Information, Political Risk, and the Competitive Advantage of Banks

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October 22, 2013

Abstract

Currency transfer and convertibility restrictions are costly to foreign investors. However, not all foreign investors are equally vulnerable to these restrictions. We argue that the critical dimensions on which foreign investors vary are their access to local information and the speed with which they can respond to changes in risk. We focus on comparing the two largest segments of international investment: bank debt and foreign direct investment (FDI). Because banks are well informed on local private information and can change lending patterns quickly, bank debt responds faster to changes in transfer risk, making banks less vulnerable to transfer risk than foreign direct investors, who are more restricted in their information and response capabilities. As a result, banks have a competitive advantage in less transparent and riskier countries. We formalize these insights in a game theoretic model from which we derive testable implications. Using a dataset from the political risk insurance industry, we test that the temporal effect of transfer risk on capital flows varies across investor types; specifically we show a difference in information and response speed capabilities between bank debt and FDI. We also test the relative sensitivity of bank debt and FDI flows to the availability of information in the host country. We find that a country's political risk climate shapes the population of economic actors. To the extent that governments prefer direct investment to more volatile flows of bank debt, improving government transparency may be an effective means by which governments can attract a more desirable class of foreign capital.

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1 Introduction

Transfer and convertibility restrictions are surprisingly frequent and costly to foreign investors.[1] In June 2013, Blackberry, Ltd. incurred a $72 million quarterly loss due to Venezuelan foreign-currency restrictions. Blackberry's stock price plunged 28%, suggesting that few investors anticipated the Venezuelan charge, let alone the size of the 10 cents per share loss. In 2012, Spanish firm Repsol lost $10 billion in Argentina's expropriation of its stake in the oil company YPF, which grabbed global headlines, but firms forced to convert Argentine pesos to US dollars at the inflated official rate have lost, by conservative estimates, more than $225 million *per day*.[2] In the past three years, nearly one in five multinational executives surveyed by the World Bank suffered material losses from foreign currency transfer policies (World Bank, 2012). Over the past three decades, political risk insurance claims on transfer and convertibility events have occurred at almost three times the annual rate of direct or creeping expropriation claims (OPIC, 2009).

What makes transfer risk so perplexing is that it eludes good governance, occurring even in countries where one would expect relatively little political risk (Graham, Johnston, and Kingsley, 2013). Expropriations and other seizures of foreigners' wealth tend to decrease as countries become more democratic and add additional veto players to the policymaking process. Transfer risk, however, is relatively immune to these domestic political constraints. Countries with more independent checks and balances expropriate far less, but they remain just as likely to im-

[1] Transfer and convertibility restrictions prevent companies from moving funds out of a country or converting funds from local to hard currency. For instance, the host government can force conversions at below market rates, establish exchange quotas or taxes, institute a freeze on non-resident's bank account, mandate foreign exchange be on deposit at the central bank, or add penalties on interest payments and profit repatriation.

[2] Calculated in 2013 using the official exchange rate of 4.95 pesos per dollar, a black market rate of 7.4, and daily trading volumes at the official rate of $685M per day (Banco Central de Republica Argentina).

pose costly transfer and convertibility restrictions (Graham, Johnston, and Kingsley, 2013). Even constrained governments steal.[3]

But not all types of foreign investors are equally exposed to transfer risk. Some investors are better informed about changes to a country's currency transfer policies and, thus, can accelerate the speed at which they repatriate profits or exit the host economy. Which foreign investors are better informed about local transfer and convertibility restrictions? Which are able to adjust their risk exposure quickly once they have new information? What are the subsequent implications for government policy? This paper attempts to answer these questions.

An extensive literature in international finance focuses on the role of information in explaining investors' competitive (dis)advantage. Most of this work investigates the information differences between local and foreign investors in a single segment, typically portfolio equity markets. Results are mixed.[4] Recent research, however, has gained traction on the role of information by distinguishing whose information (locals' or foreigners') and what kind of information (local or global; public or private) is most advantageous. In general, local information favors local investors, and global information favors foreign investors. For instance, Albuquerque, Bauer, and Schneider (2009) find that global private information - such as sophisticated knowledge about new technologies - explains around one-third of U.S. investors' foreign trades.

[3]As explained in Graham, Johnston, and Kingsley (2013), expropriation and transfer restrictions are substitutable means to seize wealth from non-residents, but the political implications of each are wildly different. Expropriations are high profile, widely salient decisions by governments that violate or diminish firms' property rights. Such policies engender headlines, protests, and foreign government interventions. Transfer restrictions, on the other hand, are more technical and easier to hide. Restricting profit conversion and repatriation also tends to hurt foreign firms more than domestic ones, and governments sometimes employ transfer restrictions as legitimate tools of macroeconomic management, which further muddies the waters. Transfer restrictions simply produce less public outrage than other types of government theft, so they can still be pursued by governments that are democratically constrained.

[4]See discussion in Albuquerque, Bauer, and Schneider (2009) and Bae, Ozoguz, Tan, and Wirjanto (2012).

In this paper, we focus on local private information: the probability that a country's government will change its domestic transfer and convertibility policies. We investigate how this kind of non-public information affects the two largest segments of the international market: foreign commercial banks and foreign direct equity investors.[5] Analyzing the role of information across two different segments is an important addition to the information literature. We argue that banks have access to local elites and experience across domestic markets, making them more "local" than direct investors, who have limited and discrete local information. The liability of foreignness is significantly more pronounced with foreign direct investors than foreign commercial banks. In arguing that banks possess more local information than direct investors, we align with the larger banking literature that finds banks are privileged by high levels of information, significant opportunities for political favors, and ongoing relationships with local elites (Dinc, 2005; Rajan and Zingales, 2003; Sengupta, 2007; Sharpe, 1990; Boot and Thakar, 1994; Boot, 2000).

A seeming challenge to our conceptualization of banks as "local" emerges from the political connections literature. Recent work finds that political connections are a substitute for foreign financing (Leuz and Oberholzer-Gee, 2006). Firms with political connections are less likely to access foreign bank debt financing because they get preferential domestic loans from state-owned banks (Johnson and Mitton, 2003) and reject the increased scrutiny and oversight required to access global capital markets (Wiwattanakantang, Charumilind, Kali, 2006; Lang, Lins, Miller, 2003; Baker, Nofsinger, Weaver, 2002). This implies that foreign banks do not finance the most politically connected firms in an economy. Our argument, however, is that

[5]Direct investment is defined as net flows of direct equity capital, including reinvestment of earnings on direct equity; considered "direct" when the investor has at least 10% controlling stake. Commercial bank debt is defined as net disbursement from commercial banks (excluding credits guaranteed or insured under credit programs of creditor governments). Together FDI (42%) and bank debt (24%) make up two-thirds of all private foreign capital inflows to emerging markets over the last three decades (IIF, 2012).

foreign banks lending in local markets are themselves politically connected firms. This situates our argument about the competitive advantage of banks solidly in the political connections literature which finds that political connections generate significant value to firms (Stigler, 1971; Kroszner and Strahan, 1999; Fisman, 2001; Faccio, 2006).

We explore these information differences between banks and direct investors in a formal model of foreign investment and political risk. We structure a game in which different types of foreign investors choose how much to invest and repatriate, given their information about the probability of the host government changing transfer policies and their costs of expediting repatriation. The government chooses whether to seek transfer and expropriation rents. We theorize that banks' higher level of information about the potential tightening of transfer restrictions - in conjunction with their lower costs - allows them to exit faster than direct investors. We formalize how changes in investors' local private information affect response speeds, an insight that fits with established work on how information affects the speed of price adjustment in investments (Fama, 1997; Grossman, 1976; Shleifer and Vishny, 1997; Bhattacharya, Daouk, Jorgenson, and Kehr, 2000; Bae, Ozoguz, Tan, and Wirjanto, 2012). We leverage the model to explain why foreign commercial banks have a competitive advantage in more risky, less transparent countries and how the country's political risk environment shapes its population of economic actors.

To test whether banks have privileged local private information and respond more quickly to over-time changes in transfer risk than direct equity investors, we examine bank debt and foreign direct investment (FDI) capital flows in the thirty largest emerging markets from 1994 to 2012. We measure the political risks of transferability and expropriation using newly available risk rating data from the

Belgian export credit agency Office National Du Ducroire (ONDD), the world's largest political risk insurer and the price leader in the industry. For local private information, we construct two novel measures of the level of publicly available, investment-relevant information. One measure is based on the extent of economic data missing and unreported by the host government to the World Bank, and the other measure is based on the extent of investment articles written about a country in a given year. Together these measures provide a useful proxy for the amount of information that is publicly available to potential investors about a given host country. The higher the publicly available information, the less valuable local private information becomes.

The paper proceeds as follows. In Section 2, we introduce a formal model of government and investor decisions. Drawing on comparative statics from the model, we derive two testable hypotheses regarding the empirical relationship between information, political risk, and global flows of bank debt and direct investment. In Section 3, we test these hypotheses using novel measures of information and additional time-series-cross-sectional data on political risk and capital flows for the thirty largest emerging markets. In Section 4, we conclude the paper with a discussion of our findings and implications for future research. Appendix A contains proofs to the propositions in the main text, and Appendix B has additional details on the empirical models.

2 The Model

How do variations in local private information about transfer risk affect capital flows? We contend that the effect of political risk varies across types of foreign capital due to the different informational efficiencies of investors. Below, we find

conditions under which it is optimal for a foreign investor to invest in a host country, despite the risk of expropriation or increased transfer restrictions. We then analyze how the equilibrium behavior changes with respect to different types of investors, specifically banks and direct equity investors. In doing so, we identify the dimensions upon which these investors differ.

2.1 An Extensive-Form Game with Risk and Repatriation

We model the relationship between a host government and a foreign investor as a four-move game. This model is related to the baseline model from earlier work (Graham, Johnston, and Kingsley, 2013). That model disaggregated the political risks of transferability and expropriation, identifying both as substitute means for host governments to seize rents from foreign investors, and analyzed how domestic political institutions constrained the government's selection of transfer or expropriation rents. In this model, we build on that foundation but incorporate important additions. First, we add rate of return elements to the investor and government's payoffs. Second, we examine the model's implications for two kinds of investors that differ in levels of information and costs of expediting repatriated profits. These changes allow us to focus on which investors have a competitive advantage under what scenarios.

Structure of the Game

To summarize the basic model, we first define the investor as the *average* foreign investor. We assume that a government (G) has two mechanisms to seize rents from the foreign investor (F): first, by increasing the rents gained from the investor

repatriating hard currency; and second, by expropriating the investor's assets.[6] In the first move, F can either *invest* (I) or *not invest* $(\neg I)$. If F invests, nature (N) determines the externality (π) associated with transfer rents.[7] After nature's move, the government can uphold the investment contract by maintaining the agreed-upon transfer rents, t_0, or the government can *breach the contract* by selecting some $t' = t_0 + \gamma$, where $\gamma > 0$. However, the foreign investor is imperfectly informed about the outcome of this determination. F perceives, with probability p, that the host government will breach by selecting t'. Based on this probability, F selects what level (ϵ) to expedite repatriation before the new transfer policy is announced. Then G decides whether to expropriate assets (ϵ) or not $(\neg\epsilon)$ .Figure 1 displays one round of this four-move game.

[6]We assume that the host government seeks to maximize its utility (e.g. revenue). "Transfer rents" accrue to the government when, by restricting capital repatriation, it takes earned revenues from foreign investors. "Expropriation rents" occur when the host government takes assets or revenue streams. We make no assumption about how governments intend to use these rents.

[7]Here, we consider any positive externality of the investment. For example, the value of the rents may be magnified if the host government is more cash strapped or if the leader is struggling to build a political war chest for re-election. In each case, the environment will impact how much more (over the market price) G will value the additional rents.

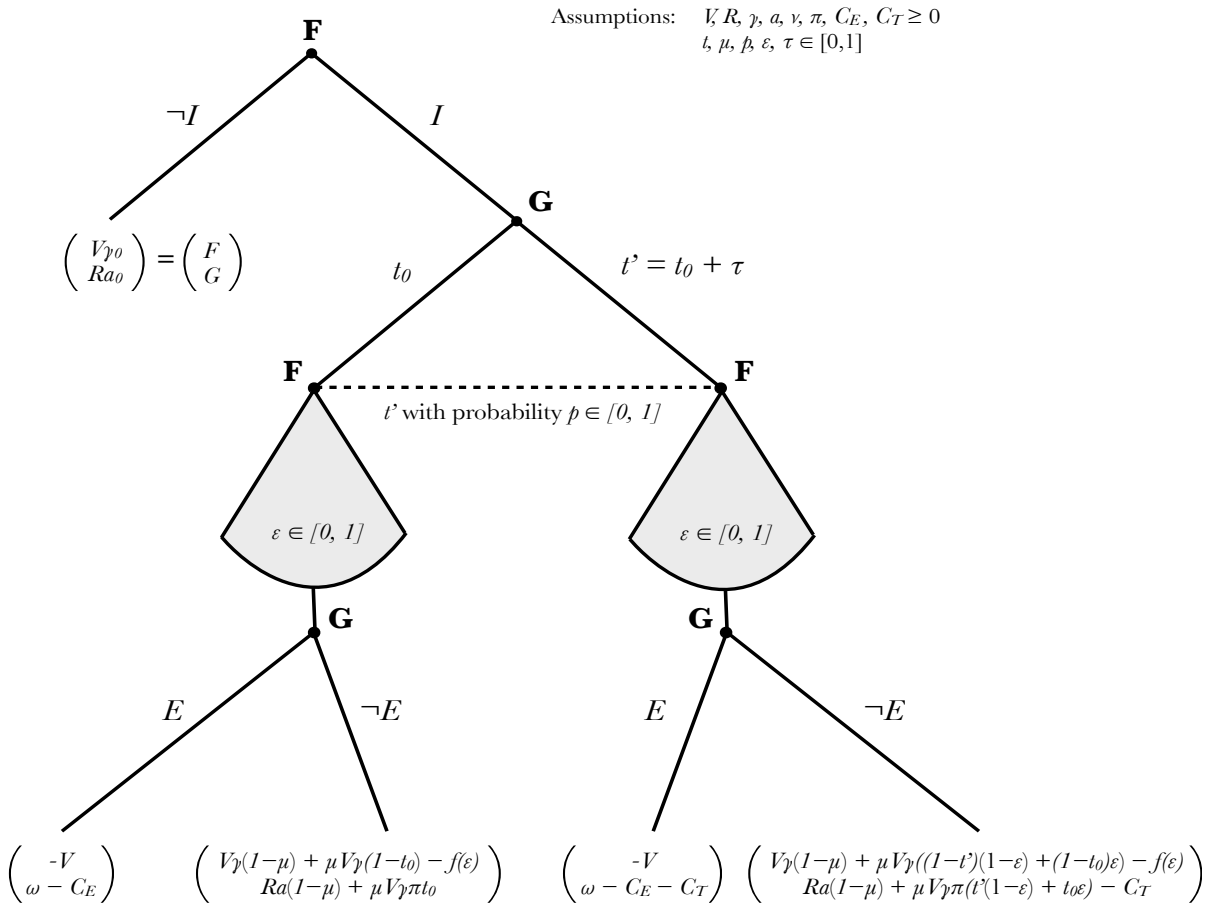

Figure 1: A two player extensive-form game in which a foreign investor (F) chooses whether or not to invest; a host government (G) chooses at what level (t) to set transfer restrictions on that investment; F chooses, before the new policy is announced, at what level to expedite repatriation (ϵ); and G decides whether to expropriate assets (E) or not $(\neg E)$.

Investor Incentives

As shown in figure 1, if the investor does not invest ($\neg I$), he receives a reservation value of $V\gamma_0$. Denote V as the amount F invests, upon playing I, and γ_0 as the rate of return on that investment.[8] Define μ as the amount of their original investment F intends to repatriate, ϵ as the amount of μ they choose to expedite (before a policy shift occurs), and $f(\epsilon)$ as a function for how costly (λ) it is to expedite that portion, where $f(0) = 0$ and $f'(\epsilon) \geq 0$. Define $\lambda \cdot \epsilon$ as the cost of expedited repatriation, where $\lambda \geq 0$. For this paper, we assume that $f(\epsilon) = \lambda\epsilon$, where $\lambda \geq 0$. If the investor plays I, he receives a maximum of $V\gamma(1-\mu) + \mu V\gamma(1-t_0)$. This occurs if G upholds the investment contract and F plays $\epsilon = 0$. The payoff is a weighted sum of what he earns on his non-repatriated assets (1 - μ) and his repatriated portion (μ, subject to t_0). F's minimum payoff is $-V$ (if G plays E). Thus, while the investor prefers to invest with minimal transfer restrictions and without the threat of expropriation, he may or may not prefer intermediate transfer restrictions (or a chance of expropriation) to $V\gamma_0$, depending on how large p is and how lucrative the investment opportunity.

Government Incentives

Like the investor, the host government (G) receives a reservation value of $R\alpha_0$ if F does not invest. Denote R as the amount of revenue G contributes to the average foreign investment project and α as the risk-adjusted returns on that contribution. Denote C_E and C_T as the costs of backlash G receives after expropriation or a unilateral increase in transfer restrictions, respectively. If F invests and G upholds the original investment contract, G receives $\mu V\gamma\pi t_0$ on the portion that F repatriates and $R\alpha(1-\mu)$ on the portion that F does not: $R\alpha(1-\mu) + \mu V\gamma\pi t_0$. If G breaks the

[8] γ is a function of various investment indicators.

contract, selecting t', they receive $R\alpha(1-\mu) + \mu V\gamma\pi(t'(1-\epsilon) + t_0\epsilon) - C_T$. Finally, if the host government expropriates, they receive $\omega - C_E - C_T$. Notice that, in this game, without the prospect of backlash to a contract violation, the government always prefers to either seize the maximum amount of transfer rents, or to directly expropriate, whichever offers the greater return. This creates tension in the game between playing t' or E, on one hand, and avoiding the backlash, on the other.

Definition 1 *A **transfer risk equilibrium** is an equilibrium in which F plays {I, $\epsilon = 0$} and G never expropriates, but sets transfer rents at level t'.*

Proposition 1 *There is a transfer risk equilibrium when the following conditions hold:*

1. $\omega \leq R\alpha(1-\mu) + \mu V\gamma\pi t_0 + C_E$
2. $\omega \leq R\alpha(1-\mu) + \mu V\gamma\pi(t'(1-\epsilon) + t_0\epsilon) - C_T + C_E$
3. $\lambda \leq \mu V\gamma\tau$
4. $p \leq \frac{1}{2-\frac{\lambda}{v\gamma(1-\mu-\mu(1-t_0))}}$
5. *N selects* $\pi \geq \frac{C_T}{\mu V\gamma\tau}$.
6. $\gamma \geq \frac{\gamma_0}{1-\mu(t_0+p\tau)}$.

At this point, we have demonstrated a logic for how transfer risk can accompany investment. Below, we differentiate between *types* of foreign investors. Specifically, we compare foreign commercial banks and foreign direct investors.

2.2 Banks, FDI, and Temporal Effects of Transfer Risk

2.2.1 Local Private Information

Foreign investors lack full information on domestic market conditions and host government preferences. However, the level of local private information varies across

suppliers of capital to emerging markets (Jensen and Meckling, 1976; Myers, 1977; Baskin, 1988; Hubbard, 1990; Akerlof, 1970; Arrow, 1963). This is an important distinction, and one that drives insights from the model.

Foreign banks have both the experience and access required to manage information problems (Beim and Calomiris, 2001). Banks lend to multiple parties across the economy and across any one firms' capital structure. They have in-house dedicated lending officers with ongoing and information-intensive relationships to borrowers. Indeed, banks negotiate for control by structuring covenants and rights in the lending documents which mimic the information transparency granted a principal. Banks also have a significant domestic presence in the investment host country. They have local branches and long-standing domestic exposures in both local and foreign currency. This provides them strategic knowledge of the country borne by deep and broad market experience (Sengupta, 2007). With that comes relationships with political and economic elites - notably those responsible for transfer and convertibility policies - who funnel high-level, non-public information or reveal policy preferences (Dinc, 2005; Cohen, 1996; Shambaugh, 2004).

Foreign direct investors have principal information about their firm given their corporate control positions (Goldstein and Razin, 2006). They have in-depth knowledge of their direct investment and thus their firm's position in the relevant sector. But direct investors' local governmental information is idiosyncratic and limited, either to their firm or the relevant sector. By its very nature, FDI is often a one-time entry decision; many firm locate only one subsidiary or company in a given host country. Knowledge of any one emerging market does not necessarily translate to relevant and valuable knowledge of another market. Moreover, while direct investors have the ability to develop relationships with political and economic elites, that interaction is limited to the firm in question and not multiple firms with mul-

tiple issues across multiple governmental actors. For all these reasons we expect that commercial banks have access to more local private information than do direct equity investors.

We will use the SPE defined in proposition 1 to compare the original investor (F) to one (F') that has both better information about G's policy preference (t_0 or t') and lower exit costs for repatriation (λ'). F represents a direct investor and F' a bank. Both solutions (one with F and the other with F') proceed the same way until the investor's decision about how much to expedite (ϵ). As before, if G selects t_0, both types of investor prefer $\epsilon = 0$; if the government selects t', they prefer $\epsilon = 1$, so long as $\lambda \leq \mu V \gamma \tau$. Put simply, F', who faces a lower cost of expediting, will expedite under a wider range of conditions.

Informational advantages generate consequences similar to the effects of lowered costs of expedited repatriation. In proposition 1, F's decision to expedite depended on both condition 3 ($\lambda \leq \mu V \gamma \tau$) and condition 4 ($p \leq \frac{1}{2-\frac{\lambda}{v\gamma(1-\mu-\mu(1-t_0))}}$). With perfect information, F's ϵ-decision will become independent of p (they will know what policy change is coming with certainty!). Greater access to local private information expands the conditions under which an investor will expedite repatriation of his profits.

Put differently, more local private information never leads to worse outcomes for investors. Observe that if G chooses to expropriate, the fully informed F' will receive either the same payoff (if the poorly informed F also decides not to invest) or a better payoff (if poorly informed F plays I). If G chooses not to expropriate, the fully informed investor F' will also have a Pareto optimal payoff: better (if poorly informed F does not invest) or the same (if poor F does invest). This logic extends to any informational advantage.[9]

[9] A further draft will verify this formally.

Testing our expectations regarding investors' access to local private information is made challenging by the fact that, by its nature, private information is not observable. However, publicly available information is observable, and it is likely that public and private information are at least partially substitutable. Investors with local private information should be able to invest profitably in countries with low levels of public information because their private information can fill in the gap.

We expect direct investors, who lack banks' access to local private information, to be more willing to invest in markets with more publicly available information and less willing to invest in markets with less publicly available information. For banks, the expected effect of publicly available information is more ambiguous. Even for investors with good private information, more publicly available information allows for marginally more accurate risk assessments (i.e. these types of information are unlikely to be perfect substitutes); however, more publicly available information also brings in more competition. Relative to direct investors, banks have the competitive edge in low-information settings. Therefore, we expect banks to be less sensitive than direct investors to the level of publicly available information.

> ***Hypothesis 1:*** *Public information about the local investment climate in the host country has a larger positive effect on inflows of FDI than on inflows of bank debt.*

2.2.2 Costs of Expediting Repatriation

Bank debt is also relatively nimble, meaning it is less costly for banks to quickly retreat if a country's transfer risk level rises. Specifically, banks have the ability to immediately halt loans in progress and future borrowings, and in certain circumstances, banks have the right to accelerate select outstanding loans. As transfer

levels change, for instance, banks react quickly. Due to the structure of bank-debt financed investments, banks have a rapid exit option. This serves to amplify the impact of their access to private local information; when new information is received, they can act on it quickly. Therefore, we expect fluctuations in flows of bank debt not to lag far behind actual changes in risk.

FDI, on the other hand, cannot easily or quickly change course. FDI is longer in tenure than bank debt, which is one of the reasons it is so valuable to host economies (Ahlquist, 2006; Vernon, 1971).[10] FDI is also relatively illiquid. This makes it more costly for direct investors to repatriate capital or exit the country before the host government institutes hard stops on transferring or converting foreign currency into hard currency. Similarly, new or increased direct investment can take a long time to implement. The effect is that FDI reacts to changes in transfer risk with longer lags than does bank debt.

Returning to insights from the model, we see that the costs of expediting repatriation (λ) are critical in explaining investment. Even without an informational advantage, the decreased costs of expediting ($\lambda \rightarrow \lambda'$, where $\lambda > \lambda'$) make the conditions for expedited repatriation more likely to be satisfied by a bank than by a direct investor. Therefore, it more likely that banks will attempt to exit early if they suspect a policy change. Notice that, even if banks had the same information structure as FDI, the p-condition (condition 4) would still become less restrictive (further incentivizing banks to choose $\epsilon = 1$ over $\epsilon = 0$) because of the lower costs of expediting (λ). The fact that banks have better access to local private information only amplifies this difference, further expanding the conditions under which banks will expedite repatriation.

[10] Portfolio investors, on the other hand, are able to flee quickly, as evidenced by the empirical literature on hot money (Reinhart and Reinhart 2008; Calvo, Leiderman, and Reinhart 1996; Prasad, Rogoff, Wei, and Kose 2004; Kose, Prasad, Rogoff, and Wei 2006).

While banks may be more likely to exit early if transfer restrictions increase unilaterally from t_0 to t', we see that condition 6 ($\gamma \geq \frac{\gamma_0}{1-\mu(t_0+p\tau)}$) will be more difficult to satisfy in the next round of investment: $\frac{\gamma_0}{1-\mu(t_0+p\tau)} \rightarrow \frac{\gamma_0}{1-\mu(t'+p\tau)}$. This means that increases in transfer restrictions will reduce future investments by all types of investors. As such, we expect that FDI will also respond to changes in transfer risk, albeit not always as rapidly as banks. Thus, in general, increasing transfer risk is expected to leave a trail of decreased investment flows; some (like bank debt) which responds more immediately and others (like FDI) which pull back gradually over a longer period of time. This leads to our second empirically testable hypothesis:

> ***Hypothesis 2:*** *Flows of bank debt will respond more quickly to changes in transfer risk than flows of FDI.*

Together, our comparative statics suggest that we should see a clear impact of transfer risk on foreign investment flows due to changes in information and costs, and that this impact will vary with time and depending on the type of foreign investor.

2.2.3 Further Political Implications

The next section will adjudicate these hypotheses empirically. Before doing so, we discuss three further implications of our logic. Specifically, we briefly discuss how differential effects on investment can mean that changes in risk can create shields for some investors, can create domestic political cleavages, and can have nuanced effects for economic stability, more broadly.

The distribution of capital flows in an economy affects the host government's behavior in important ways. For example, countries that rely primarily on bank

debt (versus FDI) for foreign investment may face a different set of incentives when it comes to imposing new transfer restrictions. Suppose that all foreign investment coming into a host government is bank debt. If we assume that F' has lower exit costs than FDI and perfect information about an upcoming policy change, how does this affect G's transfer restriction decision? In our model, G will prefer t_0 to t' when:

$$R\alpha(1-\mu) + \mu V\gamma\pi t_0 \geq R\alpha(1-\mu) + \mu V\gamma\pi t_0 - C_t$$

$$\Rightarrow C_T \geq 0,$$

which is satisfied by assumption. Thus, such an investor may have a dramatic constraining effect on how much the host government can expect to gain from transfer restrictions. While reducing the probability of transfer risk, such investors may be increasing the likelihood that governments will resort to other mechanisms (such as expropriation) to capture additional rents.

Particularly intriguing is that as FDI occupies a larger and larger share of foreign investment in the host economy, the average ease of exit increases (i.e. the costs of repatriating decreases). Looking at the conditions in proposition 1, we see that as ϵ rises, the equilibrium value of transfer risk falls (condition 1), the probability of punishment can be less and still compel compliance (condition 2), and the minimum rate of return necessary to invest decreases (condition 3). This is less obvious for condition 3 and we verify:

$$\frac{\epsilon t^*}{\frac{1-\mu}{\mu} + \bar{\nu}(1-\epsilon t^*)} > \frac{\epsilon' t^*}{\frac{1-\mu}{\mu} + \bar{\nu}(1-\epsilon' t^*)} \Rightarrow \epsilon\frac{1-\mu}{\mu} + \epsilon\bar{\nu} > \epsilon'\frac{1-\mu}{\mu} + \epsilon'\bar{\nu} \Rightarrow \epsilon' < \epsilon,$$

which is satisfied by assumption. Thus, as FDI becomes more predominant in an economy, direct investors may create a risk shield for banks. In other words, com-

pared to entering an environment where the government faces a population full of quick-footed investors, banks receive a positive externality from risk levels that are lower when slower direct investors are numerous. Similarly, we should not be surprised if countries that draw a disproportionate share of investment from bank debt also display more inhospitable conditions to FDI. Future work can extend this logic to better predict how political risk will shape investment profiles over time. It may predict, for example, that high risk countries are more likely to have foreign investment dominated by bank debt (or at least have more polarized profiles) and that low risk countries will have larger shares of FDI (as well as more diverse investment profiles).

Beyond this, there may also be broader developmental implications, for distributional prosperity and economic stabilization. If transfer restrictions impact foreign investors in different ways, depending on type of investment, they can also have a differential impact on other actors that interact with foreign investors. Banks and direct investors add different things to a host economy. One can add physical capital and employment, while the other can provide financing for both foreign and domestic ventures. Thus, as the portfolio of foreign investment shifts in response to changing transfer restrictions, distributional consequences may follow; depending on who relies on the investment for employment, investment capital, and contributions to their production chain.In this way, political risk can affect the allocation of prosperity in the host country by affecting the portfolio of foreign investment coming in.

Similarly, because risk can affect the distribution of prosperity, domestic political cleavages may arise. If, for example, we assume that labor primarily relies on FDI whereas capital-owners rely on foreign banks, cleavages may develop along class lines. If different sectors rely on banks and FDI in distinct ways, cleavages may

arise along industry lines. In this simple way, differentiating between investment flows can be a bridge to a more nuanced understanding of the domestic politics of government theft.

Changes in risk may also impact economic stability. If transfer risk triggers capital movement, and as countries are more leveraged in bank debt, there may be potential for destabilizing capital flight. In hard times, for example, when government may want additional rents, there may be heightened risk for both investor and host government: moving in the direction of capturing additional rents may chase away flighty capital, shaking an already unstable economic environment.

Future work can adjudicate these expectations. In the next section we conduct empirical tests of our hypotheses.

3 Data and Sample

We test two hypotheses derived from the model above, both related to differences between banks and direct investors. We test predictions regarding both their reliance on information (Hypothesis 1) and their ability to respond quickly to changes in the level of transfer risk (Hypothesis 2). We accomplish this by comparing flows of foreign direct investment to flows of commercial bank debt[11] in a sample of 30 developing countries from 1994-2012.[12]

Data on FDI inflows are drawn from the World Development Indicators (WDI), while data on bank debt inflows are taken from the Institute for International Finance (IIF), the private association of global banks and financial institutions. The IIF tracks the 30 largest emerging market countries, which account for the vast ma-

[11] Net disbursement from commercial banks (excluding credits guaranteed or insured under credit programs of creditor governments).

[12] The binding constraints on the sample are the country coverage of the data on bank debt and the time coverage of the data on transfer risk.

jority of global capital flows to emerging markets.[13] For both types of investment, we use a logged measure to deal with over-dispersion in the data.[14]

In testing Hypothesis 2, which regards speed of response, we examine how flows of investment change from year to year. Therefore, we use the change in investment from year $t-1$ to year t as the dependent variable. As in the specifications in levels, we use a logged DV to deal with over-dispersion. However, because negative values are frequent in the differenced data (and would be dropped if a simple log was taken), this logged DV is created as $ln\_\Delta investment = \pm ln|(\Delta investment + 1)|$. Results are also robust to simply using the raw change in investment in dollars (see Table 3 in the appendix).[15]

Data on transfer risk is drawn from the Belgian export credit agency Office National Du Ducroire (ONDD). ONDD is the world's largest political risk insurer and the price leader in the industry. Its assessments of risk reflect not only profit-motivated expert attempts to assess risk, but also the actual insurance costs paid by firms who wish to invest without shouldering the burden of political risk themselves. ONDD data are used in a similar context by Jensen (2008) and Graham, Kingsley, and Johnston (2013).[16] ONDD defines transfer risk as the risk that action by foreign authorities, such as the introduction of capital controls or other constraints, prevents the transfer of money necessary to repay creditors.

[13] Argentina, Brazil, Bulgaria, Chile, China, Colombia, Czech Republic, Ecuador, Egypt, Hungary, India, Indonesia, Korea, Lebanon, Malaysia, Mexico, Morocco, Nigeria, Peru, Philippines, Poland, Romania, Russia, Saudi Arabia, South Africa, Thailand, Turkey, Ukraine, United Arab Emirates, Venezuela.

[14] $ln\_investment = ln(investment + 1)$, where *investment* is in USD.

[15] We do not use a difference in logs, because the raw investment data contains negative net flows in some years, which would be lost if the log is taken.

[16] While risk data are issued annually, a team at ONDD meets four times per year to update risk evaluations, addressing $\frac{1}{4}$ of countries (by region) in each meeting. However, if events justify it, a country's risk rating may be revised at a meeting in which it is not otherwise scheduled to be discussed, allowing the potential for multiple revisions during a year (Jensen 2008). Therefore, the score given to a country for any given year will reflect any major changes that occurred during that year prior to ONDD's last meeting of the year. Therefore, the annual measure of risk assigned by ONDD can best be interpreted as the level of risk in Q4 of the year in question.

We use two different measures of the level of investment-relevant information that is publicly available about a given host country. Following the work of Hollyer, Rosendorff, and Vreeland (2011), *economic transparency* measures the proportion of missing values across 14 economically relevant variables in the WDI.[17] We refer to this measure as transparency because the WDI relies on data reported by host governments and a lack of data in the WDI proxies for a general lack of publicly available data on the state of the host country economy.[18] Our second measure, *investment press coverage*, is a (logged) count of the number of investment related articles published in English about a country in a given year.[19] Each of these measures has its limitations, but each captures a distinct and important type of information that is publicly available to potential investors. The two measures are correlated with one another at only 0.36, indicating they are empirically, as well as theoretically, distinct from one another.

Data on GDP, GDP per capita, population, natural resource exports, and trade (as a percentage of GDP) are taken from WDI. Data on BITs comes from Allee and Peinhardt (2010), Hicks and Johnson (2011), and UNCTAD (2013). A table of summary statistics is in the appendix.

3.1 Testing Hypothesis 1

Hypothesis 1 states that the positive effect of information availability on investment inflows is stronger for direct investors, who are more reliant on publicly available information, than for banks, who have greater access to local private information.

[17] We experiment with three plausible sets of variables and the resulting indices are all correlated with one another at greater than 0.95, indicating that the measure is robust to reasonable variations in the set of underlying variables.

[18] We use the level of missing data in year $t-1$ as a measure the level of information available in year t, because data is generally reported to the WDI the following year.

[19] We use LexisNexis to search all major English-language news publications and conducted a keyword search for "investment," restricted by country.

The results in Table 1 are consistent with these expectations. In Models 1-3, where FDI is the dependent variable, we see strong and statistically significant positive effects of information availability on investment inflows. In Models 4-6, where bank debt is the dependent variable, we see much smaller (though still positive) effects on bank debt inflows. This is true for both *investment press coverage* and *economic transparency*. To ease comparability of the coefficients, both dependent variables have been rescaled to a standard deviation of one, and each pair of models is run on exactly the same sample.

Table 1: Information and Capital Flows

	DV=FDI (logged, SD = 1)			DV=Bank Debt (logged, SD=1)		
	(1)	(2)	(3)	(4)	(5)	(6)
Investment Press Coverage	0.114***	0.088**	0.096**	0.103	0.081	0.032
	(0.033)	(0.033)	(0.039)	(0.085)	(0.085)	(0.076)
Economic Transparency	0.561**	0.751**	0.762**	0.185	0.530	0.254
	(0.256)	(0.283)	(0.350)	(0.733)	(0.710)	(0.347)
GDP Per Capita (logged)		0.345*	0.435*		0.261	0.688***
		(0.205)	(0.217)		(0.461)	(0.214)
Trade (% of GDP)		0.001	0.003*		0.007	0.000
		(0.001)	(0.001)		(0.006)	(0.004)
BITs (logged)		0.166**	0.136*		0.177	0.001
		(0.071)	(0.069)		(0.140)	(0.075)
Transfer Risk			-0.050*			-0.043
			(0.026)			(0.030)
GDP Growth			0.001			0.019***
			(0.005)			(0.005)
Inflation			-0.000**			0.000
			(0.000)			(0.000)
Natural Resource Exports			-0.009*			-0.007
			(0.005)			(0.009)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	5.432***	2.386	2.061	3.533***	0.673	-0.727
	(0.243)	(1.859)	(1.825)	(0.677)	(3.184)	(1.840)
Observations	461	445	348	461	445	348
R^2	0.560	0.572	0.574	0.163	0.169	0.254

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$
Sample = developing countries only.
All independent variables are lagged one year.

These results are consistent with Hypothesis 1: the effect of information on FDI is larger than the effect of information on bank debt. However, the differences between the coefficients are not statistically significant. For example, if we compare Model 3 to Model 6, the estimated effect of *economic transparency* on FDI is three times as large as the estimated effect on bank debt. This is a substantively significant difference. However, when we conduct a z-test of the difference between these two coefficients, we get a z-score of only 1.03 – well below conventional levels of statistical significance. Therefore we interpret these results with some caution: they are consistent with our theory but do not allow us to convincingly reject the null hypothesis of no difference.

All models in Table 1 are linear regressions with heteroskedasticity-robust standard errors. We employ both country fixed effects (which control for the time-invariant portion of unobserved sources heterogeneity across countries, like language or culture), and year dummies, which control for any linear or non-linear time trends in the data. We also control for a range of macro-economic variables, as well as both *transfer risk* and bilateral investment treaties.

3.2 Testing Hypothesis 2

Hypothesis 2 states that flows of bank debt respond more quickly to changes in political risk than do flows of FDI. Specifically, we predict that changes in bank debt inflows from year t to year t-1 are caused by changes in transfer risk during that same window, and are not affected by changes in transfer risk that occurred in earlier periods. Conversely, we predict that current changes in FDI (between year t and t-1) are driven by contemporaneous changes in transfer risk, and well as by changes between t-2 and t-1 and between t-3 and t-2 (i.e. by the 1 and 2 year lags of Δ *Transfer Risk*).

The results in Table 3 are consistent with these expectations. For both FDI (regressions 1-5) and bank debt (regressions 6 - 10), the effect of changes in transfer risk on investment are negative in the current period (changes from *t*-1 to *t*). It is only Δ *Bank Debt*, however, that is affected by the 1- and 2-year lags of transfer risk.

Table 2: Change in Risk and Change in Investment Inflows (Logged)

	Dependent Variable = Change in Bank Debt Flows					Dependent Variable = Change in FDI Flows				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Δ Transfer Risk	-6.317***			-6.205***	-4.257**	-4.801***			-4.768***	-4.366***
	(1.274)			(1.400)	(1.654)	(1.340)			(1.485)	(1.544)
Δ Transfer Risk (1-year lag)		0.486		1.187	1.481		-3.483**		-3.051*	-1.051
		(1.551)		(1.559)	(1.661)		(1.516)		(1.618)	(1.804)
Δ Transfer Risk (2-year lag)			2.746*	2.235	1.369			-2.973**	-3.299**	-5.100***
			(1.464)	(1.444)	(1.527)			(1.501)	(1.468)	(1.532)
Δ GDP per capita (logged)					103.118***					108.022***
					(27.857)					(30.032)
Δ Trade (%of GDP)					0.030					0.249**
					(0.103)					(0.106)
Δ BITs (logged)					-8.546					-10.183
					(9.745)					(9.718)
Δ GDP Growth					0.541**					0.030
					(0.225)					(0.252)
Δ Inflation					-0.014***					0.004
					(0.003)					(0.010)
Δ Natural Resource Exports					0.331*					-0.090
					(0.198)					(0.230)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	1.377*	1.516*	1.630**	1.341	-1.543	3.585***	3.656***	3.289***	2.803***	0.049
	(0.769)	(0.804)	(0.827)	(0.828)	(1.181)	(0.783)	(0.816)	(0.845)	(0.860)	(1.290)
Observations	664	627	588	588	497	664	627	588	588	497
R^2										

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$
Sample = developing countries only. DV is the annual change in investment flows (logged).

These results show that banks respond very quickly to changes in transfer risk. It is not only true that lagged transfer risk has no negative effect on current-year inflows of bank debt, the estimated effects are actually positive (though small). The adjustment of bank debt flows to the change in the risk climate occurs entirely within the same year that the change in the risk climate is registered by the experts at ONDD. A year after an increase in transfer risk, bank debt flows may already be slightly on the rebound.

The regressions on FDI, on the other hand, tell a very different story. There, a change in risk in year t is still negatively affecting FDI inflows one, and even two years later, even when controlling for more recent changes in risk. Two year after a change in risk, firms are still in the process of adjusting their investments.

We examine the effect of each lag of transfer risk separately (Models 1-3 and 6-8) because transfer risk and its lags are highly collinear. However, the same results emerge when the lags are all run in the same model together (Models 4 and 9), and when a variety of controls are included (Models 5 and 10).

Regressions on differenced data have many similarities to fixed effects regression – the effect of both observable and unobservable time-invariant variables, such as region, are controlled for. As in tests of Hypothesis 1, all models include year dummies to address possible time trends. Our results are also robust to using an unlogged version of the dependent variable (see Table 3 in the appendix).

3.3 Implications of Results

We find strong empirical evidence that flows of bank debt respond faster to changes in transfer risk than do flows of FDI. Banks implement their entire strategic response to a change in transfer risk within the same year that the change is observed by experts in the political risk insurance industry. For direct investors, however, ad-

justments are slower. Selling off illiquid assets and winding down path-dependent new investments, takes time. So too, does ramping up new investments after a risk decrease – two years after a change in risk, direct investors are still in the process of responding. This is consistent with the predictions of our model, as well as with the broad characterization of FDI in the literature as a slow-moving type of investment.

The fact that banks respond in the same year that experts perceive a change in transfer risk indicates that one or both of the following must be true: 1). Banks perceive the change in transfer risk before the experts in the political risk insurance industry (access to local private information); 2). Once banks perceive the change, they respond very quickly – halting or approving new loans immediately.

The evidence we present in Table 1 is consistent with the first of these statements – that banks have access to private information and can perceive changes to risk before other actors. However, the evidence in this area is not conclusive. Therefore, it remains possible that the rapid speed with which banks respond to changes in risk is driven exclusively by their ability to adjust strategy quickly to new information, and not to their ability to perceive coming changes in risk before other types of investors.

These findings have implications for both governments and investors. Because banks can respond to changes in transfer risk very quickly, we can infer that transfer restrictions are not an effective means for governments to collect revenue from banks. The more rapidly banks are able to respond to restrictions, the lower their exposure to loss, and the less the government appropriates in revenue. Direct investors, on the other hand, are slow-moving targets. Therefore, in an economy where most foreign investment is in the form of loans from commercial banks, transfer restrictions are less likely to be an effective strategy for raising government revenue than in an economy in which direct investment is prevalent. In fact, this

leads to an interesting prediction to be explored in future work, which is that governments are more likely to employ transfer restrictions when their stock of FDI is large relative to their stock of bank debt.

On the investor side, we know that firms without private information often model their investment behavior after better-informed actors. For instance, Firm A observes Firm B entering a country and assumes the risk level must be relatively low. This can induce Firm A to enter the market. However, if the costs of expedited repatriation are asymmetric between Firm A and Firm B, doing so could expose Firm A to significant risk. We argue that commercial banks are well-informed, but it would be dangerous for less-informed direct investors to model their entry behavior after banks. It cannot be assumed that the same risk environment that is safe for a fast-responding bank is also safe for a slower-moving direct investor.

4 Conclusion and Future Research

Scholars of capital investment have developed a rich understanding of the role of information. Information determines changes in asset pricing, and better informed investors have a competitive advantage. That asymmetric information about political risks also matters in understanding why and when certain foreign investors enter and exit countries is logical but not necessarily well developed, particularly relative to transfer risk. Similarly, while global flows of bank debt are substantively large, our work is among the first to develop theory regarding the capabilities of banks relative to other investors.

Our primary theoretical contribution is to distinguish the information asymmetries between foreign banks and direct investors about political risk. Bank debt and FDI are the two largest segments of the international investment market, and thus

both practically as well as theoretically important to understand. Banks learn early through local private information about changes in transfer risk. Banks, for example, have in-house lending officers (who develop information-intensive relationships with borrowers), sign loan documents with information-transparency clauses, cultivate relationships with political and economic elites, and have strong incentives to maintain these networks (they repatriate a large portion of their investment). Foreign direct investors, however, are less informed about the government's propensity to tighten transfer and convertibility restrictions. They require more complete local public information before investing (profitably).

Our primary empirical contribution is to examine the speed of foreign investors' response to changes in information about political risk. We argue that, in addition to their informational advantages, banks have lower costs of expediting repatriation of hard currency, which combine to allow for faster exit. We find empirical evidence that flows of bank debt respond more quickly to changes in transfer risk than do flows of FDI, and we explain how this originates from bank's superior information and their lower costs of expedited repatriation. FDI, on the other hand, has less information and response more slowly to changes in the information they do have.

Together these findings offer important insights about political risk. If our theory is correct, increasing the level of publicly available information in a market will increase FDI more than it will increase flows of bank debt. This matters because countries are hungry to reap the development-positive effects of FDI. Increasing transparency and the availability of information about the market should serve this end. Similarly, in countries that are already characterized by large stocks of bank debt relative to FDI, increases in transfer restrictions are unlikely to be effective tools for governments to raise revenue: banks are able to respond quickly, shielding themselves from exposure and limiting government revenue.

In bringing together foreign banks and foreign direct investors into one intellectual paradigm, we advance understanding of international capital flows. In then examining how political risk influences the behavior of these capital flows, we develop a more nuanced understanding of the constraints capital flows place on host governments, and the relative tradeoff between different kinds of foreign investors.

A References

1. Akerlof, G., 1970. The market for 'lemons': quality, uncertainty and the market mechanism. Quarterly Journal of Economics, 84: 488-500.

2. Albuquerque, R., Bauer, G., Schneider, M., 2009. Global private information in international equity markets. Journal of Financial Economics 94, 18-46.

3. Allee, T., Peinhardt, C., 2010. Delegating differences: bilateral investment treaties and bargaining over dispute resolution provisions. International Studies Quarterly, 54 (1):1-26.

4. Ahlquist, J. S., 2006. Economic policy, institutions, and capital flows: portfolio and direct investment flows in developing countries. International Studies Quarterly, 50: 681-704.

5. Arrow, K., 1963. Social Choice and Individual Values, Second Edition.

6. Baskin, J., 1988. The development of corporate financial markets in Britain and the United States, 1600-1914: overcoming asymmetric information. Business History Review, 62:199-237.

7. Bae, K., Ozoguz, H., Tan, H, Wirjanto, T., 2012. Do foreigners facilitate information transmission in emerging markets? Journal of Financial Economics 105, 209-227.

8. Baker, H., Nofsinger, J., Weaver, D., 2002. International cross-listing and visibility. Journal of Financial and Quantitative Analysis 37, 495-521.

9. Beim, D., Calomiris, C. 2001. Emerging Financial Markets. McGraw-Hill, New York.

10. Bhattacharya, U., Daouk, H., Jorgenson, B., Kehr, C., 2000. When an event is not an event: the curious case of an emerging market. Journal of Financial Economics 55, 69-101.

11. Boot, A., 2000, Relationship banking: what do we know? Journal of Financial Intermediation 9, 3-25.

12. Boot, A., Thakor, A., 1994, Moral hazard and secured lending in an infinitely repeated credit market game. International Economic Review 35, 899-920.

13. Calvo, G. Leiderman, L., Reinhart, C. 1996. Inflows of capital to developing countries in the 1990s. Journal of Economic Perspectives.

14. Cohen, B. 1996. Phoenix risen: the resurrection of global finance. World Politics, 48(2).

15. Dinc, I., 2005. Politicians and banks: political influences on government-owned banks in emerging countries. Journal of Financial Economics 77, 453-479.

16. Faccio, M., 2006. Politically connected firms. American Economic Review 96(1): 369-386.

17. Fama, E., 1997. Market efficiency, long-term returns, and behavioral finance. Unpublished Working Paper, University of Chicago, IL.

18. Fisman, R., 2001. Estimating the value of political connections. American Economic Review 91, 1095-1102.

19. Goldstein, I., Razin, A., 2006. An information-based trade off between foreign direct investment and foreign portfolio investment. Journal of International Economics 7, 271-295.

20. Graham, B., Johnston, N., Kingsley, A., 2013. Even constrained governments steal: the domestic politics of transfer expropriation risks. Working Paper.

21. Grossman, S., 1976. On the efficiency of competitive stock markets where traders have diverse information. Journal of Finance 31, 573-584.

22. Henisz, W., 2000. The institutional environment for multinational investment. Journal of Law Economics and Organization 16(2):334-364.

23. Hicks, R., Johnson, K., 2011. The politics of globalizing production: why we see investment chapters in preferential trade agreements. Paper presented at the conference on The Politics of Foreign Direct Investment, Princeton University, September 23.

24. Hirschman, A., 1970. Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States. Cambridge: Harvard University Press.

25. Hollyer, J., Rosendorff, B., Vreeland, J., 2011. Democracy and transparency. The Journal of Politics 73, 1191-1205.

26. Hubbard, R. G., ed., 1990 Asymmetric Information, Corporate Finance, and Investment. Chicago: University of Chicago Press.

27. Institute of International Finance (IIF), 2012. Capital flows to emerging market economies. Washington, D.C.: September 25, 2012.

28. Jensen, N., 2008. Political regimes and political risk: democratic institutions and expropriation risk for multinational investors. Journal of Politics 70(4): 1040-1052.

29. Jensen, M., Meckling, W., 1976. Theory of the firm: managerial behavior, agency costs, and ownership structure. Journal of Financial Economics 3: 305-60.

30. Johnson, S., Mitton, T., 2003. Cronyism and capital controls: evidence from Malaysia. Journal of Financial Economics 67, 351-82.

31. Kose, M. A., Prasad, E., Rogoff, K., Wei, S-J., 2006. Financial globalization: a reappraisal. IMF Working Paper 06/189.

32. Kroszner, R., Strahan, P., 1999. What drives deregulation? Economics and politics of the relaxation of bank branching restrictions. Quarterly Journal of Economics 114, 1437?1467.

33. Lang, M., Lins, K., Miller, D., 2003. ADRs, analysts and accuracy: does cross-listing in the U.S. improve a firm's information environment and increase market value? Journal of Accounting Research 41, 317-345.

34. Leuz, C., Oberholzer-Gee, F., 2006. Political relationships, global financing, and corporate transparency: evidence from Indonesia. Journal of Financial Economics 81, 411-439.

35. Mishkin, F., 2006. The Next Great Globalization: How Disadvantaged Nations Can Harness Their Financial Systems to Get Rich. Princeton University Press.

36. Myers, S., 1977. Determinants of corporate borrowing. Journal of Financial Economics 5: 147-75.

37. North, D., 1990. Institutions, Institutional Change and Economic Performance. Cambridge: Cambridge University Press.

38. North, D., Weingast, B., 1989. Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in 17th Century England. Journal of Economic History 49:803-32.

39. Olsen, M., 1965. The Logic of Collective Action: Public Goods and the Theory of Groups. Boston: Harvard University Press.

40. Overseas Private Investment Corporation (OPIC), 2009. Insurance claims experience to date: OPIC and its predecessor agency, September 30, 2009.

41. Prasad, E., Rogoff, K., Wei, S-J., Kose, M. A., 2003. Effects of financial globalization on developing countries: some empirical evidence. IMF Working Paper.

42. Rajan, R., Zingales, L., 2003. The great reversals: the politics of financial development in the twentieth century. Journal of Financial Economics 69, 5-50.

43. Reinhart, C., Reinhart, V., 2008. Capital flow bonanzas: An encompassing view of the past and present. NBER Working Paper No. 14321.

44. Sengupta, R., 2007. Foreign entry and bank competition. Journal of Financial Economics 84, 502-528.

45. Shambaugh, G., 2004. The Power of Money: Global Capital and Policy Choices in Developing Countries." *American Journal of Political Science* 48: 281-295.

46. Sharpe, S., 1990, Asymmetric information, bank lending and implicit contracts: a stylized model of customer relationships. Journal of Finance 45, 1069-1087.

47. Shleifer, A., Vishny, R., 1997. A survey of corporate governance. Journal of Finance 52, 737-783.

48. Shleifer, A., Vishny, R., 1997. The limits of arbitrage. Journal of Finance 52, 35-55.

49. Stigler, G., 1971. The theory of economic regulation. Bell Journal of Economics and Management Science 2, 3-21.

50. UNCTAD, 2013. World Investment Report 2013. New York and Geneva, United Nations Conference on Trade and Development.

51. Vernon, R., 1971. Sovereignty at Bay: The Multinational Spread of U.S. Enterprises. New York: Basic Books.

52. Wiwattanakantang, Y., Charumilind, C., Kali, R., 2006. Connected lending: Thailand before the financial crisis. The Journal of Business 79, 181-218.

53. World Bank, 2012. World Investment and Political Risk 2012. Washington D.C., The World Bank.

54. Zellner, A., 1962. An efficient method of estimating seemingly unrelated regressions and tests for aggregation bias. Journal of American Statistical Association 57:348-68.

Table 3 presents models identical to those in Table 2, but with a different version of the dependent variable. Here, we measure change in FDI flows as the raw difference between flows in year t and flows in year $t-1$ in dollars. Results are remarkably similar to those in Table 2. In model 10, however, none of the effects of current and lagged risk are statistically significant, though all remain in the expected (negative) direction.

Table 3: Change in Risk and Change in Investment Inflows (Unlogged)

	Dependent Variable = Change in Bank Debt Flows					Dependent Variable = Change in FDI Flows				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Δ Transfer Risk	-1851.988***			-2132.868***	-1056.742	-594.251**			-730.819***	487.001
	(489.833)			(563.448)	(738.345)	(239.462)			(269.652)	(620.026)
Δ Transfer Risk (1-year lag)		165.387		334.955	360.090		-640.439**		-653.051**	323.650
		(390.640)		(412.161)	(653.168)		(301.903)		(319.273)	(594.460)
Δ Transfer Risk (2-year lag)			-314.425	-488.767	-708.468			-779.273*	-834.508*	-899.935
			(467.880)	(455.732)	(550.777)			(440.873)	(447.915)	(572.664)
Δ GDP per capita (logged)					44211.387*					69357.930***
					(24547.566)					(23486.201)
Δ Trade (%of GDP)					-47.913					120.084**
					(36.871)					(46.863)
Δ BITs (logged)					993.907					1005.841
					(2438.517)					(2436.676)
Δ GDP Growth					327.366**					-151.156
					(163.420)					(116.897)
Δ Inflation					0.275					2.484**
					(1.975)					(1.235)
Δ Natural Resource Exports					-20.066					42.776
					(61.235)					(41.142)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-46.769	26.572	-23.812	-127.473	-1296.478*	683.673**	698.472**	691.131**	603.417*	-1182.780*
	(312.454)	(329.301)	(343.445)	(352.641)	(727.959)	(312.664)	(331.752)	(341.585)	(356.022)	(622.968)
Observations	667	630	591	591	500	667	630	591	591	500
R^2										

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$
Sample = developing countries only. DV is the annual change in investment flows (unlogged).