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Author: Roger Larach

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DYNAMICS OF M&A ACTIVITY AND CRISES IN LATIN AMERICA

ROGER LARACH[1]

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Department of Economics, Boston College

1   Introduction

International mergers and acquisitions have become one of the preferred forms of international investment by firms. Latin America offers many opportunities for both foreign and local firms to grow within and outside of their traditional markets. Development of Latin American countries has largely been driven by their vast supply of natural resources, which have been able to provide revenues through export of commodities (World Bank, 2010). Six countries in Latin America have an important commodity revenue share ranging from 10% to 49% of output over 2004-2008. These six countries are Argentina, Chile, Colombia, Mexico, Peru and Venezuela, which generate their revenue from agricultural exports, copper, oil, hydrocarbons, mining and hydrocarbons, respectively. The 2001 to 2008 high growth in commodity prices led to high growth in the commodity rich countries of Latin America (World Bank, 2010).

As an emerging market, Latin America has also attracted multinational firms attempting to enter into a region in which different industries are undergoing development, thus leading to increased M&A activity. The seven countries that have seen the greatest amount of M&A activity in terms of deal volume have been: Brazil, Argentina, Mexico, Chile, Colombia, Peru and Venezuela. From 1990 to 2007, aggregate deal volume in the region was $545.5 billion, with 55.4% in domestic M&A deals and 44.6% in cross-border deals (Figure 1). Of total M&A activity, 32% has been in the financial services industry, followed by 28% in technology, media and telecommunications, 27% in manufacturing, energy and utilities, 14% in consumer and retail and 1% in healthcare (Figure 2).

With these growth opportunities come significant risk. Crises in Latin America

throughout 1990 to 2007 have come with currency and debt crises as well as economic instability. Some crises in the region have spread to several countries at the same time. Such is the case of the Mexican Peso Crisis of 1994, which spread to the Southern Cone and Brazil. Many of the banking crises in the region have subsequently become systemic crisis, such as the ones seen in Argentina in 1991 and 2001, Costa Rica in 1994, Ecuador in 1998-2001, Mexico in 1994, Paraguay in 1995, Uruguay in 2002, and Venezuela in 1994 (World Bank, 2003). Currency crises have been caused by sudden devaluation and large exchange rate depreciation making foreign investment more profitable, which often leads to higher levels of M&A activity as shown by Aminian, Campart, and Pfister (2005) in their study of bi-directional capital flows between Europe and Asia between 1999 and 2004.

This paper studies M&A activity in Latin America during the period ranging from 1990 to 2007. I focus in particular on the effects of crises on M&A activity during my sample period. Crises years are years in which there was a systemic banking crisis, currency crisis, or debt crisis. An interesting feature of M&A activity is that it often comes in waves, which are periods in which M&A activity is clustered around a specific time frame (Gugler, Mueller, and Yurtoglu, 2006). Several theories have been put forward to explain the reasons behind M&A waves; they look at booming and depressed markets led by company managers searching for high returns as they acquire undervalued companies or use overvalued stock to make acquisitions. Studies on the determinants of M&A activity and cross-border acquisitions have also focused on studying macro characteristics of countries, such as openness to trade (e.g. Aminian, Campart, and Pfister, 2005), corporate governance levels (e.g. Rossi and Volpin, 2004) and GDP

growth (e.g. Aminian, Campart, and Pfister, 2005) and have attempted to explain how changes in these variables can affect the number of M&A transaction. In Latin America, different countries exhibit different levels of development in terms of their financial systems (International American Development Bank, 2007). The development of financial systems, in turn, is considered to be the product of the quality of corporate governance and investor protection, as shown by La Porta et al. (2002). Rossi and Volpin (2004) conclude that volume of M&A activity is significantly larger in countries with better accounting standards and shareholder protection by studying M&A deals announced in the 1990s and completed by 2002 in 49 major countries.

The two main competing hypotheses that are put to the test in this study are the following: First the "bargain hypothesis," whereby M&A activity *increases* during a crisis due to the low valuation of target companies. Second, and in opposition to the first hypothesis, I test whether M&A activity *decreases* due to the financial distress of potential buyers ("financing constraints" hypothesis) or the financial distress of potential targets ("loss of confidence" hypothesis).

By looking at M&A activity during crises and non-crises periods it is possible to study the fluctuation in M&A levels and thus determine the dynamics of deal activity throughout the Latin American region. In addition to looking at overall M&A activity levels, both cross-border M&A activity and domestic M&A activity is analyzed separately with the purpose of understanding how foreign buyers and domestic buyers react to acquisitions in the target countries being studied.

M&A deal activity throughout various industries is also examined with the purpose of understanding how different industries react to crises vs. non-crises years.

Results test whether merger waves are being driven by market timing. Additionally, the neoclassical argument in which M&A activity is influenced by industry shocks in the Latin American region is also considered if results show that M&A waves are not being caused by market timing.

Two main analyses are conducted: one at the country level and one at the industry level. I consider overall M&A activity as well as cross-border M&A activity and domestic M&A activity in both analyses. The five industries, as defined by Fama French[2], are: (1) Consumer and Retail, (2) Manufacturing, Energy and Utilities, (3) Technology Media and Telecom, (4) Healthcare and (5) Finance.

M&A activity levels are examined through a multiple linear regression analysis by studying how M&A levels have fluctuated from 1990 through 2007. This paper uses a dummy variable corresponding to crises years and uses control variables indicating growth in the economy, corporate governance levels and openness to trade as measured by GDP growth rates, corporate governance indices and trade's share of GDP, respectively. Performing the regression analysis and determining the effect and significance of the crisis variable provides new empirical evidence as to whether depressed markets have a different effect on M&A activity as compared to normal or booming years.

With regards to the industry analysis, M&A activity levels in each industry throughout the seven countries studied is analyzed by performing seemingly unrelated regressions with each of the five industries throughout 1990 - 2007. Crises' effects on M&A activity throughout industries provides new empirical evidence as to how different industries react to macroeconomic conditions, and particularly as to how foreign buyers

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[2] http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

and domestic buyers respond to those changing macroeconomic conditions.

The paper proceeds as follows. In Section 2, I provide a literature review. In Section 3, I provide more details on the unique dataset of Latin American M&A activity. In Section 4, I explain the methodology used. In Section 5 I present the main results. Section 6 concludes.

2   Literature Review

Most of the literature regarding mergers and acquisitions has focused on studying the determinants of domestic deals. Most recently, papers have been written studying the determinants of cross-border M&A deals and merger waves. These papers have focused on three main ideas: the Neoclassical theory, the Fire Sale and Misvaluation theories and the Agency theories.

The Neoclassical theory focuses on the motivation for firms to invest in another country to gain access to new markets and with the purpose of enhancing value. The Fire Sale and Misvaluation theories focus on foreign investors taking advantage of companies in countries facing bad shocks such as financial crises in order to take advantage of distressed targets and on how stock market misvaluations can lead to increased merger activity. Agency theories aim at explaining M&A by attributing an increase in activity to agency problems in which CEOs value mergers excessively due to empire building and corporate diversification in order to enhance the CEOs' career prospects (Makaew, 2012). With regards to crises in Latin America, there has been a study on FDI being crisis preventing in the Latin American region by Fernandez-Arias and Hausmann (2001), but not on how crises affect FDI or M&A. Although the studies in this literature review are

related to my work, to the best of my knowledge, there have not been any studies on M&A activity during crises periods in the Latin American region at the country and industry level.

Harford (2005) attempts to demonstrate that merger waves are motivated by a Neoclassical Hypothesis, which consists in aggregate merger waves being caused by technological, regulatory, or economic shocks to an industry's environment, conditional on the availability of capital liquidity, which is signaled by high market valuations as measured by the stock market's market to book value ratio. Harford argues that high market valuations, which signal the availability of capital liquidity, decrease financial constraints, thus making high valuations a good source of liquidity. By combining the high market valuation idea, which is a behavioral one, and using it to support the Neoclassical industry shocks hypothesis, Harford is able to conclude that aggregate merger waves are caused by industry shocks.

Most papers focusing on the Fire-Sale and Misvaluation theories strengthen the idea that mergers are motivated by the "bargain hypothesis," something that I analyze in this paper. The notion of "Fire-Sale FDI" was introduced by Krugman (1998) and focuses on the idea that during a financial crisis, companies in crisis countries are sold to firms from more developed economies at prices lower than fundamental values. Aguiar and Ginopath (2005) study the East Asian financial crisis and document an increase in foreign acquisitions. Erel, Liao and Weisbach (2011) study the determinants of cross-border M&A deals between country pairs by studying several variables such as geography, trade within countries, accounting standards, income tax rates, and changes in firm value due to countries' stock market valuation as well as differences in exchange rates. Most

importantly, they determine that the imperfect integration of capital markets leads to a merger whenever a highly valued acquirer purchases a relatively inexpensive target, following changes in valuation. Their study also demonstrates that holding other things constant, geography is an important factor affecting acquisitions between two countries. Trade within countries appears to be an important determinant of cross-border activity. Countries with good accounting standards tend to have more purchasers, while target firms are located in countries that have lower accounting standards. The study's results suggest that valuation plays an important role as shown when there are currency movements and country-level stock market performance leading to companies in wealthier countries to acquire firms in the poorer country when the market of the poorer country declines. Differences in valuation as a determinant as demonstrated by these channels could mean that as there is an increase in wealth, the cost of capital of the acquirer declines as Froot and Stein (1991) demonstrate, or due to the imperfect integration of capital markets. Erel Liao and Weisbach (2011) conclude that country-level factors such as currency appreciation and macroeconomic performance make acquisitions more attractive to the acquiring firm.

Similarly, Aminian, Campart and Pfister (2005) sustain that currency collapse and large exchange rate depreciation lead to a higher level of M&A activity and an increase in the wealth of the target and acquirer's shareholders around M&A announcements. Additionally, they explain changes in M&A activity by also looking at the deepening of financial markets and expected GDP growth as incentives for investment abroad. Their analysis looks at the relationship in deals between European and Asian firms and studies factors such as the level of development of a country, the supply and demand forces, the

openness of an economy, bilateral trade flows, and the level of exchange rate. The study concludes that all factors seem to be significant except GDP growth. Particularly with regards to exchange rate depreciation, the authors sustain that financial markets are actually imperfect, therefore "as the fluctuations of exchange rates are gradual, *ceteris paribus*, the firms' value adjustment process is also progressive" (Amininan, Campart and Pfister, 2005, pp. 6). The study also highlights the fact that since FDI inflows are encouraged by exchange rate depreciation in the depreciating country, they are also encouraged during crises in which asset prices sharply fall.

Along with the idea of the imperfect integration capital markets, many studies use the model and results found by Shleifer and Vishny (2003), in which stock-market-driven acquisitions through mispricing lead to firms to use their overvalued equity to make stock acquisitions of undervalued or relatively less overvalued companies. The underlying assumption in that study is that markets are inefficient and managers, being rational, take advantage of mispricing in the market in order to acquire other companies using overvalued stock.

With regards to the Agency Theory, Jensen (1986) proposes that agency problems can drive M&A by acquirer companies' CEOs valuing mergers excessively. Makaew (2012, pp. 7), explains the agency theory:

> Mergers can occur in waves because the severity of agency problems varies over time. During booms, stock market sentiment tends to be favorable, and the lending standard is likely to be lower. There tends to be more funding but less monitoring when an economy is expanding. The abundance of free cash flows and poor oversight can allow firms to engage in deals that do not create value for shareholders. Unproductive acquirers are more likely to obtain M&A financing during booms than during busts.

Gugler, Mueller, and Yurtoglu (2006) test four hypothesis: two neoclassical and two behavioral regarding the cause of merger waves. Starting with the idea that mergers

come in waves and that these are correlated with share price increases and increasing price-to-earnings multiples, Gugler, Mueller, and Yurtoglu (2006) look into industry shocks, and the q-theory of investment as its two neoclassical hypotheses and into overvaluation and managerial discretion as the two behavioral ones. The paper critiques Harford's (2005) view that merger waves are caused by the industry shock hypothesis. The q-theory of investment, which is based on Jovanovic and Rousseau (2002) states that when firms' return on capital exceeds its cost of capital, it acquires other firms' existing assets, thus propagating merger waves. Their research into the overvaluation hypothesis relies on the Shleifer and Vishny's (2003) assumption that managers take advantage of overvalued stock markets to acquire other firms' assets with their own stock. With regards to the managerial-discretion hypothesis, research is based on Marris (1964, 1998) and Mueller (1969) and states that managers pursue growth and not shareholder wealth, and that stock market psychology influences managers' decisions. Gugler, Mueller, and Yurtoglu (2006) conclude that evidence is in favor of the behavioral hypotheses when explaining aggregate merger waves.

Makaew (2012) incorporates the dynamics of the Neoclassical, Fire-Sale, Misvaluation, and Agency theories in order to analyze how the business cycle can explain fluctuations in cross-border M&A activity. Makaew argues against the "bargain hypothesis" by showing that this type of M&A activity is not typical of cross-border mergers, as cross-border M&A activity follows fluctuations in business cycle whereby most cross-border mergers occur when both the acquirer and target are in booming economies.

With regards to Latin American crises, Fernandez-Arias and Hausmann (2001)

argue that foreign direct investment (FDI) is a safer form of financing as it is "bolted

down" and helps reduce the probability of a crisis. When banking and currency crises

occur, better known as the "twin crises," there is a sudden stop in the capital inflows into

a developing country leading to a loss of access to external finance as shown by Calvo

and Reinhart (1999). Even though Fernandez-Arias and Hausmann (2001) do not look

specifically into M&A, M&A is an important part of FDI and thus it can be argued that

similar conclusions can be formulated. The argument in favor of the greater safety of FDI

in financial crises lies in the problem that currency suffers from "original sin," whereby it

cannot be used to borrow abroad or long-term domestically, thus favoring a greater

reliance in equity financing. Their study looks into FDI as being crises-preventing rather

than at looking at how crises affect FDI (M&A) levels, which is what I analyze in this

study.

3   Data

Mergers and Acquisitions Data

The M&A sample is taken from the Securities Data Corporation's (SDC) Mergers

and Corporate Transactions database including deals announced between 1990 and 2007

and completed by the end of 2007. Partial equity-stake purchases, acquisitions of

remaining interest are disregarded. Only deals in which there is an acquisition of a

majority interest (when the acquirer owns less than 50% of the target company before the

deal and more than 50% after the deal) are considered. From SDC, I collect a number of

data items for deals including: the transaction value, the announcement date, the

completion date, the target's name, its industry as demonstrated by the four-digit SIC (Standard Industry Classification) code, the target nation, the name of the acquirer, its primary industry and country of domicile.

Macroeconomic and Crisis Data

Trade as a percentage of GDP and GDP growth are gathered from the World's Bank World Development Indicators & Global Development Finance database for each of the seven countries studied. Trade as a percentage of GDP is used as a control variable to measure the openness of each of the seven economies. GDP growth captures the growth in the economies of the seven countries studied and is also used as a control variable.

The binary variable indicating crises years is constructed based on Laeven and Valencia's (2012) Systemic Banking Crises Database, which covers the universe of systemic banking crises, and also includes data on the timing of currency crises and sovereign debt crises. The crisis dummy used takes the value of one whenever there is either a systemic banking crisis, a currency crisis or a sovereign debt crisis in each of the seven countries. There are a total of seven systemic banking crises, five currency crises and one debt crisis. Under my general definition of crises, there are eleven crises[3]. Given the regional nature of some crises, most crises are distributed in the years around 1995 and 2000. According to Laeven and Valencia (2012):

> [In] a systemic banking crisis, a country's corporate and financial sectors experience a large number of defaults and financial institutions and corporations face great difficulties repaying contracts on time. As a result, non-performing loans increase sharply and all or most of the aggregate banking system capital is exhausted. This situation may be accompanied by depressed asset prices (such as equity and real estate prices) on the heels of run-ups before the crisis, sharp increases in real interest rates, and a slowdown or reversal in capital flows.

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[3] Some years have more than one type of crisis at the same time.

Building on the approach in Frankel and Rose (1996), we define a "currency crisis" as a nominal depreciation of the currency of at least 30 percent that is also at least a 10 percent increase in the rate of depreciation compared to the year before.

We identify and date episodes of sovereign debt default and restructuring by relying on information from Beim and Calomiris (2001), World Bank (2002), Sturzenegger and Zettelmeyer (2006), and IMF Staff reports. The information compiled include year of sovereign defaults to private lending and year of debt rescheduling.

Crises data for the seven Latin American countries can be found in Table 1.

Corporate Governance Data

As proxies for investor protection and corporate governance, four indices are used

in this study. Particularly, the quality of accounting standards and rule of law indices

from La Porta et. al (2002) and quality of institutions[4] and risk of expropriation[5] from La

Porta et. al (2012) are used in the model as control variables.

Consistent with recent research, using these indices will allow to control for how

different levels of corporate governance and M&A are related based on the idea that deal

activity will be stronger in countries with better governance and investor protection.

These values, shown in Figure 3, do not vary over time for each of the countries.

Industry Data

For the part of the study focusing on studying the effect of crises on the major

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[4] The institutional quality index is a variable created from (1) (minus) Informal payments, (2) (minus) Ln(Tax days), (3) (minus) Ln(Days without electricity), (4) (minus) Security costs, (5) (minus) Access to land, (6) (minus) Access to finance, Government predictability, and (8) (minus) Doing Business percentile rank. Higher values indicate better quality of institutions.
[5] Risk of expropriation index is a variable representing the risk of "outright confiscation and forced nationalization" of property. This variable ranges from zero to ten where higher values are equals a lower probability of expropriation. This variable is calculated as the average from 1982 through 1997.
Rule of law index measures the quality of law enforcement.

industries in Latin America relevant SIC codes are classified into five major categories: (1) Consumer and Retail, (2) Manufacturing Energy and Utilities, (3) Technology Media and Telecom, (4) Healthcare and (5) Finance. This organization of industries is done following Fama French's classification of SIC codes.

4 Methodology

This study uses a multiple linear regression analysis by assessing whether independent variables such as crises indicators lead to an increased M&A volume in Latin American countries, while controlling for corporate governance differences, openness of the economy as measured by trade as a share of GDP and GDP growth. Separate panel datasets are created for the country level analysis and the industry level analysis.

The two variables of interest in each analysis are the average transaction size, measured in millions of dollars, and the number of M&A transactions. Variations of these variables are created for domestic and cross-border transactions with the purpose of measuring how domestic and foreign buyers respond to crises in the target countries studied.

Having panel data allows for the opportunity to analyze how variables, specifically the crisis dummy variable, affect M&A activity in the seven countries studied. The regression is the following:

$$Y_{ct} = \alpha_{ct} + \beta_1 Crisis_{ct} + \gamma X_{ct} + \delta X_c + \varepsilon_{ct},$$

where Y_{ct} measures the level of M&A activity in country "c" and year "t." β_1 describes the relationship between crises and M&A activity levels. X_{ct} represents country by year

level controls: GDP growth and openness to trade. X_c represents country level corporate governance indices: rule of law, accounting standards, quality of institutions and risk of expropriation.

Hypotheses

Following my literature review, the two main competing hypotheses tested in this study are:

H_0: "Bargain hypothesis:" Crisis periods are characterized by low valuation, which attracts unconstrained buyers. Under this hypothesis, we should see the average transaction value of deals and number of deals increase during a crisis;

H_1: "Loss of confidence hypothesis" or "Financial constraints" hypothesis: Crisis periods destroy investor confidence or the ability of investors to fund major acquisitions. Under both of these hypotheses, crisis periods should lead to a decrease in the average transaction value of deals and number of deals.

Failing to reject H_0, will provide evidence in the data that unconstrained buyers become opportunistic about undervalued firms through acquisitions, thus supporting the Fire-Sale and Misvaluation theories. Separate sets of regressions are estimated for different versions of the two dependent variables, especially for all transactions, cross-border and domestic transactions. Regressions with the logs of these dependent variables are estimated as well in order to attenuate the effect of potential outliers. Results for cross-border transactions are able to provide evidence as to how unconstrained buyers

15

react to crises in Latin America. This analysis is done separately at the country and industry levels.

Industry level analysis

At the industry level, I examine how the main five industries studied react to crises in the years from 1990 to 2007 through the use of a seemingly unrelated regressions model, SUR.

Even though five regressions could be estimated for each industry separately, an SUR estimation is performed instead in order to take into consideration the potential correlation in the error terms of the five different regressions. The dependent variable in the SURs is the average transaction value and the number of transactions in each of the five industries studied. Like in the country-level analysis, the SURs are performed for variations of the dependent variables to include all transactions, cross-border and domestic transactions.

5   Results

Country Level

Regressions at the country level (Table 3) with country and year fixed effects (Column 1) indicate that the average transaction value decreases by $108.2 million with every crisis. The number of transactions decreases by 14.3 (Column 2). These results are both significant at the 10% level. Even though statistical significance was lacking when looking at domestic and cross-border deals separately (Columns 3 to 6), overall M&A activity seems to be significantly affected by crises in the region consistent with the

"financing constraints" and "investor confidence" hypotheses, whereby M&A activity decreases during crises.

Table 4 shows regression results at the country level analysis for the logs of the same dependent variables tested in Table 3. Even though the negative sign is preserved for the crisis variable as in the regressions without logs, the results are not statistically significant.

Industry Level – Seemingly Unrelated Regressions (Average Transaction Value)

The results for the Seemingly Unrelated Regressions for the Industry Level analysis are presented in Tables 5 to 16. In Table 5, results for the average transaction value with no fixed effects are presented for all (domestic and cross-border) transactions. These results are statistically significant for the Finance industry only, for which there is a decrease in the average transaction value of M&A deals of $186.2 million with every crisis (Column 5). In Table 6 regression results with country and year fixed effects are shown for all transactions. The crisis dummy variable is significant at the 1% level for the Manufacturing, Energy and Utilities and Finance industries (Columns 2 and 5, respectively). The results show that during a crisis year, the average transaction value in the Manufacturing, Energy and Utilities industry decreases by $245.7 million and by $230.9 million in the Finance industry.

For the SUR for average transaction value for cross-border deals with no fixed effects, the negative sign of the crisis variables is preserved for all industries (Table 7). However, the results are not statistically significant in this case. The SUR results for cross-border deals with country and year fixed effects shows that the effect of a crisis on average transaction value in the Manufacturing, Energy and Utilities (Column 2) as well

as the Finance industries (Column 5) are significant at the 5% level with the coefficient still negative, but with a slightly lower magnitude (Table 8). Tables 9 and 10 present SUR results for average transaction value for domestic deals with no fixed effects and with country and year fixed effects, respectively. As in the previous tables, the effect of a crisis on M&A activity continues to be negative, but statistical significance is absent.

Industry Level – Seemingly Unrelated Regressions (Transaction Number)

The SURs for number of transactions for all deals without fixed effects provides results that are not statistically significant (Table 11). Table 12 presents the SUR results for the number of all transactions for all deals with country and year fixed effects. The crisis variable is significant at the 1% level for the Consumer and Retail, Healthcare and Finance industries (Columns 1, 4 and 5). This variable is significant at the 5% level for the Technology, Media and Telecommunications industry (Column 3). The coefficient is negative for these four industries, indicating that a crisis leads to fewer M&A transactions. The Manufacturing, Energy and Utilities industry although not significant, presents a positive reaction to crises (Column 2). The Finance industry presents the greatest reaction to a crisis, with the number of transactions decreasing by 16.5 in this industry (Column 5).

The SUR for transaction number in cross-border deals with no fixed effects does not have results that are statistically significant (Table 13). When looking at the number of transactions for the SUR with cross-border deals with country and year fixed effects (Table 14), I find that the number of transactions increases with a crisis in the Manufacturing, Energy and Utilities industry by 3.2 transactions (Column 2). This is in contrast with the Finance industry, in which the number of transactions decreases by 6.6

whenever there is a crisis (Column 5). Both of these results are significant at the 1% level. The number of transactions decreases by 1.3 in the Technology, Media and Telecommunications industry (Column 3), with this result being statistically significant at the 10% level. Both the Consumer and Retail and the Healthcare industries (Columns 1 and 4, respectively) present positive coefficients, however, these results are not statistically significant.

The SUR for transaction number for domestic deals with no fixed effects does not have results that are statistically significant (Table 15). The crisis variable has a negative coefficient in all cases. For the SUR for transaction number for domestic deals with country and year fixed effects, the number of transactions during a crisis decreases in all industries (Table 16). The industry that is mostly affected is the Finance industry, in which the number of transactions decreases by about 9.9 whenever there is a crisis (Column 5). The number of transactions in the Consumer and Retail and Healthcare industries (Columns 1 and 4, respectively) decreases by 8.4 and 2.1 whenever there is a crisis. Results for these three industries are significant at the 1% level. The Manufacturing, Energy and Utilities and Technology, Media and Telecommunications industries (Columns 2 and 3, respectively), maintain the negative effect of crisis in terms of deal activity, but these results are not statistically significant.

6   Conclusions

In this study, I provide an analysis of the changes in M&A activity in Latin American countries from 1990 to 2007. The study focuses on the effects of systemic financial crises in the region. Most recent studies in the field have focused on the

determinants of cross-border M&A in which they look specifically into corporate governance variables as well as into neoclassical and behavior hypotheses in motivating M&A activity across firms. With regards to crises in Latin America, studies have focused on FDI, instead of M&A. This paper analyzes all, cross-border and domestic deals at both the country and industry level to determine how M&A deal activity reacts to crises periods.

My results are mostly consistent with the "financing constraints" and "loss of investor confidence" hypotheses during crises as seen by the overall decrease in the average transaction value and number of transactions at both the country and industry level. Evidence of "market timing" is scant. This result reinforces the Neoclassical Hypothesis, which suggests that mergers and acquisitions follow the business cycle in terms of M&A activity during crises.

At the industry level, I find an interesting result. Even though my country-level results show that the average transaction value decreases in all industries, the "Fire-Sale"/ "market timing" hypothesis cannot be rejected in the Manufacturing, Energy and Utilities industry, in which I observe a rise in the number of deals despite the average transaction value decreasing within those industries during crises. This fact suggests that in these industries, investors are taking advantage of undervalued companies by engaging in a greater number of lower valued acquisition targets. Lastly, it is noteworthy to see that the Finance industry results are consistent with the country-level results whereby I find a significant reduction in M&A activity in times of crises.

The Manufacturing, Energy and Utilities industries comprise a significant portion of M&A deal volume form 1990 through 2007 and hence serve as an important counter-

balance to my main country-level results, which showed a significant drop in M&A activity during crisis. My country level result consistent with the "financing constraint" hypothesis does not apply homogenously to all industries in the region. Future research should investigate the causes behind this differential effect of crises across different industries.

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Figure 1
Domestic and cross-border aggregate M&A deal volume across Brazil, Argentina, Mexico, Chile, Colombia, Peru and Venezuela from 1990 to 2007.
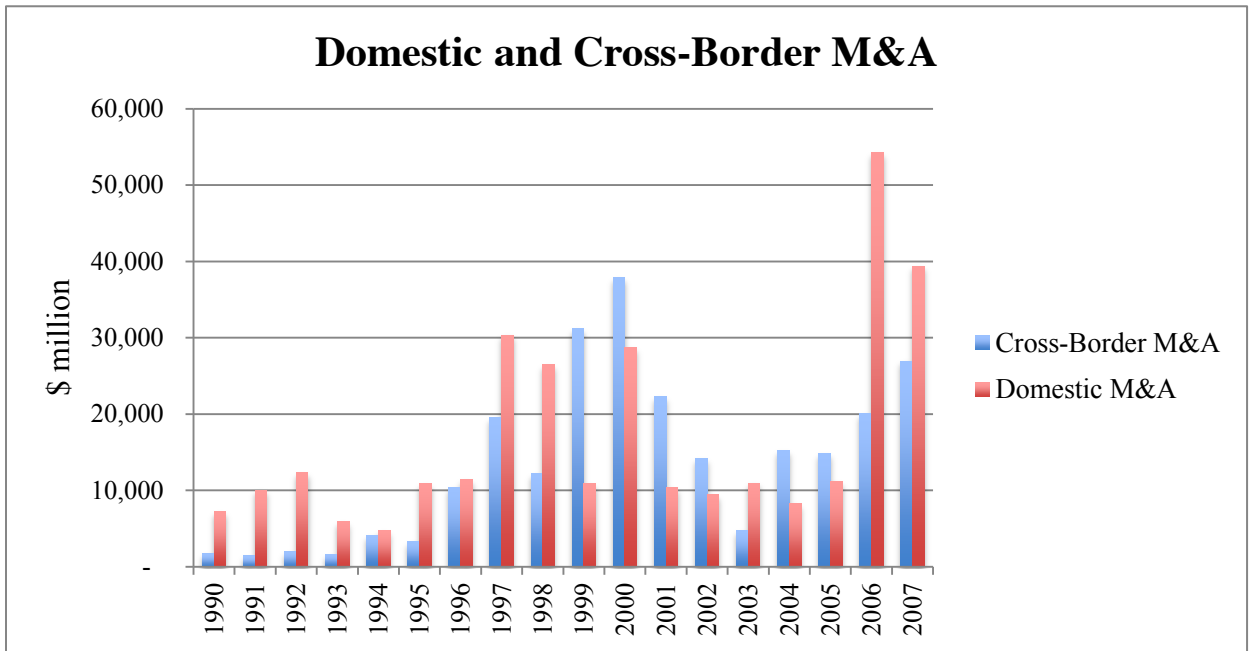
Figure 2
M&A deal activity classified by industry based on aggregate deal volume from 1990 to 2007 for Brazil, Argentina, Mexico, Chile, Colombia, Peru and Venezuela.

M&A Activity by Industry

- Consumer and Retail
- Manufacturing, Energy and Utilities
- Technology, Media and Telecommunications
- Healthcare
- Finance

14%
32%
27%
1%
28%
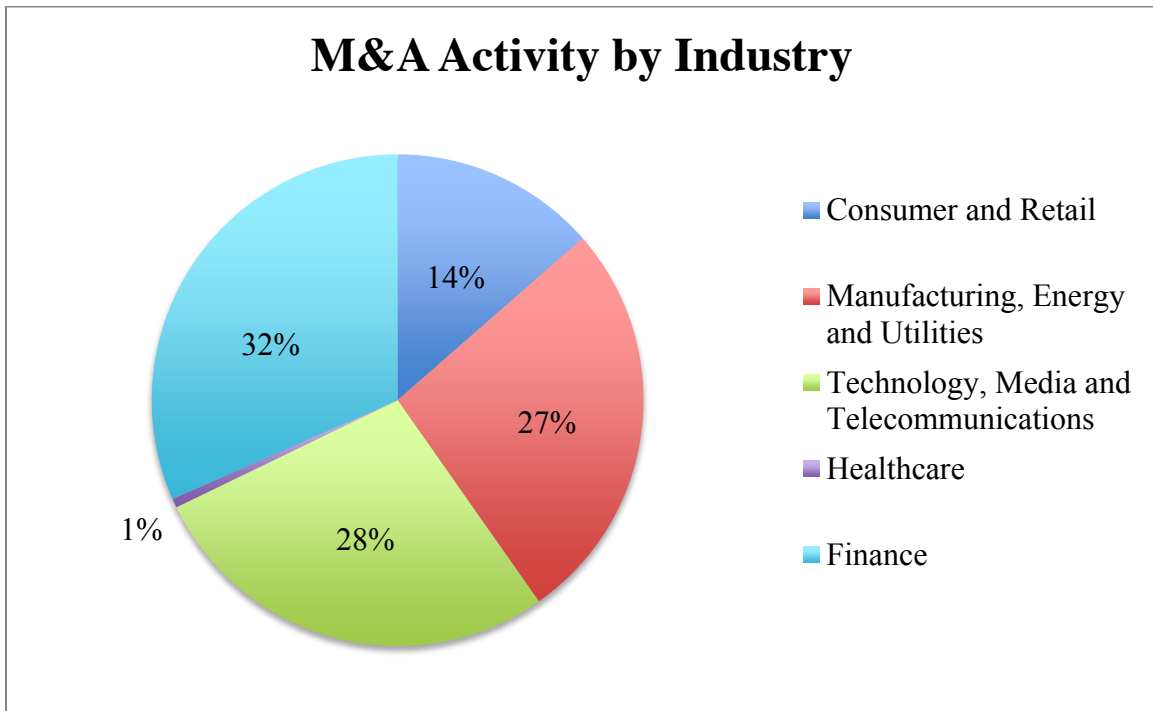
Table 1 – Timing of Crises
From *Systemic Banking Crises Database: An Update* (Laeven and Valencia 2012)

Country	Systemic Banking Crisis	Currency Crisis	Debt Crisis	Debt Restructuring
Argentina	1980, 1989, 1995, 2001	1975, 1981, 1987, 2002	1982, 2001	1993, 2005
Brazil	1990, 1994	1976, 1982, 1987, 1992, 1999	1983	1994
Chile	1976, 1981	1972, 1982	1983	1990
Colombia	1982, 1998	1985	NA	NA
Mexico	1981, 1994	1977, 1982, 1995	1982	1990
Peru	1983	1976, 1981, 1988	1978	1996
Venezuela	1994	1984, 1989, 1994, 2000	1982	1990

Table 2 – Corporate Governance Indicators
Rule of Law an Accounting Standards are from La Porta et. al. (2002). Quality of Institutions and Risk of Expropriation are from La Porta et. al. (2012)

Country	Rule of Law	Accounting Standards	Quality of Institutions	Risk of Expropriation
Chile	7.0	52.0	0.3	7.8
Argentina	5.4	45.0	-0.5	6.3
Mexico	5.4	60.0	0.3	7.5
Brazil	6.3	54.0	-0.6	7.9
Venezuela	6.4	40.0	0.2	7.1
Colombia	2.1	50.0	0.0	7.4
Peru	2.5	38.0	-0.1	6.2

Table 3 – Country Level Analysis

Variables	(1) Average Transaction Value	(2) Number of Transactions	(3) Average Cross-Border Transaction Value	(4) Number of Cross-Border Transactions	(5) Average Domestic Transaction Value	(6) Number of Domestic Transactions
GDP Growth	-5.005	-0.381	-1.086	-0.264	-3.919	-0.117
	(4.214)	(0.523)	(2.180)	(0.223)	(3.724)	(0.406)
Trade/GDP	-2.803	-0.280	0.752	0.0134	-3.555*	-0.293
	(2.320)	(0.288)	(1.200)	(0.123)	(2.050)	(0.223)
Crisis Dummy	-108.2*	-14.32*	-35.73	-4.985	-72.51	-9.332
	(59.58)	(7.400)	(30.82)	(3.153)	(52.65)	(5.738)
Rule of Law	10.32	6.321***	-6.681	1.842***	17.00*	2.895***
	(10.43)	(1.388)	(5.396)	(0.552)	(9.217)	(1.005)
Accounting Standards	7.790***	1.703***	0.796	0.969***	6.994***	0.827***
	(2.916)	(0.345)	(1.508)	(0.154)	(2.577)	(0.281)
Quality of Institutions	7.871	-26.34**	-72.55	-4.680	80.42	-1.553
	(135.2)	(11.60)	(69.93)	(7.155)	(119.5)	(13.02)
Risk of Expropriation	-6.232	-2.493	32.77	-9.183**	-39.00	-7.625
	(67.03)	(4.622)	(34.67)	(3.547)	(59.23)	(6.456)
Constant	103.6	-83.22***	-138.1	10.50	241.7	10.37
	(411.2)	(30.11)	(212.7)	(21.76)	(363.3)	(39.60)
Observations	124	124	124	124	124	124
R-squared	0.311	0.666	0.276	0.674	0.258	0.538
Country FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y

Observations are grouped by country. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 4 – Country Level Analysis (Logs)

Variables	(1) Log Average Transaction Value	(2) Log Transaction Number	(3) Log Average Cross-Border Transaction Value	(4) Log Cross-Border Transaction Number	(5) Log Average Domestic Transaction Value	(6) Log Domestic Transaction Number
GDP Growth	0.012	-0.0142	-0.0222	-0.0113	0.0755*	-0.0168
	-0.0247	-0.0162	(0.0315)	(0.0182)	(0.0408)	(0.0163)
Trade/GDP	-0.0244*	0.0208**	0.00553	0.00903	-0.0623***	0.0316***
	-0.0136	-0.00844	(0.0173)	(0.00947)	(0.0225)	(0.00848)
Crisis Dummy	-0.303	-0.405	-0.434	-0.397	0.00533	-0.346
	-0.349	-0.252	(0.445)	(0.282)	(0.577)	(0.253)
Rule of Law	0.0477	0.140***	-0.0653	0.199***	0.260**	0.0719
	-0.061	-0.0451	(0.0779)	(0.0506)	(0.101)	(0.0453)
Accounting Standards	0.0712***	0.0897***	0.0413*	0.0872***	0.125***	0.0809***
	-0.0171	-0.0129	(0.0218)	(0.0145)	(0.0282)	(0.0130)
Quality of Institutions	0.498	-1.822***	-0.374	-1.665***	2.127	-1.892***
	-0.791	-0.368	(1.010)	(0.413)	(1.308)	(0.369)
Risk of Expropriation	-0.355	-0.673***	-0.329	-0.625***	-0.983	-0.630***
	-0.392	-0.169	(0.501)	(0.189)	(0.649)	(0.169)
Constant	4.607*	1.737**	4.352	0.957	4.451	1.125
	-2.406	-0.871	(3.072)	(0.977)	(3.980)	(0.875)
Observations	124	124	124	124	124	124
R-squared	0.375	0.487	0.336	0.478	0.397	0.407
Country FE	Y	N	Y	N	Y	N
Year FE	Y	N	Y	N	Y	N

Observations are grouped by country. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 5 – SUR for Average Transaction Value for All Deals – No Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing, Energy and Utilities	(3) Technology, Media and Telecommunications	(4) Healthcare	(5) Finance
GDP Growth	6.841	-29.41***	-6.645	-2.474	-20.31**
	(4.237)	(10.54)	(9.823)	(4.886)	(10.15)
Trade/GDP	-0.0728	2.845	-1.155	-0.0965	1.251
	(1.519)	(3.777)	(3.521)	(1.751)	(3.637)
Crisis Dummy	-23.24	-112.8	-153.8	-20.13	-186.2*
	(42.73)	(106.3)	(99.08)	(49.28)	(102.3)
Rule of Law	-70.19	311.8**	-100.1	22.02	-96.92
	(60.74)	(151.1)	(140.8)	(70.05)	(145.5)
Accounting Standards	-9.325	42.23**	0.299	-9.156	5.255
	(8.198)	(20.39)	(19.01)	(9.453)	(19.63)
Quality of Institutions	85.61	-288.3**	-58.60	95.47	1.720
	(54.55)	(135.7)	(126.5)	(62.91)	(130.6)
Risk of Expropriation	137.5	-541.8**	107.2	59.86	69.54
	(101.2)	(251.7)	(234.6)	(116.7)	(242.4)
Constant					
Observations	30	30	30	30	30
R-squared	0.302	0.290	0.182	0.218	0.289

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 6 – SUR for Average Transaction Value for All Deals – Country and Year Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing, Energy and Utilities	(3) Technology, Media and Telecommunications	(4) Healthcare	(5) Finance
GDP Growth	-14.80**	-37.44*	-1.067	21.49*	7.231
	(7.075)	(22.67)	(10.11)	(12.19)	(22.71)
Trade/GDP	6.052*	-4.363	6.674	-10.16*	-17.92*
	(3.233)	(10.36)	(4.619)	(5.569)	(10.38)
Crisis Dummy	3.062	-245.7***	-51.26	-64.65	-230.9***
	(27.90)	(89.41)	(39.87)	(48.06)	(89.57)
Rule of Law	21.16*	55.08	-29.30	50.64**	-63.98
	(12.81)	(41.06)	(18.31)	(22.07)	(41.13)
Accounting Standards	-1.337	1.900	-0.0453	-1.703	21.63***
	(1.560)	(5.000)	(2.229)	(2.688)	(5.009)
Quality of Institutions	-120.4	-41.63	-292.8*	420.1**	595.0*
	(110.2)	(353.3)	(157.5)	(189.9)	(353.9)
Risk of Expropriation					
Constant					
Observations	30	30	30	30	30
R-squared	0.789	0.643	0.906	0.472	0.613

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 7 – SUR for Average Transaction Value for Cross Border Deals – No Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing, Energy and Utilities	(3) Technology, Media and Telecommunications	(4) Healthcare	(5) Finance
GDP Growth	2.325	-28.50***	-2.361	-1.577	-26.75***
	(3.301)	(10.08)	(7.570)	(4.701)	(9.319)
Trade/GDP	1.323	1.660	2.227	0.0907	6.463*
	(1.183)	(3.615)	(2.713)	(1.685)	(3.340)
Crisis Dummy	-6.387	-92.27	-43.70	-1.033	-92.71
	(33.30)	(101.7)	(76.35)	(47.42)	(94.00)
Rule of Law	-82.04*	356.0**	-7.940	54.16	-89.48
	(47.33)	(144.6)	(108.5)	(67.40)	(133.6)
Accounting Standards	-7.473	44.46**	2.555	-5.277	2.304
	(6.388)	(19.51)	(14.65)	(9.096)	(18.03)
Quality of Institutions	-15.18	-226.1*	-147.7	92.79	-161.8
	(42.51)	(129.8)	(97.46)	(60.53)	(120.0)
Risk of Expropriation	118.7	-593.7**	-17.13	2.687	43.65
	(78.86)	(240.9)	(180.8)	(112.3)	(222.6)
Constant					
Observations	30	30	30	30	30
R-squared	0.188	0.315	0.084	0.239	0.281

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 8 – SUR for Average Transaction Value for Cross-Border Deals – Country and Year Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing, Energy and Utilities	(3) Technology, Media and Telecommunications	(4) Healthcare	(5) Finance
GDP Growth	-19.15***	-42.52**	-12.03	22.19**	-13.27
	(4.689)	(21.09)	(11.43)	(11.25)	(22.57)
Trade/GDP	8.374***	-2.868	8.674*	-8.793*	-10.53
	(2.143)	(9.639)	(5.221)	(5.138)	(10.31)
Crisis Dummy	1.859	-204.0**	6.325	-42.71	-209.3**
	(18.49)	(83.19)	(45.06)	(44.35)	(89.01)
Rule of Law	2.471	84.32**	-9.612	51.09**	-95.16**
	(8.492)	(38.20)	(20.69)	(20.36)	(40.87)
Accounting Standards	-1.742*	-1.071	-1.912	-2.575	14.13***
	(1.034)	(4.652)	(2.520)	(2.480)	(4.978)
Quality of Institutions	-253.5***	-75.67	-343.4*	370.7**	463.5
	(73.07)	(328.7)	(178.0)	(175.2)	(351.7)
Risk of Expropriation					
Constant					
Observations	30	30	30	30	30
R-squared	0.822	0.675	0.774	0.527	0.542

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 9 – SUR for Average Transaction Value for Domestic Deals – No Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing, Energy and Utilities	(3) Technology, Media and Telecommunications	(4) Healthcare	(5) Finance
GDP Growth	4.516	-0.908	-4.284	-0.897	6.439
	(3.309)	(3.469)	(8.106)	(1.599)	(5.323)
Trade/GDP	-1.396	1.185	-3.381	-0.187	-5.212***
	(1.186)	(1.244)	(2.905)	(0.573)	(1.908)
Crisis Dummy	-16.85	-20.51	-110.1	-19.09	-93.53*
	(33.38)	(34.99)	(81.76)	(16.13)	(53.69)
Rule of Law	11.85	-44.17	-92.12	-32.14	-7.441
	(47.44)	(49.74)	(116.2)	(22.92)	(76.32)
Accounting Standards	-1.852	-2.224	-2.256	-3.879	2.950
	(6.403)	(6.713)	(15.68)	(3.094)	(10.30)
Quality of Institutions	100.8**	-62.18	89.07	2.688	163.5**
	(42.61)	(44.67)	(104.4)	(20.59)	(68.54)
Risk of Expropriation	18.87	51.85	124.3	57.17	25.89
	(79.04)	(82.87)	(193.6)	(38.19)	(127.2)
Observations	30	30	30	30	30
R-squared	0.237	0.109	0.221	0.210	0.330

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 10 – SUR for Average Transaction Value for Domestic Deals – Country and Year Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing, Energy and Utilities	(3) Technology, Media and Telecommunications	(59) Healthcare	(60) Finance
GDP Growth	4.345	5.085	10.96	-0.698	20.51***
	(7.374)	(8.658)	(12.00)	(3.600)	(4.618)
Trade/GDP	-2.323	-1.495	-2.000	-1.367	-7.390***
	(3.370)	(3.956)	(5.482)	(1.645)	(2.110)
Crisis Dummy	1.203	-41.76	-57.59	-21.95	-21.58
	(29.08)	(34.14)	(47.32)	(14.20)	(18.21)
Rule of Law	18.69	-29.24*	-19.69	-0.456	31.18***
	(13.35)	(15.68)	(21.73)	(6.519)	(8.364)
Accounting Standards	0.405	2.970	1.866	0.872	7.506***
	(1.626)	(1.909)	(2.646)	(0.794)	(1.019)
Quality of Institutions	133.0	34.04	50.57	49.33	131.5*
	(114.9)	(134.9)	(187.0)	(56.09)	(71.97)
Risk of Expropriation					
Observations	30	30	30	30	30
R-squared	0.589	0.398	0.815	0.566	0.945

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 11 – SUR for Transaction Number for All Deals – No Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing Energy and Utilities	(3) Technology, Media and Telecommunications	(4) Healthcare	(5) Finance
GDP Growth	-0.246	0.245	-0.230	0.0201	-0.686
	(0.558)	(0.452)	(0.339)	(0.118)	(0.733)
Trade/GDP	-0.326***	-0.389***	-0.155**	-0.0526**	-0.194
	(0.122)	(0.0989)	(0.0742)	(0.0257)	(0.160)
Crisis Dummy	-5.699	0.252	-3.999	-0.915	-14.10*
	(5.845)	(4.735)	(3.553)	(1.233)	(7.679)
Rule of Law	1.395	2.845	2.525	0.513	4.397
	(2.807)	(2.274)	(1.706)	(0.592)	(3.688)
Accounting Standards	0.235	0.305	0.0942	0.0507	0.229
	(0.320)	(0.259)	(0.194)	(0.0674)	(0.420)
Quality of Institutions					
Risk of Expropriation					
Constant	4.737	-7.841	-6.802	-1.610	-10.04
	(20.85)	(16.89)	(12.67)	(4.397)	(27.39)
Observations	30	30	30	30	30
R-squared	0.262	0.400	0.262	0.170	0.211

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 12 – SUR for Transaction Number for All Deals – Country and Year Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing Energy and Utilities	(3) Technology, Media and Telecommunications	(4) Healthcare	(5) Finance
GDP Growth	2.706***	1.522***	0.972*	0.364**	2.369**
	-0.733	-0.387	-0.571	-0.16	-0.948
Trade/GDP	-2.048***	-0.781***	-0.747***	-0.457***	-2.053***
	-0.335	-0.177	-0.261	-0.0733	-0.433
Crisis Dummy	-7.700***	0.441	-4.714**	-1.921***	-16.52***
	-2.891	-1.525	-2.252	-0.633	-3.741
Rule of Law	-27.91***	-9.628***	-10.38**	-7.296***	-33.63***
	-5.791	-3.055	-4.512	-1.267	-7.494
Accounting Standards	3.635***	1.262***	1.337**	0.928***	4.126***
	-0.673	-0.355	-0.524	-0.147	-0.871
Quality of Institutions					
Risk of Expropriation					
Constant					
Observations	30	30	30	30	30
R-squared	0.873	0.956	0.792	0.846	0.868

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 13 – SUR for Transaction Number for Cross-Border Deals – No Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing Energy and Utilities	(3) Technology, Media and Telecommunications	(4) Healthcare	(5) Finance
GDP Growth	-0.0769	-0.195	-0.294***	0.0266	-0.782***
	(0.194)	(0.204)	(0.0937)	(0.0497)	(0.270)
Trade/GDP	-0.00706	-0.0120	0.0400	-0.00857	0.240**
	(0.0696)	(0.0732)	(0.0336)	(0.0178)	(0.0966)
Crisis Dummy	0.821	2.475	-1.034	0.350	-4.345
	(1.958)	(2.061)	(0.945)	(0.502)	(2.719)
Rule of Law	-4.425	-1.006	2.696**	0.962	-2.791
	(2.783)	(2.929)	(1.343)	(0.713)	(3.864)
Accounting Standards	-0.495	-0.0265	0.359**	0.176*	-0.155
	(0.376)	(0.395)	(0.181)	(0.0962)	(0.522)
Quality of Institutions	-4.065	-5.151*	-2.756**	-0.918	-10.49***
	(2.500)	(2.630)	(1.206)	(0.640)	(3.470)
Risk of Expropriation	7.702*	1.647	-4.582**	-1.913	3.296
	(4.637)	(4.880)	(2.237)	(1.188)	(6.438)
Constant					
Observations	30	30	30	30	30
R-squared	0.444	0.408	0.299	0.142	0.345

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 14 – SUR for Transaction Number for Cross-Border Deals – Country and Year Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing Energy and Utilities	(3) Technology, Media and Telecommunications	(4) Healthcare	(5) Finance
GDP Growth	0.410	0.0858	-0.219	0.438***	0.583*
	(0.335)	(0.255)	(0.192)	(0.0505)	(0.344)
Trade/GDP	-0.297*	-0.0108	0.137	-0.219***	-0.450***
	(0.153)	(0.116)	(0.0877)	(0.0231)	(0.157)
Crisis Dummy	0.657	3.248***	-1.325*	0.209	-6.631***
	(1.320)	(1.005)	(0.757)	(0.199)	(1.358)
Rule of Law	0.506	-0.772*	0.256	-0.218**	-0.689
	(0.606)	(0.461)	(0.348)	(0.0914)	(0.624)
Accounting Standards	0.141*	0.131**	-0.0451	0.0955***	0.247***
	(0.0738)	(0.0562)	(0.0423)	(0.0111)	(0.0760)
Quality of Institutions	4.077	-6.116	-6.407**	5.579***	10.96**
	(5.217)	(3.970)	(2.992)	(0.786)	(5.367)
Risk of Expropriation					
Constant					
Observations	30	30	30	30	30
R-squared	0.821	0.900	0.680	0.904	0.884

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 15 – SUR for Transaction Number for Domestic Deals – No Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing Energy and Utilities	(3) Technology, Media and Telecommunications	(4) Healthcare	(5) Finance
GDP Growth	-0.501	0.0908	-0.134	-0.0616	-0.335
	(0.417)	(0.297)	(0.315)	(0.102)	(0.526)
Trade/GDP	0.0161	-0.0249	0.00439	0.0115	0.000533
	(0.149)	(0.107)	(0.113)	(0.0366)	(0.188)
Crisis Dummy	-5.301	-0.941	-2.239	-1.063	-8.173
	(4.205)	(3.000)	(3.177)	(1.030)	(5.301)
Rule of Law	-2.782	-10.11**	-8.982**	-2.794*	-10.18
	(5.977)	(4.264)	(4.516)	(1.464)	(7.535)
Accounting Standards	0.00972	-1.142**	-1.231**	-0.378*	-1.455
	(0.807)	(0.576)	(0.609)	(0.198)	(1.017)
Quality of Institutions	-8.722	-5.474	-2.742	-0.675	-2.535
	(5.367)	(3.830)	(4.056)	(1.314)	(6.767)
Risk of Expropriation	3.109	17.17**	16.61**	5.097**	20.13
	(9.958)	(7.105)	(7.524)	(2.439)	(12.55)
Constant					
Observations	30	30	30	30	30
R-squared	0.261	0.499	0.362	0.293	0.286

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.

Table 16 – SUR for Transaction Number for Domestic Deals – Country and Year Fixed Effects

Variables	(1) Consumer and Retail	(2) Manufacturing Energy and Utilities	(3) Technology, Media and Telecommunications	(4) Healthcare	(5) Finance
GDP Growth	2.296***	1.436***	1.191**	-0.0741	1.785**
	(0.595)	(0.451)	(0.531)	(0.164)	(0.833)
Trade/GDP	-1.751***	-0.771***	-0.884***	-0.239***	-1.603***
	(0.272)	(0.206)	(0.243)	(0.0750)	(0.380)
Crisis Dummy	-8.357***	-2.807	-3.389	-2.129***	-9.891***
	(2.348)	(1.779)	(2.095)	(0.648)	(3.284)
Rule of Law	-0.118	-0.911	0.782	0.582*	0.925
	(1.078)	(0.817)	(0.962)	(0.297)	(1.508)
Accounting Standards	0.708***	0.349***	0.258**	0.0788**	0.544***
	(0.131)	(0.0995)	(0.117)	(0.0362)	(0.184)
Quality of Institutions	51.38***	21.69***	28.78***	9.430***	55.40***
	(9.276)	(7.031)	(8.276)	(2.559)	(12.98)
Risk of Expropriation					
Constant					
Observations	30	30	30	30	30
R-squared	0.836	0.875	0.803	0.801	0.806

Observations are grouped by industry. T-statistics are computed and are shown in each column. The numbers in parenthesis are the standard errors. *, **, and *** indicate statistical significance at 10 5, and 1 percent levels, respectively.