

# Multinational Banks and IMF Conditionality

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## **Abstract**

Who benefits from IMF conditionality? We rely on firm investment location decisions to infer firms' preferences, and we find robust evidence that US firms are more likely to engage in financial mergers and acquisitions in countries with IMF programs that incorporate financial conditionality. The substantive effect is approximately a 29-percent increase in US financial M&As. IMF programs only weakly encourage non-financial M&As, and financial conditionality has much weaker effects on investment decisions by non-US firms. Firm-level analysis indicates that the US-firm advantage is not due to firm size, but to the distinctive behavior of large US firms. Large firms from other G7 countries are most similar to US firms, but are less responsive to conditionality; large firms from other OECD countries and from non-OECD countries are not responsive to conditionality. We conclude that the main beneficiaries are large multinational firms from the countries that have the most substantial informal influence in the IMF.

Major American banks and financial institutions have direct access to US policymakers, who in turn exercise extraordinary influence over the International Monetary Fund. Top economic policymakers are often drawn from the ranks of investment bankers and often serve on the boards of banks after serving in Washington. Additionally, the cooperation of important bankers is often essential to accomplishing the IMF's goals in particular countries, which draws the banks directly into the policy network. This dense network of relationships, and the informal contacts that it supports, have led many observers to conclude that the IMF has been captured by the leading US banks. The Fund makes no secret of the fact that its objectives include liberalizing international capital markets, lowering barriers to entry for multinational financial firms, and dismantling capital controls, all measures that US financial institutions favor. In many quarters, IMF loans are seen as bailouts for US banks and investors, and the conditions attached to them are assumed to be influenced by the banks and to consist of measures that increase their profits.

Informal influence is inherently difficult to observe, so we use an indirect approach. This paper uses a new empirical strategy to investigate who benefits from IMF lending by exploring how IMF lending influences foreign direct investment decisions by individual firms. Investment location decisions reveal firm preferences in the sense that they reflect the managers' expectations about whether IMF lending improves their prospects of making profits. Using firm-level merger and acquisition data drawn from SDC Platinum, we are able to refine our analysis to ask which sectors are made more profitable by IMF lending. Combining these data with detailed information on the conditionality included in particular IMF loans from the IMF MONA database allows us to tie investment decisions by particular firms to particular policy reforms. The results we present remain correlations, but this strategy allows us to draw more credible causal inferences than was possible in previous work that relied on aggregate data and did not measure the varying content of conditionality.

Aggregating the firm-level data into country-year counts, we find evidence of only a weak positive effect of IMF programs on mergers and acquisitions by US firms in general. However, those IMF programs that include financial conditions have a strong, statistically significant and

positive effect on financial M&A's by US banks, insurance companies, and financial firms. Fixed-effect models reveal that countries are significantly more likely to receive foreign investment in the financial sector when they are under IMF programs with financial conditions. This result survives a series of robustness checks, including Heckman selection models. The effect of IMF financial conditions on financial M&A's substantially increases the odds of investing in a particular country, and is relatively strong compared to other control variables, including market size, income, inflation, and democracy.

Our most intriguing findings are about the identities of the firms that respond to financial conditionality: we find much stronger effects of IMF conditionality on investments by US firms than by firms of other nationalities. We entertain two hypotheses to explain this. On one hand, the US-firm effect could be attributable to differences in scale between US and non-US financial firms, which give US firms a competitive advantage. If the US advantage is due to size, it should disappear when we control for firm size. Alternatively, US firms might respond more readily to IMF financial conditionality for reasons that are due to their national origin *per se*. For example, US firms benefit from US diplomatic support, from the leverage afforded by US trade and investment linkages, and from US informal influence in international organizations. We construct a firm-country-year dataset in order to test these hypotheses. We find that a small number of large firms is responsible for most of the financial FDI regardless of IMF conditionality, but large firms are not more responsive to IMF conditionality; to the contrary, they are less likely to invest in countries that are under IMF conditionality than in countries that are not. The effect of conditionality on FDI is driven primarily by smaller firms. However, we find that large US firms are more inclined than large firms of other nationalities to invest in countries under conditionality, and it is the differences among the large firms that drive the differences between firms of different nationalities. Large US firms are best-positioned to lobby the US government to represent their interests abroad.

Firm-level analysis further allows us to sort out alternative explanations for the nationality effect by comparing the investment behavior of US firms, firms from other G7 countries, firms from OECD countries not in the G7, and firms from non-OECD countries. None of the other

sets of firms invests in countries under financial conditionality with the alacrity of US firms, but G7 firms are most similar, while firms from both groups of non-G7 countries become less eager than their comparison groups to invest in countries under financial conditionality as their size increases. These results suggest that economic development of the home country is not persuasive in explaining the effect of firm nationality, because firms from OECD and non-OECD countries behave similarly. On the other hand, the US-firm advantage is apparently not attributable to a unique US advantage in capabilities, such as its role in international security, because the behavior of US firms is similar to that of firms from other G7 countries. Instead, because of the special role of the G7 in informal governance of the IMF, it seems most likely that the firm-nationality effect is attributable to the ability of large firms to benefit from the informal influence of their home countries in international organizations.

Two more exercises allow us to turn up the magnification on our results. First, we investigate which individual firms respond to IMF financial conditionality, and we find four US firms and four European firms for which there are enough data to replicate significant results. All are systemically important financial institutions: four are leading money-center banks, two are major insurance companies, one is a leading investment bank, and one was the financial arm of the sixth-largest multinational corporation. Each of the European firms owns important US financial institutions and has a significant presence in the US market, and all eight firms engage in significant lobbying activity in the United States, but the US firms lobby substantially more. This evidence appears consistent with our interpretation of the aggregate results. Finally, we turn to a case study of Korea, a country that was opened up for financial FDI as a condition of an IMF program during the 1997 Asian Financial Crisis under pressure from the United States. We trace which firms invested in Korea, and we find that a small number of US and European firms were able to acquire profitable stakes in some of the leading Korean financial firms.

US multinational financial firms derive substantial benefits from IMF conditional lending. Consistent with previous research, we find that the ability of IMF lending or conditionality to spur an aggregate increase in foreign investment, which might indicate a broad-based improvement in market conditions or improved prospects for growth, is negligible. However, when we

narrow our focus to particular kinds of policy conditionality, we find that financial conditionality encourages foreign investments in the financial sector. This implies that financial firms perceive this form of conditionality to improve their opportunities to earn profits. The IMF has long engaged in efforts to promote financial market liberalization around the world, and it has long been clear that the US financial industry has substantial policy influence in Washington generally, and in the IMF in particular. Our findings suggest that these firms perceive a direct interest in the IMF's efforts to open up financial markets.

## **Theory**

Until recent decades, most developing countries maintained high barriers to capital movements and rigidly controlled entry into their financial markets, and even after substantial waves of liberalization occurred, the financial sector remained the most protected and least internationalized sector in most economies. This corresponded to the preferences of leaders as well as those of domestic financial firms. From the point of view of leaders, having a robust national banking industry increased the government's autonomy in setting fiscal and monetary policy, and maintaining capital controls lowered the risk of sudden, politically destabilizing movements in the exchange rate. A relatively insulated domestic financial system made financial repression more effective as a tool of monetary and industrial policy. For authoritarian leaders in particular, credit rationing became a powerful tool for building patronage. For its part, the domestic financial industry welcomed protection against better-capitalized, more productive, more credible, and more technologically advanced competitors from developed countries. A natural alliance emerged between protected domestic banks that charged monopoly rents for financial services and the governments that extracted from them the resources to remain in power.

The International Monetary Fund has sought to disrupt this equilibrium by opening protected financial markets to international transactions and competition, with the objective of increasing international flows of capital in the long run. After initially encouraging capital controls as a means of reducing the volatility of capital flows under the Bretton Woods system of fixed exchange rates, the Fund gradually shifted its position to become a champion of capital-

market openness. Direct US pressure played an important role in this process, along with a gradual evolution of the positions of key US allies and a shift in the dominant paradigms in the economics profession (Helleiner 1994; Abdelal 2007; Chwieroth 2010). The price of deepened access to IMF resources during the Latin American debt crisis was a substantial increase in the practice of conditionality, including intrusive efforts to deregulate capital markets (Boughton 2001). These efforts intensified during the IMF programs in the post-Communist countries, which sought to rebuild whole economies from scratch and grappled with institutional problems of unprecedented complexity (Stone 2002). Conditionality covering the financial sector became routine. The Asian financial crises further trained the spotlight of international attention on financial-sector issues, and the institutional response in the IMF was the creation of Financial Sector Assessment Programs (FSAPs), designed to create more transparent, competitive, and open financial sectors, which would presumably be less subject to the temptations and abuses that made countries vulnerable to the spread of the crisis (IEO 2003).

The evidence is mixed about whether engagement with the IMF actually expands developing countries' access to international capital markets or provides new private capital flows (Bird and Rowlands 2002; Bauer, Cruz, and Graham 2012; Steinwand and Stone 2008). Mody and Saravia (2003) find that IMF lending decreases bond spreads in cases of intermediate financial risk, and Eichengreen, Gupta and Mody (2006) find a broader effect in reducing bond spreads, while Cottarelli and Giannini (2002) find little supporting evidence. In contrast, Edwards (2006) finds that program participation leads to outflows of portfolio investment. Chapman et al. (2017) argue that IMF lending can drive bond spreads up because of adverse selection and moral hazard or down because of the direct effects of providing liquidity and imposing conditionality, but that the effects are most unsatisfactory in cases where US banks are significantly exposed, because this undermines the credibility of the loans-for-reform contract. In the study most similar to the present one, Jensen (2004) finds that FDI inflows into countries that participate in IMF programs are reduced. Much of this literature, including the Jensen article, controls for non-random selection into IMF programs.

Meanwhile, substantial evidence has accumulated that major US financial firms exercise

influence over US foreign economic policy, and indirectly over the IMF. Wall Street was represented by proxy at Bretton Woods and lobbied for the creation of the Eurodollar market and the gradual lifting of capital controls abroad under Democratic as well as Republican administrations. US banks were the pioneers of multinational banking, and their organization, size, and ability to raise funds in US dollars gave them critical competitive advantages over their international competitors, so they favored an agenda of global liberalization. Furthermore, changes in the IMF's mission gave US banks new entree into policymaking. The new IMF agenda in the 1980s of managing sovereign debt rescheduling made the banks essential partners because their participation was needed to finance adjustment. As a result, they were able to influence IMF conditionality in ways that were favorable to their interests (Gould 2003, 2006). Large-scale bailouts such as the ones for Mexico in 1995 and Korea in 1997 came to routinely involve private sector involvement (or PSI, as it came to be known in Fund jargon), which meant efforts by the central banks to coerce the banks they supervised into extending additional credits. In return, however, the bankers received guarantees that IMF conditionality would serve their interests. In turn, the banks have become the major domestic supporters of the IMF in an often-critical Congress and have played a key role in securing passage of bills allowing the United States to participate in successive expansions of the Fund's resources (Broz and Hawes 2011). Studies of IMF lending, meanwhile, indicate that countries that are major customers for US bank loans receive larger IMF loans on easier conditions (Broz and Hawes 2006; Copelovitch 2010; Stone 2008, 2011). The IMF is highly responsive to the interests of international banks, particularly American ones, but the banks generally exercise this influence indirectly.

The implication is that IMF financial conditionality reflects the preferences of US financial firms, which anticipate that the reforms it prescribes will lead to opportunities for them to make higher profits by investing abroad. If this is true, IMF financial conditionality should be followed by increased multinational investment in the financial sector. The argument has additional implications, however. Scholars of foreign direct investment are finding that the nationality of the investing firm has important effects on investment decisions and on the treatment of foreign investments by the host country. Rachel Wellhausen has showed convincingly that

countries that host FDI develop differentiated reputations vis-a-vis firms of different nationalities, and as a result, expropriation of the property of a firm deters investment by other firms of the same nationality, but not by firms of other nationalities. Firms, in turn, organize collectively to defend the rights of their co-nationals, either by lobbying their home countries or the host country, but rarely rally to the side of firms from other countries (Wellhausen 2015). Several explanations of this phenomenon are possible, including the differentiated efforts and capabilities of national governments to shield their firms. The implication for the current project is that if national governments exert efforts on behalf of their firms, a firm's nationality should affect its expected profits from foreign investment, and consequently its choice of locations for FDI. Since the United States has a decisive advantage in informal influence in the IMF, our expectation is that US firms should benefit most from financial conditionality and should respond most strongly.

## **Research Design**

We aim to demonstrate that major multinational financial firms benefit from IMF financial conditionality. Because the influence of lobbying activities is inherently difficult to observe, we choose an empirical strategy that relies instead on the location strategies of financial firms to reveal their preferences about IMF policies. When firms choose to make costly investments in one country rather than another, they reveal information about their estimates of which location is likely to yield the highest profit. If these decisions are associated with particular activities of the IMF, we can infer that firms expect these activities to promote their profits. This does not establish that the firms influenced the IMF. However, it does establish a clearer basis than was previously available for drawing inferences about whether the IMF promotes policies that favor financial firms' interests.

Two sources of empirical data allow us to refine our inferences. First, firm-level data on foreign mergers and acquisitions by Fortune Global 500 firms drawn from SDC Platinum allow us to tie conditions in particular countries to the decisions of particular firms. Unlike previous studies of the effect of IMF lending on FDI, for example, we are able to differentiate the effects



on firms in various sectors, and isolate the particular factors that affect the calculations of banks and financial firms. For our initial round of analysis we aggregate these data into country-year counts of M&As, which dramatically reduces the size of the dataset. This allows us to conduct conservative hypothesis tests and makes the data manageable enough to use a wide range of models.<sup>1</sup> Later, we construct a firm-country-year dataset using the full set of firms in order to narrow the range of interpretations of our initial results. Second, detailed data on conditionality drawn from the IMF's Monitoring of Agreements (MONA) database allow us to differentiate among IMF programs that required various kinds of reform. A voluminous literature has sought to find effects of IMF programs using a dichotomous indicator for program participation as the treatment variable, but programs that emphasize different kinds of reforms ought to be expected to have different effects. Our key hypothesis is that financial sector conditionality should promote foreign investments by US financial firms. We compare these effects to those of IMF programs in general on US M&As in general, to those of IMF programs that do not include financial conditions on US non-financial M&As, and to those of financial conditionality on financial investments by firms from other countries (initially, France, Germany, Japan, and the UK). We find that each of these alternative specifications produces a positive and significant coefficient, but the estimated effects are much weaker than the effect of financial conditionality on financial M&As by US firms. The fact that the effect becomes stronger when we narrow our focus to treatments and effects that most closely fit our theory reinforces our confidence in our interpretation of our results.

## **Results**

As a first step in our analysis, we investigate the effects of IMF programs with and without financial sector conditionality on mergers and acquisitions. We use a conservative estimation strategy of aggregating our firm-level indicator of investments into a country-year count, so our dependent variables measure the number of M&As by Global Fortune 500 firms in a particular country in a particular year. Consequently, we abstract away from firm-level heterogeneity and

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<sup>1</sup>Results of Heckman selection models using a range of selection equations are in the appendix. We find no evidence of significant selection bias.

use country-level controls, along with country and year fixed effects. Our results can be interpreted as within-country effects of accepting new conditionality net of any contemporaneous global shocks. The data cover all IMF members and the years 1989-2010. We use the following controls:

- *Market Size*: the natural log of GDP (million USD) in constant prices. Source: UNCTAD.

- *Income Class*: the World Bank's income classification based on GDP per capita in constant prices. 1 = low income (less than \$1,045 per year), 2 = middle income (between \$1,045 and \$12,746), 3 = high income (more than \$12,746). Source: World Bank, UNCTAD.

- *Inflation*: annual percentage change in the Consumer Price Index (divided by 100). Source: Bas and Stone (2014).

- *Democracy*: a dummy variable for whether a country is a democracy. 0 = No, 1 = Yes. Source: Bas and Stone (2014), updated from Przeworski et al. (2000).

Summary statistics and correlation matrices are included in the appendix. The distribution of our count of M&A's is skewed (for example, the mean of all M&A's is 10.4, while the median is equal to the minimum value of 0), so we use Poisson and negative binomial regressions. Table 1 reports the results.

The first model tests for effects of all IMF programs on mergers and acquisitions in any sector by US firms. The estimated effect is positive and significant, but very small, and very precisely estimated. We interpret this as evidence that we can have a high degree of confidence that the true effect is very close to zero. The second model focuses explicitly on cases that do not fit our argument: effects of IMF programs that lack financial-sector conditionality on M&As outside the financial sector. This estimated effect is slightly smaller, and again, we conclude that we can be confident that the effect is not substantial.

The third model examines the effect of an IMF program that contains financial-sector conditionality on M&As in the financial sector. We measure the independent variable, *Financial Conditionality*, as a dummy variable for whether at least one financial or banking condition is

Table 1: IMF Conditionality and Counts of Mergers and Acquisitions

<b>Dependent Variable</b>	<b>US M&amp;A</b>	<b>US Non-Financial M&amp;A</b>	<b>US Financial M&amp;A</b>	<b>US Financial M&amp;A</b>	<b>Non-US Financial M&amp;A</b>
<i>Model:</i>	<i>Poisson</i>	<i>Poisson</i>	<i>Poisson</i>	<i>Neg. Bin.</i>	<i>Poisson</i>
IMF Program	0.037 (0.00)				
Non-Financial Program		0.036 (0.00)			
Financial Condition			0.835 (0.00)	0.715 (0.00)	0.304 (0.00)
Market Size	1.63 (0.00)	1.65 (0.00)	1.39 (0.00)	0.22 (0.08)	1.80 (0.00)
Income Class	0.35 (0.00)	0.31 (0.00)	0.63 (0.00)	0.90 (0.00)	0.32 (0.00)
Inflation	-0.36 (0.00)	-0.34 (0.00)	-0.90 (0.00)	-0.67 (0.03)	-0.75 (0.00)
Democracy	-0.18 (0.00)	-0.18 (0.00)	-0.15 (0.41)	-0.28 (0.16)	0.01 (0.81)
Observations	2,623	2,461	1,796	1,796	2,833
Country FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes

Independent variables are lagged one year.

Figures in parentheses are p-values.

included in an IMF program, as recorded in MONA. The dependent variable, *Financial M&A*, is a count variable constructed from SDC Platinum for the number of M&A transactions in which US firms acquire affiliates in a financial sector abroad. Firms classified as “financial” include: (1) commercial banks and bank holding companies; (2) credit institutions; (3) investment and commodity firms, dealers, and exchanges; and (4) other financial firms, including insurance companies. A transaction is considered financial if the target firm is in one of the financial sectors. Thus, for example, the dependent variable would include instances in which US auto companies purchased credit institutions in other countries, but would not include instances in which US banks purchased advertising companies. Almost all of the observed acquisitions were performed by parent companies that were also themselves coded as being in the financial sector, however, so our decision to code by the sector of the acquired affiliate rather than by the sector of the parent firm is unlikely to affect the results. The decision to code the financial sector broadly rather than to focus narrowly on banks, for example, seems to be supported by the numerous instances in which major banks, insurance companies and investment banks ac-

quire each other abroad, which substantially blurs the distinctions between these various lines of business.

The result is significant: an IMF program with financial-sector conditionality is associated with a 29% (17.1%, 41%) increase in the number of mergers and acquisitions in the financial sector by US firms. The fourth model asks the same question using a negative binomial count model and gets the same answer: financial-sector conditionality is associated with a 27% increase (15.8%, 37.7%) in the number of financial M&A's by US Fortune Global 500 firms.<sup>2</sup> Since we control for country fixed effects (as well as year fixed effects and several control variables that are associated with foreign investment), these results can be interpreted as within-country increases in mergers and acquisitions. The independent variables are lagged one year, so we estimate the effect of a financial condition in place in the previous year on M&A activity in the current year.

This evidence supports the interpretation that US financial firms expect IMF financial conditionality to improve their prospects of making profits abroad, and that they purchase foreign affiliates after IMF programs include such conditionality in order to capitalize on these opportunities. These results are correlations.<sup>3</sup> However, the fact that the effects strengthen dramatically when we narrow our focus—from all IMF programs to only those that contain financial conditionality, and from all mergers and acquisitions to only those that occur in the financial sector—provides greater confidence that these investments are driven by IMF conditionality.

Table 2 reports the estimated marginal effects of the variables in Column 4 of Table 1. The marginal effects from the other models are presented in the appendix (Table A).

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<sup>2</sup>The negative binomial model relaxes the assumption of the Poisson of constant variance and allows for the possibility of contagion between events in a particular observation. For example, countries that receive one financial-sector M&A may be more likely to receive additional ones in the same year.

<sup>3</sup>Note, however, that it is not the case that countries that receive a lot of financial M&As are more likely to have financial conditionality. The bivariate correlation between financial conditions and financial M&As is weakly negative ( $-0.035$ ), apparently because countries with large markets, high income, and democratic institutions are unlikely to have financial conditionality under IMF programs, and are likely to be attractive destinations for financial M&As.

<b>Table 2: Marginal Effects</b>		
<b>Variable</b>	<b>Treatment</b>	<b>Effect</b>
Financial Conditionality	IMF program with financial conditionality	(15.8%, 37.7%)
Market Size	Increasing by one standard deviation	(−2.6%, 41.3%)
Income Class	Increasing by one category	(22.1%, 45.0%)
Inflation	Increasing by one standard deviation	(−31.6%, −2.1%)
Democracy	Being a democracy	(−24.6%, 3.9%)

Figures are average marginal effects, expressed as percentages of a standard deviation of the dependent variable.

95% confidence intervals are based on estimates from the negative binomial model with fixed effects in Table 1.

The treatments we choose depend on the types of the independent variables. For continuous variables (*Market Size* and *Inflation*), the treatment is that the variable increases by one standard deviation. For the only ordinal variable (*Income Class*), the treatment is that the variable increases by one category (e.g., low income to medium income, medium income to high income). For indicator variables (*Financial Condition*, *Democracy*), the treatment is that the indicator changes from 0 to 1. The substantive effect of imposing financial conditionality is strong relative to the other factors that we find to have important effects on financial mergers and acquisitions.

In order to narrow the range of possible interpretations of our results, we replicate our analysis in the fifth column of Table 1 using a count of financial M&As by firms from countries other than the United States (Fortune Global 500 firms from France, Germany, Japan, or the UK) as the dependent variable. If these non-US M&As respond to financial conditions in the same way that M&A's from US firms do, this suggests a straightforward explanation: financial conditionality improves the profitability of investments in financial affiliates, which benefits foreign investors of all nationalities. On the other hand, if the effect is apparent only for firms based in the United States, this suggests either a political-economy explanation involving lobbying by US financial firms, or some feature of US firms that allows them to uniquely take advantage

of IMF conditionality. The result we find is that non-US financial M&A's are positively and significantly associated with financial conditionality, as expected, but that the effect is markedly weaker for non-US firms than for US financial firms. The estimated effect in Column 5 corresponds to a 0.9% increase in non-US financial M&A's (0.68%, 1.12%), which is an order of magnitude greater than the estimated effect of IMF programs on non-financial M&A's (0.07%). However, the effect of financial conditionality is approximately thirty times larger for US firms than for non-US firms. IMF conditionality appears to be broadly beneficial to multinational financial firms that seek to enter new markets, but US firms appear to capture almost all of the benefits.

## **Firm-Level Analysis**

We now investigate the relationship between IMF financial conditions and financial M&As at the firm level in order to discriminate between two possible interpretations of our results. One possibility is that the apparent effect of a firm's US origin is due to the advantages of scale that US financial firms have over their foreign competitors. In this view, the leading explanation for which fish eat which other fish is relative size. Only systemically important banks and financial institutions that are too big to fail are able to take advantage of the risky investment opportunities provided by IMF efforts to liberalize markets in countries that are undergoing financial instability, and it simply happens that most of these institutions are US firms. An alternative view is that national origin *per se* is decisively important, because foreign investors rely on the diplomatic support of their home governments to protect them and open up market access abroad. In this view, US military alliances and bilateral diplomatic relationships, trade and investment linkages, and informal influence in multilateral institutions provide US firms with key resources that firms from less powerful countries lack. If this is the case, the effects of IMF conditionality should be stronger for US firms even when we control for the differential effects of IMF conditionality due to firm size.

To test these hypotheses, we construct a firm-country-year dataset consisting of the 6,624

firms that have made financial M&As with foreign firms during the period of study<sup>4</sup>. Data availability limits the estimation sample to 167 countries over the years 1990–2008. Descriptive statistics are in the appendix. We estimate the following equation<sup>5</sup>:

$$y_{ijt} = \beta_0 + \beta_1 IMF_{it} + X_{it}\beta + Z_{jt}\gamma + W_{ijt}\delta + \mu_i + \nu_t + \epsilon_{ijt} \quad (1)$$

The dependent variable is a count of M&As in countries  $i$  by firms  $j$  in years  $t$ . IMF is an indicator for IMF financial conditionality,  $X$  is a vector of country-level controls,  $Z$  is a vector of firm-level controls,  $W$  is a vector of interaction effects between firm size, national origin and IMF financial conditionality,  $\mu_i$  is a vector of country fixed effects,  $\nu_t$  is a vector of time fixed effects, and  $\epsilon_{ijt}$  is a normally distributed error term.

The country-level controls include those used in the previous analyses, with the addition of *Country – cumulative  $\neq$  firm  $j$* , which is a cumulative count of investments in country  $i$  by firms other than firm  $j$ . The firm-level controls are *Firm-ctry-cum (t-1)*, a lagged cumulative count of firm  $j$ 's previous investments in country  $i$ ; the indicator variable *US firm*; and two alternative measures of firm size. The first measure of firm size is a count of the countries in which firm  $j$  invested in the previous year, *Firm-countries (t-1)*, and the second is a cumulative count of firm  $j$ 's investments in countries other than country  $i$ , *Firm – cum  $\neq$  country  $i$* .

The quantities of interest are the interactions between IMF financial conditionality and firm size; between financial conditionality and *US firm*; and the three-way interaction between conditionality, firm size and *US firm*.

The first conclusion to jump out of this analysis is that, regardless of IMF conditionality, large firms are much more likely to make new foreign investments than are smaller firms. This is consistent with an extensive empirical literature that consistently shows that FDI is heavily concentrated in a small minority of very large, highly productive firms. The estimated effect of a single prior investment in a country is to increase the probability of another one in a particular

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<sup>4</sup>Note that this substantially expands the pool of firms beyond the Global Fortune 500 firms considered in the previous analyses, which facilitates comparisons based on firm size.

<sup>5</sup>We use a linear model to accommodate two-way fixed effects and the large size of the dataset.

year by approximately 72 times. The effect of investing in one other country in the previous year increases the estimated probability of investing by approximately 6 times. A firm that has five cumulative previous investments in other countries is one standard deviation above the mean, and is estimated to be approximately three times more likely to invest than the modal firm with none.

Table 2: Firm-level analysis

	Coefficient	<i>p</i>	Coefficient	<i>p</i>
Financial conditionality	0.24	0.00	0.20	0.00
US firm	0.04	0.03	0.06	0.00
Firm-ctry-cum (t-1)	45.1	0.00	45.1	0.00
Financial cond x US firm	-0.10	0.16	-0.02	0.79
Firm-countries (t-1)	3.14	0.00		
Fin cond x firm-countries	-1.64	0.00		
US firm x fin cond x firm-countries	1.04	0.00		
Firm-cum $\nexists$ <i>country</i> <sub><i>i</i></sub>			0.26	0.00
Fin cond x firm cum			-0.12	0.00
US firm x fin cond x firm cum			0.03	0.01
Country-cum $\nexists$ <i>firm</i> <sub><i>j</i></sub>	0.0002	0.47	-0.0001	0.68
Constant GDP (trn USD)	0.56	0.00	0.49	0.00
WB Classification	0.29	0.00	0.30	0.00
Inflation	-0.000101	0.33	-0.000121	0.24
Democracy	-0.01	0.79	-0.01	0.85
Observations	19,169,856		19,997,856	
Adj R-sq	0.037		0.036	

Dependent variable: Firm-country-year financial M&As (count).

Note: Coefficients multiplied by 1,000.

In contrast, large multinational firms are not more responsive to IMF financial conditionality on average than small firms. To the contrary, IMF financial conditionality is estimated to significantly reduce the investment advantage of large firms. For example, a firm with an investment in one other country in the previous year is estimated to be six times as likely to invest in a country that is not under IMF financial conditionality as one with investments in no other countries, but is only 3.4 times as likely to invest in a country that is under financial conditionality. A firm that has five cumulative previous investments in other countries is estimated to be three times as likely to invest in a country that is not under IMF financial conditionality as a firm with none, but only twice as likely to invest in a country that is under financial conditionality.



Large firms dominate investment in countries under IMF conditionality, as they dominate investment everywhere, but countries under IMF financial conditionality are less likely to receive their investments than countries that are not. IMF financial conditionality has an estimated average effect of promoting investment only by firms that have not made investments in any other countries in the previous year (88.9% of the sample) or by firms that have no more than one cumulative foreign investment (89.2% of the sample).

The coefficient on *Firm-ctry-cum (t-1)*, the lagged cumulative investment by firm  $j$  in country  $i$ , provides an explanation for this finding. Large firms have established locational advantages through prior investments in numerous countries, and these advantages make them more likely to follow up with additional investments in the same country. The average level of that variable is only 29% as high in countries that are subject to IMF financial conditionality as in countries that are not. Countries that require financial conditionality have likely had relatively closed financial markets in the past, so they have provided fewer opportunities for foreign firms to establish footholds. When large financial firms survey the globe they see numerous countries in which they already have experience operating, and this reduces the probability that they choose to open a new venture in a country in which they have no experience.

The results indicate that firm nationality plays an important role, controlling for firm size. The important result is the behavior of large US firms. US firms are about 7% more likely to make foreign investments across the board, and US nationality changes the effect of IMF conditionality insignificantly for small firms, but large US firms behave distinctly differently from large firms from other nations. Like large firms from other nations, large US firms prefer to invest in familiar territory rather than in the emerging markets opened up by IMF conditionality. However, this disinclination is much weaker for large US firms. As a result, US firms that have invested in one other country in the previous year are five times as likely to invest in a country under IMF financial conditionality as a firm with no such investments, compared to 3.4 times for non-US firms. Similarly, US firms with one cumulative foreign investment are 2.4 times more likely to invest in a country under financial conditionality than a firm with none, compared to 2.1 times for non-US firms. These differences accelerate as firms grow: the effect of each additional

country in which a firm has invested on investment in a country under financial conditionality is 69% higher for US firms, and the effect of each additional cumulative investment is 24% higher.

The results of the firm-level analysis are consistent with the argument that US firms enjoy a decisive advantage in exploiting the new market opportunities that are opened up by IMF financial conditionality. This may be because the unique capabilities that stand behind US diplomacy give its firms a decisive advantage; because its direct influence in the IMF opens doors to US firms in borrowing countries; or simply because the high level of economic development in the United States makes foreign expansion more attractive. The results are inconsistent with the alternative hypothesis, however, that the advantage that US firms enjoy is due simply to an advantage of scale over their foreign competitors. While it is true that large firms make the lion's share of foreign investments, scale is not associated with an increased appetite to invest in countries under financial conditionality.

To further explore the mechanisms behind the distinctive behavior of US firms, we replicated the above analysis using three groups of firm nationalities: firms from G7 countries other than the United States (Japan, Germany, UK, France, Italy, and Canada); firms from countries that were members of the OECD<sup>6</sup> by 1990 but not members of the G7 (17 countries, all of which had joined by 1973); and firms from non-OECD members.<sup>7</sup> The specifications are the same as in Table 3, except that *US Firm* and its interactions are replaced in each iteration by *G7 Firm*, *OECD Firm*, or *Non-OECD Firm*. All models include country and year fixed effects. The results are summarized by the interactions between the groups of nationalities, IMF financial conditionality, and firm size, which are reported in Table 4. The full results are in the appendix. An asterisk represents a result significant at  $p < 0.001$ .

The table suggests (and the full results confirm) that the behavior of large US firms is strik-

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<sup>6</sup>Organization for Economic Cooperation and Development. In addition to the G7 countries, its members between 1973 and 1994 included Australia, Austria, Belgium, Denmark, Finland, Greece, Iceland, Ireland, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland and Turkey.

<sup>7</sup>US firms comprise 17% of the sample, G7 firms excluding US firms comprise 27%, OECD firms excluding the G7 comprise 19%, and non-OECD firms comprise the remaining 37%.

Table 3: Firm Size, Conditionality and Firm Nationality  
**Three-way Interactions**

	US Firms	G7 Firms	OECD Firms	Non-OECD Firms
Countries	1.04*	0.47*	-0.46*	-1.53*
Investments	0.03*	0.04*	-0.06*	-0.03

\*p < .001

Note: G-7 excludes US firms; OECD excludes G-7 firms.

All models include country and year fixed effects.

Specifications are the same as in Table ??

Full results are in the online appendix.

ingly different from that of large firms from poorer countries that are not members of the OECD, and also from that of large firms from other members of the OECD “rich countries’ club” that are outside of the G7. Firms from both of these sets of countries become more strongly deterred from investing in countries under IMF conditionality than their respective comparison groups as they become larger. The behavior of firms from other G7 countries is more similar to that of US firms: increasing size is associated with smaller decreases in their propensity to invest in countries under financial conditionality than are observed in their comparison group. Firms from other G7 countries are not as eager to invest in countries under conditionality as US firms, however. These patterns suggest some solutions to our puzzle.

The result that the behavior of firms based in OECD members that are not members of the G7 is qualitatively similar to that of firms based in non-OECD countries suggests that it is not the wealth or per capita income of a firm’s country of origin that makes it responsive to IMF conditionality. The OECD membership list, particularly in the 1970s and 1980s, was a shorthand for status as an advanced capitalist economy. The OECD coordinates issues of particular relevance to advanced economies, such as their practices as bilateral aid donors, financial regulation, and policies regarding their multinational corporations. Its members include Switzerland, the Netherlands, Belgium and Austria, which are home to important multinational financial institutions. These institutions are much less willing than institutions from G7 countries to invest in countries under financial conditionality.

The fact that firms from other G7 countries behave similarly to US firms suggests that US firms’ behavior is not due to a unique US power advantage, such as the US position in the

system of international security, but to something more broadly shared, such as influence in international organizations. The G7 is widely known as a forum for high-profile multilateral summits that issue broad statements of principles and shape the international agenda and the working plans of an array of other international organizations. For our purposes, it is more important that the G7 is the key locus of collective informal influence over the IMF. Most major policy initiatives in the Fund since the G7 was formed in the 1970s have been hammered out in the G7 and then adopted by the IMF Executive Board without amendments. Controversial loan programs are negotiated in advance of Board meetings in conference calls by the G7 Deputy Finance Ministers. The IMF Executive Directors from G7 countries are privy to briefings and confidential information that are withheld from the rest of the Board, and they have substantially greater informal influence than their colleagues over the IMF staff (Stone 2011, 58-62). G7 members are important countries that would have influence even if the G7 did not exist, but these governance practices provide special access in the IMF for G7 members specifically because of their membership, which is enjoyed independently of the reasons for membership. One indication that it is G7 membership rather than economic size, for example, that drives firm behavior is that firms from the smallest G7 members, Canada and Italy, behave the same way as firms from the largest. Approximately two-thirds of financial M&As in countries under IMF financial conditionality by G7 member-country firms are executed by large firms with three or more investments in other countries; the corresponding figures for Canada and Italy are 93% and 63%. The G7 member with the lowest share of large firms among its investors in countries under financial conditionality is Germany, with only 55%.

In spite of these similarities, the distinction between US firms and firms from other G7 countries is significant. For example, a US firm that has invested in one other country in the previous year is 69% more likely to invest in a country under IMF financial conditionality than a similar firm in its comparison group, while a similar firm from another G7 country is only 28% more likely to make the investment.<sup>8</sup> The table suggests that there is no distinction to

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<sup>8</sup>This is calculated as the ratio of the joint effect of size, size interacted with conditionality, and both interacted with nationality to the joint effect of only size and size interacted with conditionality.

be made between US and other G7 firms when size is measured in terms of the effect of the number of previous investments, but US firms are more likely to invest in countries under IMF conditionality at every level of firm size. Calculations based on the full results indicate that US firms that have made one previous investment are 76% more likely than similar firms from other G7 countries to invest in a country if it is under IMF conditionality, and those that have made five are 14% more likely to do so.<sup>9</sup> This distinction between US firms and firms from other G7 countries is consistent with the interpretation that firms benefit from their home country's informal influence in the IMF, because US informal influence is distinctively potent (Stone 2002, 2008, 2011).

### **Firm-by-Firm Analysis**

As the previous analysis demonstrated, a large scale of operations does not explain which firms take advantage of IMF financial conditionality. Nevertheless, investment in countries with IMF financial conditionality is dominated by large firms, and it is likely that the average effects uncovered in the previous section conceal some large firms that specialize in investments in emerging markets. In order to explore the characteristics of large firms that choose to exploit the new opportunities offered by IMF conditionality, we now run a series of analyses at the country-year level using data for individual firms. We generate new count variables for investments by each firm in our dataset and replicate our previous country-year analysis using these counts to determine which firms respond to financial conditionality. We identify eight firms, half of which are based in the United States, for which we are able to replicate the result that financial conditionality promotes financial M&A's. These are, of course, all large firms, because only large firms have sufficiently wide FDI portfolios to provide enough variation to find significant effects. Table 4 presents the results of regressions with the same specification as in Table 1. The first eight columns limit the sample to investments by one firm at a time. The coefficient of financial conditionality is statistically significant and positive for each firm, and

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<sup>9</sup>The comparison is between the total effect of IMF financial conditionality for US and other G7 firms at the respective levels of firm investment.

the coefficients are large for each of these firms. The ninth model pools the observations for these eight firms, and the coefficient of financial conditionality is again significant. The last model includes all Global Fortune 500 financial firms except the eight influential ones, and in that model financial conditionality has a coefficient that is an order of magnitude smaller and is insignificant. The observations including the eight influential firms together account for less than 2% of the sample, but they substantially drive the result. When the sample is limited to US firms excluding the four that are individually influential, however, the coefficient remains positive and significant.<sup>10</sup>

These firms include four US firms – JPMorgan Chase, Citi Group, GE Capital, and Prudential Financial – and four European firms – Credit Suisse, BNP Paribas, Allianz, and ING. Each of these firms is a systemically important financial institution, also known colloquially as a “too big to fail” (TBTF) firm. Some notable TBTF players are absent from this list, however, including Goldman Sachs, HSBC and UBS. Five of these institutions are listed on the Financial Stability Board’s list of Globally Systemically Important Banks (Citibank, JP Morgan, Credit Suisse, ING Bank, BNP Paribas); Alliance and Prudential are major global insurance companies; GE Capital was until recently a division of General Electric, a top-ten Fortune Global 500 firm until it entered into a rapid decline in the 2010s.

It appears not to be the case that the differences in bank strategy are driven by the differences between the Anglo-Saxon and Continental styles of bank supervision and financial regulation. The United States and the UK have more flexible and market-oriented financial regulatory frameworks than the Continental countries, which has long been thought to undergird the competitive advantages of New York and London as financial centers. Markets are deeper and more complete, and financial instruments are more innovative. Capital controls were abolished earlier, and cross-border flows have generally been encouraged rather than discouraged. If this difference in regulatory regimes were driving the aggregate results, however, major British banks such as HSBC should appear on the list, rather than German, French, Dutch and Swiss

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<sup>10</sup>The coefficient is insignificant in the sample of non-US firms excluding the influential firms.

Table 4: Firm-by-Firm Analysis

	<b>Citi Group</b>	<b>JP Morgan Chase</b>	<b>GE Capital</b>	<b>Prudential Financial</b>	<b>Allianz</b>
Financial Conditionality	0.45 (0.00)	1.18 (0.00)	0.49 (0.00)	1.97 (0.00)	0.78 (0.00)
Market Size	1.00 (0.00)	0.93 (0.00)	0.79 (0.00)	0.81 (0.00)	0.55 (0.00)
Income Class	-1.11 (0.00)	0.04 (0.68)	-0.11 (0.01)	0.09 (0.61)	0.46 (0.00)
Inflation	-35.64 (0.00)	-0.03 (0.93)	-6.57 (0.00)	-66.63 (0.00)	0.04 (0.61)
Democracy	0.86 (0.00)	0.26 (0.04)	0.88 (0.00)	1.04 (0.00)	0.51 (0.00)
Constant	-11.22 (0.00)	-13.51 (0.00)	-9.52 (0.00)	-13.11 (0.00)	-8.60 (0.00)
Observations	4, 144	4, 144	2, 072	2, 072	2, 072
Pseudo $R^2$	0.35	0.32	0.41	0.34	0.30
	<b>BNP Paribas</b>	<b>ING</b>	<b>Credit Suisse</b>	<b>All Eight</b>	<b>All Others</b>
Financial Conditionality	0.85 (0.00)	0.42 (0.00)	1.55 (0.00)	0.46 (0.00)	0.06 (0.08)
Market Size	0.68 (0.00)	0.69 (0.00)	0.90 (0.00)	0.78 (0.00)	0.65 (0.00)
Income Class	-0.08 (0.20)	-0.03 (0.68)	-0.38 (0.00)	-0.24 (0.00)	-0.02 (0.06)
Inflation	-1.22 (0.19)	0.00 (0.99)	-31.72 (0.00)	-2.42 (0.00)	-5.54 (0.00)
Democracy	0.52 (0.00)	0.61 (0.00)	0.85 (0.00)	0.77 (0.00)	0.64 (0.00)
Constant	-9.02 (0.00)	-9.29 (0.00)	-11.65 (0.00)	-10.28 (0.00)	-11.74 (0.00)
Observations	2, 072	2, 072	2, 072	20, 720	1, 127, 348
Pseudo $R^2$	0.33	0.38	0.49	0.34	0.17

All models are Poisson regressions.

All variables are lagged one year.

Figures in parentheses are p-values.

banks.

It remains a question why American TBTF institutions appear to be more aggressive than non-US firms in exploiting the opening of risky emerging markets. One possible explanation might be that US firms can afford to take bigger risks because their lender of last resort is the US Fed, which is the only central bank that can create dollars. The US Federal Reserve was the backstop for the international financial system during the 2008 financial crisis, for example, although the crisis originated in the United States. The only other central bank capable of playing a similar role, the ECB, remains limited by its statute and by European domestic politics. This interpretation is consistent with the fact that all of the major non-US institutions that we identify as responding to IMF conditionality have significant presence in the United States, and consequently could be eligible for support from US authorities during a crisis. Allianz, already a major international insurance and asset management firm based in Germany, acquired PIMCO in 1999 in order to establish a significant US presence and expand its operations in Asia. Credit Suisse acquired CS First Boston Bank in 1990 and the US investment bank Donaldson, Lufkin & Jenrette in 2000. ING was the world's largest banking and financial services conglomerate by 2012, after acquiring the major US insurer Aetna in 2000, but spun off some of its US holdings as a condition of a capital injection by the Dutch government following the 2008 financial crisis. BNP Paribas, the Eurozone's largest bank, also has a substantial retail banking presence in 20 states in the United States, including Bank of the West and First Hawaiian Bank, as well as a substantial line of investment banking and other financial services. There is an important sense in which the globalization of the international financial system has come to blur the lines between the largest US and non-US financial conglomerates, so that systemic risk can no longer be compartmentalized.

The objection to the TBTF argument for the US advantage is that large scale does not correlate with increased appetite to invest in countries under IMF conditionality, as demonstrated in the last section. If US firms' advantage over foreign firms were attributable to their increased access to bail-outs from the Fed, the logic of too-big-to-fail would argue that the largest US firms should enjoy an advantage over smaller US firms; but this is not the case.



An alternative interpretation is that US firms have distinctive advantages over foreign firms within the US political system, which allows them to influence US foreign policy to protect their investments. Corporations have long been viewed as legal entities with rights, and after *Citizens United v. FEC* (2010) they acquired some of the rights of citizens. The fact that the four foreign firms identified above own affiliates that are US corporations means that they are entitled to lobby the US government and make campaign contributions. The Lobbying Disclosure Act data indicate that all of them have regularly done so; however, the US firms' engagement in political activity in the United States dwarfs that of the European conglomerates.

Table 5: Lobbying expenditures, 1999 – 2016

	Number of disclosures		Expenditures (millions)	
	Mean	Max	Mean	Max
<i>European firms:</i>				
Allianz	1	6	0.28	2.5
BNP	2	12	0.34	3.1
Credit Suisse	5	18	0.79	3.9
ING	23	89	3.1	30.8
<i>US firms:</i>				
Citicorp	77	180	57.5	578
GE	104	280	174	1,370
JP Morgan	83	224	95.1	416
Prudential	76	160	23.2	135

Source: Lobbying Disclosure Act data

## Case Study: South Korea and the Asian Financial Crisis

A prominent example illustrates the relationship between IMF financial conditionality and investment decisions by major financial institutions. In the midst of the widening Asian Financial Crisis in December 1997, the IMF offered a financial rescue package to the Republic of Korea that was unprecedented at the time in size and scope, with a loan size of \$22.5 billion and a very intrusive set of financial and macroeconomic conditions. The US Treasury explicitly pushed for financial conditionality that was ultimately included in the loan package, and US financial firms rushed in afterwards to purchase troubled banks and other financial institutions.

The IMF Stand-By agreement with the Republic of Korea was published by Korea in a bid

to reassure turbulent financial markets.<sup>11</sup> It specified a series of dramatic changes in regulation of the Korean financial sector. Up until this point, foreign entry into the Korean financial sector had been tightly controlled, and US efforts to negotiate broad liberalization during Korea's negotiations to enter the OECD had been rebuffed. The US Treasury prioritized liberalizing Korea's financial sector and took the view that structural impediments to foreign investment were the principal obstacle to restructuring Korean banks.

The Stand-By program set a series of structural benchmarks involving financial liberalization. The limit on foreign participation in Korean financial institutions was to be raised from 7% to 50% per investor and from 26% to 50% in aggregate by the end of 1997 (that is, a few weeks after the agreement was signed). "Effective immediately," if foreign institutions sought to exceed the 4% ownership limit in Korean banks that triggers supervisory review, "the supervisory authority will allow such purchases provided that the acquisitions contribute to the efficiency and soundness of the banking sector." The government committed to proposing legislation to harmonize Korean financial-sector regulation with OECD norms. In addition, the government pledged to "further reduce restrictions on foreign direct investment through simplification of procedures." In another gain for foreign banks, restrictions on the ability of Korean corporations to borrow abroad would be eliminated. Taken together, these measures represented a revolution in the regulation of the Korean financial sector. Additionally, the program mandated rapid restructuring and reorganizing of troubled Korean financial institutions, which would provide opportunities for FDI: "A credible and clearly defined exit strategy will include closures as well as mergers and acquisitions by domestic and foreign institutions."<sup>12</sup>

This set of policy prescriptions was unusually intrusive, as the IMF generally excludes financial and capital account liberalization from formal conditionality (IEO 2005, 30-32). Interviews

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<sup>11</sup>It is available on the IMF website: <http://www.imf.org/external/np/oth/korea.htm>. The publication of the LOI infuriated the IMF Management and led to unusually heated discussion and wide criticism at the Executive Board Meeting on December 8, 1997. IMF, Minutes of Executive Board Meeting 97/117 (EBM97117), 10:00 am, December 8, 1997, 42-45.

<sup>12</sup>Republic of Korea. IMF Stand-By Arrangement. Summary of the Economic Program. December 5, 1997. International Monetary Fund.

with Korean officials involved in the negotiations indicated that the United States insisted on the inclusion of reforms to open up the Korean financial markets.<sup>13</sup> This had, indeed, been a long-term US objective that had been pursued, for example, during the talks leading to Korea's accession to the OECD in 1996, but which had not accomplished a significant opening of Korea's financial markets (IEO 2003, 94). IMF staff confirm that the United States was "pushing very hard" for financial reform in Korea.<sup>14</sup> The Korean government initially resisted these proposals, but the United States linked them to accelerating the disbursement of the program's financing and US participation in the "Second Line of Defense," which was a patchwork of commitments by individual countries to make additional resources available to support the Korean adjustment program on a bilateral basis if they were needed. Korean Deputy Prime Minister Lim indicated that the US negotiators took a much harder line than the other G-7 countries in the negotiations over the Second Line of Defense, insisting on a right to extensive consultations on economic policy in the future.<sup>15</sup> Since other countries linked their participation to US participation and the IMF program was generally understood to be underfunded, this effectively compelled the Koreans to accept the US position.

The reforms that opened up investment in the Korean financial sector, in combination with an aggressive program to privatize and restructure weakened Korean financial institutions, created lucrative opportunities for international financial institutions. SDC Platinum records 59 mergers and acquisitions in the financial sector in 1998 and 1999, compared to only three foreign investments in the Korean financial sector in 1997 before the crisis broke. This surge in investment was not primarily driven by the devaluation of the Korean won in January 1998, which had regained almost all of its value by the time the transactions occurred.<sup>16</sup> Several of the major institutions that we estimate to react most strongly to IMF financial conditionality made deals in 1998 or 1999 to acquire substantial stakes in some of the leading Korean banks.

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<sup>13</sup>IEO, "Back-to-Office Report: Visit to Korea, September 23-26, 2002," p. 21.

<sup>14</sup>Interview with a former IMF Department Director, July 25, 2007.

<sup>15</sup>Goldsbrough, David, "Korea: Managing Director's Meeting with Deputy Prime Minister Lim," IMF Memorandum for Files, January 12, 1998.

<sup>16</sup>The Korean won lost 45.6% of its value in the first month of the crisis but had rebounded to a loss of only 1.9% after six months.

Most of the Korean firms that the major international firms targeted for acquisition were major players in their respective industries or subsidiaries of the chaebols. For example, Dongwon is South Korea's fifth-largest securities firm, the Ssangyong Investment and Securities Company is the fifth-biggest brokerage firm, Korea Exchange Bank (KEB) is the fifth-largest bank and the largest exchange bank, with 40% of South Korea's foreign exchange market. SK and Hanjin are among Korea's largest conglomerates, or chaebols, and JP Morgan and Prudential, respectively, acquired substantial stakes in their financial arms. Kookmin was the fourth-largest commercial bank, and the Housing & Commercial Bank was the dominant player in the housing mortgage market, which until 1996 had enjoyed a legal monopoly on long-term mortgages. Goldman Sachs gradually acquired a substantial stake in Kookmin Bank, which expanded rapidly by acquiring other troubled Korean financial institutions and also expanded internationally. ING took a leading interest in H&CB, which recovered from the financial crisis and grew to become Korea's third-largest bank.<sup>17</sup> In 2001 Kookmin and H&CB merged to form Korea's leading bank under the Kookmin name. The Korean economy recovered rapidly from the financial crisis, so all of these investments were highly profitable.

Table 6: Major Investors' Acquisitions after the Korean Crisis

Date	Target	Stake (%)	Value (\$mil)	Parent Firm	Nationality
08/26/98	Ssangyong Investment & Sec Co	28.1	85.0	Chase Manhattan Bank	United States
08/19/99	Korea Exchange Bank	30.0	NA	Citigroup Inc	United States
09/29/99	SK Securities Co Ltd	14.1	108.0	JP Morgan & Co Inc	United States
05/17/99	Hanjin Investment & Securities	24.0	42.1	Prudential Insurance Co	United States
04/09/99	Kookmin Bank	17.0	500.0	Goldman Sachs Group Inc	United States
07/29/99	Dongwon Invest & Trust Mgmt	30.0	22.4	BNP Paribas SA	France
07/16/99	Housing & Commercial Bank	10.0	280.7	ING	Netherlands
07/15/99	Joeeun Invest Trust Mgmt Co	20.0	23.9	ING	Netherlands
11/24/99	Housing & Commercial Bank	20.0	NA	ING	Netherlands

The shifting fortunes of Korean financial institutions even provided an opportunity for the American investment house JP Morgan to settle an outstanding financial dispute. JP Morgan had swapped a billion dollars of Thai baht for Japanese yen with SK Securities in February 1997; JP Morgan was betting against the baht, and SK Securities was betting in favor. The baht collapsed

<sup>17</sup>Kevin Hamlin, "Asia's Most Influential Bankers," Institutional Investor International Edition. 24.8 (Aug. 1999): p. 41.

in the summer, launching the 1997 Asian Crisis, and SK ended up with a substantial loss, owing up to \$489 million to JP Morgan. SK became caught up in the Korean banking crisis a few months later, and was unable to pay. The Korean firm accused JP Morgan of misrepresentations and of secretly changing the contract language regarding limits on potential gains and losses, and the two firms engaged in a year-long court battle.<sup>18</sup> JP Morgan attempted, unsuccessfully, to have derivatives contracts included in the multilateral debt roll-over agreement sponsored by the IMF in spring 1998, which would have allowed it to use Korea's need for short-term debt relief as leverage to force SK to pay. The debt-relief deal remained limited to bank-to-bank credits, however. In the end, JP Morgan settled its dispute by accepting a stake in the Korean firm. In an initial deal, the US firm invested \$85 million in SK Securities and received an unspecified fee in settlement of the lawsuit along with a 10% stake in the company, which JP Morgan subsequently expanded to a 14% stake in SK.<sup>19</sup>

Before the 1997 financial crisis, the Korean financial sector was closed to a degree that was unmatched among OECD countries. Strict restrictions applied to foreign ownership of financial institutions, to which institutions were permitted to contract for debt internationally, and to what types of transactions were permitted. The Korean financial landscape was dominated by self-financing conglomerates, or chaebols, by state-owned banks, and by state-directed credits. The relationships between industry and its bankers were excessively cozy, and many corporations had debt-to-equity ratios in excess of 500 percent. Globally competitive financial institutions were largely excluded from Korea, and many saw opportunities there if the regulatory shell that protected Korean finance could be pried open. At the same time, officials at the IMF and the US Treasury regarded the closed and uncompetitive environment of Korean finance as an impediment to growth and a contributor to the crisis. Failed banks had to be reorganized, and the ideal way to restructure them would be with the participation of internationally competitive banks. The US Treasury pushed for what the US banks wanted, IMF officials agreed, and the

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<sup>18</sup>Timothy L. O'Brien, "J.P. Morgan in Korea Battle on Derivatives," *The New York Times, Business*, February 27, 1998.

<sup>19</sup>"J. P. Morgan to Take Korean Brokerage Stake," *The New York Times, Business*, October 1, 1999.

Korean authorities were compelled to accede to a drastic liberalization of their financial regime. The leading US financial institutions and some leading European ones swooped in and snapped up the undervalued shares of troubled Korean firms, establishing important stakes in Korea's leading banks and brokerage houses.

## **Conclusion**

Whose interests are served by IMF conditional lending? IMF officials may have professional interests in promoting lending and particular kinds of market-oriented reforms. Leaders of borrowing countries may have political interests in borrowing in order to delay the day of reckoning for macroeconomic imbalances, or in order to gain leverage over other domestic actors in order to promote their preferred economic reform agendas. Leading member countries may have political agendas that are unrelated to macroeconomic policies or structural reforms, which limit the discretion of IMF officials to design and implement conditionality. Leading multinational banks may have interests in shaping conditionality to promote their competitive strategies. Suggestive correlations that bear on each of these questions have been presented in the literature.

This paper takes a different approach, using the location decisions of multinational financial firms to reveal their preferences. We find that IMF financial conditions have a statistically significant and positive association with financial M&A's by US firms; countries under IMF programs with financial conditions are significantly more likely to receive financial M&A's. This result survives a number of robustness checks, including Heckman selection. It does not appear to be accounted for by reverse causation; to the contrary, countries with substantial numbers of financial M&A's are unlikely to receive financial conditionality. The substantive effect of IMF financial conditions on financial M&A's is strong in the sense that they predict substantially increased odds of relatively rare events. Additionally, this effect is relatively strong compared to other important factors that we find to affect financial M&A's, including market size, income, inflation, and democracy. These results imply that US financial firms expect financial conditionality to significantly improve their profits in the affected countries.

We find that this effect is specific to financial conditionality and is specific to financial firms. The presence of an IMF program has a small effect on FDI in general, and the presence of an IMF program without financial conditionality does little to promote FDI in non-financial sectors. This eliminates alternative interpretations of our results, and focuses attention clearly on the mechanism of financial conditionality. Furthermore, the aggregate effect is much stronger for US financial firms than for non-US firms. These results suggest that US financial firms, in particular, are important beneficiaries of IMF conditionality.

Firm-level analysis allows us to distinguish among alternative interpretations of the aggregate results. The advantage enjoyed by US firms could be due to the effects of size, or could be due to their US national origin *per se*. We create a firm-country-year dataset to distinguish between these hypotheses, and we reject the hypothesis that size is responsible. Indeed, large firms, while responsible for most foreign investment regardless of which countries are under financial conditionality, are less likely to invest in countries under conditionality than in countries that are not. The effect of IMF conditionality on FDI is driven by small firms. Large US firms, however, are substantially more likely than large firms of other national origins to invest in countries under conditionality, and the aggregate difference between US firms and those with other home countries is driven by large firms. We further explore this finding by replicating it for firms of various groupings of national origins: firms from G7 countries excluding the United States; firms from OECD countries excluding the G7; and firms from non-OECD countries. The results confirm the importance of national origin *per se*, and no other set of firms responds to IMF conditionality with the alacrity of US firms. G7 firms are most similar to US firms, however, while firms from non-G7 OECD countries and from non-OECD countries become less likely than their respective control groups to invest in countries under conditionality as their size increases. The fact that the investment behavior of firms from OECD countries outside the G7 is qualitatively similar to that of non-OECD firms suggests that level of economic development does not drive the effect of national origin, and the fact that firms from G7 countries behave quite differently than firms from other OECD countries suggests that the informal influence in the IMF afforded by G7 membership may be decisive. These findings are consistent

with the interpretation that the informal influence that the home country enjoys in international organizations provides large firms with attractive investment opportunities in countries under financial conditionality.

Firm-by-firm analysis makes it possible to further explore these results. We perform a series of replications of our results using country-year data using one firm at a time, and we are able to identify eight financial firms (four US firms, and four European ones) for which the coefficient of financial conditionality is positive and statistically significant. All of these are systemically important firms. When we eliminate these eight firms from our sample of country-year aggregated data, the effect of IMF conditionality on financial FDI disappears for non-US firms, but not for US firms. Upon examining these firms, we find that all of the European firms have substantial presence in the United States because they own affiliates that are important US financial firms. As a result, all of these firms are subject to US financial regulation and oversight and could potentially be the recipients of a rescue operation by the US government. Access to emergency lending by the Federal Reserve, then, does not seem to explain the different behavior of large US and European financial firms. Furthermore, we have found that size does not correlate with appetite for investing in countries under financial conditionality, as it should if access to Fed bailouts were driving the phenomenon. We find that each of these firms engages in significant lobbying activity in the United States. There remains a substantial difference between the US firms and the European firms in this respect, however: the political engagement of the US firms is much greater. It appears that the most internationalized foreign financial institutions continue to suffer from a political handicap relative to their US competitors, and this is consistent with the interpretation that US firms are better able to access the political system in order to take advantage of US informal influence over the IMF.

These results do not demonstrate that US banks and financial institutions control the content of IMF conditionality, or even that they lobby to promote financial conditionality. However, the fact that US banks and other financial institutions are influential in the US policy establishment, which in turn has informal influence over the IMF, is well established in the literature. The results of this paper demonstrate directly something that previous studies have only suggested,



which is that US financial institutions derive direct benefits from the practice of IMF financial conditionality. They demonstrate, furthermore, that these benefits are largely limited to US financial institutions and a handful of European institutions. The implication is that the informal influence that US banks are presumed to exercise is in fact quite effective.

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## A Appendix

### A.1 Marginal Effects

Table 7: Estimated Marginal Effects

Dependent Variable	US M&A	US Non-Financial M&A	US Financial M&A	US Financial M&A	Non-US Financial M&A
Model	Poisson	Poisson	Poisson	Neg. Bin.	Poisson
IMF Program	(0.07, 0.12)				
Non-Financial Program		(0.07, 0.12)			
Financial Condition			(17.1, 41.0)	(15.8, 37.7)	(0.68, 1.12)
Market Size	(9.11, 10.67)	(9.76, 11.47)	(15.1, 209.5)	(-2.6, 41.3)	(11.9, 13.4)
Income Class	(0.64, 1.16)	(0.56, 1.14)	(6.6, 40.1)	(22.1, 45.0)	(0.69, 1.19)
Inflation	(-0.77, -0.46)	(-0.78, -0.45)	(-33.3, -13.8)	(-31.6, -2.1)	(-1.79, -1.19)
Democracy	(-0.72, -0.19)	(-0.77, -0.19)	(-14.7, 6.2)	(-24.6, 3.9)	(-0.26, 0.34)
Observations	2,623	2,461	1,796	1,796	2,833
Country FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes

Independent variables are lagged one year.

Confidence intervals expressed as percentages of a standard deviation of the dependent variable.

### A.2 Descriptive Statistics

Table 8: Country-Year Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Median	Max
U.S. M&A	10.404	39.191	0	0	571
Financial M&A	0.707	2.675	0	0	39
IMF Program	0.264	0.441	0	0	1
Financial Condition	0.092	0.289	0	0	1
Market Size	9.521	2.378	2.531	9.323	15.384
Income Class	1.898	0.73	1	2	3
Inflation	0.053	0.673	-0.016	0.006	24.411
Democracy	0.550	0.498	0	1	1

Table 9: Firm-Country-Year Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Firm-ctry-yr financial M&As	0.0006	0.03	0	9
Financial conditionality	0.07	0.26	0	1
US firm	0.17	0.37	0	1
Non-US G7 firm	0.27	0.44	0	1
Non-G7 OECD firm	0.19	0.39	0	1
Non-OECD firm	0.37	0.48	0	1
Firm-ctry-cumulative (t-1)	0.005	0.12	0	30
Firm cum $\neq$ <i>country</i> <sub><i>i</i></sub>	0.93	3.99	0	182
Firm-countries (t-1)	0.09	0.44	0	13
Country cum $\neq$ <i>firm</i> <sub><i>j</i></sub>	36	105	0	1502
Constant GDP (mln USD)	244,965	992,753	227	1.3 x 10 <sup>7</sup>
WB Classification	1.9	0.7	1	3
Inflation	5.2	68.5	-1.6	2441
Democracy	0.59	0.49	0	1

Note: 19,169,856 observations, 167 countries, 6,624 firms, years 1990 – 2008.

### A.3 Correlation Matrices

Correlation Matrix: IMF Programs and M&A's						
Variable	(1)	(2)	(3)	(4)	(5)	(6)
(1) M&A	1					
(2) IMF Program	-0.140	1				
(3) Market Size	0.479	-0.141	1			
(4) Income Class	0.317	-0.386	0.507	1		
(5) Inflation	-0.019	0.003	-0.002	-0.044	1	
(6) Democracy	0.190	-0.012	0.216	0.359	-0.041	1

Correlation Matrix: Financial Conditions and Financial M&A's						
Variable	(1)	(2)	(3)	(4)	(5)	(6)
(1) Financial M&A	1					
(2) Financial Condition	-0.035	1				
(3) Market Size	0.461	-0.064	1			
(4) Income Class	0.273	-0.16	0.507	1		
(5) Inflation	-0.020	-0.012	-0.002	-0.044	1	
(6) Democracy	0.169	-0.010	0.216	0.359	-0.041	1

#### A.4 Firm-level Analysis

Table 10: Firm-Level Analysis: G7 Excluding US Firms

	Coefficient	<i>p</i>	Coefficient	<i>p</i>
Financial conditionality	0.23	0.00	0.21	0.00
Non-US G7 firm	0.01	0.72	-0.01	0.58
Firm-ctry-cum (t-1)	45.1	0.00	45.1	0.00
Financial cond x G7 firm	-0.06	0.32	-0.07	0.24
Firm-countries (t-1)	3.15	0.00		
Fin cond x firm-countries	-1.55	0.00		
G7 firm x fin cond x firm-countries	0.47	0.00		
Firm-cum $\neq$ <i>country</i> <sub><i>i</i></sub>			0.27	0.00
Fin cond x firm cum			-0.13	0.00
G7 firm x fin cond x firm cum			0.04	0.01
Country-cum $\neq$ <i>firm</i> <sub><i>j</i></sub>	0.0002	0.47	-0.0001	0.68
Constant GDP (tln USD)	0.56	0.00	0.49	0.00
WB Classification	0.29	0.00	0.30	0.00
Inflation	-0.0001	0.33	-0.0001	0.24
Democracy	-0.01	0.79	-0.01	0.85
Constant	-0.15	0.81	1.14	0.05
Observations	19,169,856		19,997,856	
Adj R-sq	0.037		0.036	

Dependent variable: Firm-country-year financial M&As (count).

Note: Coefficients multiplied by 1,000.

Table 11: Firm-Level Analysis: OECD Excluding G7 Firms

	Coefficient	<i>p</i>	Coefficient	<i>p</i>
Financial conditionality	0.23	0.00	0.20	0.00
Non-G7 OECD firm	0.10	0.00	0.08	0.00
Firm-ctry-cum (t-1)	45.1	0.00	45.1	0.00
Financial cond x OECD firm	-0.10	0.14	-0.08	0.26
Firm-countries (t-1)	3.14	0.00		
Fin cond x firm-countries	-1.27	0.00		
OECD firm x fin cond x firm-countries	-0.46	0.00		
Firm-cum $\neq$ <i>countryi</i>			0.26	0.00
Fin cond x firm cum			-0.10	0.00
OECD firm x fin cond x firm cum			-0.06	0.00
Country-cum $\neq$ <i>firmj</i>	0.0002	0.46	-0.0001	0.69
Constant GDP (tln USD)	0.56	0.00	0.48	0.00
WB Classification	0.29	0.00	0.30	0.00
Inflation	-0.0001	0.33	-0.0001	0.24
Democracy	-0.01	0.79	-0.01	0.85
Constant	-0.17	0.79	1.12	0.06
Observations	19,169,856		19,997,856	
Adj R-sq	0.037		0.036	

Dependent variable: Firm-country-year financial M&As (count).

Note: Coefficients multiplied by 1,000.

Table 12: Firm-Level Analysis: Non-OECD Firms

	Coefficient	<i>p</i>	Coefficient	<i>p</i>
Financial conditionality	0.15	0.00	0.15	0.00
Non-OECD firm	-0.10	0.03	-0.08	0.00
Firm-ctry-cum (t-1)	45.1	0.00	45.1	0.00
Financial cond x non-OECD firm	0.23	0.0	0.14	0.02
Firm-countries (t-1)	3.14	0.00		
Fin cond x firm-countries	-1.14	0.00		
Non-OECD firm x fin cond x firm-countries	-1.53	0.00		
Firm-cum $\neq$ <i>countryi</i>			0.26	0.00
Fin cond x firm cum			-0.11	0.00
Non-OECD firm x fin cond x firm cum			-0.03	0.22
Country-cum $\neq$ <i>firmj</i>	0.0001	0.49	-0.0001	0.68
Constant GDP (tln USD)	0.56	0.00	0.49	0.00
WB Classification	0.29	0.00	0.30	0.00
Inflation	-0.0001	0.34	-0.0001	0.24
Democracy	-0.01	0.80	-0.01	0.85
Constant	-0.12	0.85	1.17	0.05
Observations	19,169,856		19,997,856	
Adj R-sq	0.037		0.036	

Dependent variable: Firm-country-year financial M&As (count).

Note: Coefficients multiplied by 1,000.



## Robustness Check: Heckman Selection

The most important robustness checks we perform on our main country-year results are a series of Heckman selection models. IMF programs are not randomly assigned, and a country cannot be subject to financial conditionality without participating in a program. There is reason to believe that non-random selection into IMF programs may bias our analysis of M&As. On one hand, many of the conditions that make program participation likely also make financial M&As less attractive. On the other hand, the severely depressed value of financial assets following an economic crisis may make these investments more attractive. In either case, if selection into an IMF program is correlated with unobservable or unmeasured factors that also affect investments by financial firms, our estimates may be biased if we fail to model the selection effect.

To model selection into IMF programs, we use variables that consistently show statistical significance in the literature on IMF programs, including *Debt Service*, *Investment*, and *Balance of Payments* (Vreeland 2003; Bas and Stone 2014). In addition, we introduce two instruments—*Affinity* and *IMF Office*—which are theoretically expected to affect IMF program participation but not to affect investment decisions by financial firms except through program participation. *Affinity* measures how similar countries' votes in the UN General Assembly are to those of the United States, and has been widely used as an instrument for IMF program participation because the United States exercises informal influence over IMF lending (Thacker 1999; Barro and Lee 2005; Steinwand and Stone 2008). It is unlikely that largely symbolic votes in the UNGA influence the acquisition decisions of financial firms. *IMF Office* is a dummy variable for whether a country has an IMF resident representative office. The presence of an IMF office is positively correlated ( $\rho = 0.36$ ) with the presence of an IMF program, presumably because the IMF locates its permanent representatives in countries that interact with it intensively. However, it seems unlikely that the presence of an IMF representative affects the profitability of financial M&As in any other way than through the increased probability of an IMF program. In any case, models that do not include IMF Office as an instrument generate substantively equivalent results

(see below). Table ?? reports results from Heckman selection models, using IMF Program as the selection variable and US Financial M&A as the dependent variable.

Table 13: Robustness Check – Selection Bias

Selection Stage					
Dependent Variable: IMF Program					
Investment	-0.027 (0.000)	-0.026 (0.000)	-0.023 (0.000)	-0.022 (0.001)	-0.009 (0.178)
Balance of Payments		-0.021 (0.005)	-0.053 (0.001)	-0.049 (0.002)	-0.050 (0.002)
Debt Service			0.020 (0.134)	0.017 (0.213)	0.028 (0.061)
Affinity				1.018 (0.000)	1.201 (0.000)
IMF Office					0.808 (0.000)
Inverse Mills Ratio	0.160 (0.809)	-0.023 (0.966)	-0.296 (0.447)	-0.634 (0.080)	-0.229 (0.387)
Outcome Stage					
Dependent Variable: US Financial M&A					
Financial Conditionality	0.161 (0.278)	0.272 (0.091)	0.419 (0.010)	0.340 (0.034)	0.398 (0.013)
Market Size	0.482 (0.000)	0.519 (0.000)	0.502 (0.000)	0.461 (0.000)	0.514 (0.000)
Income Class	0.376 (0.036)	0.571 (0.001)	0.627 (0.001)	0.503 (0.017)	0.630 (0.001)
Inflation	-0.454 (0.319)	-0.501 (0.319)	-1.264 (0.127)	-1.294 (0.093)	-1.308 (0.122)
Democracy	0.534 (0.006)	0.610 (0.002)	0.557 (0.005)	0.500 (0.004)	0.554 (0.004)
Observations	3,363	2,890	1,967	1,956	1,956
$\chi^2$	90.39 (0.000)	127.38 (0.000)	74.74 (0.000)	45.80 (0.000)	98.78 (0.000)

All models are Heckman two-stage selection models.  
Independent variables are lagged one year.  
Figures in parentheses are p-values.

The main result is robust. The coefficient of *Financial Conditionality* remains positive in all models, and is statistically significant in those that are best identified. The selection variables inherited from the literature on IMF programs are statistically significant with the expected signs. The coefficients of the additional instruments for selection into IMF programs—*Affinity* and *IMF Office*—are positive and significant, as expected. Indeed, both appear to be strong predictors of IMF program participation. Countries that hew closely to the US voting pattern in the UN are more likely to receive IMF programs, and countries that have IMF offices are also more likely to receive IMF programs. The inverse Mills ratio is not statistically significant in

any of the models. A statistically significant inverse Mills ratio would indicate the existence of selection bias, but this result indicates that we cannot reject the null hypothesis of no selection bias.

### **A.5 Reverse Causality: Do Financial M&As Cause Financial Conditions?**

An alternative interpretation of our results might be that financial M&As by US firms are responsible for the financial conditionality in IMF programs, perhaps because the firms that make these investments lobby the IMF. This seems unlikely, since we have lagged financial conditionality, but in order to further investigate this possibility, we reverse the direction of the analysis. The first three models presented in Table D contain the results of logit models where the dependent variable is Financial Condition, and the next three are Heckman models with the same dependent variable that control for selection into IMF programs.

The results consistently reject the hypothesis that financial M&As increase the probability that a country is under financial conditionality. The coefficient of *Financial M&A* is consistently negative in the logit models, and it is insignificant or negative in the Heckman models. Consequently, it is difficult to interpret our previous results as effects of reverse causality. To the contrary, these results are consistent with the interpretation that countries that receive a substantial number of financial M&As are unlikely to receive financial conditionality because their financial markets are relatively open.

Table 14: Reverse Causality Check

Variable	Model D1	Model D2	Model D3	Model D4	Model D5	Model D6
Selection Stage						
Dependent Variable: IMF Program						
Investment				-0.009 (0.213)	-0.008 (0.302)	-0.006 (0.431)
Balance of Payment				-0.050 (0.002)	-0.044 (0.004)	-0.045 (0.008)
Debt Service				0.028 (0.065)	0.021 (0.160)	0.015 (0.302)
Affinity				1.185 (0.000)	1.299 (0.000)	1.335 (0.000)
IMF Office				0.813 (0.000)	0.867 (0.000)	0.927 (0.000)
Inverse Mills Ratio				0.000 (0.999)	0.054 (0.823)	0.120 (0.611)
Outcome Stage						
Dependent Variable: Financial Conditionality						
Financial M&A	0.056 (0.507)	-0.226 (0.138)	-0.527 (0.029)	0.034 (0.648)	-0.059 (0.414)	-0.242 (0.026)
Market Size	-0.962 (0.180)	-1.089 (0.145)	-1.321 (0.095)	-0.053 (0.396)	-0.024 (0.695)	0.010 (0.872)
Income Class	-0.483 (0.327)	-0.701 (0.174)	-0.700 (0.175)	-0.087 (0.640)	-0.065 (0.732)	-0.009 (0.960)
Inflation	-0.013 (0.944)	-0.120 (0.713)	-0.078 (0.799)	0.206 (0.295)	0.206 (0.465)	0.246 (0.400)
Democracy	0.391 (0.277)	0.410 (0.267)	0.259 (0.514)	-0.015 (0.928)	-0.010 (0.952)	-0.051 (0.764)
Observations	1,303	1,205	1,080	1,956	1,911	1,847
$\chi^2$	208.40 (0.000)	193.96 (0.000)	185.12 (0.000)	3.00 (0.699)	2.68 (0.749)	6.34 (0.275)

Model D1-D3 use logistic regressions, Models D4-D6 use Heckman two-stage selection.

Financial M&A is lagged by one year in Models D1 and D4, three years in Models D2 and D5, five years in Models D3 and D6. All other independent variables are lagged by one year throughout.

Figures in parentheses are p-values.