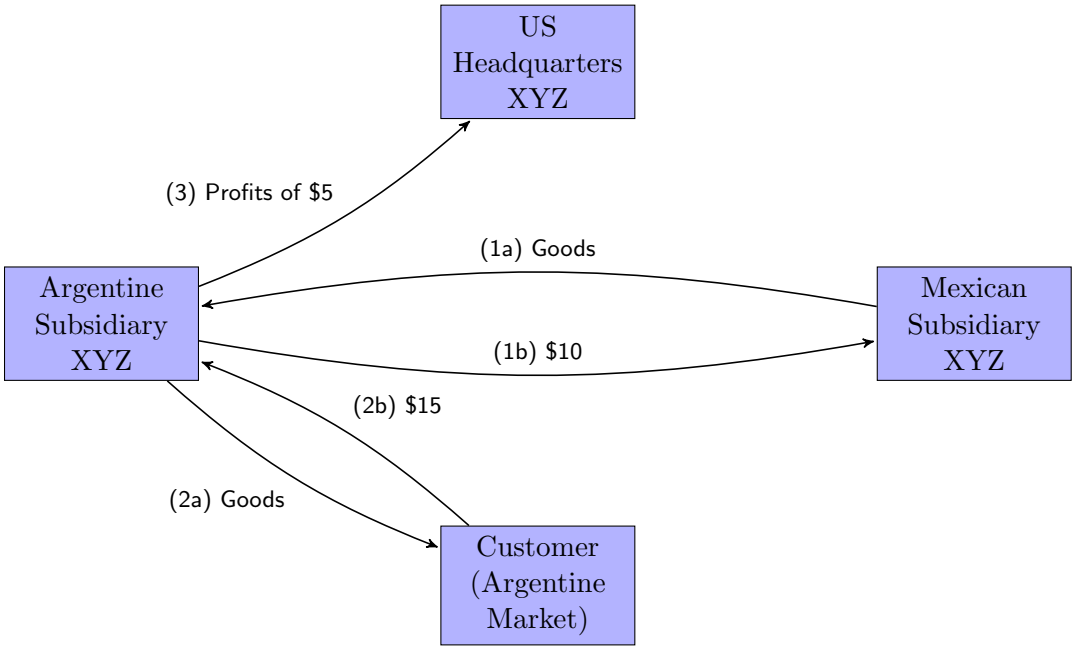
[14] The premium paid for foreign currency in the black market was on average 25% in 2012 and 60% in 2013, and peaked at 100% in May 2013.

[15] www.ambito.com/diario/noticia.asp?id=623531.

[16] See online Appendix for a comprehensive list of forms of mispricing.

[17] The example provided ignores tax effects for simplicity.

(a) Flow before regulation



(b) Flow after regulation

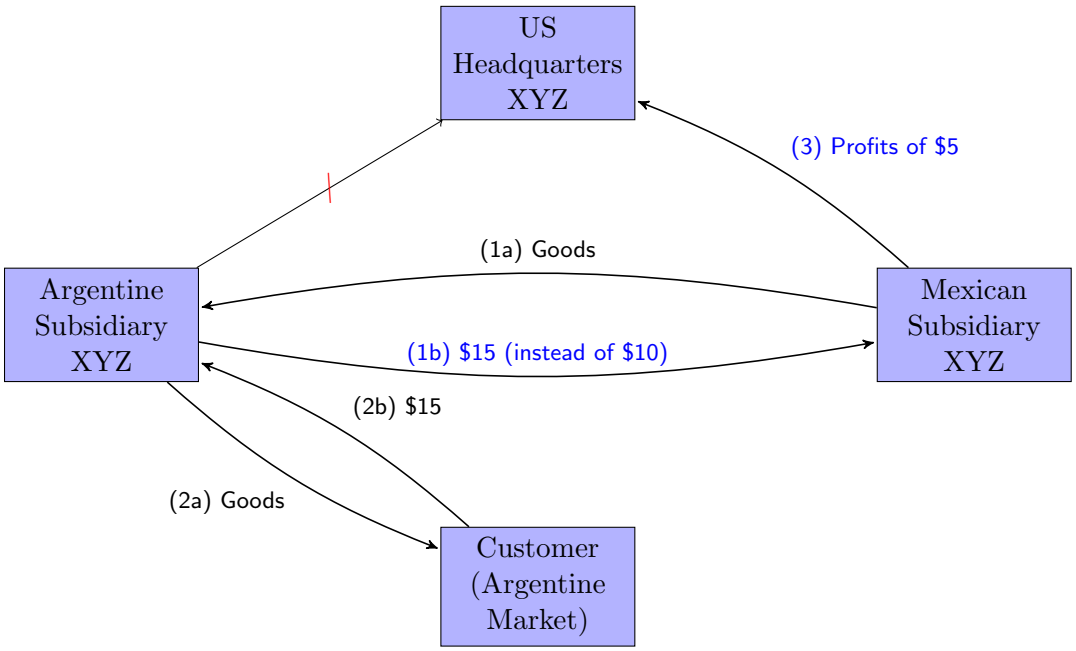


Figure A1: Flows before and after regulation

in Argentina when selling the product at the same price it was being sold before (2a and 2b), and the profit is transferred from the Mexican subsidiary to the headquarters, thereby bypassing the effects of the regulation. However, higher post-regulation transfer prices are not sufficient evidence to claim that the company is overpricing goods in order to export capital. Prices might have gone up for reasons other than capital repatriation, such as inflation in Mexico, or changes in the quality of the product, among others.

To rule out alternative explanations, I use a DiD setting that compares the price paid for a good by a branch or affiliate of the manufacturer with the price paid for exactly the same good by a company unrelated to the exporter, before and after the regulation. I use the price paid by the non-related company as a proxy for the market price, to absorb changes in price related to any macroeconomic factors common to all firms in this same industry, such as inflation in the exporter country. The granularity of the data allows me to trace each exact good imported over time and by different parties.

While the study of the transfer mispricing mechanism is not new, my analysis differs from the existing literature in several ways. First and most important, my paper is the first to cite the ownership structure of firms as a key determinant affecting the use of this mechanism. Second, I compare the price paid by related and non-related parties for the exact same good, unlike Lall (1973) who relies on experts' assessment of the value of the imported goods to proxy for the market price in Colombia. Third, unlike Bernard et al. (2006) who study intra- and extra-firm import prices for firms operating in the U.S. and compare prices paid for products belonging to the same category, thanks to the detail in my data I can compare the price paid for the exact same good. [18]

[18] Several papers identify products by their 10-digit harmonized system code, a coding system that classifies traded products. However, even when using the maximum level of detail the system provides, the comparison of products is not precise. For instance, the 10-digit category 8407.33.10.30 includes "Spark-ignition reciprocating or rotary internal combustion piston engines, of a cylinder capacity exceeding 250 cc but not exceeding 1,000 cc, to be installed in tractors suitable for agricultural use, not exceeding 37.3 kW". However, products within this category are hardly comparable. An engine with a capacity of 500 cc and 5kW will not have the same price as one with a capacity of 1,000 cc and 37kW, even though they are grouped under the same 10-digit harmonized code.

2.2 Data and Methodology

2.2.1 Data

I use two datasets for this section. The first dataset is a novel and confidential Argentine customs database. Compared to datasets used in previous studies (e.g. the U.S. merchandise trade database), this database offers key advantages. In addition to the information frequently available in customs databases used by researchers, the one used in the present study provides information identifying the importer (name and taxpayer ID) and product detail —brand, model, and country of manufacture— beyond what is provided by the Harmonized Code. This level of detail allows me to compare the price paid for exactly the same product being imported by different firms at different points in time. The dataset includes imports that occurred between January 2010 and September 2014, spanning two years before the regulation, and two-and-a-half years after it.

I focus on transactions belonging to the harmonized system codes 84.07, 84.08, and 84.09,[19] for a key reason. Products in these categories are engine components for the automotive aftermarket (i.e., involving solely replacement or repair). Products in this industry present a peculiarity: they are imported by two different types of firms: affiliates of the manufacturer, and independent distributors that sell spare parts to end users or auto repair shops. This unique characteristic of this segment allows me to compare the price paid for exactly the same product being imported by two different firms, one related and one non-related to the manufacturer. Therefore, the price paid by the non-related party can be used as a proper counterfactual, since it incorporates price changes that occur for reasons other than profit repatriation.

I perform a set of restrictions to guarantee the quality of my novel data. I keep observations that include complete information on the importer, brand, and model of the product. This is required in order to match the importer with an exporter, determine if the two firms are related, and trace each specific product imported by different parties over time. Then, I remove observations

[19] These codes reference spark-ignition reciprocating or rotary internal combustion piston engines, compression-ignition internal combustion piston engines (diesel or semi-diesel engines), and parts suitable for use solely or principally with the engines of heading 84.07 or 84.08, respectively. Products in these categories account for approximately 2.5% of total Argentine imports.

where the importer is not a frequent importer,[20] as prices for non-frequent importers might be noisy and affect the results. I also drop transactions denominated in Argentine Pesos (less than 2% of the observations) which might have been set based on an exchange rate other than the official exchange rate and are not comparable to prices set in USD. The final sample includes almost 850,000 import transactions and 73 importers, 37 of which are subsidiaries of MNC, and 36 of which are independent domestic companies. Among the MNC, 23 are listed companies and 14 are private companies; all are incorporated in countries that belong to the Organisation for Economic Co-operation and Development (OECD). Altogether, these firms import products from 88 different countries.

The second dataset I use is the World Intellectual Property Organization (WIPO) Global Brand Database,[21] which includes information on registered trademarks. Since the imports dataset does not include information on the identity of the exporter, I match each imported product with its manufacturer by looking at the firm that owns the trademark in the country from which the product is being exported. For instance, if I observe a product "Veglia Borletti" being imported from Indonesia, I search for the trademark and find that the owner of that brand in that country is the company Magneti Marelli S.p.A.. It could be argued that the firm producing the good might not be the firm exporting it. However, for the present study it is sufficient to know that there is a relationship between the importer and the producer. The presence of an intermediary does not affect the potential use of the transfer mispricing mechanism.

The next step is to determine whether the firm importing the goods in Argentina and the exporter for each transaction are related. To that end, I manually search for information on each firm on the internet, determine whether it is a multinational company, and determine who the parent company is. As an example, by looking at Magneti Marelli S.p.A. I find that the company's parent organization is Fiat S.p.A. Next, I look at each transaction, determine whether the importer and the exporter are branches or affiliates under the control of the same parent firm, and create an indicator for related firms. For instance, if the importer of the Veglia Borletti product is Fiat Argentina, I flag the transaction as between *related* parties, since Fiat Argentina (importer) and

[20] A non-frequent importer is defined as an importer with less than one thousand products imported in the period 2010-2014.

[21] Available at http://www.wipo.int.

Magneti Marelli (exporter) belong to the same parent company. Lastly, I manually search for information on the ownership structure of the parent company, with respect to whether it is listed or private. In this case, I find that at the time of the transaction, Fiat S.p.A. (or Fiat Industrial S.p.A.) was listed on the Milan stock exchange.

2.2.2 Methodology

I exploit a regulation imposed by the Argentine government in 2012 banning companies from transferring funds from Argentine operations abroad as a source of exogenous variation, and I use firms' ownership structure as a source of cross-sectional variation. Companies trying to repatriate capital despite the regulation could overprice products imported from their headquarters or affiliates. However, higher post-regulation prices could be caused by reasons other than capital repatriation, such as inflation or changes in the quality of the product. Therefore, a simple comparison of prices before and after the regulation is not sufficient.

I focus on a specific industry: the automotive aftermarket.[22] This industry has a characteristic that is key to overcoming the problem mentioned before. In this industry, two types of firms import exactly the same goods, produced by the same foreign manufacturer in the same country: i) affiliates of the manufacturer, and ii) independent distributors that sell spare parts to end users or auto repair shops. I exploit this peculiarity and use a DiD setting to compare the price paid for a product by a related importer with the price paid by a non-related importer, before and after the regulation.

A DiD setting requires a subset of the units under study to be subject to a treatment, while the other subset is used as control. Since in my setting every firm is subject to the same treatment (i.e. the ban on international transfers) the usual definition of *treated* and *control* firms cannot be applied. However, the context allows for an interesting definition of *treated* and *control* firms. In this setting, a *treated* unit is one that imports products from its headquarters or an affiliate manufacturer.[23] Meanwhile, a *control* unit is one that imports products from a non-related party.

[22] Parts for replacement or repair of worn or damaged components.
[23] One that belongs to the same MNC.

Comparing the price paid by a related party with the one paid by a non-related party allows me to isolate the effect that factors other than capital repatriation motives might have on the price of a product. Since the price paid by a non-related party is subject to market conditions, it includes all those potential factors. The extraordinary granularity of the dataset allows me to trace a product identified with extreme detail and compare the price paid for exactly the same good imported by two different parties at different points in time.

In addition to the two standard dimensions used in a DiD setting —*treated* and *post*— I exploit a third source of variation: *treated* firms' listing status.[24] The literature on the economics of crime has shown that a key driver of the decision to evade a norm is the probability of being detected. Since listed firms are subject to stricter scrutiny than private firms, the conditional probability of their being detected is greater. Thus, I exploit the listing status of the MNC's parent company as the cross sectional source of variation for testing whether private and listed firms behave differently. To this end, I divide the *treated* group —which imports goods from related parties— into two different subgroups: (1) subsidiaries of MNCs whose parent companies are listed, and (2) subsidiaries of MNCs whose parent companies are private.[25]

Analyzing MNCs serves two purposes. First, MNCs have a natural advantage at exploiting the transfer mispricing mechanism. Firms with no affiliates need a third party to act as an accomplice and pay the difference between the market price and the paid price in a foreign account, without leaving a record. Second, analyzing MNCs imparts exogeneity to the listing status of firms, since a MNC would hardly change its global listing status in response to a regulation in Argentina.

The main regression specification used in this section is:

$$P_{ijkt} = \alpha_i + \alpha_m + \beta_p * Post + \beta_r * Related_{jk} + \beta_{pr} * Post * Related_{jk} + \epsilon_{ijkt} \quad (1)$$

where i represents the imported good, j indicates the importer, k indicates the exporter, m indicates month, and t indicates time. The variable under study is the price paid for the good i being imported

[24] To facilitate interpretation, I present the results in a DiD setting, splitting the sample between listed and private firms. However, it must be noted that the results using a triple differences setting are similar to the ones presented here.

[25] The firms used as controls are independent distributors, and in all the cases they are private Argentine firms.

by firm j and exported by firm k at time t. To keep the study uncontaminated by changes in other costs such as insurance, freight, and shipping costs, I use the Free on Board (FOB) price, the price of the good ready to be shipped at the origin port. The exporter pays for transportation of the goods to the port of shipment, plus loading costs. In addition, the import price is normalized by the mean price of that product in order to provide equal consideration to products at different price levels. The specification includes product (α_i) and month (α_m) fixed effects. Product fixed effects control for all time-invariant characteristics of the product and for all time-invariant characteristics of the exporter, since each product is manufactured by only one company. Month fixed effects control for seasonality. The standard errors are clustered at the importer-exporter pair level (682 pairs).[26]

The coefficient β_r is expected to be negative. This coefficient is related to the price wedge in Bernard et al. (2006), where the authors show that U.S. exporters set lower prices for related importers than for arm's-length importers.[27] The coefficient β_p indicates the price change for products after the regulation. If demand for imported products is reduced, we might expect a negative coefficient to increase sales. However, if exporters expect delays in liquidation of international payments, they might increase prices to account for a longer financing period. Therefore, the sign of this coefficient cannot be predicted.

The coefficient of interest is β_{pr}, which indicates whether the price increase after the regulation for a related importer is different than that for a non-related importer. If companies start paying a higher price for products imported from related parties to export capital, we should expect β_{pr} to be positive. The magnitude of the coefficient is a priori unknown and should respond to a trade-off. On the one hand, higher price manipulation allows a company to export a higher fraction of the profits that cannot be exported anymore via an international transfer. On the other hand, the higher the manipulation the higher the probability of being detected by the regulator.

The DiD design requires that treated and control firms would follow parallel trends had the regulatory intervention not happened. To assess the plausibility of this untestable assumption, I test whether the two groups of firms followed parallel trends before the regulation change. Figure 4 plots the deviation from the demeaned price for goods imported by both firms related and non-

[26] Results do not vary if standard errors are clustered at the exporter level.

[27] Potential explanations given by the authors include longer-term contracts, managerial incentives, and tax reasons.

related to the exporter. In addition, I include the series for private related importers only. Before the regulation the prices for related and non-related importers move together and the price for a related importer is lower than the price for a non-related importer, which is consistent with prior findings in the literature. At the time of the regulation the patterns for related importers seem to change, but they do not exhibit a clear pattern consistent with imports overpricing. However, when I exploit the third source of variation –listing status of the MNC– and analyze the series for *private* related importers only, the pattern is striking. At the time of the regulation, prices for private related importers increase significantly, while prices for non-related importers decrease. This evidence suggests that private firms overprice imports to export capital.

An alternative explanation for the pricing patterns would be significant changes in the volumes imported, since they might affect bargaining power or discounts given by exporters. Figure 5 plots the aggregate volume of imports by domestic, listed, and private MNCs for these products. Subfigure (A) shows total imports from all types of exporters, while subfigure (B) shows only imports from related exporters. Both figures show stable patterns, suggesting that volumes cannot explain the pricing patterns observed.

As for control variables, we might control for time-varying characteristics of the firms. Unfortunately, information on the Argentine operations of firms is protected by national fiscal secrecy rules. As for global private MNCs, they do not disclose financial statements. In contrast, global listed MNCs disclose their financial statements, however the statements are consolidated, and don't allow for the isolation and study of Argentine subsidiaries' operations. For this reason, I conduct several robustness tests to rule out alternative explanations such as differences in size, concentration of ownership, or visibility.

2.3 Results

I first show that private MNCs have a lower compliance rate than listed MNCs, participate in transfer mispricing, and export a significant fraction of the profits via this mechanism. Then I present several robustness tests to rule out alternative explanations.

The results of regression specification 1 are presented in Table 1, where the sample is split between transactions made by private MNCs (columns [1] and [2]) and listed MNCs (columns [3] and [4]). In both cases, transactions made by domestic firms are included as controls.[28] The coefficient on *Related* shows that exporters set a lower price for related importers, which is consistent with findings in Bernard et al. (2006). The difference calculated in column [5] shows that this practice does not differ between listed and private firms, ruling out alternative explanations such as the differential use of tax avoidance strategies by listed or private firms.

More importantly, the results provided in the first column of Table 1 show that after the regulation, the price increase for a product imported by a related company is 9.96% higher than that for a non-related company if the related importer is a private company. These results are significant at the 1% level. In column [2] the specification includes month fixed effects to control for potential seasonality issues, and the results are not altered. The evidence suggests that private companies are manipulating transfer prices to export capital. Results in columns [3] and [4] measure price increases for listed firms relative to that of non-related importers. The differential price increase is indistinguishable from zero, suggesting that listed firms do not exploit the transfer mispricing mechanism. The difference in the price increase between private and listed MNCs relative to the difference in price increase for non-related importers is shown in column [5]. The difference between the two coefficients for *Post x Related* is significant at the 1% level. In contrast, the differences in the individual coefficients for *Post* and *Related* are not significant at the 10% level.

The quarter-by-quarter coefficients plotted in Figure 6 show that private firms respond immediately. As a matter of fact, private firms seem to anticipate the regulation and increase prices a quarter before it is enacted, when transfers for individuals where banned and transfers for companies were limited. In contrast, listed firms do not change prices.

To understand the magnitude of the coefficient β_{pr}, I do a back-of-the-envelope calculation using information obtained from one of the companies in the sample. Before the regulation, this firm had a ratio of Cost of Goods Sold (COGS) to Sales of 84% and a ratio of Selling, General and Administrative Expenses to Sales of 9.5%. Ignoring taxes for the sake of simplicity, this firm

[28] Approximately 360,000 transactions.

would have a Net Income to Sales ratio of 6.5%. Lacking further information and proceeding conservatively, I assume the FOB price of the imported goods to be 30% of sales, with the balance of 54% corresponding to assembling, shipping, packaging, and other costs. For a company with these characteristics, the 10% overprice of imports would represent a transfer of 46% of the profits earned, since 10% of a cost that amounts to 30% of sales represents 3% of sales, or 46% (3% divided by 6.5%) of the profits earned. The following table summarizes the back-of-the-envelope exercise.

	Before	After
Sales	100	100
COGS		
FOB	(30)	(33)
Others	(54)	(54)
SG&A	(9.5)	(9.5)
Net Income	6.5	3.5

2.4 Robustness Checks

2.4.1 Size

Listed firms are, in general, larger than private ones, and larger firms might get more attention from regulators than smaller ones. Thus, it could be argued that it is size —and not listing status— that affects firms' compliance with business-unfriendly regulations. To test this theory, I construct a subsample of listed firms that are comparable in size to private firms and repeat the analysis for this subset of firms. Since unconsolidated data on the size of the Argentine operations for each firm is not available, I proxy it with the total volume of dollar imports before the regulation. The results in Table 2 show that listed firms that are comparable to private firms do not overprice imports in order to export capital. This result suggests that size does not affect behavior regarding the ban on profits repatriation.

2.4.2 Concentrated Ownership

It might also be argued that listed firms in general have a more dispersed ownership structure, and that this characteristic might influence political connectedness, risk aversion, or the ability to coordinate actions. To rule out this alternative explanation, I split listed firms into those that have a shareholder with 10% or more of the shares[29] and those that don't. I repeat the study for the subset of firms that have concentrated ownership to test whether this is the factor driving non-compliance. The results in Table 3 suggest that listed firms with concentrated ownership do not exploit the overpricing mechanism. These results rule out the alternative explanation that ownership concentration drives the findings.

2.4.3 Visibility

In addition to being larger and having more dispersed ownership, listed firms are usually more visible than private firms. Therefore, it might be that the more visible firms comply more with regulations. To test whether visibility drives compliance, I construct a measure of visibility using the Factiva dataset to determine the number of news items that mention each company in 2011,[30] and repeat the test splitting firms into those that are more visible (visibility level above the median), and those that are less visible (visibility level below the median). Since, for this test, I do not need financial data such as size or ownership concentration,[31] I can use the universe of firms in my database and split them into those that are more visible and less visible, regardless of their listing status. The results in Table 4 show that visibility is not a factor that drives compliance. While it would be interesting to test how the characteristics analyzed interact to affect the results, the relatively small number of firms in my sample does not allow me to exploit interactions.[32]

[29] Taking after La Porta et al. (1999).

[30] I use information on the year before the regulation to avoid potential endogeneity problems.

[31] This information is not available for private firms, therefore it is not possible to split the entire sample in terms of characteristics such as size or ownership concentration.

[32] For instance, analyze small firms with concentrated ownership or visible firms with disperse ownership.

2.4.4 Corporate Taxes and Tariffs Minimization Strategy

The DiD setting is ideal for controlling for shocks that affect all firms. However, there are also shocks that affect some firms and not others, such as changes in exporting countries' tax rates, or changes in tariffs. Consider a case in which the corporate tax rate in Brazil decreases. Since transfer prices can also be used to shift profits from one subsidiary to another, firms that import goods from their affiliates in Brazil would have incentives to increase transfer prices and reduce the overall amount of tax the company pays. If only private MNCs imported goods from Brazil, listed MNCs would not be able to exploit this mechanism even if they wanted to. If listing status is correlated with changes in tax rates or tariffs, my findings could be responding to the possibility rather than intentionality of firms' bypassing regulations.

To rule out this alternative, I control for changes in corporate tax rates for each country that Argentine firms in my sample are importing from, and for changes in tariffs, meant to absorb price changes arising from tax minimization strategies. The results of the specification, including a dummy variable set to one for each country-year with a change in the corporate tax rate, are provided in Table 5 and show that the differential price increase does not correspond with tax minimization strategies.

2.4.5 Other Avenues

Overpricing imports is one of several mechanisms that firms might use to export capital, in spite of the regulation. Firms can also overpay for services at their headquarters, or inflate the interest on intra-firm loans. Even though firm-level data is not available, a close look at aggregated data seems to suggest that firms do not exploit these avenues. Figure 7 plots the transfers abroad made by firms in Argentina with regard to: i) payment for services[33] and ii) interest payments.

Payment for services does not increase after the regulation, suggesting that firms did not use this avenue to export capital. In contrast, interest payments do increase after the regulation.

[33]This category includes professional and technical services, insurance, communication services, IT services, IP and trademark, and copyright.

However, this increase can be explained by an increase in the credit risk spread of Argentina, as measured by J.P. Morgan's Emerging Markets Bond Index (EMBI+) for Argentina.

In addition, listed firms could enter into private agreements with the government to be excluded from the ban. For instance, in Luxembourg the official corporate tax rate is 29%. Yet, several firms have private agreements with the tax authority and pay rates close to 0%.[34] If this were the case, listed firms would not need to overprice imports. However, Figure 3 suggests that the ban affected all firms.

Although other avenues might be available, the fact that listed firms do not overprice imports —a mechanism that is readily available to them— and do not seem to use other mechanisms that are easy to implement, suggests that it is costlier for listed firms to bypass regulations. The tax authorities can and potentially do detect the use of this mechanism. Thus, a potential explanation for the differences found in compliance can be attributed to the differential scrutiny to which listed firms are subject to. For instance, while both listed and private firms could "grease the wheels" to bypass regulations in EM, they can be prosecuted in their home countries for doing this. Differences in the strictness of auditing or likelihood of prosecution between firm types could then drive the results. This is explored in the last section of the paper.

3 The Impact on the M&A Market

The previous section shows that private firms have more flexibility than listed ones in terms of using mechanisms that assist them in bypassing a regulation. In this section, I assess the magnitude of the cost differential in compliance with regulations. This assessment presents two empirical challenges. The first empirical challenge is that the traditional event study methodology cannot be applied in this setting for two reasons: i) we do not observe market value for private firms and ii) for listed MNC, we should not expect a significant change in their value after a regulation in an EM, because usually the size of the operations in any particular EM is relatively small compared to global operations. The second empirical challenge is that the differential cost of compliance is

[34] I thank Stefan Zeume for this comment.

firm-time-regulation specific, with several factors rendering it unobservable.

To show that the cost differential is large, I take an alternative route and show that changes in the levels of market regulations impose differential compliance costs of such magnitude that they shape the patterns of M&A transactions. The rationale is this: if in business-unfriendly markets listed firms face a much higher compliance cost than private ones, after a sudden increase in business-unfriendly regulations, we should expect private firms to acquire listed ones, since the former can mitigate the regulatory burden and increase the value of a listed firm. In contrast, when the market becomes more business-friendly, the benefits of being public should outweigh the effect of the lower compliance cost, and we should expect listed firms to acquire private ones.[35] In this section, I show that these patterns of M&A activity are present in Argentina, where the aforementioned regulation took place. In addition, I show how these patterns respond to the ban on profit repatriation. I then expand my study to include a broader sample of emerging markets and business-unfriendly regulations, and provide evidence suggesting that my previous findings could be generalized. Last, I show evidence suggesting that scrutiny and monitoring are the factors that drive the compliance of listed firms.

3.1 The Impact on the Argentine M&A Market

The regulation exploited in the previous section had important consequences for firms operating in Argentina. An article in The Economist titled "Waiting for Cristina to Go" and dated December 2014 (partially reproduced in the Online Appendix) states that in response to harshening business conditions and according to a study by a consultancy firm, *"40 foreign companies have left or frozen their operations since 2011"*. In the context of this paper, a foreign firm or MNC leaving the country would be reflected in an M&A transaction wherein the MNC sells its Argentine subsidiary. In line with the findings of the previous section, since private firms can significantly mitigate their regulatory costs, one might expect that listed firms sell their operations to private firms. In addition, since private firms would value a listed firm more than its current owner, one might expect that after the regulation, private firms would acquire listed ones, while listed firms

[35] In the Online Appendix I develop a simple static model that exploits differences in the probability of being caught bypassing regulations, and the cost of capital for listed and private firms; and I draw such conclusions.

would stop acquiring private ones.

To test this conjecture, I first expand my list of firms by incorporating all the transactions in the Zephyr M&A dataset[36] where the Argentine subsidiary of a MNC —the group of firms most affected by the regulation— was sold following the ban on international transfers. My dataset comprises 762 M&A transactions over the period 2000-2015. For each year, I calculate two values: (i) the percentage of transactions in which the seller is a listed MNC and the acquirer is a private firm, and (ii) the percentage of transactions in which the seller is a private MNC and the acquirer is a listed firm. In panel (A) of Figure 8, I plot both types of transactions and show patterns consistent with the conjecture above. More specifically, after the regulation, private firms (which can bypass regulations and reduce the burden of compliance) started acquiring listed firms at an extraordinary pace while listed firms stopped acquiring private ones altogether. To show that the domicile of the company (i.e. domestic vs. foreign) does not drive the results, in panel (B) I plot across time the percentage of transactions where the acquirer is a domestic firm. The pattern suggests that the domicile of the acquirer does not drive the results.

However, the graphical evidence presented is not totally sufficient, since the pattern could respond to factors such as global trends rather than to differential compliance costs. To test whether the regulation analyzed in the previous section drives the patterns observed in Figure 8, I take a step further and analyze the type of firms that sell their subsidiaries. In particular, I analyze whether firms that sell their subsidiaries are listed firms that operate in industries more exposed to the regulation. I define industry exposure as the transfers of earnings and royalties made by a particular industry[37] in 2011 (before the regulation took place) normalized by the added value of that industry, as a proxy to its earnings. The higher the percentage of added value that firms within an industry repatriate, the higher the impact of the ban on transfers on that industry. For instance, before the regulation, the oil and gas industry was transferring abroad 7.83% of its added value, while the textile industry was transferring only 0.31% of its added value. Comparatively, the oil and gas industry was more affected by the regulation than the textile industry. I calculate the likelihood of selling a subsidiary by using the percentage of MNCs operating in a particular industry that sell

[36] Described in the next section.

[37] I use the same 18 industry categories that the Argentine Central Bank uses to report repatriation of earnings and royalties.

their subsidiary in year t. To test whether listed firms respond more to the regulation than private firms, I calculate this variable for listed and private MNCs separately.

I use a difference-in-difference-in-differences (DDD) setting and exploit three sources of variation; (1) whether the transaction takes place before the regulation, (2) whether the industry is significantly exposed to the regulation, and (3) whether the parent firm of the MNC is listed.

The empirical specification is as follows:

$$\begin{aligned} Sell_{s,l,t} = \alpha + HighExposure_s + Post_t + Listed + \\ HighExposure_s \times Post_t + HighExposure_s \times Listed + Post_t \times Listed + \\ HighExposure_s \times Post_t \times Listed + \epsilon_{s,l,t} \end{aligned} \quad (2)$$

where s is the industry, l is an indicator of listed firms, and t denotes time. $HighExposure_s$ is an indicator that is set to one for industries that are in the top quartile of exposure, and set to zero for industries in the bottom quartile of exposure. $Post_t$ is an indicator set to one in terms of years after the ban on profits repatriation was imposed, and $Listed$ is an indicator set to one for listed firms. Standard errors are clustered at the industry level to account for possible serial correlation in the error terms. The coefficient of interest is the triple interaction term, which measures the comparative likelihood of selling a subsidiary of listed firms that are highly exposed to the regulation after it was imposed, relative to their private counterparties.

The results of the test are reported in Table 6. The coefficient for the triple interaction term is positive and significant, showing that the regulation has a different effect on listed than on private firms in the same industries and suggesting that the M&A patterns observed in Argentina after the ban on profits repatriation reflect the differential cost of compliance between listed and private firms. In the rest of this section, I test whether this effect also holds in other EM.

3.2 The Impact on the M&A Market in EM

In this section, I test whether the previous findings can be extended to EM and business-unfriendly regulations in general, and present evidence that they can. More specifically, I show that when a market becomes more business-unfriendly, private firms acquire operations from listed ones, and when markets become less business-unfriendly, listed firms acquire operations from private ones. In addition, I provide evidence that suggests that monitoring plays a key role in determining compliance. Lastly, I rule out several alternative explanations for the findings.

3.2.1 Data and Methodology

3.2.1.1 Regulatory Data

To test whether the M&A patterns are present in EM in general, a measure of how business-unfriendly a market is, is required. There are different publications and indexes that achieve this goal. The closest one to my idea of an unregulated market is that of Gwartney et al. (2015), who publish the *Economic Freedom of the World Annual Report* and create an index to measure economic freedom in 141 nations. First published in 1996, it has remained a standard reference in the literature; its different editions have been widely used and cited, with approximately 3,700 cites as of November 2016.

The report *"measures the degree to which the policies and institutions of countries are supportive of economic freedom."* For each country-year, the report provides 42 different measures of Economic Freedom (EF) grouped into 5 different categories,[38] and then combines them to provide an overall index of EF. The 2015 report includes information for the years 1975, 1980, 1985, 1990, 1995 and then yearly data from 2000 to 2013. To understand whether regulatory events affect M&A transactions, the information used is restricted to the years between 2000 and 2013. The measure of EF ranges from 0 to 10, with an index of 10 given to a country where free competition is the absolute rule. For the countries in the sample, the lowest value is 2.88 (Zimbabwe, 2005) and the

[38] Size of Government, Legal Structure and Security of Property Rights, Access to Sound Money, Freedom to Trade Internationally, and Regulation of Credit, Labor, and Business.

highest value is 9.07 (Hong Kong, 2008). A higher value indicates more EF, or a less business-unfriendly environment. To be consistent with the index, I will refer to a country that becomes less business-unfriendly as one where the EF index increased. In contrast, I will refer to a market that becomes more business-unfriendly as one where the EF index decreased.

While other similar measures are available, they are not suitable for my study for different reasons. One such measure is the Doing Business Index issued by the World Bank.[39] This index provides measures of Business Regulations across countries, which makes it appropriate for my study. However, it measures the *de jure* rules (i.e. what should happen), in contrast to the *de facto* measures (i.e. what does happen). As shown in Hallward-Driemeier and Pritchett (2015), there is almost zero correlation between the *de jure* and the *de facto* measures as reported by firms in the Enterprise Surveys, also issued by the World Bank.[40] To check the relevance of the EF Index and contrast its usefulness with the Doing Business Index, I test the correlation between the EF Index and the Enterprise Surveys data for the percentage of time that senior management spend dealing with the requirements of government regulation. I find that the correlation is negative and significant at the 1% level. The less business-unfriendly the country is (higher levels of EF), the lower the percentage of time senior management spends dealing with regulations. In contrast, when I test the correlation between the Doing Business Index and the Enterprise Surveys data, I find that the correlation is not significant at the 10% level, which is consistent with findings in Hallward-Driemeier and Pritchett (2015).

Another commonly cited database is that of the Heritage Foundation. One problem with this dataset is that the indexes do not seem to provide the level of detail needed in my study. For instance, the first country in the dataset with available information is Albania. For this country, the index of Financial Freedom only changes three times in the last twenty years. For the following country, Algeria, the number of changes is also only three. A third index constructed specifically for EM is that by Karolyi (2015). This index provides a remarkable level of detail and would be suitable for my study, except that the data is only available for 2012 and the author himself warns about the lack of consistent data to construct an annual index.

[39] Available at www.doingbusiness.org.

[40] The Enterprise Surveys provide extremely rich information. However, the surveys are not conducted on a yearly basis, which make them inappropriate for my study.

3.2.1.2 M&A Data

I use Bureau Van Dijk's Zephyr database and consider all the completed M&A transactions that were announced between years 2000 and 2014 and were completed by the end of 2015. An advantage that this database has over Thomson One is that it includes information on more than 281,000 deals, while Thomson One has information on 247,000 deals for the same period due to stricter restrictions on the minimum deal value. In addition, it includes more information on the vendor for each transaction.

In accordance with the goal of the paper, i.e. to understand how firms operate in business-unfriendly markets, I use observations in which the target company is located in a country with a minimum level of regulatory burden. To determine whether a country falls in this category, I calculate its average EF index for the period under study and keep a list of the countries in the three lowest quintiles.[41] As is customary in the literature, transactions where the target company belongs to a regulated industry such as utilities (SIC codes 4900-4949) or financial institutions (SIC codes 6000-6999) are excluded. In addition, since the focus of this paper is on firms that sell their operations,[42] I focus on the transactions where the final stake the acquirer has is greater than or equal to 95%.[43] Finally, I exclude transactions in which the companies involved are state-owned. The final sample is left with 51,858 observations, summarized in Table 7.

3.2.1.3 Methodology

In this section I describe the methodology used to test whether changes in the regulatory level of a country trigger M&A transactions, which in turn suggest large differential compliance

[41] The countries identified as restricted, and for which macroeconomic data are available, include: Albania, Algeria, Bahamas, Bangladesh, Belize, Bolivia, Brazil, Bulgaria, Cameroon, Central African Republic, Chad, China, Colombia, Congo, Croatia, Democratic Republic of the Congo, Dominican Republic, Ecuador, Egypt, Fiji, Gabon, Greece, Guatemala, Guyana, Haiti, Honduras, Indonesia, Islamic Republic of Iran, Kenya, Latvia, Lithuania, Madagascar, Malawi, Malaysia, Mexico, Morocco, Namibia, Nepal, Nicaragua, Nigeria, Pakistan, Papua New Guinea, Paraguay, Philippines, Poland, Romania, Russian Federation, Rwanda, Sierra Leone, Slovenia, South Africa, Sri Lanka, Tanzania, Thailand, Trinidad and Tobago, Ukraine, Uruguay, Venezuela, and Zimbabwe.

[42] As opposed to a reduction in the percentage of ownership, which would still make the company liable if found bypassing regulations.

[43] In some cases, there are shareholders with a minority interest, therefore the acquirer does not have 100% of the shares after the transaction. The 95% threshold allows for some flexibility. The results are robust to different specifications, such as the exclusion of transactions where the acquired stake is lower than 50%

costs for listed firms. For each transaction in the database, I identify whether the seller and the acquirer are listed or private. I categorize each transaction as: listed acquirer/private seller, listed acquirer/listed seller, private acquirer/listed seller, or private acquirer/private seller. The data are aggregated at the country-year-category level. To control for the changing volume of M&A transactions, the number of transactions in each country-year-category is normalized by the total number of transactions in that country-year. As a result, we are left with the percentage of transactions that fall under each category in each country-year. I merge this panel with the EF database and include the EF index for each country-year. Following Singh and Jun (1995), I lag the EF index by one year to account for physical and procedural constraints that prevent transactions from being immediate, such as the search for counterparts, due diligence, and negotiation. Thus, if a market becomes more regulated in year t, we are more likely to observe changes in the percentage of transactions of the affected category in year $t+1$. The panel dataset includes the percentage of transactions that fall under each one of the four categories of transactions between years 2001 and 2014[44] and the lagged EF index for that country-year.

Since minor changes in regulatory levels would hardly trigger decisions as important as acquisitions, I follow Alesina and Dollar (2000) in creating a dummy variable ($Episode_{c,t-1}$) indicating whether there was an "episode", which is defined as a sudden change of at least one standard deviation on the level of the EF index from one year to another, lagged by one period. An illustrating example is that of Slovenia in 2010. Between 2003 and 2009 the EF index ranged between 6.94 and 7.04. In 2010, the EF dropped to 6.55 and remained between 6.55 and 6.56 for the next three years. This followed a regulation aimed to stop capital flight that banned corporations from maintaining accounts abroad, except with the authorization of the central bank. In addition, corporations had to report foreign exchange transactions and balances, and foreign exchange accounts in local banks were only authorized in connection with certain operations, making it harder for firms to do business in Slovenia.

The econometric specifications tested are the following:

[44]The time frame is limited by the EF dataset, that includes information for years 2000-2013.

$$\% \, TX_{c,t,L\to P} = \gamma_1 \times Episode_{c,t-1} + \gamma_2 \times Index_{EF_{c,t-1}} + \gamma_3 Episode_{c,t-1} \times Index_{EF_{c,t-1}} + \gamma_4 \psi_{c,t-1} + \delta_c + \delta_t + \varepsilon_{c,t,i} \quad (3)$$

The explained variable is the percentage of transactions where listed firms acquire private ones in country c at time t, and the explanatory variables are: 1) an indicator of whether there was a sudden change on the EF index ($Episode_{c,t-1}$), 2) the lagged level of EF ($Index_{EF_{c,t-1}}$), and 3) an interaction term. A second specification replacing $\% \, TX_{c,t,L\to P}$ with $\% \, TX_{c,t,P\to L}$ (i.e. where private firms acquire listed ones) is run to test my hypothesis. $\psi_{c,t-1}$ includes lagged macro control variables that the literature indicates have explanatory power in predicting M&A transactions: Gross Domestic Product (GDP) per capita growth, level of GDP per capita, domestic credit to private sector, interest rate spread (lending rate minus deposit rate), exchange rate with respect to the US dollar, and trade as a percentage of GDP. This data is obtained from World Bank's DataBank. For robustness, I follow Papke and Wooldridge (1996) and use a Generalized Linear Model (GLM) in which the link function is probit to account for a fractional dependent variable with a potential mass of observations at 0 and 1 and obtain similar results.

In addition, two sets of fixed effects are included: country (δ_c) and year (δ_t). The former controls for time-invariant characteristics of transactions that take place within a country. For instance, in country A, it could be that for most years, 50% of the transactions occur between listed acquirers and listed targets, and the rest occur between private acquirers and private targets, while maintaining a stable composition of firms. At the same time, in country B, 50% of the transactions occur between listed acquirers and private targets, and the rest occur between private acquirers and listed targets, also leading to a stable composition of firms but with different base values for each category of transaction. The latter fixed effect controls for common shocks that might affect the M&A market in a particular year. For instance, if the stock market is overvalued, listed companies might use shares to cheaply acquire private companies and we would observe a higher percentage of transactions where the acquirer is a listed firm.

The effect on M&A might not be symmetric when a country becomes more business-unfriendly compared to when it becomes less business-unfriendly. Thus, I test separately the effect

Regulatory Change	Private acquiring Listed	Listed acquiring Private
More business unfriendly	⇑	⇓
Less business friendly	⇓	⇑

Table A1: Predicted Results

of sudden increases (deregulatory episodes) and sudden decreases (regulatory episodes) in the level of EF. In addition, to impart interpretability to the coefficients obtained from the regression, the EF index is centered at three different levels: mean, one standard deviation below the mean, and two standard deviations below the mean. This allows me to test the effect of a regulatory (deregulatory) episode in countries that have different base levels of EF.[45] The coefficients of interest are γ_1, γ_2 and γ_3. γ_1 measures the impact of a regulatory (deregulatory) episode on the percentage of transactions of each type. The coefficient γ_2 measures the impact of a unitary change on the EF index on the percentage of transactions of a certain category when the change in this coefficient is gradual, i.e. there is no sudden change. Lastly, the coefficient γ_3 measures how the effect of a regulatory (deregulatory) episode depends on the level of EF.

If the findings of the previous sections can be generalized, the percentage of transactions wherein private firms acquire listed ones should increase after a regulatory event, i.e. when markets become more business-unfriendly. In contrast, the percentage of transactions wherein private firms acquire listed ones should decrease after a deregulatory event, i.e. when markets become more business-friendly. The expected results are summarized in Table A1, where (⇑) represents an expected increase in transactions and (⇓) represents an expected decrease in transactions. The effect of regulatory and deregulatory episodes on the other two types of transactions (public acquirer/public target and private acquirer/private target) are tested for robustness purposes. If the differential compliance cost drives the results, there should be no effect that regulatory or deregulatory episodes have on these two types of transactions.

[45] Among the countries with mean levels of EF we find countries such as Mexico and Russia, among those with low levels of EF Nigeria and Pakistan, and among those with even lower levels of EF we find countries such as Algeria and Venezuela

3.2.2 Results

In this section I present the results of the tests measuring whether differential compliance costs are so impactful that they trigger M&A transactions. When a market suddenly becomes more business-unfriendly, we might expect more transactions between private acquirers and listed targets. In contrast, when a market becomes less business-unfriendly we might expect more transactions between listed acquirers and private targets.

3.2.2.1 Markets becoming more business-unfriendly

I test whether a regulatory episode has an impact on M&A transactions in EM. Table 8 shows the results for transactions wherein private firms acquire listed ones (panel A), and wherein listed firms acquire private ones (panel B).

The results in panel A of Table 8 show that after a regulatory episode, the percentage of transactions wherein a private company acquires a listed company increases by between 5 and 28 percentage points, from a baseline of 8.2%. This result is consistent with the high differential compliance costs for listed firms. I observe that the effect is significant at the 5% level in countries with relatively low levels of EF (one and two standard deviations below the mean, respectively), and that in those markets the magnitude of the coefficient is large and significant. The results do not change with the inclusion of region-year fixed effects which control for shocks affecting certain regions in certain years. Similarly, the results in panel B of Table 8 show that after a regulatory episode, the percentage of transactions wherein listed firms acquire private ones decreases by between 5 and 14 percentage points from a baseline of 29.6%, and that the effect is statistically significant for countries with different levels of EF.[46]

The coefficient γ_2 —reflecting the change in the percentage of transactions when the level of EF changes gradually— does not appear to be significant. Thus if the change is slow, the impact on the percentage of transactions is nil. The coefficient that accompanies the interaction term has

[46] I also test whether regulatory and deregulatory events have an effect on the volume of M&A transactions and find no effect.

the sign opposite of γ_1, indicating that markets that are less business-unfriendly are affected less severely by a regulatory episode than more business-unfriendly markets.

3.2.2.2 Markets becoming less business-unfriendly

When a market becomes less business-unfriendly, the benefits of being public outweigh the (now lower) compliance costs. We find more transactions wherein listed firms acquire private ones, and fewer transactions wherein private firms acquire listed ones. Table 9 shows the results for transactions wherein private firms acquire listed ones (panel A), and wherein listed firms acquire private ones (panel B) after a deregulatory event.

The results in panel A of Table 9 show that when there is a deregulatory episode and a market becomes less business-unfriendly, the percentage of transactions wherein private firms acquire listed ones decreases by between 8 and 15 percentage points. The effect is significant at the 5% level in countries with relative low levels of EF. Again, the results survive the inclusion of region-year fixed effects that control for shocks affecting certain regions in certain years. Similarly, the results in panel B show that when there is a deregulatory event and the market becomes less business-unfriendly, the percentage of transactions wherein listed firms acquire private ones increases. The coefficient has the expected sign but is not statistically significant.

3.2.3 Pinning Down the Mechanism

Having ruled out in the corresponding section that the differential behavior of listed and private firms responds to differences in size, ownership structure, or visibility, I test whether the factor that affects compliance might be monitoring, or audit pressure. A firm that is strictly audited has a higher probability of being caught bypassing regulations than one that is loosely audited, and therefore has stronger incentives to comply. If monitoring drives compliance, the M&A patterns shown in the previous section should be stronger for firms that are more rigorously audited and where enforcement is stricter than for those that are loosely audited, even when these firms operate in the same market.

An example is that of Wal-Mart in Mexico, and the corruption case it was involved in. Wal-Mart of Mexico is a subsidiary of Wal-Mart Stores Inc. and is listed in the Mexican Stock Exchange under ticker symbol *WALMEX*, while its parent company Wal-mart Stores Inc. is listed on the New York Stock Exchange under ticker symbol *WMT*. In the early 2000s officers from the Mexican subsidiary paid $24 million in bribes to Mexican officers to obtain permits to open stores in protected zones. No actions were taken by the Mexican auditors or by the regulator. However, when in 2011 the company disclosed "possible violations" to the SEC related to this incident, the company faced significant charges, suggesting that auditing and enforcement standards differ across listing markets, and that the consequences of bypassing regulations also differ.

To provide further support for my interpretation, I categorize transactions into those involving firms listed in countries with stricter auditing and enforcement standards, and those involving firms listed in countries with more lenient standards. I use the index constructed by Brown et al. (2014). This index combines 9 factors related to auditing standards (including as requirements for auditor rotation and auditing intensity) and 6 factors related to enforcement standards (including the relative size of the securities market regulator). According to this index, the United States represents a country with stricter standards, with a score of 56/56, while Ukraine represents the country with more lenient standards, with a ranking of 6/56. I divide countries between those that are above the median level of auditing and enforcement standards (i.e. stricter standards) and those that are below (i.e. more lenient standards). The regression results in Table 10 show that the effect that sudden changes in the levels of EF have in the M&A market is of large magnitude and significant only for companies listed in countries with stricter auditing and enforcement standards. This result supports the notion that listed firms comply with regulations because they are subject to stricter scrutiny.

A plausible explanation for this finding is the effect that auditing and enforcement have on the potential for corruption to "grease the wheels" and bypass regulations in EM. While both private and listed firms could engage in corruption, the strict monitoring and enforcement standards some listed firms are subject to in their home countries prevent them from exploiting this mechanism. This follows legislation such as the FCPA in the US and the Bribery Act in the UK, among others, that make it unlawful to engage in corrupt practices while operating in third countries.

3.2.4 Robustness Tests

In the Online Appendix, I provide evidence that further supports my hypothesis via several additional sources of heterogeneity.

4 Conclusion

Over the last two decades, there has been a large decline in the number of firms that decide to go or remain public. In this paper, I uncover a differential cost faced by listed multinational firms that operate in emerging markets and that might help explain this pattern, the differential cost of compliance with regulations that target all firms.

I show that, when facing regulations that limit their operations, listed firms comply more than private ones. In addition, I show that private firms can significantly mitigate the regulatory burden presented to them. I then provide evidence suggesting that the differential compliance cost imposed on listed firms is of such magnitude that it shapes the pattern of M&A transactions in emerging markets. In particular, I demonstrate that when a country becomes more business-unfriendly, private firms acquire listed ones. In contrast, when a country becomes less business-unfriendly, listed firms acquire private ones.

The findings in this paper have important implications for managers and policymakers. For the former, this paper uncovers an additional cost faced by listed multinational firms operating in emerging markets: the differential compliance cost associated with regulations that target all firms. Listed firms are subject to stricter monitoring, therefore they cannot bypass regulations nor reduce the burden these regulations impose on them, whereas private firms can, and do.

For policymakers, this paper shows that changes in the regulatory environment shape the composition of firms that operate in a country. In particular, business-unfriendly regulations attract firms that defy those regulations, thereby limiting the effectiveness of the policies. Future research might attempt to quantitatively measure this, and look at the welfare implications of attracting firms that partially mitigate the effect of regulations.

References

Alesina, A. and D. Dollar (2000). Who gives foreign aid to whom and why? *Journal of Economic Growth 5*(1), 33–63.

Allingham, M. G. and A. Sandmo (1972). Income tax evasion: a theoretical analysis. *Journal of Public Economics 1*(3-4), 323–338.

Becker, G. S. (1968). Crime and punishment: An economic approach. *The Journal of Political Economy*, 169–217.

Bekaert, G., C. R. Harvey, C. Lundblad, and S. Siegel (2007). Global growth opportunities and market integration. *The Journal of Finance 62*(3), 1081–1137.

Bernard, A. B., J. B. Jensen, and P. K. Schott (2006). Transfer pricing by US-based multinational firms. Report, National Bureau of Economic Research.

Brown, P., J. Preiato, and A. Tarca (2014). Measuring country differences in enforcement of accounting standards: An audit and enforcement proxy. *Journal of Business Finance & Accounting 41*(1-2), 1–52.

Burgstahler, D. C., L. Hail, and C. Leuz (2006). The importance of reporting incentives: Earnings management in European private and public firms. *The Accounting Review 81*(5), 983–1016.

Busse, M. and C. Hefeker (2007). Political risk, institutions and foreign direct investment. *European Journal of Political Economy 23*(2), 397–415.

Cloyd, C. B., J. Pratt, and T. Stock (1996). The use of financial accounting choice to support aggressive tax positions: Public and private firms. *Journal of Accounting Research*, 23–43.

DeBacker, J., B. T. Heim, and A. Tran (2015). Importing corruption culture from overseas: Evidence from corporate tax evasion in the United States. *Journal of Financial Economics 117*(1), 122–138.

Desai, M. A., C. F. Foley, and J. R. Hines (2004). A multinational perspective on capital structure choice and internal capital markets. *The Journal of Finance 59*(6), 2451–2487.

Desai, M. A., C. F. Foley, and J. R. Hines (2006). Capital controls, liberalizations, and foreign direct investment. *Review of Financial Studies 19*(4), 1433–1464.

Desai, M. A., C. F. Foley, and J. R. Hines (2008). Capital structure with risky foreign investment. *Journal of Financial Economics 88*(3), 534–553.

Di Giovanni, J. (2005). What drives capital flows? The case of cross-border M&A activity and financial deepening. *Journal of International Economics 65*(1), 127–149.

Doidge, C., G. A. Karolyi, and R. M. Stulz (2017). The US listing gap. *Journal of Financial Economics 123*(3), 464–487.

Durnev, A. and E. Kim (2005). To steal or not to steal: Firm attributes, legal environment, and valuation. *The Journal of Finance 60*(3), 1461–1493.

Dyck, A. and L. Zingales (2004). Private benefits of control: An international comparison. *The Journal of Finance 59*(2), 537–600.

Engel, E., R. M. Hayes, and X. Wang (2007). The Sarbanes-Oxley act and firms going-private decisions. *Journal of Accounting and Economics 44*(1), 116–145.

Erel, I., R. C. Liao, and M. S. Weisbach (2012). Determinants of cross-border mergers and acquisitions. *The Journal of Finance 67*(3), 1045–1082.

Gao, X., J. R. Ritter, and Z. Zhu (2013). Where have all the IPOs gone? *Journal of Financial and Quantitative Analysis 48*(6), 1663–1692.

Gwartney, J., R. Lawson, and W. Block (2015). *Economic Freedom of the World*. Fraser Institute.

Hallward-Driemeier, M. and L. Pritchett (2015). How business is done in the developing world: Deals versus rules. *The Journal of Economic Perspectives 29*(3), 121–140.

Hanlon, M., L. F. Mills, and J. B. Slemrod (2005). An empirical examination of corporate tax noncompliance. *Ross School of Business Paper* (1025).

Harford, J. (2005). What drives merger waves? *Journal of Financial Economics 77*(3), 529–560.

Hines, J. R. (1995). Forbidden payment: Foreign bribery and american business after 1977. Report, National Bureau of Economic Research.

Kamar, E., P. Karaca-Mandic, and E. Talley (2008). Going-private decisions and the Sarbanes-Oxley Act of 2002: A cross-country analysis. *The Journal of Law, Economics, & Organization 25*(1), 107–133.

Karolyi, G. A. (2015). *Cracking the Emerging Markets Enigma*. Oxford University Press, USA.

Karpoff, J. M., D. S. Lee, and G. S. Martin (2014). The economics of foreign bribery: Evidence

from FCPA enforcement actions. *Available at SSRN 1573222*.

Klapper, L. F. and I. Love (2004). Corporate governance, investor protection, and performance in emerging markets. *Journal of Corporate Finance 10*(5), 703–728.

La Porta, R., F. Lopez de Silanes, and A. Shleifer (1999). Corporate ownership around the world. *The Journal of Finance 54*(2), 471–517.

Lall, S. (1973). Transfer pricing by multinational manufacturing firms. *Oxford Bulletin of Economics and Statistics 35*(3), 173–195.

Lee, I., S. Lochhead, J. Ritter, and Q. Zhao (1996). The costs of raising capital. *Journal of Financial Research 19*(1), 59–74.

Longstaff, F. A. (1995). How much can marketability affect security values? *The Journal of Finance 50*(5), 1767–1774.

Maksimovic, V., G. Phillips, and L. Yang (2013). Private and public merger waves. *The Journal of Finance 68*(5), 2177–2217.

Malmendier, U. and G. Tate (2008). Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of Financial Economics 89*(1), 20–43.

Mills, L. F. and K. J. Newberry (2001). The influence of tax and nontax costs on book-tax reporting differences: Public and private firms. *Journal of the American Taxation Association 23*(1), 1–19.

Mitchell, M. L. and J. H. Mulherin (1996). The impact of industry shocks on takeover and restructuring activity. *Journal of Financial Economics 41*(2), 193–229.

Papke, L. E. and J. M. Wooldridge (1996). Econometric methods for fractional response variables with an application to 401 (k) plan participation rates. *Journal of Applied Econometrics 11*(6), 619–632.

Rhodes-Kropf, M., D. T. Robinson, and S. Viswanathan (2005). Valuation waves and merger activity: The empirical evidence. *Journal of Financial Economics 77*(3), 561–603.

Ritter, J. R. (1987). The costs of going public. *Journal of Financial Economics 19*(2), 269–281.

Rossi, S. and P. Volpin (2007). The governance motive in cross-border mergers and acquisitions. *Corporate Governance and Regulatory Impact on Mergers and Acquisitions: Research and Analysis on Activity Worldwide Since 1990*, 43.

Rossi, S. and P. F. Volpin (2004). Cross-country determinants of mergers and acquisitions. *Journal*

of Financial Economics 74(2), 277–304.

Shleifer, A. and R. W. Vishny (2003). Stock market driven acquisitions. *Journal of Financial Economics 70*(3), 295–311.

Siegel, J. I., A. N. Licht, and S. H. Schwartz (2011). Egalitarianism and international investment. *Journal of Financial Economics 102*(3), 621–642.

Silber, W. L. (1991). Discounts on restricted stock: The impact of illiquidity on stock prices. *Financial Analysts Journal 47*(4), 60–64.

Singh, H. and K. W. Jun (1995). Some new evidence on determinants of foreign direct investment in developing countries. *World Bank Policy Research Working Paper* (1531).

Smarzynska, B. K. and S.-J. Wei (2000). Corruption and composition of foreign direct investment: Firm-level evidence. Report, National Bureau of Economic Research.

Thijssen, J. J. (2008). Optimal and strategic timing of mergers and acquisitions motivated by synergies and risk diversification. *Journal of Economic Dynamics and Control 32*(5), 1701–1720.

Wei, S.-J. (2000a). *Does corruption relieve foreign investors of the burden of taxes and capital controls?*, pp. 73–88. University of Chicago Press.

Wei, S.-J. (2000b). How taxing is corruption on international investors? *Review of Economics and Statistics 82*(1), 1–11.

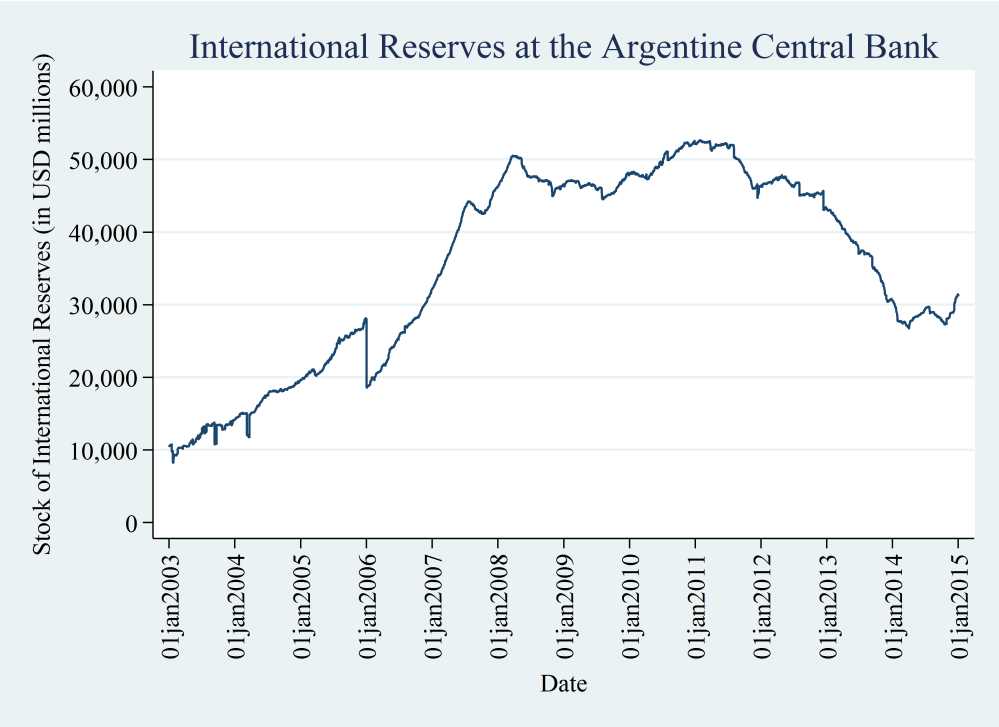
Wei, S.-J. and Y. Wu (2002). *Negative alchemy? Corruption, composition of capital flows, and currency crises*, pp. 461–506. University of Chicago Press.

World Bank (2016). Doing Business 2016: Measuring regulatory quality and efficiency. Report, World Bank Washington, DC.

Zeume, S. (2017). Bribes and firm value. *The Review of Financial Studies 30*(5), 1457–1489.

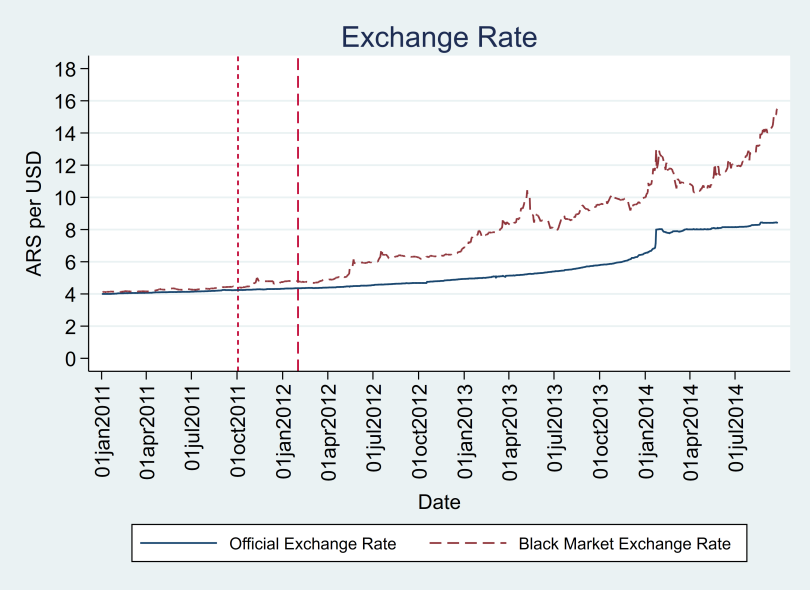
Figures and Tables

Figure 1: Stock of International Reserves at the Argentine Central Bank



This Figure reports the level of international reserves at the central bank of Argentina, including foreign currency, gold, and term deposits. By the end of 2011, several macroeconomic conditions combined to cause a sharp decline in international reserves. A group of factors affected the flow of funds to and from Argentina, including the drop in international soy prices, the depreciation of the Brazilian Real (which reduced the demand for Argentine goods in the Brazilian market), and the specter of inflation. Source: Argentine Central Bank.

Figure 2: Official and Black Market Exchange Rates: ARS per USD

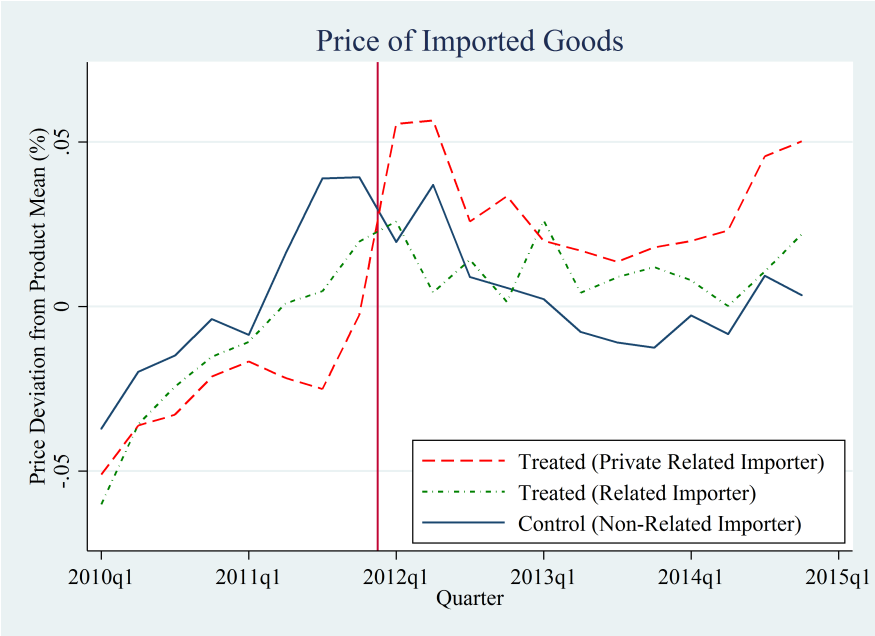


This Figure shows the evolution of both the official and the black market exchange rates for the Argentine peso with respect to the US dollar. The vertical lines indicate the implementation of regulations on currency exchange by individuals and profits repatriation by firms. After the Argentine government imposed restrictions on the exchange of foreign currency, the spread between the official and the black market rates increased sharply. Source: La Nación Newspaper (http://www.lanacion.com.ar/1798393-el-dolar-blue-y-su-evolucion-en-los-ultimos-anos)

Figure 3: Transfer of Earnings and Royalties

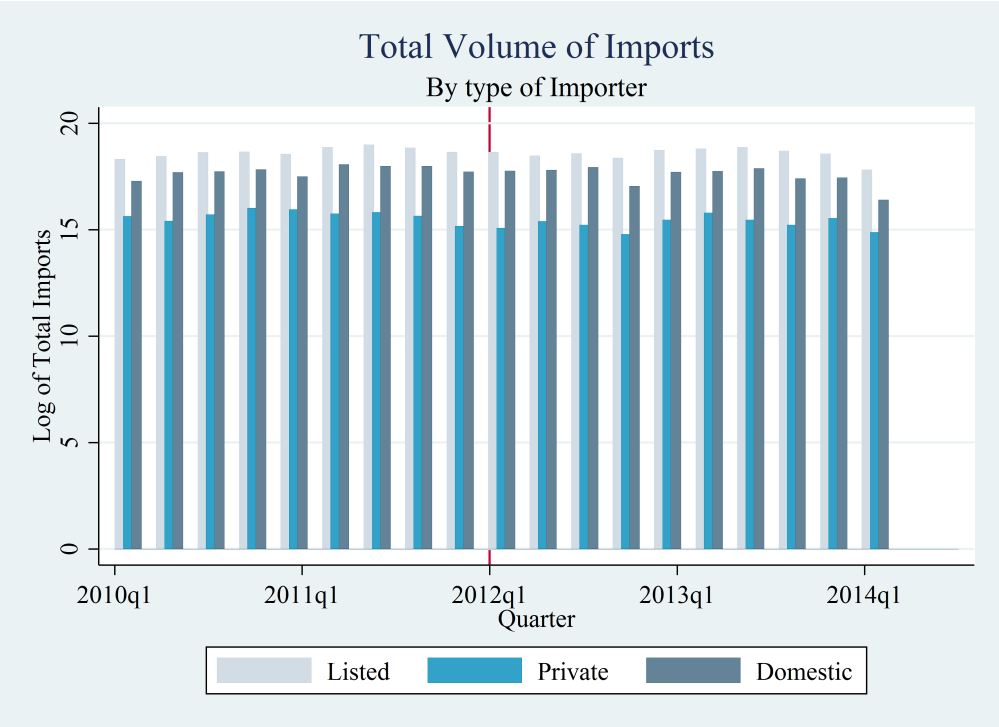
This Figure graphs the amount of US dollars that companies were repatriating from Argentina to their headquarters. In 2011, before the ban on international transfers, companies were transferring approximately 4.5 billion US dollars per year. After the ban, the amount transferred decreased by more than 94%. The vertical line demarcates the *pre* and *post* periods. Source: Argentine Central Bank.

Figure 4: Price paid by related and non-related importers, before and after the regulation

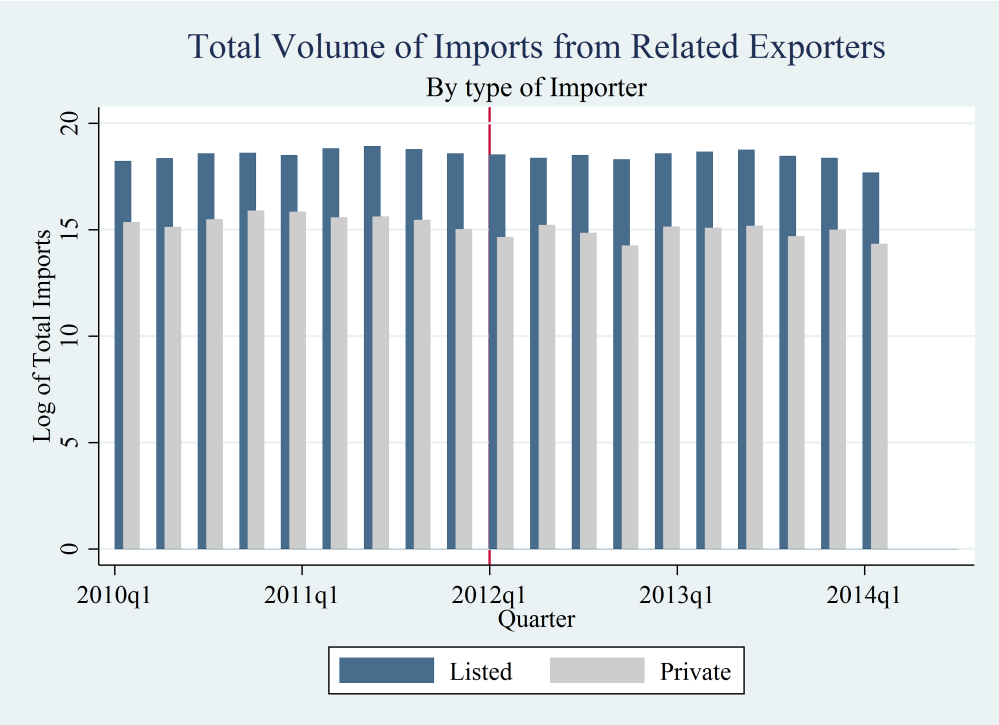


This Figure plots the deviation from the demeaned price for products imported by both related and non-related importers. In addition, I include the series for private related importers only. Before the regulation, related importers paid lower prices than non-related importers. At the time of the regulation, prices for private-related importers increased significantly compared to prices for non-related importers, suggesting that companies were overpricing imports to export capital. The vertical line demarcates the *pre* and *post* periods.

Figure 5: Volume of Imports



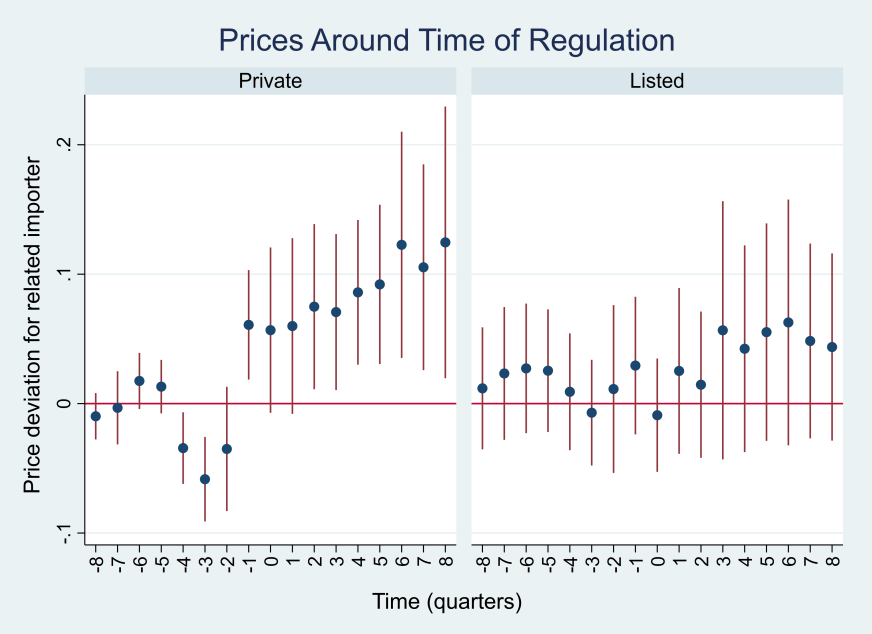
(A) From all exporters



(B) From related exporters

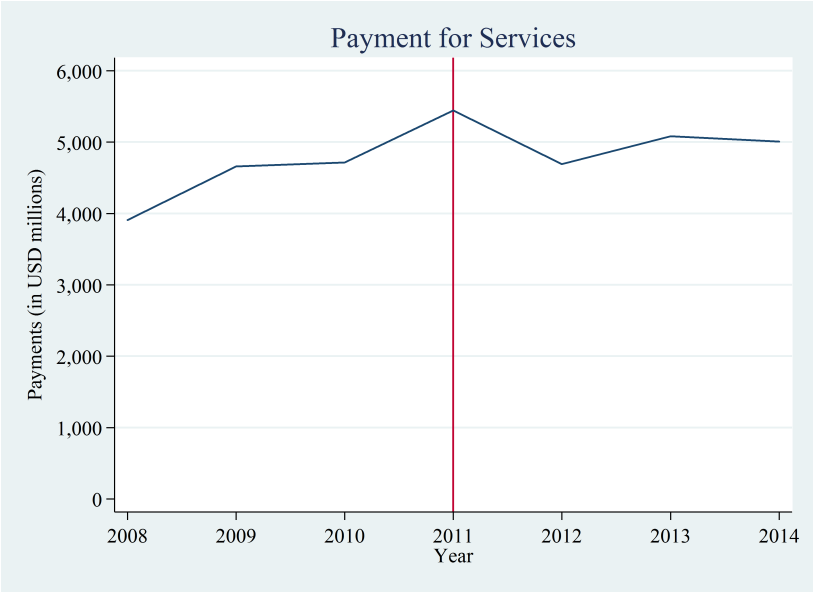
This Figure plots the total volume of imports (taken from a log of FOB prices) made by firms in my sample. Figure (A) includes products imported from all types of exporters. Figure (B) includes only products imported from related exporters. The vertical line demarcates the *pre* and *post* periods. This evidence suggests that the volumes imported did not change significantly after the regulation and were similar for both listed and private firms.

Figure 6: Quarter-by-quarter evolution of prices paid by private-related and listed-related importers

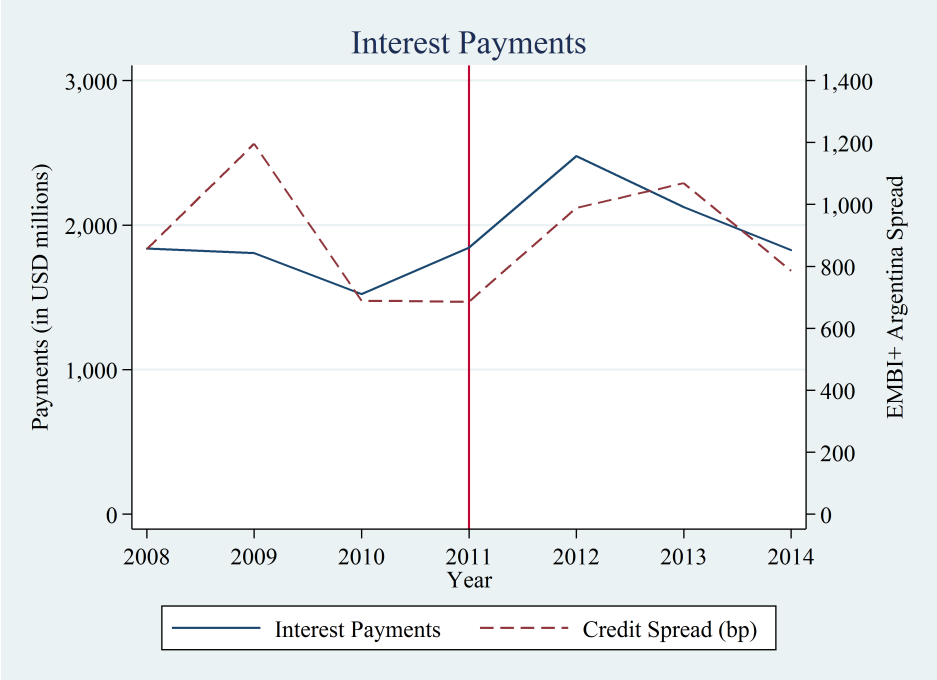


This Figure plots the quarter-by-quarter regression coefficients for products imported by both private-related and listed-related importers. When the government imposed limits on profits repatriation –a quarter before banning them– private-related importers increased prices to export capital, while listed-related importers did not.

Figure 7: Alternative Channels



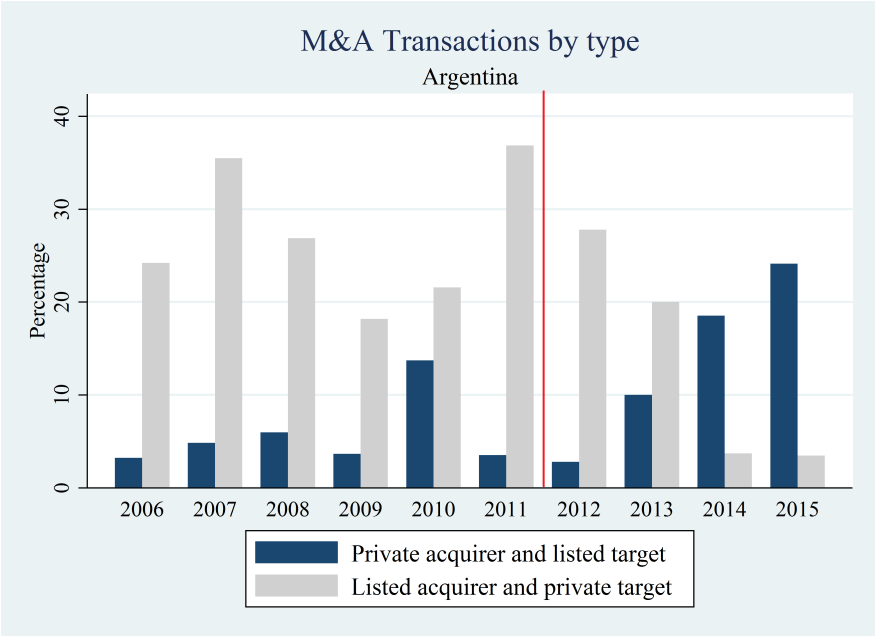
(A) Payment for Services



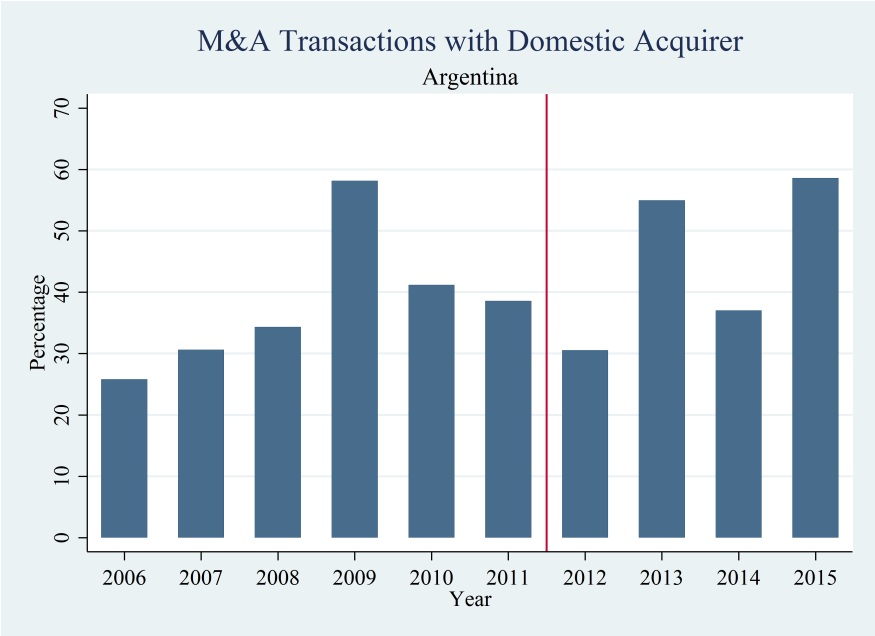
(B) Interest Payments

These graphs plot transfers abroad made by firms in Argentina, with regard to: payment for services (Figure (A)) and interest payments (Figure (B)). The graph shows that after the regulation, payment for services did not increase, suggesting that firms did not use this avenue to repatriate capital. In contrast, interest payments did increase after the regulation. However, the increase seems to correspond with higher interest rates, as reflected by the increase in the credit spread as measured by J.P. Morgan's Emerging Markets Bond Index (EMBI+) for Argentina. The vertical line demarcates the *pre* and *post* periods. Source: Argentine Central Bank and Ambito Financiero Newspaper.

Figure 8: Type of Transactions before/after Ban on International Transfers



(A) Listing Status



(B) Domicile

These graphs plot M&A transactions wherein a MNC sells its Argentine subsidiary, between the years 2006 and 2015. Figure (A) shows the percentage of the total number of transactions where the operation is between a private acquirer and a listed target (dark blue) and between a listed acquirer and a listed target (light gray). Figure (B) shows the percentage of the total number of transactions where the acquirer is a domestic firm. The vertical line demarcates the *pre* and *post* periods. Source: Zephyr Database.

Table 1: Transfer Mispricing Mechanism

	(1)	(2)	(3)	(4)	(5)
Price	Private firms		Listed firms		Difference (1) - (3)
Post	0.00376	0.00172	0.00861	0.00810	-0.00485
	(0.020)	(0.020)	(0.017)	(0.017)	
Related	-0.0530***	-0.0548***	-0.0889**	-0.0892**	0.0359
	(0.018)	(0.017)	(0.039)	(0.039)	
Post × Related	0.0996***	0.0990***	0.0134	0.0133	0.0862***
	(0.031)	(0.031)	(0.017)	(0.018)	
Product FE	Yes	Yes	Yes	Yes	
Month FE	No	Yes	No	Yes	
N	430,846	430,846	787,591	787,591	

This table presents the import prices in a DiD setting. The sample consists of imported goods belonging to Harmonized System codes 84.07 (Spark-ignition reciprocating or rotary internal combustion piston engines), 84.08 (Compression-ignition internal combustion piston engines (diesel or semi-diesel engines)) and 84.09 (Parts suitable for use solely or principally with the engines of heading 84.07 or 84.08) and represent the period between January 2010 and September 2014. The dependent variable is the import price normalized by the mean price of that product, which is done in order to give equal consideration to products at different price levels. *Post* is a dummy indicator for import transactions that occurred after Rule A5264. $Related_{jk}$ is a dummy indicator for transactions between importers and exporters that belong to the same MNC. The results in columns [1] and [2] measure the differential price increase for private firms, using the price paid by unrelated domestic firms as a control. The results in columns [3] and [4] measure the same differential price increase for listed firms. Column [5] shows the difference in the coefficients obtained from Columns [1] and [3]. Standard errors are clustered at the importer-exporter pair level and are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 2: Transfer Mispricing Mechanism - Size

	(1)	(2)	(3)	(4)	(5)
Price	Private firms		"Small" Listed Firms		Difference (1) - (3)
Post	0.00376	0.00172	0.00860	0.00769	-0.00484
	(0.020)	(0.020)	(0.017)	(0.017)	
Related	-0.0530***	-0.0548***	-0.122**	-0.122**	0.069
	(0.018)	(0.017)	(0.061)	(0.061)	
Post × Related	0.0996***	0.0990***	0.0125	0.0122	0.0871**
	(0.031)	(0.031)	(0.018)	(0.018)	
Product FE	Yes	Yes	Yes	Yes	
Month FE	No	Yes	No	Yes	
N	430,846	430,846	686,319	686,319	

This table presents the import prices in a DiD setting and compares the behavior of private firms with that of listed firms of comparable size. The dependent variable is the import price normalized by the mean price of that product, which is done in order to give equal consideration to products at different price levels. *Post* is a dummy indicator for import transactions that occurred after Rule A5264. $Related_{jk}$ is a dummy indicator for transactions between importers and exporters that belong to the same MNC. The results in columns [1] and [2] measure the differential price increase for private firms, using the price paid by unrelated domestic firms as a control. The results in columns [3] and [4] measure the same differential price increase for listed firms comparable in size to private firms. Column [5] shows the difference in the coefficients obtained from Columns [1] and [3]. Standard errors are clustered at the importer-exporter pair level and are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 3: Transfer Mispricing Mechanism - Concentrated Ownership

	(1)	(2)	(3)	(4)	(5)
Price	Private firms		Listed Firms w/ Concentrated Ownership		Difference (1) - (3)
Post	0.00376	0.00172	-0.00538	-0.00634	0.00914
	(0.020)	(0.020)	(0.019)	(0.019)	
Related	-0.0530***	-0.0548***	-0.109**	-0.109**	0.056
	(0.018)	(0.017)	(0.052)	(0.052)	
Post × Related	0.0996***	0.0990***	0.0292	0.0292	0.0704***
	(0.031)	(0.031)	(0.020)	(0.021)	
Product FE	Yes	Yes	Yes	Yes	
Month FE	No	Yes	No	Yes	
N	430,846	430,846	693,535	693,535	

This table presents the import prices in a DiD setting and compares the behavior of private firms with that of listed firms with concentrated ownership. The dependent variable is the import price normalized by the mean price of that product, which is done in order to give equal consideration to products at different price levels. *Post* is a dummy indicator for import transactions that occurred after Rule A5264. $Related_{jk}$ is a dummy indicator for transactions between importers and exporters that belong to the same MNC. The results in columns [1] and [2] measure the differential price increase for private firms, using the price paid by unrelated domestic firms as a control. The results in columns [3] and [4] measure the same differential price increase for listed firms with a concentrated ownership structure, defined as having a shareholder that owns at least 10% of the shares. Column [5] shows the difference in the coefficients obtained from Columns [1] and [3]. Standard errors are clustered at the importer-exporter pair level and are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 4: Transfer Mispricing Mechanism - Visibility

	(1)	(2)	(3)	(4)	(5)
Price	Low visibility		High visibility		Difference (1) - (3)
Post	0.0145	0.0134	-0.00419	-0.00521	0.01869
	(0.018)	(0.018)	(0.019)	(0.019)	
Related	-0.0895*	-0.0917**	-0.0510*	-0.0510*	-0.0385
	(0.046)	(0.046)	(0.026)	(0.026)	
Post × Related	0.0316	0.0315	0.0266	0.0266	0.005
	(0.027)	(0.027)	(0.020)	(0.020)	
Product FE	Yes	Yes	Yes	Yes	
Month FE	No	Yes	No	Yes	
N	543,110	543,110	680,689	680,689	

This table presents the import prices in a DiD setting and compares the behavior of firms that are less visible with that of firms that are more visible. The dependent variable is the import price normalized by the mean price of that product, which is done in order to give equal consideration to products at different price levels. *Post* is a dummy indicator for import transactions that occurred after Rule A5264. $Related_{jk}$ is a dummy indicator for transactions between importers and exporters that belong to the same MNC. The results in columns [1] and [2] measure the differential price increase for less visible multinational firms, using the price paid by unrelated domestic firms as a control. The results in columns [3] and [4] measure the same differential price increase for more visible multinational firms. Column [5] shows the difference in the coefficients obtained from Columns [1] and [3]. Standard errors are clustered at the importer-exporter pair level and are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 5: Transfer Mispricing Mechanism - Tax and Tariff Minimization Strategies

	(1)	(2)	(3)	(4)	(5)
Price	Private firms		Listed firms		Difference (1) - (3)
Post	0.00377	0.00171	0.00864	0.00824	-0.00487
	(0.020)	(0.020)	(0.017)	(0.017)	
Related	-0.0542***	-0.0563***	-0.0933**	-0.0933**	0.0391
	(0.018)	(0.018)	(0.039)	(0.039)	
Post × Related	0.0956***	0.0941***	0.0199	0.0190	0.0757***
	(0.029)	(0.029)	(0.017)	(0.017)	
Product FE	Yes	Yes	Yes	Yes	
Month FE	No	Yes	No	Yes	
Corporate Taxes	Yes	Yes	Yes	Yes	
N	430,846	430,846	787,591	787,591	

This table presents the import prices in a DiD setting and includes dummy variables that are set to one for each exporting country-year with a change in corporate tax rates. The dependent variable is the import price normalized by the mean price of that product, which is done in order to give equal consideration to products at different price levels. *Post* is a dummy indicator for import transactions that occurred after Rule A5264. $Related_{jk}$ is a dummy indicator for transactions between importers and exporters that belong to the same MNC. Columns [1] and [2] measure the differential price increase for private firms, using the price paid by unrelated domestic firms as a control. Columns [3] and [4] measure the same differential price increase for listed firms. Standard errors are clustered at the importer-exporter pair level and are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 6: The Impact of Exposure to a Ban on International Transfers on Firms' Selling Decision

	(1) Likelihood of Selling
$HighExposure_s$	0.291**
	(0.118)
$Post_t$	-0.0669
	(0.044)
$Listed$	-0.104
	(0.064)
$HighExposure_s \times Post_t$	-0.194**
	(0.074)
$HighExposure_s \times Listed$	-0.263*
	(0.118)
$Post_t \times Listed$	0.0771
	(0.048)
$HighExposure_s \times Post_t \times Listed$	0.171**
	(0.073)
N	288
R-Squared	0.346

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

This table presents the regression of the percentage of MNCs in each industry that, after regulation A5264, sold their operations in Argentina based on the exposure of that industry to the regulation. The exposure to the regulation is measured as the percentage of added value that was being transferred abroad before the regulation. Standard errors are clustered at the industry level. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 7: Deals by Region of the World

Region	**Deals**	**Deregulatory episodes**	**Regulatory episodes**
Asia Pacific	26,724	26	14
North America	36	2	2
Africa	2,801	51	33
Latin America and the Caribbean	5,093	18	19
Europe	17,204	14	10
Total	**51,858**	**111**	**78**

This table summarizes the number of M&A deals per region of the world between 2000 and 2014, the number of deregulatory episodes (sudden increase in the level of Economic Freedom), and the number of regulatory episodes (sudden decrease in the level of Economic Freedom) in the final dataset.

Table 8: The Effect of a Sudden Reduction in the Level of Economic Freedom in the M&A market

(a) Private acquirer and Listed target

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Regulatory Episode$_{t-1}$	0.0672*	0.0546	0.178**	0.170**	0.289**	0.286**
	(0.038)	(0.035)	(0.080)	(0.077)	(0.132)	(0.130)
EF Index (centered)	-0.0134	-0.0153	-0.0134	-0.0153	-0.0134	-0.0153
	(0.021)	(0.025)	(0.021)	(0.025)	(0.021)	(0.025)
Regulatory Episode$_{t-1}\times$ EF Index (centered)	-0.140**	-0.146**	-0.140**	-0.146**	-0.140**	-0.146**
	(0.070)	(0.070)	(0.070)	(0.070)	(0.070)	(0.070)
Region-Year FE	No	Yes	No	Yes	No	Yes
N	704	704	704	704	704	704
R-Squared	0.172	0.277	0.172	0.277	0.172	0.277

(b) Listed acquirer and Private target

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Regulatory Episode$_{t-1}$	-0.0746**	-0.0581*	-0.0758**	-0.0988**	-0.0769	-0.139*
	(0.029)	(0.030)	(0.037)	(0.047)	(0.055)	(0.072)
EF Index (centered)	0.0136	0.0324	0.0136	0.0324	0.0136	0.0324
	(0.050)	(0.055)	(0.050)	(0.055)	(0.050)	(0.055)
Regulatory Episode$_{t-1}\times$ EF Index (centered)	0.00146	0.0513	0.00146	0.0513	0.00146	0.0513
	(0.030)	(0.037)	(0.030)	(0.037)	(0.030)	(0.037)
Region-Year FE	No	Yes	No	Yes	No	Yes
N	704	704	704	704	704	704
R-Squared	0.259	0.328	0.259	0.328	0.259	0.328

This table presents the effect that a sudden reduction in the level of EF has on the percentage of M&A transactions between private acquirers and listed targets (Panel (a)), and between listed acquirers and private targets (Panel (b)). *Regulatory Episode*$_{t-1}$ is an indicator equal to one if, in the previous year, there was a reduction of at least one standard deviation in the level of EF in a certain country. In columns [1] and [2] the index of EF is centered at its mean value to give meaning to the coefficient of *Regulatory Episode*$_{t-1}$. In columns [3] and [4] the index of EF is centered at its mean value minus one standard deviation. In columns [5] and [6] the index of EF is centered at its mean minus two standard deviations. The dependent variable is the percentage of transactions in a country-year between private acquirers and listed targets (Panel (a)), or between listed acquirers and private targets (Panel (b)). All specifications include the following macroeconomic control variables lagged by one year: GDP per capita growth, level of GDP per capita, domestic credit to private sector, interest rate spread (lending rate minus deposit rate), log of exchange rate with respect to the US dollar, and trade as a percentage of GDP. Standard errors are clustered at the target firm's country level and are in parentheses. *, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Table 9: The Effect of a Sudden Increase in the Level of Economic Freedom in the M&A market

(a) Private acquirer and Listed target

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Deregulatory Episode$_{t-1}$	-0.0225	-0.0237	-0.0761**	-0.0876**	-0.130**	-0.152**
	(0.020)	(0.024)	(0.030)	(0.034)	(0.053)	(0.059)
EF Index (centered)	-0.0308	-0.0348	-0.0308	-0.0348	-0.0308	-0.0348
	(0.022)	(0.027)	(0.022)	(0.027)	(0.022)	(0.027)
Deregulatory Episode$_{t-1}\times$ EF Index (centered)	0.0676*	0.0807**	0.0676*	0.0807**	0.0676*	0.0807**
	(0.034)	(0.037)	(0.034)	(0.037)	(0.034)	(0.037)
Region-Year FE	No	Yes	No	Yes	No	Yes
N	704	704	704	704	704	704
R-Squared	0.151	0.260	0.151	0.260	0.151	0.260

(b) Listed acquirer and Private target

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Deregulatory Episode$_{t-1}$	0.0309	0.0161	0.0569	0.0404	0.0829	0.0647
	(0.050)	(0.052)	(0.086)	(0.093)	(0.133)	(0.143)
EF Index (centered)	0.0246	0.0462	0.0246	0.0462	0.0246	0.0462
	(0.048)	(0.052)	(0.048)	(0.052)	(0.048)	(0.052)
Deregulatory Episode$_{t-1}\times$ EF Index (centered)	-0.0328	-0.0306	-0.0328	-0.0306	-0.0328	-0.0306
	(0.065)	(0.068)	(0.065)	(0.068)	(0.065)	(0.068)
Region-Year FE	No	Yes	No	Yes	No	Yes
N	704	704	704	704	704	704
R-Squared	0.256	0.326	0.256	0.326	0.256	0.326

This table presents the effect that a sudden increase in the level of EF within a country has on the percentage of M&A transactions between private acquirers and listed targets (Panel (a)), and between listed acquirers and private targets (Panel (b)). *Deregulatory Episode*$_{t-1}$ is an indicator equal to one if, in the previous year, there was an increase of at least one standard deviation in the level of EF. In columns [1] and [2] the index of EF is centered at its mean value to give meaning to the coefficient of *Deregulatory Episode*$_{t-1}$. In columns [3] and [4] the index of EF is centered at its mean value minus one standard deviation. In columns [5] and [6] the index of EF is centered at its mean value minus two standard deviations. The dependent variable is the percentage of transactions in a country-year between private acquirers and listed targets (Panel (a)), or between listed acquirers and private targets (Panel (b)). All specifications include the following macroeconomic control variables lagged by one year: GDP per capita growth, level of GDP per capita, domestic credit to private sector, interest rate spread (lending rate minus deposit rate), log of exchange rate with respect to the US dollar, and trade as a percentage of GDP. Standard errors are clustered at the target firm's country level and are in parentheses. *, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Table 10: The Effect of a Sudden Reduction in the Level of Economic Freedom for Companies Listed in Markets with Stricter (More Lenient) Auditing and Enforcement Standards

(a) Companies Listed in Markets with Stricter Auditing and Enforcement Standards

	(1) P → L	(2) P → L	(3) L → P	(4) L → P
Regulatory Episode$_{t-1}$	0.113*	0.123*	-0.0695**	-0.134**
	(0.065)	(0.072)	(0.031)	(0.052)
EF Index (centered)	-0.00783	-0.0152	0.0294	0.0227
	(0.016)	(0.023)	(0.031)	(0.048)
Regulatory Episode$_{t-1}$ × EF Index (centered)	-0.101*	-0.102*	0.0406	0.0787*
	(0.057)	(0.059)	(0.025)	(0.042)
Region-Year FE	No	Yes	No	Yes
N	704	704	704	704
R-Squared	0.192	0.461	0.231	0.499

(b) Companies Listed in Markets with More Lenient Auditing and Enforcement Standards

	(1) P → L	(2) P → L	(3) L → P	(4) L → P
Regulatory Episode$_{t-1}$	0.0266	0.0243	-0.0153	-0.00865
	(0.024)	(0.024)	(0.015)	(0.022)
EF Index (centered)	0.00565	0.0167	-0.00405	-0.00149
	(0.007)	(0.012)	(0.023)	(0.037)
Regulatory Episode$_{t-1}$ × EF Index (centered)	-0.00515	-0.00674	-0.00354	-0.00440
	(0.007)	(0.006)	(0.012)	(0.014)
Region-Year FE	No	Yes	No	Yes
N	704	704	704	704
R-Squared	0.171	0.337	0.476	0.622

This table presents the effect that a sudden reduction in the level of *EF* has on the percentage of M&A transactions between private acquirers and listed targets (columns [1] and [2]), and between listed acquirers and private targets (columns [3] and [4]) when the listed company is under stricter auditing and enforcement standards (panel A) as well as when it is under more lenient auditing and enforcement standards (panel B). *Regulatory Episode*$_{t-1}$ is an indicator equal to one if, in the previous year, there was a reduction of at least one standard deviation in the level of *EF* in a certain country. The index of *EF* is centered at its mean value minus one standard deviation to give meaning to the coefficient of *Regulatory Episode*$_{t-1}$. All specifications include the following macroeconomic control variables lagged by one year: GDP per capita growth, level of GDP per capita, domestic credit to private sector, interest rate spread (lending rate minus deposit rate), log of exchange rate with respect to the US dollar, and trade as a percentage of GDP. Standard errors are clustered at the target firm's country level and are in parentheses. *, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Internet Appendix

This appendix is in two sections. The first one provides robustness tests to the last section of the paper -M&A transactions in Emerging Markets-. The second section provides a theoretical model to explain why firms might decide to comply with regulations or to bypass them, and the consequences this decision has on a firms' value.

A The Impact on the M&A Market in Emerging Markets - Robustness Tests

In this section, I provide evidence that further supports the evidence provided to assess external validity by exploiting several additional sources of heterogeneity. In the interest of brevity a summary of the tables is provided. The remaining tables are available upon request.

A.1 Additional Controls

For robustness, I repeat the main tests analyzing whether changes in the regulatory environment of a country trigger M&A transactions, and include additional controls. First, in order to absorb potential country-specific trends, I include controls with linear and quadratic terms in the percentage of transactions in each category. Second, to control for potential differential effects that growth opportunities have on listed and private firms that might also drive transactions, I follow Bekaert et al. (2007) and construct a measure of Local Growth Opportunities equal to the log of a country's market price to earnings ratio. As with the authors, my preferred source is Datastream. When data are not available, I use S&P's Emerging Markets Data Base. I lag this measure by one year, which is consistent with my treatment of other macroeconomic controls. Unfortunately, 29 of my 59 countries are not covered by Datastream, S&P, nor MSCI. For those countries, I set the log of the ratio equal to zero. The results in Tables A1 and A2 show that the significance of the coefficients survives the inclusion of these controls.

A.2 Private-Private and Listed-Listed transactions

There are two types of transactions that should exhibit no patterns at all in response to regulatory episodes: those wherein listed firms acquire listed ones, and those wherein private firms acquire private ones. However, analysis of M&A transactions in these categories can provide further support for the previous findings. Since regulatory (deregulatory) episodes do not generate differential compliance costs for firms in these categories, we should find no effect on the percentage of M&A transactions in response to changes in regulations.

I find that after a regulatory (deregulatory) episode, the percentage of transactions wherein listed firms acquire listed firms and wherein private firms acquire private firms does not change. This result helps identify the flexibility enjoyed by private firms in business-unfriendly markets as the driver of M&A transactions.

A.3 Firms Operating in Developed Markets

For the advantage of private firms to endure, non-compliers must perceive a substantial probability of getting away with bypassing regulations. Since DM have stricter enforcement of regulations for both listed and private firms, the advantage private firms have over listed ones when dealing with regulations is absent. This means that regulatory episodes do not generate differential compliance costs, nor do they trigger value-creating M&A. Therefore I expect the M&A patterns to be nil in those markets.

To test this hypothesis, I run the main specification with countries in the first two deciles of levels of EF —those that were excluded from my main test. Table A3 shows that the coefficients do not have the expected sign and are not significant at the 10% level, meaning that regulatory (deregulatory) episodes in countries with higher levels of EF do not have an effect on the composition of M&A transactions.

A.4 Political Risks

Listed firms generally have a more dispersed ownership structure than private ones, and this might affect their risk aversion. If the EF index is correlated with measures of risk, the previous results could derive from differences in risk aversion and not from a differential burden imposed by regulations. To rule out this possibility, I repeat the previous tests using the Political Risk Index included in the International Country Risk Guide, developed by the Political Risk Services Group.[47] Despite its name, this index includes information on 12 risk factors that address not only political risk but also different components of political institutions risk, such as religious and ethnic tensions. The higher the index, the lower the political risk. Therefore, a reduction in the index implies higher political risk, as with the EF Index.

I run two tests to check whether the results are driven by risk factors and not by the burden of regulations. First, I include the index as an additional control on the main specification and find that the results remain unchanged. Second, I repeat the analysis replacing the EF index with the political risk index, including a dummy variable indicating whether the political risk index exhibits a sudden change of more than one standard deviation from one year to another, as was done with the EF index. Tables A4 and A5 show that sudden changes in the political risk index do not seem to have an effect on the percentage of transactions between listed acquirers and target firms, nor do they seem to affect the percentage of transactions between private acquirers and listed targets.

A.5 Placebo Test

To rule out that my results are driven by spurious correlations, I repeat the analysis and randomize the allocation of sudden changes in the level of EF. For each country-year, I generate a random number using the uniform distribution. To the country-years with the highest h numbers, I assign a deregulatory episode. To the country-years with the lowest l numbers, I assign a regulatory episode. I choose h and l so that my placebo sample has the same number of deregulatory and regulatory episodes as the original sample. Tables A6 and A7 show that no single coefficient is

[47] www.prsgroup.com.

significant. These results provide supporting evidence towards my hypothesis.

B A Simple Static Model

In this section I present a simple static model to explain why firms might decide to comply with regulations or to bypass them, and the consequences this decision has. The first takeaway of the model relates to the compliance rate of the firm, and shows that it is a priori theoretically unclear whether companies listed on stock exchanges should have a higher compliance rate than private firms, or vice versa. After incorporating the results obtained in the section of the paper that analyses transfer prices, the model predicts that if the differential compliance cost is of large magnitude it should shape the pattern of M&A transactions. This prediction is tested in the M&A Section in the main body.

Consider a firm that operates in a business unfriendly-environment with regulations that limit its normal operations. The firm might choose to comply with regulations, reducing the value of its operations (e.g. by increasing operational cost) or it might choose to defy them, maintaining the value of its operations but facing the risk that authorities will discover and sanction the firm. Consider a firm that imports products to be used as inputs. Certain categories of imported products might be subject to higher tax rates or stricter inspections than other goods, and would therefore be cleared more slowly when going through customs. The firm has two options: 1) it can choose to truthfully declare the category of the product being imported and pay higher taxes, or wait longer for the product to be cleared, 2) it can choose to declare the product as belonging to a different category and pay lower taxes, or have it cleared faster. If caught doing this second option, the firm would be fined or sanctioned.

I define β as the compliance rate of a given firm. A coefficient $\beta = 0$ means that the company does not comply with regulations at all, and therefore they do not affect its operations. However, the firm risks being caught bypassing regulations. On the other hand, a coefficient $\beta = 1$ means that the company fully complies with regulations, and therefore regulations have full impact on its operations. However, there is no risk of being fined or suspended.

Following the previous example, the value of the firm can be modeled as the sum of a term that accounts for the firm's operative profits, and a term that accounts for the expected cost of

being fined or suspended. I define α_i as the inverse of the cost of capital of firm i (or Present Value Factor) that discounts future profits, and EF as the level of Economic Freedom of the market where the firm operates, as described in the main body of the paper. Business-unfriendly markets will have low EF, and business-friendly markets will have high EF. The coefficient p_i measures the probability that firm i is caught bypassing regulations, and the term $\gamma(1-\beta_i)$ is the cost the firm pays if it is caught, which is further explained below. My model of the value of the firm is then

$$V(firm_i) = \alpha_i[1-\beta_i(1-EF)] - p_i[\gamma(1-\beta_i)] \tag{4}$$

The value of the firm as defined in Equation 4 can be thought of as follows. The first term measures the value of operations of firm i. The second term measures the expected cost of non-compliance. In the first term, the parameter α_i is the inverse of the cost of capital of firm i and is used as a discount factor, with a higher cost of capital implying a lower α_i. The term $\beta_i(1-EF)$ factors in the burden of compliance with regulations. The higher the level of compliance β_i and the more business-unfriendly the market is (lower EF), the higher the burden of compliance and the lower the resulting value of operations. Going back to the customs example, the higher the number of regulations and the higher the compliance rate, the longer the company has to wait to clear inputs from customs or the higher the taxes it has to pay to import products. In the extreme case in which the firm does not comply at all with regulations, $\beta_i = 0$ and regulations do not impose a burden on operations. In contrast, when the firm fully complies, $\beta_i = 1$, the more business-unfriendly the market is, the greater the burden on operations.

The second term in Equation 4 also has two components. The first component is the probability of getting caught bypassing regulations. The second component is the price the firm pays, conditional on being caught. The latter has a fixed value (γ) and a factoring term ($1-\beta_i$) that implies that, conditional on being caught, the lower the compliance rate the higher the cost to the firm. [48]

The probability of being audited and caught is endogenous and depends on two variables.

[48] If the firm is found committing an infraction, it will likely be audited, and other infractions might be discovered. Thus, the lower the compliance rate, the larger the number of fines it will be subject to.

First, it depends on the compliance rate of the firm. Intuitively, we might say that $\frac{\partial p}{\partial \beta} < 0$: the lower the compliance rate, the higher the probability of being caught.[49] Second, it depends on the strictness of the auditing and enforcement standards of the regulator, defined as δ_i. It is easy to see that $\frac{\partial p}{\partial \delta} > 0$: the stricter the standards, the higher the probability of being caught.[50] A linear model is obtained by setting $p_i = (1 - \beta_i)\delta_i$. [51]

Managers have to choose the compliance rate β_i that maximizes the value of the firm. The trade-off the firm faces is that a high β_i reduces the probability of being fined or suspended. However, it also maximizes the negative impact that regulations have on the value of the firm's operations. In contrast, a low β_i reduces the impact that regulations have on the firm but increases the probability of being caught and fined.

By substituting $p_i = (1 - \beta_i)\delta_i$ in Equation 4, and simplifying the expression, we see that the firm's problem is

$$\max_{\beta_i} \alpha_i(1 - \beta_i(1 - EF)) - \gamma(1 - \beta_i)^2\delta_i \tag{5}$$

The trade-off the firm faces is seen again in the simplified equation. The compliance rate β_i affects the firm in two ways, one positive and one negative. A higher compliance rate reduces the operative value of the firm. However, it also reduces the non-compliance cost. The FOC of the previous maximization problem yields an optimal compliance rate of $\beta_i^* = 1 - \frac{\alpha_i(1-EF)}{2\gamma\delta_i}$. It varies with the firm-specific coefficients α_i and δ_i. The lower the firm's cost of capital (higher α_i), the higher the marginal value of each dollar saved bypassing regulations and operating outside the law, therefore the lower the optimal compliance rate. The stricter the auditing and enforcement standards under which the firm is monitored (δ_i), the higher the probability of being caught and therefore the higher the optimal compliance rate.

[49] As an analogy, a car with a broken tail light, no side mirror, and no license plate is more likely to be pulled over by the police than a car with just a broken tail light.

[50] Revisiting the car analogy, we can assume that being pulled over by a police officer that thoroughly checks compliance with laws (rather than by one that does a careless check) increases the probability of getting a ticket.

[51] It could be argued that firms are more likely to be caught in more regulated markets. The inclusion of a term to account for this does not change the model's main implications.

Firm type and regulatory environment

From the FOC we see that the optimal compliance rate depends on the relationship between the firm-specific parameters α_i and δ_i. In principle, there are two kinds of firms, each with distinct parameters: those whose shares are publicly listed on stock exchanges ("listed") and those whose shares are privately held ("private"). The coefficient α_i is different for these two types of firms for several reasons; among them are liquidity premiums and ease of access to finance. All other things being equal, private firms' cost of capital is higher than that of listed firms because their shares are not traded in organized and liquid markets. Therefore, these types of securities cannot be traded easily, and investors demand a premium.[52] As a result, private firms are subject to a liquidity premium, and the parameter α_i should be higher for publicly listed firms, all other things being equal.

The second coefficient of interests is δ_i, the strictness of the regulator monitoring the firm, which affects the probability p_i of being caught bypassing regulations. This coefficient is also different for listed firms than for private ones, and can differ significantly for at least two reasons. First, listed firms are subject to stricter scrutiny because they are overseen by a larger number of agencies than private firms.[53] Second, their statements are publicly available and therefore they are subject to additional scrutiny by analysts, shareholders, and competitors. Therefore, the conditional probability of being caught bypassing regulations is higher for listed firms than for private firms.

Since both α and δ are higher for listed firms than for private firms, the relationship between the optimal compliance rate for listed and private firms determined by $\beta_i^* = 1 - \frac{\alpha_i(1-EF)}{2\gamma\delta_i}$ is a priori undetermined, and is tested in the main body of the paper. However, my result makes it clear that optimal compliance rates increase with the level of EF, since the cost of compliance gets lower and the cost of non-compliance remains unchanged. In addition, the relation between optimal compliance rates for listed and private firms does not change for different levels of EF. If listed

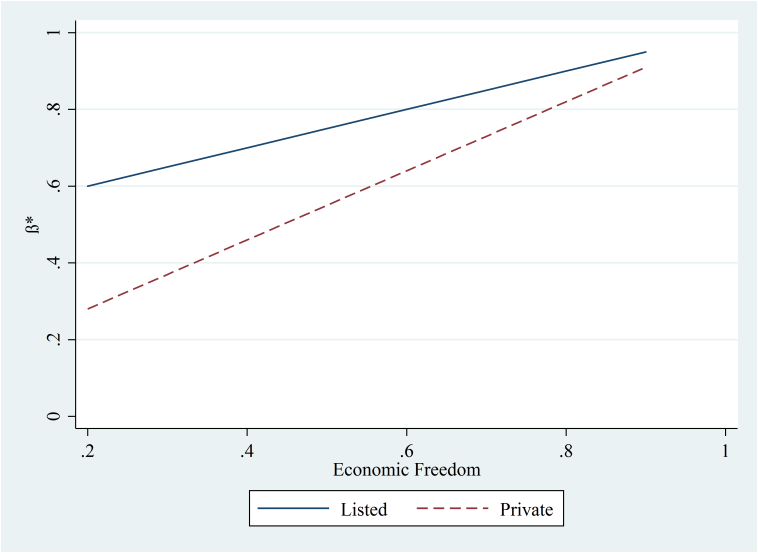
[52] Several papers try to estimate the discount at which non-liquid shares trade, with respect to liquid shares. For instance, Longstaff (1995) provides an analytical framework and estimates that the discount can be high, even for short terms of non-marketability. This conclusion is consistent with empirical findings in Silber (1991), that estimate the discount to be about 34%.

[53] Agencies such as the SEC monitor listed firms only.

firms comply more than private ones, they do it at every level of EF.

After showing that listed firms comply more than private ones, the model draws interesting predictions. Figure A1 shows optimal compliance rates for different levels of EF with the following parameters: $\alpha_{listed} = 1,\ \alpha_{private} = 0.9,\ \delta_{listed} = 1,\ \delta_{private} = 0.5$, and $\gamma = 1$.[54] Figure A2 graphs the value of listed and private firms under their optimal compliance rates and for different levels of EF.[55] Interestingly, we find that in business-unfriendly markets —with levels of EF below or equal to 0.45— the same firm is more valuable for a private owner than for a listed one. However, in less business-unfriendly environments —with levels of EF above 0.45— the firm is more valuable for a listed owner than for a private one. Consequently, when markets become less business-unfriendly, we might expect listed firms to acquire private firms, because $V(listed) > V(private)$. In contrast, when markets become more business-unfriendly, we might expect private firms to acquire listed firms, because $V(private) > V(listed)$. I test this prediction in the M&A Section of the paper and find evidence consistent with my prediction.

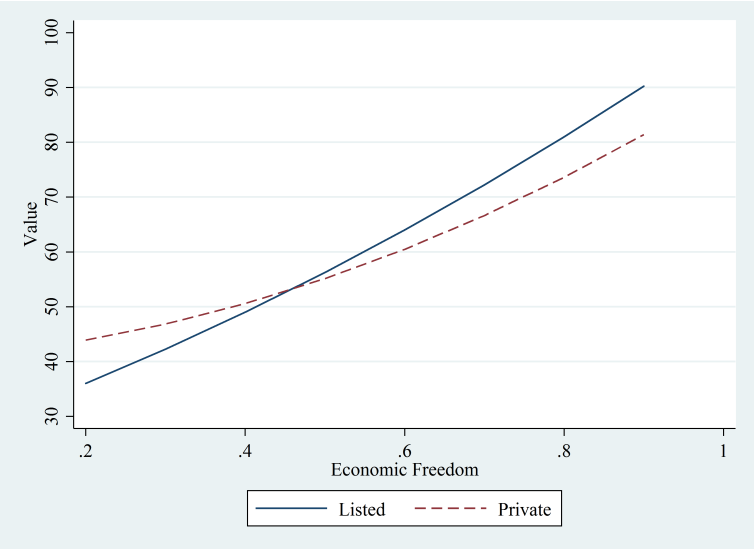
Figure A1: Comparative Statistics: Optimal Compliance Rates Under Different Levels of EF



This Figure shows how the optimal compliance rate for listed and private firms varies with changes in the level of EF. The graph reflects the trade-off firms face between compliance and non-compliance costs, and shows that differences in the strictness of the auditing and enforcement standards and in the cost of capital between listed and private firms affect the optimal compliance rate.

[54] This parametrization reflects the relative results found in the main body of the paper.
[55] The value obtained from the model is multiplied by 100 for clarity.

Figure A2: Comparative Statistics: Value of Firms Under Different Levels of EF



This Figure shows how the value of listed and private firms varies with changes in the level of EF. At low levels of EF (i.e. more business-unfriendly markets), the firm value is higher for a private owner than for a listed owner. In contrast, at higher levels of EF (i.e. more business-friendly markets) the relationship is reversed and the firm value is higher for a listed owner than for a private owner.

Table A1: The Effect of a Sudden Reduction in the Level of Economic Freedom in the M&A market - Additional Controls

(a) Private acquirer and Listed target

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Mean			Mean - 1 SD			Mean - 2 SD	
Regulatory Episode$_{t-1}$	0.0719*	0.0484	0.0715*	0.196**	0.146**	0.193**	0.320**	0.243**	0.315**
	(0.041)	(0.034)	(0.041)	(0.084)	(0.064)	(0.085)	(0.138)	(0.104)	(0.140)
EF Index (centered)	0.0461	-0.0197	0.0243	0.0461	-0.0197	0.0243	0.0461	-0.0197	0.0243
	(0.056)	(0.023)	(0.059)	(0.056)	(0.023)	(0.059)	(0.056)	(0.023)	(0.059)
Regulatory Episode$_{t-1}$ × EF Index (centered)	-0.156**	-0.123**	-0.153**	-0.156**	-0.123**	-0.153**	-0.156**	-0.123**	-0.153**
	(0.073)	(0.055)	(0.074)	(0.073)	(0.055)	(0.074)	(0.073)	(0.055)	(0.074)
Region-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Quadratic Trend	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
Growth Opportunities	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
N	704	668	668	704	668	668	704	668	668
R-Squared	0.364	0.289	0.375	0.364	0.289	0.375	0.364	0.289	0.375

(b) Listed acquirer and Private target

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Mean			Mean - 1 SD			Mean - 2 SD	
Regulatory Episode$_{t-1}$	-0.0544	-0.0587*	-0.0518	-0.111*	-0.113**	-0.112*	-0.167**	-0.167**	-0.172*
	(0.044)	(0.035)	(0.048)	(0.057)	(0.048)	(0.062)	(0.080)	(0.065)	(0.086)
EF Index (centered)	-0.00429	0.0114	-0.0235	-0.00429	0.0114	-0.0235	-0.00429	0.0114	-0.0235
	(0.094)	(0.061)	(0.106)	(0.094)	(0.061)	(0.106)	(0.094)	(0.061)	(0.106)
Regulatory Episode$_{t-1}$ × EF Index (centered)	0.0713*	0.0685**	0.0757*	0.0713*	0.0685**	0.0757*	0.0713*	0.0685**	0.0757*
	(0.038)	(0.027)	(0.040)	(0.038)	(0.027)	(0.040)	(0.038)	(0.027)	(0.040)
Region-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Quadratic Trend	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
Growth Opportunities	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
N	704	668	668	704	668	668	704	668	668
R-Squared	0.490	0.342	0.493	0.490	0.342	0.493	0.490	0.342	0.493

This table presents the effect that a sudden reduction in the level of EF has on the percentage of M&A transactions between private acquirers and listed targets (Panel (a)) and between listed acquirers and private targets (Panel (b)). *Regulatory Episode*$_{t-1}$ is an indicator equal to one if, in the previous year, there was a reduction of at least one standard deviation in the level of EF in a certain country. In columns [1], [2], and [3] the index of Economic Freedom is centered at its mean value to give meaning to the coefficient of *Regulatory Episode*$_{t-1}$. In columns [4], [5], and [6], the index of Economic Freedom is centered at its mean value minus one standard deviation. In columns [7], [8], and [9] the index of EF is centered at its mean value minus two standard deviations. The dependent variable is the percentage of transactions in a country-year between private acquirers and listed targets (Panel (a)), or between listed acquirers and private targets (Panel (b)). All specifications include the following macroeconomic control variables lagged by one year: GDP per capita growth, level of GDP per capita, domestic credit to private sector, interest rate spread (lending rate minus deposit rate), log of exchange rate with respect to the US dollar, and trade as a percentage of GDP. Standard errors are clustered at the target firm's country level and are in parentheses. *, **, and *** denote significance at the 10%, 5% and 1% levels respectively.

Table A2: The Effect of a Sudden Increase in the Level of Economic Freedom in the M&A market - Additional Controls

(a) Private acquirer and Listed target

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Mean			Mean - 1 SD			Mean - 2 SD	
Deregulatory Episode$_{t-1}$	-0.0338	-0.0186	-0.0204	-0.102**	-0.0801**	-0.0918*	-0.170**	-0.142**	-0.163**
	(0.034)	(0.025)	(0.038)	(0.044)	(0.035)	(0.047)	(0.071)	(0.059)	(0.076)
EF Index (centered)	-0.0372	-0.0543*	-0.0786	-0.0372	-0.0543*	-0.0786	-0.0372	-0.0543*	-0.0786
	(0.085)	(0.029)	(0.090)	(0.085)	(0.029)	(0.090)	(0.085)	(0.029)	(0.090)
Deregulatory Episode$_{t-1}$ × EF Index (centered)	0.0861*	0.0775**	0.0902*	0.0861*	0.0775**	0.0902*	0.0861*	0.0775**	0.0902*
	(0.044)	(0.037)	(0.048)	(0.044)	(0.037)	(0.048)	(0.044)	(0.037)	(0.048)
Region-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Quadratic Trend	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
Growth Opportunities	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
N	704	668	668	704	668	668	704	668	668
R-Squared	0.340	0.271	0.352	0.340	0.271	0.352	0.340	0.271	0.352

(b) Listed acquirer and Private target

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Mean			Mean - 1 SD			Mean - 2 SD	
Deregulatory Episode$_{t-1}$	0.0221	0.0130	0.0166	0.0473	0.0335	0.0390	0.0724	0.0540	0.0613
	(0.064)	(0.056)	(0.073)	(0.109)	(0.101)	(0.126)	(0.163)	(0.155)	(0.189)
EF Index (centered)	0.0420	0.0374	0.0312	0.0420	0.0374	0.0312	0.0420	0.0374	0.0312
	(0.105)	(0.058)	(0.115)	(0.105)	(0.058)	(0.115)	(0.105)	(0.058)	(0.115)
Deregulatory Episode$_{t-1}$ × EF Index (centered)	-0.0318	-0.0259	-0.0282	-0.0318	-0.0259	-0.0282	-0.0318	-0.0259	-0.0282
	(0.074)	(0.073)	(0.085)	(0.074)	(0.073)	(0.085)	(0.074)	(0.073)	(0.085)
Region-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Quadratic Trend	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
Growth Opportunities	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
N	704	668	668	704	668	668	704	668	668
R-Squared	0.487	0.338	0.490	0.487	0.338	0.490	0.487	0.338	0.490

This table presents the effect that a sudden increase in the level of EF within a country has on the percentage of M&A transactions between private acquirers and listed targets (Panel (a)) and between listed acquirers and private targets (Panel (b)). *Deregulatory Episode*$_{t-1}$ is an indicator equal to one if, in the previous year, there was an increase of at least one standard deviation in the level of EF. In columns [1], [2], and [3] the index of Economic Freedom is centered at its mean value to give meaning to the coefficient of *Deregulatory Episode*$_{t-1}$. In columns [4], [5], and [6], the index of Economic Freedom is centered at its mean value minus one standard deviation. In columns [7], [8], and [9] the index of EF is centered at its mean value minus two standard deviations. The dependent variable is the percentage of transactions in a country-year between private acquirers and listed targets (Panel (a)), or between listed acquirers and private targets (Panel (b)). All specifications include the following macroeconomic control variables lagged by one year: GDP per capita growth, level of GDP per capita, domestic credit to private sector, interest rate spread (lending rate minus deposit rate), log of exchange rate with respect to the US dollar, and trade as a percentage of GDP. Standard errors are clustered at the target firm's country level and are in parentheses. *, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Table A3: The Effect of a Sudden Reduction in the Level of Economic Freedom on firms operating in Developed Countries

	(1) P → L	(2) P → L	(3) L → P	(4) L → P
Regulatory Episode$_{t-1}$	-0.00669	-0.0131	-0.0664	-0.0588
	(0.025)	(0.027)	(0.044)	(0.050)
EF Index (centered)	-0.0232	-0.0454	-0.0675	-0.0919
	(0.029)	(0.030)	(0.083)	(0.089)
Regulatory Episode$_{t-1}$ × EF Index (centered)	0.0267	0.0419	0.0546	0.0557
	(0.026)	(0.030)	(0.038)	(0.041)
Region-Year FE	No	Yes	No	Yes
N	420	420	420	420
R-Squared	0.189	0.320	0.350	0.476

This table presents the effect that a sudden reduction in the level of EF has on the percentage of M&A transactions between private acquirers and listed targets (columns [1] and [2]), and between listed acquirers and private targets (columns [3] and [4]) for firms operating in developed countries. *Regulatory Episode*$_{t-1}$ is an indicator equal to one if, in the previous year, there was a reduction of at least one standard deviation in the level of EF in a certain country. The index of EF is centered at its mean value minus one standard deviation to give meaning to the coefficient of *Regulatory Episode*$_{t-1}$. All specifications include the following macroeconomic control variables lagged by one year: GDP per capita growth, level of GDP per capita, domestic credit to private sector, interest rate spread (lending rate minus deposit rate), log of exchange rate with respect to the US dollar, and trade as a percentage of GDP. Standard errors are clustered at the target firm's country level and are in parentheses. *, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Table A4: The Effect of a Sudden Increase in the Level of Political Risk

(a) Private acquirer and Listed target

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Destabilization Episode$_{t-1}$	-0.00562	0.000137	0.0284	0.0377	0.0625	0.0753
	(0.028)	(0.030)	(0.039)	(0.038)	(0.054)	(0.054)
Political Risk Index (centered)	0.0000651	0.000809	0.0000651	0.000809	0.0000651	0.000809
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Destabilization Episode$_{t-1}\times$ *PR* Index (centered)	-0.00339*	-0.00374*	-0.00339*	-0.00374*	-0.00339*	-0.00374*
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Region-Year FE	No	Yes	No	Yes	No	Yes
N	643	643	643	643	643	643
R-Squared	0.155	0.272	0.155	0.272	0.155	0.272

(b) Listed target and Private acquirer

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Destabilization Episode$_{t-1}$	0.00259	-0.00156	-0.0474	-0.0300	-0.0974	-0.0584
	(0.032)	(0.031)	(0.048)	(0.048)	(0.076)	(0.074)
Political Risk Index (centered)	-0.00139	-0.000819	-0.00139	-0.000819	-0.00139	-0.000819
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Destabilization Episode$_{t-1}\times$ *PR* Index (centered)	0.00497	0.00283	0.00497	0.00283	0.00497	0.00283
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Region-Year FE	No	Yes	No	Yes	No	Yes
N	643	643	643	643	643	643
R-Squared	0.241	0.317	0.241	0.317	0.241	0.317

This table presents the effect that a sudden increase in the level of Political Risk (reduction in the *PR* index) within a country has on the percentage of M&A transactions between private acquirers and listed targets, and between listed acquirers and private targets. *Destabilization Episode*$_{t-1}$ is an indicator equal to one if, in the previous year, there was an increase of at least one standard deviation in the level of Political Risk in a certain country. In columns [1] and [2] the index of Political Risk is centered at its mean value to give meaning to the coefficient of *Destabilization Episode*$_{t-1}$. In columns [3] and [4] the index of Political Risk is centered at its mean minus one standard deviation. In columns [5] and [6] the index of Political Risk is centered at its mean minus two standard deviations. The dependent variable is the percentage of transactions in a country-year between private acquirers and listed targets. All specifications include the following macroeconomic control variables lagged by one year: GDP per capita growth, level of GDP per capita, domestic credit to private sector, interest rate spread (lending rate minus deposit rate), log of exchange rate with respect to the US dollar, and trade as a percentage of GDP. Standard errors are clustered at the target firm's country level and are in parentheses. *, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Table A5: The Effect of a Sudden Reduction in the Level of Political Risk

(a) Listed target and Private acquirer

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Stabilization Episode$_{t-1}$	0.0232	0.0117	-0.00753	-0.0175	-0.0382	-0.0468
	(0.027)	(0.026)	(0.033)	(0.036)	(0.045)	(0.054)
Political Risk Index (centered)	-0.000805	0.0000748	-0.000805	0.0000748	-0.000805	0.0000748
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Stabilization Episode$_{t-1}\times$ *PR* Index (centered)	0.00305*	0.00291	0.00305*	0.00291	0.00305*	0.00291
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Region-Year FE	No	Yes	No	Yes	No	Yes
N	643	643	643	643	643	643
R-Squared	0.157	0.271	0.157	0.271	0.157	0.271

(b) Private target and Listed acquirer

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Stabilization Episode$_{t-1}$	-0.0493	-0.0415	-0.0599	-0.0716	-0.0706	-0.102
	(0.036)	(0.037)	(0.059)	(0.058)	(0.090)	(0.088)
Political Risk Index (centered)	-0.000315	-0.000169	-0.000315	-0.000169	-0.000315	-0.000169
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Stabilization Episode$_{t-1}\times$ *PR* Index (centered)	0.00106	0.00299	0.00106	0.00299	0.00106	0.00299
	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)
Region-Year FE	No	Yes	No	Yes	No	Yes
N	643	643	643	643	643	643
R-Squared	0.241	0.318	0.241	0.318	0.241	0.318

This table presents the effect that a sudden reduction in the level of Political Risk (increase in the *PR* index) within a country has on the percentage of M&A transactions between private acquirers and listed targets, and between listed acquirers and private targets. *Stabilization Episode*$_{t-1}$ is an indicator equal to one if, in the previous year, there was a reduction of at least one standard deviation in the level of Political Risk in a certain country. In columns [1] and [2] the index of Political Risk is centered at its mean value to give meaning to the coefficient of *Stabilization Episode*$_{t-1}$. In columns [3] and [4] the index of Political Risk is centered at its mean minus one standard deviation. In columns [5] and [6] the index of Political Risk is centered at its mean minus two standard deviations. The dependent variable is the percentage of transactions in a country-year between private acquirers and listed targets. All specifications include the following macroeconomic control variables lagged by one year: GDP per capita growth, level of GDP per capita, domestic credit to private sector, interest rate spread (lending rate minus deposit rate), log of exchange rate with respect to the US dollar, and trade as a percentage of GDP. Standard errors are clustered at the target firm's country level and are in parentheses. *, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Table A6: Placebo Test - The Effect of a Sudden Reduction in the Level of Economic Freedom

(a) Private acquirer and Listed target

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Regulatory Episode$_{t-1}$	-0.00670	0.00324	-0.0103	0.00341	-0.0140	0.00359
	(0.013)	(0.018)	(0.021)	(0.029)	(0.037)	(0.049)
EF Index (centered)	-0.0291	-0.0338	-0.0291	-0.0338	-0.0291	-0.0338
	(0.022)	(0.027)	(0.022)	(0.027)	(0.022)	(0.027)
Regulatory Episode$_{t-1}$ x *EF* Index (centered)	0.00460	-0.000216	0.00460	-0.000216	0.00460	-0.000216
	(0.023)	(0.029)	(0.023)	(0.029)	(0.023)	(0.029)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Region-Year FE	No	Yes	No	Yes	No	Yes
N	704	704	704	704	704	704
R-squared	0.145	0.253	0.145	0.253	0.145	0.253

(b) Listed target and Private acquirer

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Regulatory Episode$_{t-1}$	0.00732	0.00729	0.0169	0.0254	0.0265	0.0434
	(0.036)	(0.039)	(0.048)	(0.056)	(0.073)	(0.088)
EF Index (centered)	0.0256	0.0464	0.0256	0.0464	0.0256	0.0464
	(0.048)	(0.051)	(0.048)	(0.051)	(0.048)	(0.051)
Regulatory Episode$_{t-1}$ x *EF* Index (centered)	-0.0121	-0.0228	-0.0121	-0.0228	-0.0121	-0.0228
	(0.040)	(0.049)	(0.040)	(0.049)	(0.040)	(0.049)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Region-Year FE	No	Yes	No	Yes	No	Yes
N	704	704	704	704	704	704
R-squared	0.255	0.325	0.255	0.325	0 .255	0.325

This table presents the placebo test of the effect that a sudden reduction in the level of EF within a country has on the percentage of M&A transactions between private acquirers and listed targets, and between listed acquirers and private targets. *Regulatory Episode*$_{t-1}$ is an indicator equal to one if, in the previous year, there was a reduction of at least one standard deviation in the level of EF in a certain country. In columns [1] and [2] the index of EF is centered at its mean value to give meaning to the coefficient of *Regulatory Episode*$_{t-1}$. In columns [3] and [4] the index of EF is centered at its mean value minus one standard deviation. In columns [5] and [6] the index of EF is centered at its mean value minus two standard deviations. The dependent variable is the percentage of transactions in a country-year between private acquirers and listed targets. All specifications include the following macroeconomic control variables lagged by one year: GDP per capita growth, level of GDP per capita, domestic credit to private sector, interest rate spread (lending rate minus deposit rate), log of exchange rate with respect to the US dollar, and trade as a percentage of GDP. Standard errors are clustered at the target firm's country level and are in parentheses. *, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Table A7: Placebo Test - The Effect of a Sudden Increase in the Level of Economic Freedom

(a) Listed target and Private acquirer

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Deregulatory Episode$_{t-1}$	0.0106	0.0236	-0.000315	0.00473	-0.0112	-0.0141
	(0.035)	(0.038)	(0.081)	(0.079)	(0.140)	(0.134)
EF Index (centered)	0.0257	0.0476	0.0257	0.0476	0.0257	0.0476
	(0.046)	(0.049)	(0.046)	(0.049)	(0.046)	(0.049)
Deregulatory Episode$_{t-1}$ x EF Index (centered)	0.0137	0.0238	0.0137	0.0238	0.0137	0.0238
	(0.078)	(0.073)	(0.078)	(0.073)	(0.078)	(0.073)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Region-Year FE	No	Yes	No	Yes	No	Yes
N	704	704	704	704	704	704
R-squared	0.256	0.326	0.256	0.326	0.256	0.326

(b) Private target and Listed acquirer

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean		Mean - 1 SD		Mean - 2 SD	
Deregulatory Episode$_{t-1}$	-0.0102	-0.00469	-0.0125	-0.00862	-0.0148	-0.0126
	(0.032)	(0.035)	(0.063)	(0.066)	(0.099)	(0.102)
EF Index (centered)	-0.0303	-0.0343	-0.0303	-0.0343	-0.0303	-0.0343
	(0.024)	(0.028)	(0.024)	(0.028)	(0.024)	(0.028)
Deregulatory Episode$_{t-1}$ x EF Index (centered)	0.00291	0.00496	0.00291	0.00496	0.00291	0.00496
	(0.047)	(0.048)	(0.047)	(0.048)	(0.047)	(0.048)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Region-Year FE	No	Yes	No	Yes	No	Yes
N	704	704	704	704	704	704
R-squared	0.145	0.253	0.145	0.253	0.145	0.253

This table presents the placebo test of the effect that a sudden increase in the level of EF within a country has on the percentage of M&A transactions between private acquirers and listed targets, and between listed acquirers and private targets. *Deregulatory Episode*$_{t-1}$ is an indicator equal to one if, in the previous year, there was an increase of at least one standard deviation in the level of EF. In columns [1] and [2] the index of EF is centered at its mean value to give meaning to the coefficient of *Deregulatory Episode*$_{t-1}$. In columns [3] and [4] the index of EF is centered at its mean value minus one standard deviation. In columns [5] and [6] the index of EF is centered at its mean value minus two standard deviations. The dependent variable is the percentage of transactions in a country-year between private acquirers and listed targets. All specifications include the following macroeconomic control variables lagged by one year: GDP per capita growth, level of GDP per capita, domestic credit to private sector, interest rate spread (lending rate minus deposit rate), log of exchange rate with respect to the US dollar, and trade as a percentage of GDP. Standard errors are clustered at the target firm's country level and are in parentheses. *, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.