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Even Constrained Governments Steal: The Domestic Politics of Transfer and Expropriation Risks

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Abstract

Foreign investors consistently rate transfer risk, the risk associated with the inability to convert and repatriate hard currency, as more frequent and of greater concern than the classic political risks of war and expropriation. We argue that the collection of transfer and expropriation rents are two distinct tools through which governments extract wealth from foreign investors and that regime types vary in their freedom to use these tools. Veto-player-type constraints (i.e. institutional constraints on the executive, which are common among democracies and rich countries) curtail governments' ability to collect expropriation rents but have little impact on their ability to collect transfer rents. To clarify this relationship, we use game theory to derive testable implications regarding the effect of political institutions and domestic politics on governments' ability to collect these two types of rent. Empirically, we show that transfer risk is an important independent determinant of foreign direct investment flows to developing countries (transfer risk matters) and that, while increases in executive constraints diminish expropriation risk, transfer risk is much less affected (even constrained governments extract transfer rents). By isolating transfer risk, as one distinct and important subset of creeping expropriation risk, we identify how the politics of different kinds of political risk diverge and require independent study. In addition to scholars of international policy and economics, this manuscript offers value for non-academics; from lawyers and practitioners (who observe this phenomenon daily, but often without rigorous statistical methods), to investors (who can gain insight into the politics of *when* some risks will manifest over others), and for policymakers (who may gain insight into how to protect their nationals abroad).

Keywords: Foreign investment, political risk, property rights, international relations, globalization, economic growth

The puzzle of protecting property rights is a classic topic in the social sciences. From philosophers who connect property with freedom and natural rights, to political economists who connect it with efficiency and prosperity, few topics have engendered such consistent attention. For countries hosting cross border investment, the problem of enforcement is particularly acute, as there is no global sovereign to enforce even those property rights that are universally acknowledged. Making enforcement still more difficult, the nature and extent of the rights to which foreign investors should be entitled remains actively contested. To stylize this evolution and contestation, foreign investors and the governments of capital-supplying countries advocate for a more expansive set of investor rights while the governments of capital-demanding countries seek to retain their freedom to make policy changes that may be adverse to foreign investors. The greater the rights possessed by investors, the less policy flexibility is retained by host governments.

Over the past several decades, the scope of property rights accorded to foreign investors has steadily expanded, driven most recently by the proliferation of Bilateral Investment Treaties (BITs) and the inclusion of investment provisions in many preferential trade agreements (PTAs).[1] These agreements extend a variety of rights to investors, including the right to seek redress from host governments through binding arbitration. We focus on a property right that remains actively contested – the right to unfettered repatriation of capital by foreign investors, i.e. the right to be free from transfer restrictions. While investors' rights to be free from outright expropriation and from selective taxation and regulation are almost universally accepted, the right to unfettered repatriation of capital is not. This right to unfettered repatriation is enshrined in many BITs, including the U.S. model BIT, but governments in capital demanding countries continue to insist that transfer restrictions are essential tools of macro-prudential policy, and that governments' freedom to employ these policies must not be infringed. It remains unclear whether transfer restrictions will eventually achieve near-universal acknowledgement as violations of investor property rights, or whether foreign investors and governments sympathetic to their interests have overreached, claiming a right that the international community will eventually decline to recognize.

A World Bank survey of executives at multinationals shows that 43% of respondents rated transfer risk as having either the highest or second highest impact on their companies' risk assessment, a significantly more pressing concern than the risks of expropriation (31%) or war (28%).[2] Political risk insurance claims for transfer risk also occur at nearly triple the annual rate of outright or creeping expropriation claims combined.[3] As we show empirically, the effect of transfer risk on flows of foreign direct investment is higher and the effect of political constraints on transfer risk is weaker than for other types of outright and creeping expropriation.

To date, transfer risk has been understudied relative to other political risks. We add to the literatures in international politics, international economics, international business, and international law, which examine political risk and property rights, more generally. But this research also offers value for non-academics. It highlights multiple ways of seizing foreign assets; some salient and offering immediate benefits, and others obscure with gradual benefits. It provides rigorous statistical evidence to legitimize the swelling concern, among lawyers and practitioners, over regulatory takings. For investors, it offers insight into *when* certain

[1] The international arbitration of expropriation claims was long resisted by capital-demanding countries, (e.g. the Calvo Doctrine) but this debate has largely subsided, with international arbitration of expropriation claims now broadly accepted.

[2] World Bank 2013.

[3] Over a thirty year period beginning in the 1970s the Berne Union, the leading global association for export credit and investment insurance, reports that 200 out of the 380 insurance claims submitted were transfer or convertibility risk claims. From 1966 to 2009 the U.S. Overseas Private Investment Corporation attributes 60% of claims to transfer events versus 23% for expropriations (OPIC 2009).

risks will manifest over others: governments with tighter internal sanctions may lean more on opaque, gradual forms of rent-seeking. And for policymakers, who are on the front-line of the rapidly unfolding globalization in foreign investment markets, this can inform where to put emphasis in BIT negotiations (e.g. emphasizing regulatory takings in BITs with constrained governments) and how to anticipate risks to nationals abroad.

We begin by defining transfer risk and illustrating its substantive importance. We then use game theory to model investor-government relations and perform a comparison analysis to generate testable hypotheses. Most notably, we predict that, in contrast to expropriation risk, transfer risk is largely unaffected by even tight domestic political constraints. We test these predictions using a novel panel dataset from the political risk insurance industry and find that transfer risk has a dramatic effect on foreign investment flows but is unaffected by the political constraints that deter expropriation.

Transfer Risk

Nearly every business venture overseas, and particularly those in developing countries, faces some risk of government violation of property rights. This may take the form of direct government seizure of assets (expropriation risk) or the government's seizure of revenue streams through taxation, regulation or other changes in law (creeping expropriation risk). One type of creeping expropriation risk that has been identified by foreign market participants as distinct, frequent, and important is transfer risk.

Transfer risk is the risk that foreign investors will be restricted from converting and transferring hard currency out of the host country.[4] Through transfer restrictions, host governments deprive foreign investors of the "benefits of ownership,"[5] seizing assets both directly via taxation and indirectly through seignorage (i.e. mandating the purchase of a currency produced (and sold) by the government). Examples of transfer restriction policies include the government's establishing exchange taxes, instituting policies that freeze nonresidents' bank accounts, mandating that foreign firms deposit their foreign exchange at the central bank, adding penalties on interest payments and profit repatriation, and generally restricting any transfer of hard currency out of the country. Whereas the exchange rate sets "the most important price in any economy,'[6] a government's transfer policies determine whether or how foreign investors are able to use that price.

To illustrate transfer and expropriation risks, we look briefly at Argentina, which has recently employed both transfer restrictions and outright expropriation as tools for extracting wealth from foreign firms. In April 2012 the government of Argentina expropriated 51% of the oil company YPF from the Spanish owner Repsol, a stake valued at approximately $10.5 billion. The government has also enacted transfer restrictions, which block the exchange of pesos to dollars and have led to a 40% spread between the official exchange rate and the black market rate. Foreign firms are among those mostly likely to be forced into buying pesos at the inflated official rate and, as a result, repatriated profits and dividends fell sharply. However, even with reduced volumes of exchange, as of January 2013 the Argentine government was collecting roughly $225M **per day** in additional seignorage from those forced to buy pesos at the inflated official rate.[7] At that

[4] IMF 2012.
[5] Kobrin 1980.
[6] Broz and Frieden 2006: 587.
[7] This calculation is based on an official exchange rate of 4.95 pesos per dollar, a black market rate of 7.4 (by March 2013 it

pace, it takes just over a month before the amount collected via transfer restrictions exceeds that taken in the Repsol expropriation.

Our view of the right to unfettered repatriation of assets as a (contested) property right is rooted in the canonical work of Hohfeld (1913) and in the related tradition in legal scholarship defining property rights to include both rights of possession and rights of transfer.[8] Hohfield asserts that a right, as opposed to a privilege, must define access to an object, establish a duty of others to not interfere with that access, and enable enforcement of those duties. Under this view, it became reasonable to discuss a (contested) "right" to unfettered repatriation only recently, when that right began to appear in a large number of investment agreements (e.g. 2008 German Model BIT) and free trade agreements (e.g. 1996 US-Colombia FTA; 1992 NAFTA).

Article 7 of the 2012 US Model BIT, for example, asserts an investor's right to make transfers "freely and without delay into and out of" the host country. Article 7 defines: 1). the types of transfers the host has a duty to respect (e.g. profits, capital gains, payments from a loan agreement); 2). exchange conversion practices the host has a duty to uphold (i.e. the market exchange rate), and; 3). the contract-specific returns (between investor and host) the host has a duty to permit. Thus, the U.S. model BIT, like many other international trade and investment agreements, defines access, specifies a duty of others not to interfere, and creates enforceability (via binding arbitration and integration with domestic law).

Whereas transfer and expropriation policies are both means for governments to seize wealth from foreign direct investors, we argue that they vary in their domestic political salience and costs. Outright expropriation is a highly salient political event, both outright and (non-transfer) creeping expropriation are costly to domestic interests, and both violate well-established and broadly accepted rights of investors. In comparison, the right to be free from such restrictions is not universally acknowledged as a right that foreign investors possess – the conflict between investors rights to unfettered repatriation and governments' rights to impose transfer restrictions as a tool of macroeconomic management has not been resolved. While we use the terms "steal" and "sovereign theft" to describe both transfer restrictions and expropriation, we also recognize that there are legitimate policy reasons for a country to take these steps, and we do not take a normative position on the appropriateness of such actions.

We focus instead on the distinction between contested property rights and those that are universally accepted. This distinction is critical because, without a global sovereign capable of enforcing international property rights, foreign investors rely on collective enforcement of their property rights. When a host government violates the terms of an implicit contract with a foreign investor[9], other foreign investors withhold or withdraw capital and governments of capital-supplying countries impose various additional costs.[10] This type of collective enforcement is only effective when the community of potential punishers can coordinate on what does and does not constitute a violation.[11]

The difficulty of sanctioning transfer restrictions is amplified by the fact that these restrictions are often highly technical in nature and governments often claim the measures will be temporary, making it initially unclear which investors will be harmed and how badly. As one foreign investor noted, "Expropriation is an event in time that people can measure - it is a very profound statement. But transfer risk is very be-

was closer to 8.5), and daily trading volumes at the official rate of $685M per day (Banco Central de Republica Argentina 2013).

[8] e.g. Shavell 2004.

[9] We take this concept of an implicit contract from Frieden (1994).

[10] e.g. Wellhausen 2014.

[11] e.g. Hadfield and Weingast 2012.

nign: it happens in banks, under the table on dark Saturday nights, and there are no headlines."[12] This low observability is then compounded by the fact that transfer restrictions are most costly to foreign investors repatriating profits, not to domestic firms, lowering the salience of transfer restrictions as a domestic political issue.

While such transfer restrictions often take the form of capital controls on outflows, transfer restrictions do not fit well within the existing literature on capital controls and capital account openness.[13] Most studies of capital controls either do not distinguish between restrictions on capital inflows and restrictions on capital outflows,[14] or focus only on restrictions to capital inflows. Because capital controls on inflows are primarily imposed to reduce risks associated with hot capital and to protect domestic firms from foreign competition, capital controls on inflows usually restrict either inward portfolio investment or limit new entry by foreign investors. Thus, restrictions on inflows do not usually violate the property rights of existing direct investors – they are distinct from transfer restrictions in both purpose and effect.[15]

Similarly, while the exchange rate literature has established the importance of domestic politics in determining the level and stability of the exchange rate[16] and has worked to identify the winners and losers from under- and overvaluation,[17] most of the actions governments take to manipulate exchange rates also do not violate any recognized property rights of foreign investors.

Instead, our view of transfer restrictions as a subset of creeping expropriation places us squarely in the political risk literature, though to date this literature has focused primarily on outright and non-transfer forms of creeping expropriation.[18] Our work is also closely related to the study of sovereign default which, like expropriation, violates a broadly accepted investor property right and, like transfer restriction, is more common during financial crises. Default offers an additional means for governments to seize wealth from foreign investors, and the existing literature suggests that governments substitute between types of sovereign theft – governments tend not to expropriate at the same time they default.[19] Because we are focused on modeling the interaction between host government and direct investor, we do not address sovereign default directly in this paper, but it is worth noting that the empirical evidence regarding sovereign default is consistent with the theory and results that we present in the following sections. Like expropriation risk (also a highly visible violation of well established property rights), the risk of sovereign default is reduced when domestic political constraints are increased.[20]

Subsequent sections discuss the analytical differences between transfer and expropriation risks, and examine the domestic politics of transfer risk relative to other forms of sovereign theft. We argue that transfer restrictions enable governments to seize foreign assets when domestic political constraints render other forms of creeping and outright expropriation too costly.

[12] Authors' confidential interview, November 6, 2012.

[13] e.g. Quinn and Jacobson 1989; Quinn and Inclan 1997. Magud, Reinhart, and Rogoff (2011) argue explicitly that restrictions on inflows and outflows are sharply distinct policy tools with wildly divergent results.

[14] Chinn and Ito 2008; Leblang 1997.

[15] In a case where capital controls on inflows prevent an existing investor from implementing a planned expansion of an existing investment, it would, under our framework, constitute a violation of that investor's property rights. However, we believe this is not characteristic of most capital controls on inflows.

[16] Bernard, Broz, and Clark 2003; Bernhard and Leblang 2002; Hallerberg 2002.

[17] Frieden 1991; Broz, Frieden, and Weymouth 2008; Walter 2008.

[18] Henisz 2000b; Jensen, Biglaiser, Li, Malesky, Pinto, Pinto, and Staats 2012; Kobrin 1980.

[19] Tomz and Wright, 2010; Eden et al. 2012.

[20] North and Weingast 1989; Biglaaser and Staats 2012.

The Model

To begin a discussion of the politics of transfer risk, we first identify conditions under which it is optimal for a foreign investor to invest in a foreign country, despite a risk of increased transfer costs for the repatriation of capital. Once these conditions are expressed, we then analyze how domestic political constraints affect the host government's relative preference over transfer restrictions and expropriation.

Extensive-Form Game

We examine a game-theoretic approach to the problem of investment under transfer risk and expropriation risk. We model the relationship between a host government and a foreign investor as a four-move game. We define this investor as the *average* investor over a range of firm sizes and sectors.

Structure of the Game

Our model assumes that in each round of play, a government (G) has two mechanisms to seize rents from the foreign investor (F): first, by increasing the rents gained from F repatriating revenue; and second, by expropriating assets.[21] At the beginning of the game, the foreign investor can either *invest* (I) or *not invest* $(\neg I)$. If F invests, nature (N) moves and determines the costs associated with transfer breach (C_T) and expropriation (C_E). After nature's move, the government can either uphold the investment contract by collecting the agreed-upon transfer rents, t_0, or *breach the contract* by selecting some $t' = t_0 + \tau$, where $\tau > 0$. The foreign investor is imperfectly informed about the outcome of this determination, however. He perceives, with probability p, that the host government will breach their contract by selecting t'. Based on this perception, F selects what level (ϵ) to expedite repatriation before the new policy is announced. G then decides whether to expropriate assets (E) or not $(\neg E)$.[22] Figure 1 displays this game.

Investor Incentives

As shown in Figure 1, if the foreign investor plays $\neg I$, both players receive zero. Suppose F chooses to invest. Denote ω as the value of his investment,[23] $\mu \cdot \omega$ as the portion he intends to repatriate $(\mu \in [0, 1])$, amid transfer restrictions t_0, and ϵ as the amount of repatriation he expedites, upon anticipating a transfer breach. Define $\lambda \cdot \epsilon$ as the cost of expedited repatriation $(\lambda \geq 0)$.[24] If the investor plays I, he receives a

[21] We assume that the host government seeks to maximize its utility (e.g. revenue, political gain, etc.). Expanding restrictions on capital repatriation takes earned revenues from foreign firms and creates "transfer rents" for the government. Similarly, expropriating assets or revenue streams creates "expropriation rents." In this paper, we make no assumption about how G intends to use this revenue.

[22] If G expropriates, this model assumes that F's intention to expedite repatriation is unrealized - that the assets will be seized in either case. This simulates the difference between endogenous risk, which can be mitigated by informational advantages and structural capabilities, and exogenous risk, which cannot. An alternative version could allow F to salvage *some* of his assets even in the case of outright expropriation.

[23] ω is a function of the investor's initial investment and the rate of return on that investment, which is a function of various indicators.

[24] A future model could analyze a more general cost function, $f(\epsilon)$, such that $f(0) = 0$ and $f'(\epsilon) \geq 0$.

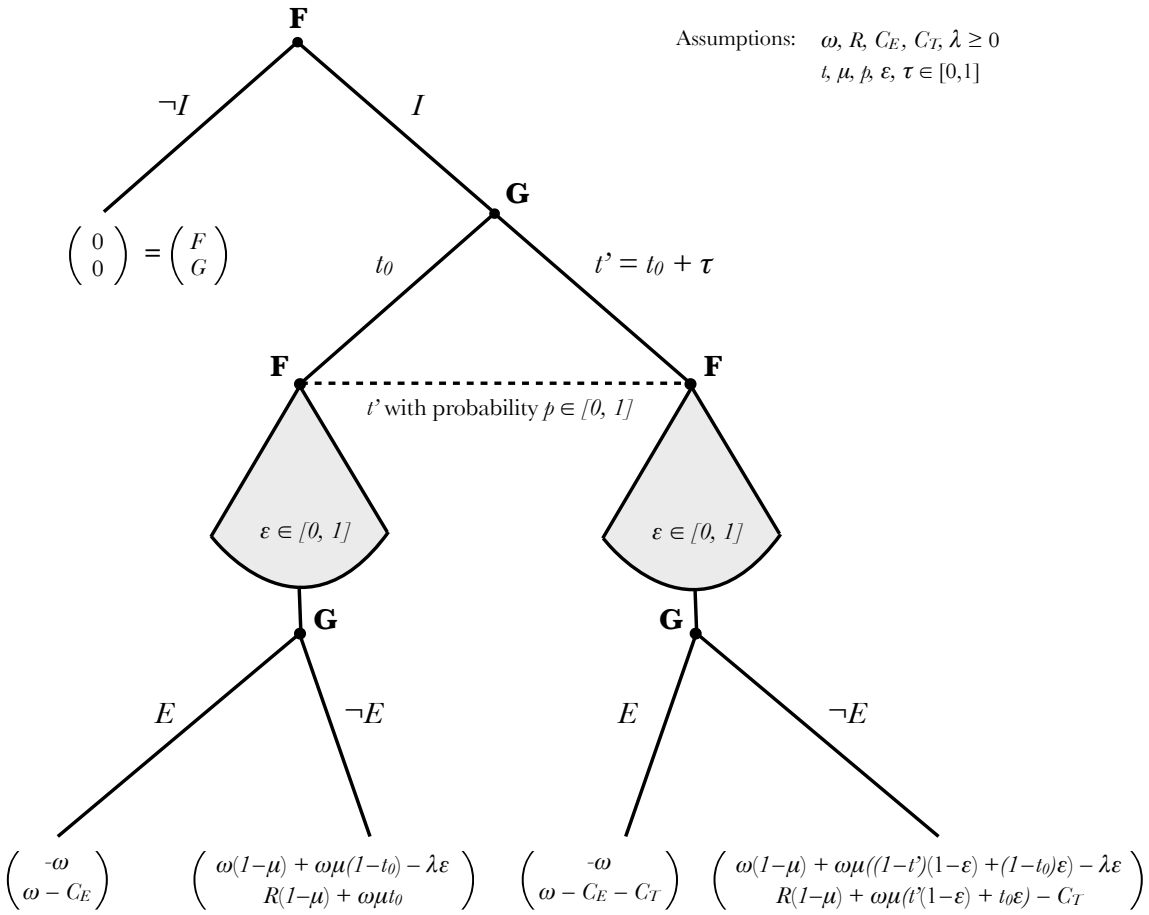

Figure 1: A two player extensive-form game in which a foreign investor (F) chooses whether or not to invest; a host government (G) chooses at what level (t) to set transfer restrictions on that investment; F chooses, before the new policy is announced, at what level to expedite repatriation (ϵ); and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

maximum of $(1-\mu)\omega + \mu\omega(1-t_0)$. 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). The investor receives a minimum of $-\omega$, when 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 ω, depending on how large p is and how lucrative the investment opportunity.

Government Incentives

Like the investor, the host government receives zero if F does not invest. Denote R as the government's share in the investment's value. R is a sum of the tax revenue and other benefits that accrue to the government from the investor's operation. If F invests and G upholds the original investment contract, G receives $\mu\omega t_0$ on the portion that F repatriates and $R(1-\mu)$ on the portion that F does not: $R(1-\mu) + \mu\omega t_0$.

Denote C_E and C_T as the costs of backlash G receives after expropriation or a unilateral increase in transfer restrictions, respectively.[25]

If G breaks the contract, selecting t', he receives $R(1-\mu)+\mu\omega t'(1-\epsilon)-C_T$ with the new transfer restrictions and $\mu\omega t_0\epsilon$ on the amount that F expedites before the policy shift: $R(1-\mu)+\mu\omega(t'(1-\epsilon)+t_0\epsilon)-C_T$. Finally, if the host government expropriates, he receives $\omega - C_E$.[26] 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.

To analyze the strategy of investment amid transfer risk, we define a subgame perfect Nash equilibrium in which: the expropriated assets are worth sufficiently little (ω) so that G prefers to play $\neg E$ rather than bear the costs of expropriation (C_E) (condition 1); the cost of expediting repatriation (λ) is sufficiently high so that F plays $\epsilon = 0$ (condition 2); Nature sets the costs of transfer breach (C_T) low enough for G to unilaterally increase transfer restrictions to t' (condition 3); and F prefers to invest, despite the p-probability of transfer breach (condition 4). Formally:

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

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

1. $\omega \leq \frac{R(1-\mu)+C_E}{1-\mu t'}$
2. $\lambda \leq \omega\mu\tau$
3. *N selects* $C_T \leq \omega\mu\tau$.
4. $p \leq \frac{1-\mu t_0}{\mu\tau}$.

See online appendix for proof.[27]

To summarize our model less formally, this is a game in which governments and investors maximize revenues (whether for economic of political gain), subject to each other's decisions. In the model, as in reality, expropriation and transfer restrictions are substitute means of wealth seizure, but can also occur alongside each other. They are distinct phenomena, and our model distinguishes between them in concrete ways. First, while the entire investment can be expropriated, transfer breach only applies to the repatriated profits.Second, increasing transfer restrictions may be followed by expropriation, but once assets are expropriated outright, transfer breach is no longer an option. Third, investors can better anticipate

[25] Below we elaborate on these costs; on how they derive from domestic institutional conditions such as bureaucratic transaction costs and veto players. We focus on domestic institutions for theoretical reasons (e.g. comparative statics analysis). While not unfeasible, it is unclear how foreign investment may affect these broader institutional characteristics, which often apply economy-wide or are set in a state's constitution. Public opinion as well, can shift with economic climate, but may be in support of or against foreign investment. For simplicity, the model assumes that the decision to invest does not have a clear affect on the broader institutional costs, one way or the other, as determined by Nature.

[26] Notice that ω may represent political value to G. In this paper we do not disentangle the ways in which a government may benefit (or not) from expropriation. This likely includes the addition of direct revenues, but it may also include either domestic audience costs or domestic audience rewards (e.g. in populist governments which trumpet an expropriation as an act of independence).

[27] URL REDACTED FOR REVIEW

and protect themselves from transfer risk than from expropriation. In other words, transfer restrictions target a very specific part of an investment and, primarily by accelerating or delaying profit repatriation, some firms can limit their losses in the face of such restrictions. In the next section, we further distinguish between these two types of risk.

At this point, we have demonstrated a logic for how transfer risk can accompany investment. Below, we analyze comparative statics from the model to determine how an increase in transfer risk affects the outcome supported in equilibrium.

Transfer Risk and Foreign Investment Volume

How does an increase in transfer risk affect the behavior of G and F in equilibrium?

We begin by assuming that G and F are in the *transfer risk equilibrium* specified in Proposition (1), in which F invests despite transfer restrictions, t'. Now assume that the probability of a unilateral transfer rent hike (t') increases from p to p^*, where $p^* > p$. At this new level of transfer risk, how is the equilibrium behavior affected? By inspection, we see that an increase in p affects condition 4, above: as p increases, condition 4 (F's minimum profit-threshold in order to invest) becomes more difficult to satisfy. Thus, in general, we expect that increases in transfer risk will lead to less investment.[28] This expectation is consistent with existing theory that host countries with higher levels of political risk receive less foreign investment.[29] However, we predict that transfer risk will have an *independent* negative effect on FDI, even when the risk of other types of creeping and outright expropriation is controlled for.

We test this prediction empirically and find support for it. However, given the unsurprising nature of these findings, we relegate them to our online appendix and focus instead on the three hypotheses that follow.

Political Constraints and Transfer Risk

While political risk can alienate potential investors and drive out existing firms, countries may be able to mitigate these risks by increasing the domestic constraints on government leaders. Constraints such as institutional veto players provide checks on discretionary behavior by the sovereign.[30] Governments may be willing to break commitments but are less able to do so when constrained. As the extant literature in political risk shows, constrained governments have lower levels of aggregate political risk.[31]

There are multiple mechanisms to explain compliance. Domestic institutional constraints are a key mechanism, but scholars also argue that reputation with investors[32] and sanctions from foreign governments or international organizations (international pressure)[33] can incentivize compliance. We do not debate that there is explanatory significance in international constraints. However, as a first step in a larger project,

[28] Note that investment losses may be due to less reinvestment but also less new investment.

[29] Jensen and Johnston 2011; Henisz 2000b.

[30] Cowhey 1993; Rogowski 1999; Henisz 2000a; Tsebelis 2002.

[31] Henisz and Zelner 2001; Henisz 2000b; Li and Resnick 2003; Jensen 2006; Li 2009; Weymouth 2011.

[32] Tomz 2007, 2010; Jensen 2006; Jensen and Johnston 2011; Sandleris 2008; Allee and Peinhardt 2010, 2011; Büthe and Milner 2008.

[33] Cole and English 1991; Kerner 2009; Elkin et al 2011; Biglaiser and DeRouen 2007.

we isolate *one* mechanism to achieve compliance - domestic political constraints – and reserve analysis of international constraints for future work.

But do domestic political constraints reduce transfer risk? Political constraints provide checks on arbitrary policy changes and make governments less willing to break their commitments. Put simply, political constraints increase the costliness of bad behavior. Denote ρ, where $\rho \in [0,1]$, as the likelihood that institutional checks on the executive will hold G accountable for the breach of compliance. In other words, ρ accounts for the depth of institutional constraints but also the likelihood that the relevant veto players will observe the breach, view the breach as deserving of sanction, and discharge their power to hold G accountable.[34] Denote c, where $c \in \mathbb{R}^+$, as the cost to G if held accountable. c accounts for how politically salient the transgression is. Together, the product $\rho \cdot c$ expresses the influence of institutional constraints on the government. For example, $\rho \cdot c$ may be large in political systems with strong constitutional checks and large sanctions for breaking a foreign investment contract. On the other hand, $\rho \cdot c$ may be small if there are strong constitutional checks but small sanctions (low salience) for such a violation (low c) or, alternatively, large sanctions (high salience) but weak checks (low ρ).

Define the costs of expropriation (C_E) and transfer breach (C_T) with respect to ρ and c. More formally, define $\rho_i \cdot c_i$, where $i \in \{E, T\}$ such that $C_i = \rho_i \cdot c_i$ and $\rho_i, c_i \geq 0$. In words, each type of political risk has a different cost to the government. As we argue below, these costs may be dramatically different for different types of breach.

Suppose that the host government undergoes political changes, increasing the political costs associated with contract breach.[35] Here, the overall backlash to either expropriating or capturing extra transfer rents increases from C_i to C_i', meaning that $\rho_i c_i \rightarrow \rho_i' c_i'$, where $\rho_i' c_i' = \rho_i c_i (1+\beta)$ and $\beta > 0$ is the amount by which the domestic shift increases costs.

With these new parameters, we now investigate the impact of tighter domestic political institutions on these two types of risk. We begin with expropriation. Looking at condition 1 (which determines the expropriation decision for G), as $C \rightarrow C'$, the host government will have less incentive to expropriate when:

$$\frac{R(1-\mu)+C_E'}{1-\mu t'} \geq \frac{R(1-\mu)+C_E}{1-\mu t'} \Rightarrow C_E' \geq C_E \Rightarrow \rho_E' c_E' \geq \rho_E c_E \Rightarrow$$
$$\rho_E c_E (1+\beta) \geq \rho_E c_E \Rightarrow \rho_E c_E \beta \geq 0,$$

which is satisfied by assumption (ρ, c, and β are all nonnegative). Thus, condition 1 becomes harder to satisfy as the depth of domestic political constraints increases. Our first hypothesis can be stated as follows:

Hypothesis 1: *Political constraints have a negative effect on expropriation risk.*

For transfer risk, we look at condition 3 ($C_T \leq \omega \mu \tau$) (which determines the transfer risk decision for G). The consequence is straightforward: $C \rightarrow C'$ will increase C_T, making it more costly for the host government to play t' in equilibrium (and will, for some projects, make transfer breach unaffordable). This creates the naive expectation that political constraints will also have a negative effect on transfer risk.

[34] For the remainder of the paper, 'contract breach' refers to a deviation from the agreement between investor and host government. It may represent either expropriation or transfer restrictions.

[35] These may include, for example, more extensive bureaucratic red tape, additional veto players to check government leaders, or policies that sanction contract breach.

However, as we proceed with the analysis below, we will see that political constraints can incentivize governments to substitute away from expropriation to a type of breach that is comparatively less costly, undermining their effectiveness as a tool for transfer risk mitigation.

The Differential Effect of Domestic Political Constraints

While the aggregate effect of domestic political constraints on risk is negative, constraints may elevate the severity of some risks relative to others. There is thus good reason to expect that political constraints will reduce the total level of rents that political actors extract from foreign investors in a given country, but they will also alter the choice governments make between seeking transfer rents or expropriation rents. We argue that political constraints reduce the collection of expropriation rents more than transfer rents. Our logic flows from the different political costs associated with collecting each type of rent, which we explain through the model.

Suppose that a government is deciding between expropriation and a transfer breach (i.e. unilateral transfer risk increase). To analyze this choice, we first define an equilibrium in which a government chooses between transfer breach and expropriation, depending on the state of nature, and then ask how domestic political constraints bear upon this decision.

Suppose G chooses between transfer restrictions and expropriation, subject to costs C_T and C_E. To analyze the strategy of investment amid both risks, we define a subgame perfect Nash equilibrium in which: the expropriated assets are worth enough (ω) so that G prefers to play E when he plays t_0, but not enough that he will commit both kinds of breach (which would be subject to multiple sanctions) (condition 1); the cost of expediting repatriation (λ) is sufficiently high so that F plays $\epsilon = 0$ (condition 2); Nature sets the costs of transfer breach and expropriation (C_T and C_E) low enough for G to play t' when G plays $\neg E$, but t_0 otherwise (condition 3); and F prefers to invest, despite the prospect of transfer breach or expropriation (condition 4). Formally:

Definition 2 *A **political risk equilibrium** is an equilibrium in which F plays {I, $\epsilon = 0$} and G plays $\{t', \neg E\}$ on the equilibrium path, playing $\{t_0, E\}$ otherwise.*

Proposition 2 *There is a political risk equilibrium when the following conditions hold:*

1. $\frac{R(1-\mu)+C_E}{1-\mu t_0} \leq \omega \leq \frac{R(1-\mu)+C_E}{1-\mu t'}$
2. $\lambda \leq \omega\mu\tau$
3. *N selects* $C_T \leq R(1-\mu) - \omega(1-\mu t') + C_E$.
4. $p \geq \frac{1}{2-\mu t'}$.

See appendix for proof.

In this context, what happens to expropriation risk (condition 1) and transfer risk (condition 3) as domestic political constraints increase? For expropriation risk, we can see from condition 1 ($\omega \geq \frac{R(1-\mu)+C_E}{1-\mu t_0}$), which determines the expropriation decision for G, that increasing C to C' will increase C_E, making it more difficult to satisfy the minimum ω-threshold for G to benefit from expropriation:

$$\frac{R(1-\mu)+C'_E}{1-\mu t_0} \geq \frac{R(1-\mu)+C_E}{1-\mu t_0} \Rightarrow C'_E \geq C_E \Rightarrow \rho'_E c'_E \geq \rho_E c_E \Rightarrow$$
$$\rho_E c_E(1+\beta) \geq \rho_E c_E \Rightarrow \rho_E c_E \beta \geq 0,$$

which is satisfied by assumption (ρ, c, and β are all nonnegative). Notice that, as in proposition 1, there is no ambiguity here: political constraints will disincentivize expropriation.

For transfer risk, however, the answer is less clear. Solving condition 3 for R ($R \geq \frac{\omega(1-\mu t')-C_E+C_T}{1-\mu}$), we see that G must account for both the costs of transfer breach and expropriation when making his decision about t_0 and t'. These costs however are oppositely signed; expropriation exists as an opportunity cost in the transfer restriction decision. A shift from C to C' will increase both C_T and C_E, making it more difficult to satisfy condition 3 when:

$$\frac{\omega(1-\mu t')-C'_E+C'_T}{1-\mu} \geq \frac{\omega(1-\mu t')-C_E+C_T}{1-\mu} \Rightarrow$$
$$-C'_T+C'_E \leq -C_T+C_E \Rightarrow -\rho'_T c'_T+\rho'_E c'_E \leq -\rho_T c_T+\rho_E c_E \Rightarrow$$
$$-\rho_T c_T(1+\beta_T)+\rho_E c_E(1+\beta_E) \leq -\rho_T c_T+\rho_E c_E \Rightarrow \frac{\beta_E}{\beta_T} \leq \frac{\rho_T c_T}{\rho_E c_E}.$$

So, we have a clear condition, but how do we interpret what it predicts? Specifically, when G can choose between expropriation and transfer restrictions, will an increase in political constraints mitigate transfer risk, relative to expropriation risk? We turn to the substance.

Governments are sensitive to both the political salience and distributive politics of public policy outcomes.[36] Existing work in international political economy has often divided competing policy choices by their political salience and costs.[37] Here we argue that transfer restriction and expropriation policies differ in their political salience and costs.

Transfer restrictions garner few headlines and typically fail to motivate opposition by core domestic interests. The policy actions involved, such as prohibitions and penalties on currency exchange, disproportionately affect foreign commercial interests repatriating capital.[38] Fixed assets and capital destined for domestic reinvestment or payment of local creditors and suppliers are not at risk. Indeed, restrictions on repatriation incentivize foreign investors to move their value chain onshore, which can benefit domestic interests.[39] Transfer restrictions are also less likely to be opposed by domestic constituencies in part because investor rights in this area remain contested. Transfer restrictions are still viewed by many as legitimate, even essential, tools of macro-economic management rather than as violations of the rule of law. In addition, because of the complex nature of the exchange policies involved, transfer restrictions may prove relatively easy for governments to hide from constituents.

[36] e.g. Grossman and Helpman 2001

[37] e.g. Frieden 1991; Brooks and Kurtz 2007.

[38] We acknowledge that some domestic actors, including importers, are also negatively affected, but it is foreign investors who are most likely to bear high costs.

[39] Jensen, Quinn, and Weymouth 2013.

Taking rents through expropriation, on the other hand, tends to be highly salient and costly to domestic interests. Expropriation is a high-profile event, and the tools through which the government expropriates are easily extended to domestic firms, even if the government promises that expropriation will be limited to only foreign firms. Once the government begins expropriating foreign firms its promise to refrain from expropriating domestic firms becomes less credible. Indeed scholars have found that countries that have expropriated private assets at least once are significantly more likely to expropriate again.[40] Equally problematic, the firm-level policies through which expropriation is implemented are viewed as inconsistent with a strong rule of law.[41] The very claimed selectiveness of expropriation - which can be interpreted as arbitrariness - elevates rule-of-law concerns. The more a government's actions are viewed as inconsistent with the rule of law, the greater the long-run economic costs in terms of lost investment, and thus the greater the domestic political costs.

The nature of each phenomenon creates a divide in how responsive they are to domestic politics. Expropriation triggers significantly more domestic opposition because it has higher salience with the domestic public ($c_E > c_T$) and because it is easier to observe and recognize as contract breach (higher profile) ($\rho_E > \rho_T$). This implies both that the level of domestic constraints has a stronger negative effect on expropriation risk than transfer risk and that increases in constraints have a similar differential effect ($\beta_E > \beta_T$). Thus, even if this asymmetry is small, $\frac{\beta_E}{\beta_T} \leq \frac{\rho_T c_T}{\rho_E c_E}$ will not be satisfied. Therefore, increasing domestic constraints has an ambiguous effect on transfer risk, possibly decreasing but perhaps even increasing transfer risk in absolute terms, as governments are forced to substitute away from expropriation, which has become too costly. Notice that this is non-obvious at the outset of the game, and indeed challenges the conventional wisdom that greater political constraints reduce political risks of all kinds.

Hypothesis 2: *Political constraints have an ambiguous effect on the level of transfer risk.*

With this revised intuition in hand, we analyze the comparative effect of political constraints. In the two comparative statics above, we see that an increase in political constraints will increase expropriation risk by $c_E\beta_E$ and transfer risk by $-c_T\beta_T + c_E\beta_E$. Comparing each effect against each other, we see that, when governments can choose between the two forms of breach, increasing domestic political constraints will have a more dramatic effect on expropriation when:

$$c_E\beta_E \geq -c_T\beta_T + c_E\beta_E \Rightarrow c_T\beta_T \geq 0,$$

which is satisfied by assumption (c and β are nonnegative). Notice that, while we previously relied on assumptions to adjudicate whether domestic constraints decrease transfer risk, the assumptions are not necessary here (nor were they needed to demonstrate that domestic constraints reduce the incentive to expropriate). The result is unambiguous: tightening political constraints will have a greater effect on expropriation risk than transfer risk.[42] Figure 2 displays the intuition graphically.

[40] Tomz and Wright 2010.

[41] Jensen 2006; Staats and Biglaiser 2012.

[42] An alternative way of understanding our theory is that expropriations are too salient for veto players to reach a consensus decision on, but transfer restrictions are more technical, more hidden, and less costly for veto players reach a decision.

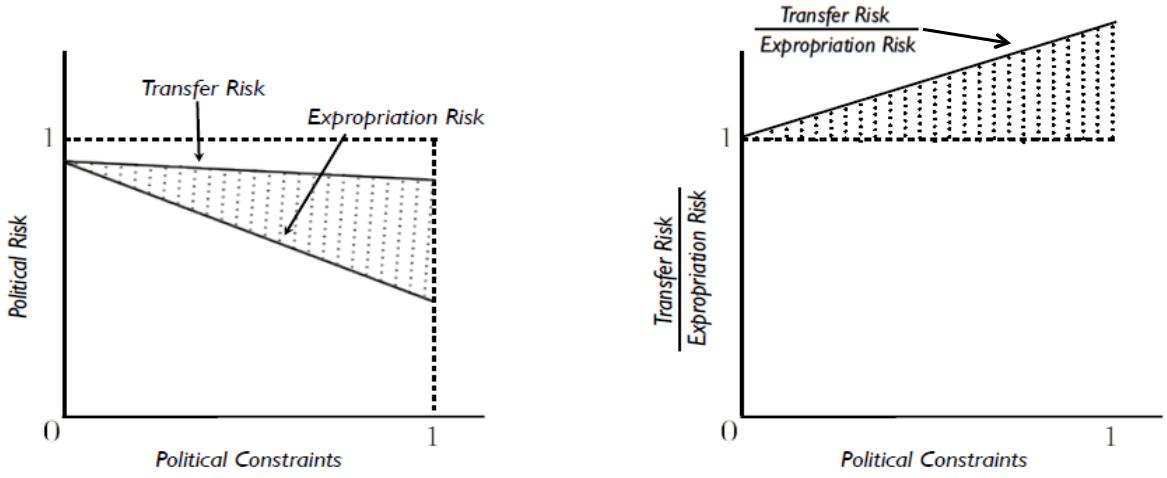

Figure 2: Illustrations of how political constraints map onto transfer risk and expropriation risk (LHS), and how increasing political constraints may elevate the severity of some risks relative to others (RHS).

Consequently, we argue that the more constrained the government, the more likely it is to prefer transfer rents over expropriation rents:[43] thus, while an increase in political constraints ($C \rightarrow C'$) may provide disincentives for both expropriation and transfer risk (H1 and H2), it incentivizes G to prefer transfer rents relative to expropriation rents for a larger set of investment projects. The last empirically testable hypothesis can be specified as follows:

> ***Hypothesis 3:*** *Governments facing greater domestic political constraints are more likely to choose transfer restrictions over expropriation.*

More broadly, this logic suggests that, while increasing political constraints improves the overall risk environment, these improvements are not equal across risk types (i.e. transfer risk is increased relative to expropriation risk). Constrained sovereigns continue to steal. They lose one weapon (expropriation) but retain an effective alternative (transfer restrictions). In the next section we test these hypotheses using novel time-series-cross-sectional data from the political risk insurance industry.

Empirical Strategy

To test Hypotheses 1 and 2 it is necessary to assess the effect of political constraints on expropriation risk and on transfer risk, and to compare the sizes of these effects. Here, we are less concerned with reverse causation than one might be in models using political risk to predict investment flows – we do not expect that the level of political risk causes changes in the number of veto-player type political constraints in a country. Therefore, we use a linear panel model with country fixed effects and year dummies as our primary specification (results are robust to systems GMM estimation and estimation via Seemingly Unrelated Regressions as well).

[43] Note that firm variation also matters: some firms are more vulnerable to expropriation and others are more vulnerable to transfer risk. We leave this nuance aside for now, but address it in a subsequent article. We also note recent advances in the trade literature on heterogeneous firms (Jensen, Quinn, and Weymouth 2013).

To test Hypothesis 3, we estimate the effects of political constraints on the ratio of transfer risk to expropriation risk. The dependent variable is specified simply as $ratio = \frac{transfer\ risk}{expropriation\ risk}$. Both *transfer risk* and *expropriation risk* have a standard deviation of one and a minimum value of 1. As with H2 and H3, we use a linear panel regression with country fixed effects and year dummies as the primary specification.

One of the most direct implications of our model is that an increase in transfer risk should cause a decrease in inward FDI. This expectation is not particularly controversial, and thus we relegate a full discussion of our empirical test of this expectation to the online appendix. Our results there show that transfer risk has a substantively large and statistically significant negative effect on inward FDI. These effects are stronger, both substantively and statistically, than the effects we estimate for expropriation risk.

Data and Sample

For all analyses, we restrict the sample to developing countries only.[44] The wealth restriction limits us to 157 countries, of which 139 are covered by both our data on political risk and our data on political constraints.[45]

Data on political risk is drawn from the Credendo Group.[46] The Credendo Group is the world's largest political risk insurer and the price leader in the industry. Credendo's assessments of risk reflect not only capital-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. The Credendo (ONDD) data are used cross-sectionally by Jensen (2008), but a newly obtained time-series-cross-section version of the data is used for the first time here.

We use Credendo data on government risk, which is the risk of outright expropriation or "adverse government action" (i.e. creeping expropriation); and *transfer risk*, which refers to the risk that action by foreign governments, such as the introduction of convertibility constraints, prevents the transfer of capital back to the investor's home country. For clarity, we refer to Credendo's measure of government risk as *expropriation risk*. Data on transfer risk are available back to 1994, while data on expropriation risk are available only back to 2002. Each variable is coded on a scale of 1-7, which we then rescale to a standard deviation of one. Both risk ratings reflect long-term (e.g. 5-15 year) risk assessments. For additional summary statistics and details on Credendo data construction, including alternate specifications using de facto capital control on outflows measures, please see the appendix.

We use Henisz's (2000a) measure of political constraints, which ranges from 0 to 1. *Political constraints* measures the feasibility of government policy change based on veto players, party alignment, and preferences. In the online appendix, we substitute in the executive constraints measure from Polity IV[47] and find similar results.

[44] See Blonigen and Wang (2005) for a discussion of why developed and developing economies should not be pooled in this or similar contexts.

[45] To eliminate problems that would arise with countries entering or exiting the sample over time, we define developing countries as those that fall below the World Bank threshold for High Income Countries in 2002, which is the first year of our sample in most analyses.

[46] Credendo Group (2015). The data was originally created by the Office National Du Ducroire (ONDD), which has since been subsumed by the Credendo Group. Historical data is available via the IPE Data Resource (Graham 2015).

[47] Marshall and Jaggers 2004.

Data on the host country's GDP per capita, population, natural resource exports (as a share of total exports), foreign reserves, inflation, and trade volume (as a share of GDP) are taken from the World Development Indicators.[48] Data on BITs comes from Allee and Peinhardt (2010), Hicks and Johnson (2011) and UNCTAD (2013).[49] Data on *de jure* currency regimes, *pegged*, *crawling*, and *floating* are from the IMF.[50] The data on left governments are drawn from the Database of Political Institutions.[51]

Results

Hypothesis 1 states that more constrained governments expropriate less, while hypothesis 2 predicts an ambiguous relationship between constraints and transfer risk. Table 1 presents results from four regressions, two testing Hypothesis 1 and two testing Hypothesis 2. Models 1 & 3 estimate linear panel models with country fixed effects, Models 2 & 4 estimate similar models without country fixed effects (GLS). All models include year fixed effects, which control for both time trends and global capital shocks. The results are robust to (and indeed stronger in) systems GMM estimation and a Seemingly Unrelated Regressions (SUR) approach. The SUR results are in the online appendix.

Consistent with Hypothesis 1, Models 1 and 2 show a robust negative relationship between *political constraints* and *expropriation risk*. This result also holds in additional specifications shown in the appendix. The relationship between *political constraints* and *transfer risk*, shown in Models 3 and 4, is near zero, which is consistent with Hypothesis 2. The estimated effect is slightly positive in the specifications shown, weakly negative in one of the additional models in the appendix. Comparing the substantive effects between the two linear models with country fixed effects, we see that a one-standard deviation increase in *political constraints* is associated with a 0.6 standard deviation decrease in *government risk* (Model 1) and a 0.04 standard deviation increase in *transfer risk* (Model 3).

We can take this analysis one step farther and test whether the effect of *political constraints* on *government risk* that we estimate is more negative than the effect we estimate on *transfer risk*. Conducting a simple z-test, we are able to reject the null hypothesis of no difference ($p<.05$) for both pairs of models.[52] Domestic political constraints are more effective at constraining governments from expropriating than from imposing transfer restrictions.

Turning to the covariates in these regressions, we see that all significant effects are consistent with theory. When countries are wealthier they have lower levels of both types of risk. Large foreign reserves and lower inflation are associated with lower levels of transfer risk. BITs have a negative effect on both types of risk, though they appear to have a greater constraining effect on expropriation risk.

[48] We log GDP per capita, reserves, inflation, and population.

[49] We take the log of the total number of BITs a country has signed plus one.

[50] See Ilzetski, Reinhardt, and Rogoff 2008.

[51] Beck et al. 2001.

[52] For each pair of models (1 & 3, 2 & 4), we take the regression coefficient on *political constraints* ($\hat{\beta}$) and its standard error (se), and enter it into the following equation to compute a z-score: $\frac{\hat{\beta}_{m1}-\hat{\beta}_{m3}}{\sqrt{(se^2_{m1}+se^2_{m3}}}$.

Table 1: The Effect of Political Constraints on Expropriation and Transfer Risk

	DV = Expropriation Risk		DV= Transfer Risk	
	(1)	(2)	(3)	(4)
	FE	RE	FE	RE
Political Constraints	-0.613**	-0.632**	0.035	0.053
	(0.287)	(0.247)	(0.148)	(0.147)
Trade (% of GDP)	0.005*	0.002	-0.001	-0.001
	(0.003)	(0.002)	(0.003)	(0.002)
GDP Per Capita (logged)	-0.327	-0.337***	-0.736***	-0.461***
	(0.374)	(0.105)	(0.260)	(0.077)
Natural Resource Exports	0.005	0.006***	0.000	0.002
	(0.004)	(0.002)	(0.002)	(0.002)
BITs to Date (logged)	-0.462**	-0.265***	-0.118	-0.104
	(0.202)	(0.093)	(0.107)	(0.079)
Pegged Ex. Rate	0.050	0.099	-0.118	-0.154*
	(0.105)	(0.087)	(0.089)	(0.083)
Crawling Ex. Rate	-0.003	0.017	-0.035	-0.057
	(0.089)	(0.076)	(0.073)	(0.070)
Reserves (logged)	0.055	0.026	-0.079	-0.101**
	(0.082)	(0.082)	(0.049)	(0.048)
Inflation (logged)	0.095	0.210**	0.202***	0.201***
	(0.095)	(0.082)	(0.056)	(0.050)
GDP Growth	0.008*	0.006	-0.002	-0.005
	(0.004)	(0.005)	(0.004)	(0.004)
EU Member		-0.214**		-0.360**
		(0.106)		(0.150)
Eurozone Member		0.153		-0.708***
		(0.243)		(0.169)
Population (logged)		0.113		-0.080
		(0.087)		(0.065)
Country Fixed Effects	YES	NO	YES	NO
Year Dummies	YES	YES	YES	YES
Constant	4.440	2.540***	10.342***	10.119***
	(3.166)	(0.976)	(2.138)	(0.774)
Observations	738	738	1364	1364
R^2	0.164		0.365	

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$
Sample restricted to developing countries only.
All models report heteroskedasticity-robust standard errors.

Testing Hypothesis 3: Constraints and the Risk Ratio

Hypothesis 3 reformulates the predictions from H2 and H3 and states that more constrained governments are more likely to choose transfer restrictions over expropriation. If more constrained governments choose transfer restriction over expropriation, then countries with more constraints should be characterized by a higher ratio of transfer risk to expropriation risk. The dependent variable is the ratio of *transfer risk* to *expropriation risk* such that a positive coefficient indicates that an independent variable increases *transfer risk* relative to *expropriation risk*.

Consistent with Hypothesis 3, Table 2 shows a positive and statistically significant effect of political constraints on the ratio of transfer risk to expropriation risk. This is consistent with the theoretical expectation that more heavily constrained executives are more likely to choose to extract transfer rents, rather than engage in creeping or outright expropriation. A one standard deviation increase in political constraints over time is associated with a 0.17 standard deviation rise in the ratio of transfer risk to expropriation risk. This result provides an alternative confirmation of the simple comparison of effect sizes via z-tests. As political constraints increase, governments reduce expropriation but continue to impose transfer restrictions, increasing the severity of transfer risk relative to expropriation risk.

Also worth discussing, as trade volumes increase, transfer risk falls relative to expropriation risk. The models in Table 1 estimate only a small negative effect of trade on transfer risk, but the direction of effect is consistent with theory. Higher levels of trade increase the degree to which transfer restrictions harm not just foreign investors, but also domestic importers and domestic consumers of imported goods. This drives up the collateral damage associated with transfer restrictions (i.e. increases C_T), decreasing the government's payoffs from transfer restrictions both in absolute terms and relative to expropriation.

In the online appendix we demonstrate the robustness of these results to a range of alternative specifications including alternative measures of political constraints and the inclusion of a dummy variable for left government and the interaction between left government and constraints.

Implications of Results

The tests of Hypotheses 1-3 support our theoretical expectation that increased constraints on the executive are more effective in preventing expropriation than from stopping the imposition of transfer restrictions. Indeed, we do not find that domestic political constraints limit transfer risk at all. Constrained governments continue to collect rents from foreign firms; they have lost one tool, but retain others. As expropriation becomes more costly for the government, transfer risk begins to make up a larger proportion of the total political risk faced by firms, possibly even increasing in absolute terms.

These results hold up across a wide range specifications. Humility is always necessary when attempting to make causal inference on the basis of observational data. However, the tests presented here put our (causal) theory at substantial risk of falsification, and we fail to falsify it. It remains possible that our findings can be attributed to omitted variable bias or some other confound, but we do not consider it likely.

Table 2: The Effect of Political Constraints on Risk Ratio

	(1) FE	(2) RE
Political Constraints	0.356**	0.312**
	(0.165)	(0.138)
Trade (% of GDP)	-0.003	-0.002*
	(0.002)	(0.001)
GDP Per Capita (logged)	0.133	0.060
	(0.209)	(0.059)
Natural Resource Exports	-0.003	-0.002**
	(0.002)	(0.001)
BITs to Date (logged)	0.083	0.090*
	(0.153)	(0.054)
Pegged Ex. Rate	-0.017	-0.056
	(0.070)	(0.061)
Crawling Ex. Rate	0.070	0.030
	(0.059)	(0.053)
Reserves (logged)	-0.008	-0.048
	(0.069)	(0.043)
Inflation (logged)	-0.042	-0.063
	(0.081)	(0.075)
GDP Growth	-0.006*	-0.006*
	(0.004)	(0.003)
EU Member		0.057
		(0.138)
Eurozone Member		-0.936***
		(0.130)
Population (logged)		-0.136**
		(0.054)
Country Fixed Effects	YES	NO
Year Dummies	YES	YES
Constant	0.648	4.427***
	(1.736)	(0.623)
Observations	745	745
R^2	0.069	

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$
Sample restricted to developing countries only.
All models report heteroskedasticity-robust standard errors.

Conclusion and Future Research

From an investor perspective, transfer risk has emerged in the 21st century as the most ubiquitous and most concerning violation of international property rights. While other types of political risk can be substantially lowered by veto-player-type domestic constraints, we show that even constrained governments continue to use transfer restrictions to extract wealth from foreign firms, a process that can produce substantial collateral damage to the economy. We strive to build a foundation for the study of transfer risk, on its own and as an important subset of creeping expropriation. We hope this study provides insight into the structure of government compliance with the property rights claimed by foreign investors, the implications of ongoing contestation regarding the scope of those rights, and the limits of domestic veto players as a constraint on government behavior in the international arena.

Our primary contribution is to introduce and test a theory of transfer risk as the outcome of the host country's domestic politics. In particular, we identify how expropriation and transfer restriction are strategic means for governments to seize rents from foreign investors. Expropriation can generate larger short-term revenues than restrictions on foreign exchange transfer, and this makes governments more willing to expropriate, all else being equal. But expropriation is more politically costly for constrained governments than seeking transfer rents. Expropriations are highly salient violations of well established property rights, whereas transfer policies violate a contested "right" of foreign investors, are difficult to observe, and provoke less domestic opposition. Governments that are constrained by more veto players and by the heterogeneous preferences of domestic political actors are less able to pursue costly expropriations, but are still able to seize revenues through transfer restrictions. We show empirically that more constrained governments continue to pursue transfer rents even when political constraints render expropriation infeasible.

Given the nascent stage of research on transfer risk, there remain a variety of questions to drive future research. For example, how does transfer risk affect the composition of a country's capital flows if there are systematic differences across different types of foreign investors? To what extent can investors foresee and manage transfer and expropriation risks, and how do those mitigating strategies affect their exposure to other risks? Most importantly, can the field move toward a more comprehensive model of political risk and foreign investment that incorporates both different types of risk and different types of foreign investors?

One of the implications of our theory is that, if an international consensus were to emerge that foreign investors possess a right to free and unfettered repatriation of assets, then domestic political constraints would become more effective in constraining governments from imposing transfer restrictions. Should such a consensus emerge in the future, we will have the opportunity to test this implication, giving us more empirical traction on the reason why domestic political constraints are currently ineffective at limiting transfer risk.

The security of property rights is a classic topic in the social sciences; inherently challenging because governments are simultaneously the protector and perpetrator, and because the scope of these rights continues to evolve over time. When violations occur in foreign countries, and when host governments can use the sophisticated tools of the modern economy, the puzzle is especially daunting. We hope that, by establishing the substantive importance of transfer risk, and by advancing and testing theory regarding governments' choice between the collection of transfer rents and expropriation rents, we have laid the groundwork for an expanded research agenda in this area.

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Appendix

Proof of Proposition 1

Using the process of backwards induction, we begin with the final move of the game; the government's expropriation decision. First, assume that the investor (F) does not expedite the repatriation of his capital ($\epsilon = 0$) (we provide this condition below).

Suppose the government (G) chooses transfer breach (t'). G will play $\neg E$ when his payoff for expropriation ($\omega - C_E - C_T$) is less than his payoff for not expropriating ($R(1-\mu) + \omega\mu(t'(1-\epsilon) + t_0\epsilon) - C_T$). Solving for ω, this condition reduces to:

$$\omega \leq \frac{R(1-\mu) + C_E}{1 - \mu t'}. \tag{1}$$

Suppose that the government chooses t_0, instead. G will play $\neg E$ when his expropriation payoff ($\omega - C_E$) is less than his payoff for not expropriating ($R(1-\mu) + \omega\mu t_0$). Solving for ω, this condition reduces to:

$$\omega \leq \frac{R(1-\mu) + C_E}{1 - \mu t_0}.$$

Notice that, because $t' \geq t_0$, this condition is satisfied by condition 1. Working backwards, we look at the investors decision to expedite his repatriation at level ϵ.

The investor will select the amount to expedite which maximizes his expected payoff. While G knows his transfer policy (t) before it goes into effect, F only sees a probability p of a change to t'. If G does not change transfer policy, F will always prefer not to expedite repatriation:

$$\frac{\partial}{\partial \epsilon}\left(\omega(1-\mu) + \omega\mu(1-t_0) - \lambda\epsilon\right) \leq 0 = -\lambda \leq 0 \Rightarrow \lambda \geq 0$$

(which is satisfied by assumption). If G instead plays t', F's preference is conditional. For this SPE, we are looking for a condition under which F will play $\epsilon = 0$. We see that increasing ϵ decreases F's payoff ($\omega(1-\mu) + \omega\mu[(1-t')(1-\epsilon) + (1-t_0)\epsilon] - \lambda\epsilon$) when the first derivative with respect to ϵ is negative. Solving for λ, this reduces to:

$$\lambda \leq \omega\mu\tau. \tag{2}$$

Thus, when $\lambda \leq \mu\omega\tau$, $\epsilon = 0$ is optimal, regardless of p!

Continuing the backwards induction, with G playing $\neg E$ and and F selecting $\epsilon = 0$, we now look at G's choice of transfer policy. He will choose t' when the payoff for playing t_0 ($R(1-\mu) + \omega\mu t_0$) is less than the payoff for playing t' ($R(1-\mu) + \omega\mu t' - C_T$). Solving for C_T, the condition reduces to:

$$C_T \leq \omega\mu\tau. \tag{3}$$

In this equilibrium, we assume that $C_T \leq \omega\mu\tau$, but that F does not know for sure; he sees a p-likelihood of it being satisfied. Finally, with conditions 1, 2, 3, and 4, we now analyze the first move of the game: F's decision to invest or not.

F faces a lottery. He will play I when his expected payoff for investing is greater than his break-even point of not investing (0). Given the probability of transfer breach (p), and the expectation of the moves above, F's expected payoff for investing is a weighted average of his payoff in the case of transfer breach ($\omega(1-\mu)+\omega\mu(1-t')$) and no breach ($\omega(1-\mu)+\omega\mu(1-t_0)$): $p[\omega(1-\mu)+\omega\mu(1-t')]+(1-p)[\omega(1-\mu)+\omega\mu(1-t_0)]$. Comparing this weight average to the payoff for not investing (0), and solving for p, we see that F will play I when:

$$p \leq \frac{1-\mu t_0}{\mu\tau}. \tag{4}$$

In words, if F attributes the probability of transfer breach as greater than $\frac{1-\mu t_0}{\mu\tau}$, he will not invest.

We conclude that if $\omega \leq \frac{R(1-\mu)+C_E}{1-\mu t'}$, $\omega \leq \frac{R(1-\mu)+C_E}{1-\mu t_0}$, $\lambda \leq \omega\mu\tau$, N plays $C_T \leq \omega\mu\tau$, and $p \leq \frac{1-\mu t_0}{\mu\tau}$, a transfer risk equilibrium (as defined in proposition 1) exists for the game.

Proof of Proposition 2

We again use the process of backwards induction, beginning with the final move of the game. In this equilibrium however, G chooses between expropriation and transfer breach.

Suppose that the government (G) chooses transfer breach (t') and the investor does not expedite the repatriation of his capital ($\epsilon = 0$). G will play $\neg E$ when his payoff for expropriation ($\omega - C_E - C_T$) is less than his payoff for not expropriating ($R(1-\mu)+\omega\mu(t'(1-\epsilon)+t_0\epsilon) - C_T$). Solving for ω, this condition reduces to:

$$\omega \leq \frac{R(1-\mu)+C_E}{1-\mu t'}. \tag{5}$$

Suppose that the government chooses t_0, instead. G will play E when his expropriation payoff ($\omega - C_E$) is greater than his payoff for not expropriating ($R(1-\mu)+\omega\mu t_0$). Solving for ω, this condition reduces to:

$$\omega \geq \frac{R(1-\mu)+C_E}{1-\mu t_0}. \tag{6}$$

Working backwards, we look at the investors decision to expedite his repatriation at level ϵ.

The investor will select the amount to expedite which maximizes his expected payoff. While G knows his transfer policy (t) before it goes into effect, F only sees a probability p of a change to t'. If G does not change transfer policy, F will always prefer not to expedite repatriation:

$$\frac{\partial}{\partial \epsilon}\left(\omega(1-\mu)+\omega\mu(1-t_0)-\lambda\epsilon\right) \leq 0 = -\lambda \leq 0 \Rightarrow \lambda \geq 0$$

(which is satisfied by assumption). If G instead plays t', F's preference is conditional. For this subgame perfect Nash equilibrium, we are looking for a condition under which F will play $\epsilon = 0$. We see that increasing ϵ decreases F's payoff ($\omega(1-\mu)+\omega\mu[(1-t')(1-\epsilon)+(1-t_0)\epsilon]-\lambda\epsilon$) when the first derivative with respect to ϵ is negative. Solving for λ, this reduces to:

$$\lambda \leq \omega\mu\tau. \tag{7}$$

Thus, when $\lambda \leq \mu\omega\tau$, $\epsilon = 0$ is optimal, regardless of p.

Continuing the backwards induction, with F selecting $\epsilon = 0$, we now look at G's choice of transfer policy. He will choose t' when the payoff for playing t_0 ($\omega - C_E$) is less than the payoff for playing t' ($R(1-\mu)+\omega\mu t' - C_T$). Solving for C_T, the condition reduces to:

$$C_T \leq R(1-\mu)-\omega(1-\mu t')+C_E. \tag{8}$$

In this equilibrium, we assume that $C_T \leq R(1-\mu)-\omega(1-\mu t_0)+C_E$, but that F does not know for sure; he sees a p-likelihood of it being satisfied. Finally, with conditions 1, 2, 3, and 4, we now analyze the first move of the game: F's decision to invest or not.

F faces a lottery, but this time, he faces both expropriation and transfer breach. He will play I when his expected payoff for investing is greater than his break-even point of not investing (0). Given the probability of transfer breach (p), and the expectation of the moves above, F's expected payoff for investing is a weighted average of his payoff in the case of transfer breach ($\omega(1-\mu)+\omega\mu(1-t')$) and no breach ($-\omega$): $p[\omega(1-\mu)+\omega\mu(1-t')]+(1-p)(-\omega)$. Comparing this weight average to the payoff for not investing (0), and solving for p, we see that F will play I when:

$$p \geq \frac{1}{2-\mu t'}. \tag{9}$$

In words, if F attributes the probability of transfer breach as less than $\frac{1}{2-\mu t'}$, he will not invest.

We conclude that if $\omega \leq \frac{R(1-\mu)+C_E}{1-\mu t'}$, $\omega \geq \frac{R(1-\mu)+C_E}{1-\mu t_0}$, $\lambda \leq \omega\mu\tau$, N plays $C_T \leq R(1-\mu)-\omega(1-\mu t')+C_E$, and $p \geq \frac{1}{2-\mu t'}$, a political risk equilibrium (as defined in proposition 2) exists for the game.

Additional Details Regarding the Credendo Group (ONDD) Data

Data based on expert assessments are frequent in the political science literature, but they have some drawbacks.[A1] First, experts may partially base their assessments of political risk on proxies like investment flows, generating a spurious correlation between investment flows and political risk.[A2] If this bias is present in the Credendo data, it would lead to an artificially strong negative correlation between FDI flows and both transfer risk and expropriation risk; our results show that, counter-intuitively, the negative relationship between expropriation risk and FDI is fairly weak, indicating that this bias, if it exists, is not strong (see Table A3). Similarly, conventional wisdom would suggest that political constraints are associated with lower levels of transfer risk which, consistent with our theory, we do not find (See Table 1 in the body of the paper).

Also reassuring, Credendo's scoring is not just an expert assessment, it is also the central determinant of a price - the price firms may pay to buy insurance that transfers liability for a given political risk off of themselves and onto Credendo (individual contract prices are, unfortunately, strictly confidential). When Credendo makes errors in its assessments, it loses money, enforcing some discipline on the quality of their measurement.

While risk data are issued annually, a team at Credendo 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.[A3] Therefore, the annual measure of risk assigned by Credendo can best be interpreted as the level of risk in Q4 of the year in question.

Assessing *De Facto* Measures of Transfer Restriction

We also draw on new data on capital controls from Fernandez et al. (2015) to assess the validity of the Credendo measures we rely on in the body of the paper and to add some empirical evidence to the our theoretical discussion of the distinction between capital controls on outflows and capital controls on inflows.[A4] Fernandez et al. offer binary measures of whether there are restrictions of any form in place on capital outflows or capital inflows across a variety of asset classes (e.g. direct investment, portfolio equity, bonds, real estate). They also construct two additive indices, *kao* (controls on outflows) and *kai* (controls on inflows), that capture the proportion of asset classes across which a government imposes restrictions. To use restrictions on direct investment as an example, within our sample of developing countries 45% of country-years have restrictions on inflows and 48% have restrictions on outflows; 27% have restrictions on both.

The two indices, *kao* and *kai*, are highly correlated ($\rho = 0.82$); countries that have controls on inflows also tend to have controls on outflows. However, an examination of the relationship between these indices and the Credendo measures of transfer risk and expropriation risk offers support for our decision to treat these two types of capital control as analytically distinct.

[A1] e.g. Andersson and Heywood 2009; Keman 2007.

[A2] See Knack (2006) on corruption measures and growth.

[A3] Jensen 2008.

[A4] These measures were originally developed by Schindler (2009). They quantify information provided in the Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER) issued by the International Monetary Fund (IMF).

Table A1 presents the results from regressions in which the Credendo risk measures are used to predict the scope of restrictions of capital inflows and capital outflows. Due to the high correlation between controls on inflows and controls on outflows, we include controls on inflows in some of our models of controls on outflows and vice versa.

These regressions allow us some empirical purchase on three assertions that we make in the paper: 1). Capital controls on outflows are distinct from capital controls on inflows; 2). transfer risk is distinct from expropriation risk; and 3). transfer risk is a valid measure of the risk of costly restrictions on capital outflows. If the Credendo transfer risk rating is a valid measure of the risk of costly transfer restrictions, then transfer risk should be positively correlated with the Fernandez et al. measure of capital controls on outflows. If capital controls on inflows are distinct from capital controls on outflows, then a similarly strong positive correlation should NOT exist between transfer risk and capital controls on inflows. If transfer risk is distinct from expropriation risk, then a strong positive relationship should also not be expected between expropriation risk and capital controls on outflows.

Table A1: Transfer Risk and De Facto Capital Controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	DV = Controls on Outflows				DV = Controls on Inflows			
Transfer Risk	0.035***	0.046***	0.038*	0.049**	-0.023*	-0.038***	-0.021	-0.035
	(0.012)	(0.010)	(0.022)	(0.019)	(0.012)	(0.010)	(0.027)	(0.025)
Expropriation Risk	0.019*	-0.006	0.018	-0.001	0.038***	0.034***	0.035	0.029
	(0.011)	(0.012)	(0.022)	(0.024)	(0.011)	(0.011)	(0.023)	(0.023)
Controls on Inflows		0.629***		0.520***				
		(0.049)		(0.105)				
Controls on Outflows						0.440***		0.365***
						(0.031)		(0.090)
Country FE	NO	NO	YES	YES	NO	NO	YES	YES
Constant	0.353***	0.105**	0.352***	0.134	0.414***	0.249***	0.419***	0.291***
	(0.063)	(0.050)	(0.086)	(0.088)	(0.058)	(0.042)	(0.099)	(0.091)
Observations	683	683	683	683	683	683	683	683
R^2			0.024	0.209			0.026	0.211

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$
Sample restricted to developing countries only.
All models report heteroskedacticity-robust standard errors.

Consistent with our expectations, Table A1 shows a strong positive correlation between transfer risk and capital controls on outflows. We actually estimate a negative relationship between transfer risk and capital controls on inflows, indicating that transfer risk is indeed a measure of restrictions on capital outflows in particular and not simply a measure of capital controls generally. Similarly, the relationship between expropriation risk and capital controls on outflows is weak with varying sign. These results provide empirical support for both the validity of the Credendo transfer risk rating as a measure of the expected losses imposed on firms via transfer restrictions and for our theoretical argument that transfer risk is distinct from capital controls on inflows.

Also of note, we see some evidence of a positive relationship between expropriation risk and capital controls on inflows. One plausible explanation for this is that the type of governments that engage in creeping and outright expropriation also tend to intervene heavily in the economy and tend to make efforts to protect domestic firms from foreign competition in particular.

Summary Statistics

Table A2 presents summary statistics for all variables used in the analysis. Note that, while the the dataset runs from 1994 to 2012, data on *expropriation risk* goes back only through 2002, which shortens the panel in most analyses.

Table A2: Summary Statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
FDI Inflows	2537	13587.899	-20933.508	331591.711	2651
FDI (logged)	19.109	2.83	2.303	26.527	2508
Political Constraints (Henisz)	0.25	0.204	0	0.688	2624
Transfer Risk	3.811	1	1	4.879	2716
Expropriation Risk	2.844	1	1	4.863	1298
Ratio	1.389	0.445	0.46	2.968	1298
Trade (% of GDP)	82.613	42.027	0.309	531.737	2537
GDP Per Capita	2666.342	2719.221	50.042	15171.682	2702
GDP Per Capita (logged)	7.335	1.127	3.913	9.627	2702
Reserves (total)	18628.367	138853.998	0.041	3387512.975	2505
Reserves (logged)	20.915	2.293	10.617	28.851	2505
Natural Resource Exports	24.733	27.846	0	99.740	1870
Pegged Ex. Rate	0.405	0.491	0	1	2061
Crawling Ex. Rate	0.386	0.487	0	1	2061
BITs to Date	10.375	12.739	0	85	2939
BITs to Date (logged)	1.808	1.189	0	4.454	2939
Population	36002307.886	139998571.354	9188	1350695040	2810
Population (logged)	15.584	2.037	9.125	21.024	2810
Inflation	32.601	517.923	-18.109	23773.132	2314
Inflation (logged)	3.35	0.525	0	10.077	2314
EU Member	0.023	0.15	0	1	2886
Eurozone Member	0.002	0.046	0	1	2886
Controls on Outflows (kao)	0.519	0.395	0	1	1150
Controls on Inflows (kai)	0.455	0.332	0	1	1152
Calendar Year	2002.983	5.47	1994	2012	2939

Testing the Effect of Transfer Risk on FDI Inflows

The first empirical implication of our model is straightforward and intuitive: higher levels of transfer risk cause smaller inflows of FDI. This claim is relatively uncontroversial, but demonstrating this relationship empirically is necessary to establish the substantive importance of transfer risk as a deterrent to FDI flows into developing countries. Because transfer risk and expropriation risk are highly correlated ($\rho = 0.67$), we estimate the effect of the level of transfer risk on FDI inflows in a model that also estimates the effect

of expropriation risk. As discussed in the body of the paper, we use a measure of expropriation risk that includes both outright expropriation and (non-transfer) creeping expropriation.

Data on net FDI inflows is drawn from the World Development Indicators (WDI).[A5] Because the data on FDI inflows (in USD) is over-dispersed, we use a logged DV.

The relationship between political risk and FDI flows is potentially endogenous – while we believe that the primary direction of causation runs from political risk to FDI flows, it is also possible that the level of FDI affects the behavior of political actors in ways that alter the level of risk. To address this potential endogeneity, we lag all regressors by one year and employ a systems Generalized Method of Moments (systems GMM) estimator to estimate a dynamic panel model, which includes a lagged dependent variable as a regressor.

All models include country fixed effects, which control for unobserved sources of heterogeneity across countries,[A6] and year dummies, which control for both time trends and global capital shocks. Because *transfer risk* and *expropriation risk* are correlated, we estimate each of their effects on FDI within the same model. We consider Model 4 our "primary" specification.

Both types of risk are expected to have independent negative effects on FDI inflows, but the negative effect of *transfer risk* on FDI flows is significant in all models, while the negative effect of *expropriation risk* is significant in only two. Because both risk measures have a standard deviation of 1, the relative size of effects is easy to compare, and we see that transfer risk has almost four times as large an effect in our primary specification (Model 4). In substantive terms, we estimate that a one-standard deviation increase in transfer risk causes a 27% decrease in FDI inflows.

Both in absolute terms, and relative to outright expropriation and (non-transfer) creeping expropriation, transfer risk has a large negative effect on FDI. This finding upholds a core motivation for this paper: transfer risk is an important determinate of global flows of foreign investment.

All of the control variables have effects consistent with theory, increasing confidence that the model is indeed specified correctly. Countries attract more FDI when they are wealthier, growing faster, trading more, have lower inflation, and have larger foreign reserves. Pegged exchange rates are associated with low levels of FDI, crawling pegs have an intermediate status, and freely floating exchange rates (the omitted category) are most conducive to attracting FDI.

In each model, we limit the number of lags of the independent variables used as instruments to three to reduce the problems associated with instrument proliferation.[A7] Our results are robust to restricting the number of lags to 2, 3, 4, 5, or to not limiting the lags at all. However, these models fail a Sargan over-identification test, indicating that at least one instrument is correlated with the error term.[A8] Therefore in Table A4 we test the robustness of these results to simple linear estimation.

[A5] With net FDI inflows, repatriated profits are counted as negative inflows (Kerner 2014). By making profit repatriation more costly, transfer risk reduces flows of repatriated flows of profits, as well as reducing new investment. This means that our measure likely leads us to understate the strength of the negative relationship between FDI and transfer risk.

[A6] Country fixed effects also absorb most of the effect of slow-moving institutional characteristics, such as central bank independence.

[A7] Roodman 2009.

[A8] The Chi-Squared remains high across specifications.

Table A3: Political Risk and Investment Inflows: Systems GMM Results

	(1)	(2)	(3)	(4)	(5)
Transfer Risk	-0.518***	-0.270**	-0.238***	-0.272***	-0.193**
	(0.140)	(0.115)	(0.087)	(0.088)	(0.081)
Expropriation Risk	-0.216**	-0.064	-0.068	-0.075	-0.172**
	(0.098)	(0.092)	(0.076)	(0.080)	(0.083)
Trade (% of GDP)		0.001	-0.000	0.001	-0.001
		(0.002)	(0.002)	(0.002)	(0.002)
GDP Per Capita (logged)		0.170	0.188**	0.146	0.147*
		(0.105)	(0.086)	(0.089)	(0.086)
Reserves (logged)		0.259***	0.220***	0.221***	0.273***
		(0.079)	(0.046)	(0.048)	(0.050)
Inflation (logged)			-0.068	-0.093	-0.022
			(0.072)	(0.074)	(0.081)
GDP Growth			0.027***	0.025***	0.024***
			(0.005)	(0.005)	(0.006)
Pegged Ex. Rate				-0.358**	-0.035
				(0.141)	(0.144)
Crawling Ex. Rate				-0.147	0.205
				(0.129)	(0.126)
Left Government					0.067
					(0.106)
Natural Resource Exports					0.002
					(0.002)
Lagged Dependent Variable	0.502***	0.465***	0.486***	0.479***	0.447***
	(0.054)	(0.051)	(0.026)	(0.026)	(0.034)
Year Dummies	YES	YES	YES	YES	YES
Country Fixed Effects	YES	YES	YES	YES	YES
Constant	12.252***	4.973***	5.212***	6.152***	5.211***
	(1.074)	(1.742)	(1.132)	(1.240)	(1.272)
Observations	1007	912	872	821	695

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$
All independent variables are lagged one year. Sample is developing countries only.
Model 3 reports GMM SEs because robust standard errors could not be computed.
Model 4 is identical to Figure 4 but without the rescaling of the variables.

Table A4: Political Risk and Investment Inflows: Varying the Lags

	1-Year Lag			2-Year Lag			3-Year Lag		
	GMM	Linear FE		GMM	Linear FE		GMM	Linear FE	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Transfer Risk	-0.272***	-0.156*	-0.142	-0.146*	-0.175*	-0.239**	-0.270***	-0.223	-0.278*
	(0.088)	(0.085)	(0.112)	(0.088)	(0.095)	(0.119)	(0.091)	(0.136)	(0.148)
Expropriation Risk	-0.075	0.031	-0.036	0.109	0.116*	0.048	0.238***	0.240***	0.212**
	(0.080)	(0.081)	(0.099)	(0.079)	(0.068)	(0.079)	(0.084)	(0.083)	(0.084)
Trade (% of GDP)	0.001	0.001	0.005	0.001	-0.001	0.003	0.004*	-0.001	0.001
	(0.002)	(0.004)	(0.005)	(0.002)	(0.003)	(0.004)	(0.002)	(0.004)	(0.005)
GDP Per Capita (logged)	0.146	-0.112	-0.226	0.293***	-0.386	-0.448	0.164	-0.570	-0.776
	(0.089)	(0.490)	(0.612)	(0.089)	(0.379)	(0.506)	(0.103)	(0.414)	(0.488)
Reserves (logged)	0.221***	0.113*	0.173**	0.290***	0.247***	0.245***	0.253***	0.126*	0.184***
	(0.048)	(0.061)	(0.075)	(0.047)	(0.079)	(0.075)	(0.054)	(0.071)	(0.069)
Pegged Ex. Rate	-0.358**	-0.170	-0.204	-0.085	0.025	-0.002	-0.012	0.092	0.128
	(0.141)	(0.124)	(0.149)	(0.145)	(0.096)	(0.110)	(0.149)	(0.115)	(0.131)
Crawling Ex. Rate	-0.147	0.124	0.157	-0.149	0.034	0.072	-0.070	0.036	0.048
	(0.129)	(0.103)	(0.137)	(0.131)	(0.095)	(0.123)	(0.134)	(0.105)	(0.127)
GDP Growth	0.025***	0.015*	0.019***	0.011**	0.009*	0.016***	0.027***	0.023***	0.025***
	(0.005)	(0.009)	(0.007)	(0.005)	(0.005)	(0.006)	(0.006)	(0.007)	(0.007)
Inflation (logged)	-0.093	-0.004	0.068	0.116	0.136*	0.134	0.135*	0.199*	0.208*
	(0.074)	(0.091)	(0.112)	(0.073)	(0.074)	(0.082)	(0.078)	(0.110)	(0.116)
1-Year Lag of DV	0.479***	0.300***							
	(0.026)	(0.045)							
2-Year Lag of DV				0.537***	0.294***				
				(0.034)	(0.057)				
3-Year Lag of DV							0.512***	0.215***	
							(0.037)	(0.063)	
Constant	6.152***	13.188***	18.466***	0.520	11.534***	17.787***	2.807**	17.299***	22.022***
	(1.240)	(3.611)	(4.620)	(1.275)	(3.314)	(3.927)	(1.372)	(3.661)	(3.973)
Observations	821	821	843	756	756	776	658	658	675
R^2		0.471	0.393		0.390	0.320		0.248	0.205

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$
Sample is developing countries only.

Table A4 examines linear panel models alongside systems-GMM specifications and varies the lags from 1-3 years. We find the results consistent across these alternative specifications, though frequently just below the .05 threshold for statistical significance.

Robustness Tests for Hypotheses 1-3

Table A5 presents alternative specifications for the tests of Hypotheses 1 and 2. These results are from pairs of Seemingly Unrelated Regressions, a type of estimation which allows the errors between models to be correlated. Specifically, it is possible that the the errors from models predicting transfer risk may be correlated with the errors from models predicting expropriation risk, so we pair these models together and estimate them jointly (e.g. models 1a and 1b are estimated together). These results are consistent with the models shown in Table 1: a strong negative relationship is observed between political constraints and expropriation risk and an ambiguous relationship (here weakly negative in one model and weakly positive in the other) is observed between political constraints and transfer risk.

As with the results in Table A3, we use z-tests to compare the estimated effect of *political constraints* on *transfer risk* and on *government risk* and in both pairs of models we find the difference between these estimated effects to be statistically significant ($p<.05$).

Table A5: The Effect of Political Constraints on Expropriation and Transfer Risk

	(1a) Expropriation	(1b) Transfer	(2a) Expropriation	(2b) Transfer
Political Constraints	-0.540***	-0.099	-0.612***	0.026
	(0.102)	(0.083)	(0.130)	(0.101)
Trade (% of GDP)			0.005***	-0.001
			(0.002)	(0.001)
GDP Per Capita (logged)			-0.349*	-0.321**
			(0.188)	(0.146)
GDP Growth			0.008**	-0.005*
			(0.004)	(0.003)
Natural Resource Exports			0.005***	-0.001
			(0.002)	(0.001)
Reserves (logged)			0.061	0.011
			(0.038)	(0.030)
Inflation (logged)			0.097	0.143***
			(0.063)	(0.049)
Pegged Ex. Rate			0.059	-0.001
			(0.072)	(0.056)
Crawling Ex. Rate			0.002	0.125***
			(0.060)	(0.047)
BITs to Date (logged)			-0.484***	-0.129
			(0.126)	(0.098)
Country Dummies	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES
Observations	1298	1298	738	738
R^2	0.878	0.926	0.866	0.938

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$
Sample restricted to developing countries only. Seemingly Unrelated Regressions.
All models include country and year fixed effects (via dummy variables).

Table A6 presents additional specifications similar to those in Table 2 in the text. Table A6, Model 1 is identical to Table 2, Model 1. The positive effect of political constraints on the ratio of transfer risk to expropriation risk is stable across all specifications. As the level of political constraints increases, governments tend to favor transfer restrictions over expropriation as a means of seizing wealth from foreign investors.

Models 3 and 4 include additional control variables because they lack the country fixed-effects included in Models 1 and 2. In Models 2 and 4, we show that our core result is also robust to the inclusion of a dummy variable for left governments and an interaction between political constraints and left government. The coefficient on the interaction is not significant in either model, but the ratio of transfer risk to expropriation risk is lower with left governments.

These results are also robust to inclusion of a lagged dependent variable in the linear fixed effects models, but a lagged DV introduces Nickel bias and are therefore not included in the table. Similarly, these results are directionally correct in all, and statistically significant in some, systems GMM specifications, but these specifications fail a Sargan test of over-identification. As noted in the body of the paper, we prefer simple linear specifications in tests of Hypotheses 1-3 because of their simplicity and because we believe the risk of reverse causality is relatively low.

Table A7 tests the robustness of our results to two alternative measures of political constraints: the *XCONST* measure from the Polity IV dataset[A9] and the *Checks* measure from the Database of Political Institutions[A10] *XCONST* is a categorical variable that can take on seven values ranging from "Unlimited Authority" to "Executive Parity or Subordination." It evaluates constraints placed on executive action by "accountability groups" broadly defined. Checks is a count of the veto players in a system and ranges from 1-18. Checks is augmented by one if the chief executive is directly elected and if the opposition controls the legislature. However, in parliamentary systems checks is also augmented for every party in government that is necessary for to maintain a majority – hence the extremely high number of checks in some systems.

We prefer the Henisz measure of political constraints because it draws on information regarding both the number of independent political institutions with veto power and on the preferences of the political actors within those institutions. This information is fed into a relatively simple structural model, which is used to estimate the feasibility of policy change. However, the results in Table 6 show that both alternative measures produce results consistent with our theoretical expectations.

The estimated effects of *XCONST* on *Expropriation Risk* (Model 1) and *Transfer Risk* (Model 2) are both negative; however, the estimated effect on *Expropriation Risk* is more than twice as large. In Model 3, the positive effect of *XCONST* on *Ratio* falls just short of the threshold for statistical significance (p =.055) but is consistent with Hypothesis 4.

The results for *Checks* are quite weak: Checks is not a strong predictor of political risk level. However, the patterns of the small effects we do estimate are consistent with our theory: the negative effect of *Checks* on *Expropriation Risk* is larger than the estimated effect on transfer risk and more checks is associated with higher values of *Ratio*.

[A9] Marshall and Jaggers 2004

[A10] Beck et al. 2001.

Table A6: The Effect of Political Constraints on Risk Ratio

DV = Ratio of Transfer Risk to Expropriation Risk				
	(1) FE	(2) FE	(3) RE	(4) RE
Political Constraints	0.381**	0.298**	0.338**	0.289**
	(0.161)	(0.139)	(0.137)	(0.129)
Trade (% of GDP)	-0.004**	-0.003*	-0.003**	-0.002*
	(0.002)	(0.002)	(0.001)	(0.001)
GDP Per Capita (logged)	0.077	0.082	0.049	0.053
	(0.190)	(0.177)	(0.057)	(0.057)
GDP Growth	-0.007*	-0.006	-0.006*	-0.006*
	(0.004)	(0.004)	(0.003)	(0.003)
Natural Resource Exports	-0.003	-0.002	-0.002**	-0.002*
	(0.002)	(0.002)	(0.001)	(0.001)
Reserves (logged)	0.004	-0.007	-0.038	-0.037
	(0.065)	(0.056)	(0.041)	(0.037)
Inflation (logged)	-0.002	0.001	-0.052	-0.053
	(0.050)	(0.046)	(0.038)	(0.036)
Pegged Ex. Rate	-0.019	-0.050	-0.060	-0.083
	(0.069)	(0.070)	(0.059)	(0.060)
Crawling Ex. Rate	0.056	0.041	0.022	0.010
	(0.058)	(0.061)	(0.051)	(0.053)
BITs to Date (logged)	0.091	0.069	0.101*	0.094
	(0.145)	(0.135)	(0.059)	(0.062)
Left Government		-0.328**		-0.207
		(0.164)		(0.132)
Constraints*Left		0.189		0.105
		(0.421)		(0.356)
EU Member			0.050	0.023
			(0.133)	(0.130)
Eurozone Member			-0.905***	-0.791***
			(0.128)	(0.109)
Population (logged)			-0.149***	-0.128**
			(0.052)	(0.050)
Country Fixed Effects	YES	YES	NO	NO
Year Dummies	YES	YES	YES	YES
Constant	0.863	1.115	4.458***	4.108***
	(1.711)	(1.660)	(0.608)	(0.611)
Observations	738	725	738	725
R^2	0.083	0.151		

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$
Sample restricted to developing countries only.
All models report heteroskedasticity-robust standard errors.

Table A7: Robustness Checks: XCONST and Checks in Place of Political Constraints

	(1) DV=Exprop.	(2) DV=Transfer	(3) DV=Ratio	(4) DV=Exprop.	(5) DV=Transfer	(6) DV=Ratio
XCONST [Polity]	-0.150**	-0.065**	0.048*			
	(0.075)	(0.029)	(0.025)			
Checks [DPI]				-0.029	-0.002	0.019
				(0.032)	(0.015)	(0.017)
Trade (% of GDP)	0.005	-0.001	-0.005**	0.005	-0.001	-0.004**
	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)
GDP Per Capita (logged)	-0.368	-0.688***	0.122	-0.326	-0.741***	0.075
	(0.406)	(0.255)	(0.210)	(0.384)	(0.260)	(0.191)
GDP Growth	0.008	-0.002	-0.007*	0.008*	-0.004	-0.007*
	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)
Natural Resource Exports	0.005	-0.000	-0.003	0.005	0.001	-0.003
	(0.005)	(0.002)	(0.002)	(0.005)	(0.002)	(0.002)
Reserves (logged)	0.061	-0.066	-0.001	0.054	-0.065	0.005
	(0.089)	(0.048)	(0.072)	(0.084)	(0.049)	(0.067)
Inflation (logged)	0.088	0.204***	0.009	0.086	0.207***	0.004
	(0.094)	(0.057)	(0.049)	(0.094)	(0.056)	(0.049)
Pegged Ex. Rate	0.032	-0.129	-0.016	0.039	-0.117	-0.013
	(0.101)	(0.090)	(0.069)	(0.103)	(0.089)	(0.068)
Crawling Ex. Rate	-0.022	-0.025	0.065	-0.012	-0.028	0.062
	(0.089)	(0.071)	(0.060)	(0.088)	(0.072)	(0.059)
BITs to Date (logged)	-0.458**	-0.085	0.097	-0.506**	-0.119	0.112
	(0.221)	(0.103)	(0.152)	(0.231)	(0.107)	(0.156)
Constant	5.250	9.980***	0.460	4.493	10.050***	0.825
	(3.341)	(2.102)	(1.836)	(3.309)	(2.150)	(1.745)
Observations	707	1280	707	725	1309	725
R^2	0.171	0.385	0.072	0.143	0.369	0.064

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$
Sample restricted to developing countries only.
All models are linear regressions with country and year fixed effects.

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