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Political Risk Guarantees and Capital Flows: The Role of Bilateral Investment Treaties

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Abstract:

This paper examines the influence of political risk guarantees of bilateral investment treaties on debt and equity flows using panel data on middle income countries for the period 1984-2011. Adopting system GMM methodology, the paper empirically finds that ratified bilateral investment treaties with OECD countries have a combined positive influence on non-guaranteed debt flows and a direct positive influence on portfolio equity flows. The results highlight the importance of considering political risk guarantees in financial integration, regulation of financial markets and institutions, and capital liberalization.

JEL Classification: F21; F34; G15; G18; K33

Keywords: Political risk guarantees; bilateral investment treaties; capital flows; debt flows; equity flows

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1. Introduction

The recent global financial crisis, which started with the US subprime crisis in February 2007 and spread to many European countries - Iceland, Belgium, Latvia, Greece, Spain, Ireland, and Portugal, and Spain - over the past five years, has created a squeeze in the supply of capital to middle income countries. The squeeze in the first two years of the crisis (2007-2009) was more apparent in debt compared to FDI flows. Debt flows to middle income countries declined by more than 70 percent from about $450 billion in 2007 compared to $130 billion in 2009 (Figure 1).[2] In contrast, the decline in equity flows was much less: FDI flows decreased by 24 percent from $543 billion in 2007 to $410 billion in 2009, while portfolio equity flows decreased by 14 percent from $133 billion to $114 billion.

[Insert Figure 1 here.]

While these figures may lend support to the view that FDI in particular and equity in general are more stable than the other types of capital flows in financial crises (Agenor 2003; Fernandez-Arias and Hausmann 2001; Stiglitz 2000), they raise interest about the role of political risk guarantees, namely of bilateral investment treaties, in attracting capital flows, whether equity or debt. The use of bilateral investment treaties has proliferated over the last three decades. The total number of

[2] These countries are Albania, Algeria, Angola, Argentina, Armenia, Azerbaijan, Belarus, Bolivia, Botswana, Brazil, Bulgaria, Cameroon, Chile, China, Colombia, Congo (Democratic Republic), Costa Rica, Cote d'Ivoire, Dominican Republic, Ecuador, Egypt, El Salvador, Ghana, Guatemala, Guyana, Honduras, India, Indonesia, Iran, Iraq, Jamaica, Jordan, Kazakhstan, Latvia, Lebanon, Libya, Lithuania, Malaysia, Mexico, Moldova, Mongolia, Morocco, Namibia, Nicaragua, Nigeria, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Romania, Russia, Senegal, Serbia, South Africa, Sudan, Suriname, Syria, Thailand, Tunisia, Turkey, Ukraine, Uruguay, Venezuela, Vietnam, Yemen, and Zambia. These 68 sample countries are classified as middle income based on the World Bank's 2012 classification on which ICRG's political risk data and UNCTAD's bilateral investment treaties data are available.

newly ratified bilateral investment treaties by middle income countries multiplied more than 55 times, from 33 in 1985 to 1854 in 2012.

Building on Fitzpatrick (1983) political risk is due to unwanted consequences of government or sovereign actions on business. These actions may take the forms of industry- and/or firm-level constraints, such as expropriation, restrictions on remittance of profits, and discriminatory taxation. Political risk can also be due to hard-to-anticipate discontinuities in the business environment, which have the potential to significantly affect the profit or other goals of a particular enterprise. Accordingly in this paper the definition of political risk incorporates not only government actions but also policy uncertainty, whether or not associated with political instability, which encroach on domestic and foreign businesses.

Bilateral investment treaties reduce political risk to foreign investors. They establish clear, simple, and enforceable rules for foreign investment protection from expropriation, specify the circumstances under which expropriation takes place and the compensation standards, and design the necessary investment dispute settlement mechanisms between states and investors (Ginsburg 2005; Hallward-Driemeier 2003; Mina 2009; Neumayer and Spess 2005; UNCTAD 1998).[3,4] Bilateral investment treaties therefore reduce policy uncertainty and guarantee the presence and adoption

[3] For example, paragraphs 1 and 2 of Article 5 of the 2012 U.S. Model Bilateral Investment Treaty state that, "1. Neither Party may expropriate or nationalize a covered investment either directly or indirectly through measures equivalent to expropriation or nationalization ("expropriation"), except: (a) for a public purpose; (b) in a non-discriminatory manner; (c) on payment of prompt, adequate, and effective compensation; and (d) in accordance with due process of law and Article 5 [Minimum Standard of Treatment] (1) through (3). 2. The compensation referred to in paragraph 1(c) shall: (a) be paid without delay; (b) be equivalent to the fair market value of the expropriated investment immediately before the expropriation took place ("the date of expropriation"); (c) not reflect any change in value occurring because the intended expropriation had become known earlier; and
(d) be fully realizable and freely transferable." The 2012 U.S. Model Bilateral Investment Treaties available at http://www.ustr.gov/sites/default/files/BIT%20text%20for%20ACIEP%20Meeting.pdf.
[4] See for example sections B and C of the 2012 U.S. Model Bilateral Investment Treaty.

of rules for foreign investment protection, which may boost foreign investor's confidence and promote foreign investment flows.[5]

The domain of foreign investment bilateral investment treaties cover extends beyond FDI. FDI has been the only type of capital flows examined in the bilateral investment treaties literature. Foreign investment, in the 2012 U.S. Model Bilateral Investment Treaties for example, is defined as "every asset that an investor owns or controls, directly or indirectly, that has the characteristics of an investment, including such characteristics as the commitment of capital or other resources, the expectation of gain or profit, or the assumption of risk". An investment may take the form of an enterprise; shares, stock, and other forms of equity participation in an enterprise; bonds, debentures, other debt instruments, and loans; and futures, options, and other derivatives.[6,7] Therefore, bilateral investment treaties provide political risk guarantees to portfolio equity, private non-guaranteed debt in addition to FDI. They may even provide guarantees to public and publicly guaranteed debt as far as multinational corporations seek guarantees on their loans from host country governments.[8]

In this paper we empirically examine the influence of bilateral investment treaties' political risk guarantees on capital flows using panel data on middle income

[5] Recent empirical studies in the FDI literature show positive impact of bilateral investment treaties on FDI flows (Egger and Pfaffermayr 2004; Egger and Merlo 2007; Neumayer and Spess 2005; Tobin and Rose-Ackerman 2006).

[6] The definition of assets also includes "turnkey, construction, management, production, concession, revenue-sharing, and other similar contracts; intellectual property rights; licenses, authorizations, permits, and similar rights conferred pursuant to domestic law; and other tangible or intangible, movable or immovable property, and related property rights, such as leases, mortgages, liens, and pledges".

[7] UNCTAD (2007) identifies four definitions of investment: "asset-based" definition; a "tautological" definition; a "closed-list" definition; and a limiting definition which excludes certain assets and transactions. Most recent bilateral investment treaties have adopted the first definition, which covers every or any kind of assets and typically includes: a) movable and immovable property and any related property rights; b) interests in companies, such as shares, stock, bonds, and debentures; c) claims to money and claims under a contract having a financial value and loans directly related to a specific investment; d) intellectual property rights; and e) business concessions.

[8] In discussing determinants of capital flows, Hooper and Kim (2007) point out that opacity in corruption might increase the likelihood of multinational corporations seeking loan guarantees resulting in an increase in capitals inflows.

countries for the period 1984-2011 adopting system GMM estimation methodology. The paper empirically finds that ratified bilateral investment treaties with OECD countries have a total positive influence on non-guaranteed debt flows and portfolio equity flows.

The paper contributes to the literature in two main respects. First, it examines the influence of bilateral investment treaties beyond FDI to different types of capital flows constituting foreign investment. This has not been examined in the literature before to the best of our knowledge despite the wide definition of foreign investment covered in bilateral investment treaties. In addition, the paper distinguishes between non-guaranteed and guaranteed debt flows, helping to provide an understanding of long-term creditors' responses to political risk guarantees, an issue that has not been explored before.

Second, by accounting for government efforts to reduce political risk through contracting bilateral investment treaties, this paper provides a more realistic and policy-oriented political risk definition than elsewhere in the literature. While political risk has been defined to reflect government actions that can adversely affect businesses, this definition does not take into account government reforms to ameliorate political risk through bilateral investment treaties.[9] We account in the theoretical and empirical models for political risk, political risk guarantees, and the interaction between them.

This paper is structured as follows. Section 2 provides a brief survey of the determinants of capital flows and the impact of bilateral investment treaties on FDI, and highlights literature messages and gaps. Section 3 specifies the empirical model and data. Section 4 discusses the empirical issues and estimation methodology.

[9] Signing or ratifying bilateral investment treaties in reality may stem from pressure by domestic and/or foreign investors.

Section 5 presents and discusses the empirical results. Section 6 concludes, highlights the policy implications, and identifies issues for future research.

2. Literature survey

In this section we first explore the determinants of capital flows in the voluminous capital flows literature and then turn to explore the impact of bilateral investment treaties on FDI. The purpose of this section is to identify the messages and gaps in the literature on which this research builds.[10]

2.1 Determinants of capital flows

The development of capital flows determinants literature largely reflects the increasing financial globalization that has taken place over the past three decades and the roles that external and domestic economic fundamentals play in encouraging or discouraging capital flows. Among the domestic factors, political risk has attracted special attention in the capital flows literature owing to their contribution in triggering the 1997 Asian financial crisis. In addition to those examined factors, a major strand of the capital flows determinants literature explored the role that capital liberalization or controls play in promoting or limiting capital flows. This logic underlies the brief literature survey discussion below.

The determinants of capital flows have been extensively examined in the capital flows literature. Some studies have distinguished between the role of external (push) and domestic (pull) factors (Calvo et al 1996; Fernandez-Arias 1996). Calvo et al (1996) explain capital flows during the 1990s in terms of external factors to the recipient economy and domestic factors. External factors to the recipient economy

[10] A comprehensive review of the literature is beyond the scope of this research.

include declining world interest rates, which improve creditworthiness and reduce default risk in developing countries, global business cycle, integration of world capital markets, diversification of investments internationally, and contagion effects. Domestic factors include sound domestic monetary and fiscal policies, and trade and capital market liberalization. Similar to Calvo et al (1996), Fernandez-Arias (1996) argued that the decline in world interest rates improved creditworthiness and reduced default risk in developing countries, and therefore perceived capital flows as a result of the interaction between external push factors and domestic pull factors.

Over the past three decades of increased global financial integration many governments adopted policies of financial liberalization in order to lure more capital flows and reap the benefits of smoothing consumption, boosting investment, and speeding up economic growth, while other governments adopted capital control measures to reduce the disruption that the high volumes and volatility of capital inflows and outflows create. A number of studies have focused on the impact of financial liberalization and capital controls (Binici et al 2010; Campion and Neumann 2004; Okada 2013). Binici et al (2010) examine the efficacy of capital controls in 74 countries during the period 1995-2005 in stemming inflows and outflows of equity, FDI, and debt holdings. They find that the efficacy of capital controls is on the outflow side but is very little or absent on the inflow side. In addition they find that the efficacy of capital controls is low in in low and middle income countries. Okada (2013) attributes the efficacy of capital controls to institutional quality, and examines the effect of these two factors and their interaction on FDI and foreign private investment. He finds that while there is no individual impact of financial openness and institutional quality on capital inflows, the interaction between these two factors has a significant impact. Unlike the above studies which examined the impact of

capital controls on volume of capital inflows, Campion and Neumann (2004) using high frequency data examine the effect on the composition of international capital flows in Latin American countries in 1990-2000. They find that capital controls alter the composition of capital inflows in such a way that discourages short-term capital and reduces the volatility of capital inflows. This however comes at the expense of reducing capital inflows.

Recent studies have focused on the role of institutions and political risk as domestic factors in attracting capital flows (Daude and Fratzscher 2008; De Santis and Luhrmann 2009; Fratzscher 2012; Hooper and Kim 2007; Kim and Wu 2008; Papaioannou 2009).[11] Fratzscher (2012) explores the drivers of global portfolio investment flows using high frequency mutual funds data for the period 2005-2010 differentiating between financial crises and the subsequent recovery, and between common global shocks and country-specific factors.[12] He finds that during crises there is a strong divergence in capital flows across countries with dynamics of capital flows primarily driven by safe-haven flows. He also finds that the effect of global shocks, in particular during the recovery period, was heterogeneous and depended on the recipient country's institutional quality, country risk, and the strength of macroeconomic fundamentals and policies. He contends that, "countries are far from innocent bystanders that are powerless in being exposed to volatile global markets, and that indeed they have tools to insulate to some extent their economies from

[11] Other studies, which examine the influence of property rights protection on foreign direct investment and portfolio investment, include Alfaro et al (2008), Asiedu (2006), Busse and Hefeker (2007), Daude and Stein (2007), Du et al (2008), Faria and Mauro (2009), Mishra and Daly (2007), Naude and Krugell (2007), and Wei (2000). Studies examining the influence on international lending include Kraay and Nehru (2004), Lane (2004), Mina (2006; 2011), and Mina and Martinez-Vazquez (2006). The empirical evidence of these studies suggests that better domestic institutional functions encourage capital inflows and tilt the capital structure of countries towards equity and away from debt.

[12] He focuses on common global liquidity, risk, and macroeconomic news shocks.

adverse global shocks" (p 2). Earlier Daude and Fratzscher (2008) finds that institutional quality matters most for portfolio investment and least for FDI.

Opacity of the operating environment seems to matter for capital flows. Hooper and Kim (2007) examine the role of operating environment opacity in influencing FDI, portfolio investment, and international bank lending.[13] They argue that opacity in general discourages capital flows. However, with the profit opportunities it creates, opacity may increase capital flows. For example, multinational corporations (MNCs) may concentrate on FDI to exploit accounting and reporting opacity in order to maximize profit. Other forms of capital flows may respond differently to accounting opacity.

Interestingly they point out that opacity in corruption might increase FDI or international bank lending. Corruption opacity can increase MNCs likelihood of obtaining loans, which are government guaranteed, or favorable tax treatments, thus increasing FDI flows to the country. Corruption opacity might take the form of government guarantees of crony capitalists' international loans, increasing the likelihood of obtaining loans and thus international bank lending. In contrast, legal opacity reduces contract enforcement and protection of property rights and thus capital flows in general.

In explaining the Lucas (1990) paradox on why capital flows from poor to rich countries, contrary to the neoclassical model prediction of capital flowing in the opposite direction, Papaioannou (2009) focuses on the role of institutions in explaining these flows and finds that weak institutions – weak property rights protection, inefficient legal system and high risk of investment expropriation – deter

[13] They use Price Waterhouse Coopers' opacity index covering corruption, legal, economic, accounting/reporting, and regulation opacity as well as aggregate opacity.

banking flows. Similarly, in examining mainly the role of demographic structure in international portfolio flows, De Santis and Luhrmann (2009) find that lower quality institutions deter net portfolio inflows explaining the capital reallocation from developing to developed countries.

Going beyond specific institutional influence, Kim and Wu (2008) empirically examine the impact of country risk measured by sovereign credit ratings on capital flows. They find that foreign currency long-term ratings proved to be the most important stimulus for international (as opposed to domestic) capital flows, while local currency long-term ratings had negative impact on international capital flows. Short-term foreign and domestic currency ratings have detrimental effect on international capital flows.

2.2 Bilateral investment treaties and FDI

The influence of bilateral investment treaties on FDI has been examined in the FDI literature. Earlier studies found little positive impact of these treaties, while the more recent ones found a significantly positive impact. UNCTAD (1998) examines the impact of investment treaties on FDI using both time series and cross-section analyses with results of time-series analysis more suggestive of the positive impact of investment treaties on FDI. Similarly to UNCTAD's cross section analysis results, Hallward-Driemeier (2003) finds little positive impact of investment treaties, possibly masked by lower trade barriers between country pairs, increased knowledge of conducting business in the host country, or tax treaty ratification. She also finds that treaties are complementary to strong domestic institutions. Treaties become more effective when institutions are reformed or of high quality and are not short-cut for

institutional reforms, a conclusion Mina (2012) confirms in the case of MENA countries.

More recent studies found a significant positive impact of bilateral investment treaties (Egger and Pfaffermayr 2004; Neumayer and Spess 2005; Tobin and Rose-Ackerman 2006). Egger and Pfaffermayr (2004) distinguish between ratified and signed treaties, and find a higher positive impact of ratified treaties reflecting the higher degree of commitment. Tobin and Rose-Ackerman (2006) find positive impact of treaties on FDI in subsequent periods though the marginal impact diminishes with the increase in the number of treaties. Similar to Hallward-Driemeier (2003), Tobin and Rose-Ackerman (2006) find that a stronger political environment complements investment treaties.

2.3 Messages and gaps

In summary the brief literature survey of the capital flows determinants highlights that institutional quality or more generally political risk, and the strength of macroeconomic fundamentals and policies matter for attracting capital flows as well as for insulation and recovery from global shocks. More specifically, a high risk of investment expropriation deters both bank loans and portfolio flows. In addition, the FDI literature shows positive impact of bilateral investment treaties on FDI.

There are no studies, to the best of our knowledge, which examine the impact of bilateral investment treaties on foreign investment other than FDI. As mentioned in the introduction, foreign investment may take the form of an enterprise; shares, stock, and other forms of equity participation in an enterprise; bonds, debentures, other debt instruments, and loans; and futures, options, and other derivatives. A positive influence of bilateral investment treaties on debt and equity flows may be viewed as

an additional means to promote capital flows. In particular, a positive influence on long-term as opposed to short-term debt may be viewed as an insulation of countries from global financial shocks.

3. Empirical model and data

The empirical model specification builds on Wei and Wu (2001), who examine the effect of distortionary corruption on FDI by a multinational firm using a simple optimization model. The multinational firm chooses the level of FDI, which maximizes its after-tax and after-bribery profit. In this paper, we also formulate an optimization model. However, instead of examining the effect of distortionary corruption on FDI, we examine the effect of political risk, political risk guarantees, and the interaction between both of them on foreign investment.

Foreign investors obtain capital in world capital markets. A foreign investor chooses the level of foreign investment, whether equity or credit, she extends to a host country *j* that maximizes her profit π. The optimization problem can be expressed as:

$$\pi = \sum_{j=1}^{N}\left[f\left(K_j\right) - c\left(r, p(x_j, g_j, (xg)_j\right)K_j\right] \qquad \textbf{(1)}$$

where π is foreign investor's profit, K_j is the flow of foreign investment the foreign investor extends to the host country, c is the cost of foreign investment, which is a function of the risk-free world interest rate r and a political risk premium p, and *j=1,…,N*. The political risk premium for country j is function of the rate of government expropriation x_j of a dollar of foreign investment and the rate of political risk guarantee g_j of investment, which bilateral investment treaties provide, and the interaction between the two, $(xg)_j$.

We model political risk premium using two approaches. The first approach considers the premium to be driven primarily by the risk of investment expropriation. Political risk guarantees interact with expropriation risk and mitigates it. Accordingly the political risk premium can be expressed in specific form as:

$$p_j = x_j(1 + g_j) \qquad \textbf{(2)}$$

The second approach considers the premium to be driven primarily by political risk guarantees. Expropriation risk interacts with the guarantees: If the risk of investment expropriation is high, it may reduce the level of guarantee bilateral investment treaties provide. Accordingly the political risk premium can be expressed in specific form as:

$$p_j = g_j(1 + x_j) \qquad \textbf{(2')}$$

The effects of x and g on the political risk premium are intuitively expected to positive and negative $(p_x > 0;\ p_g < 0)$, respectively, which in turn have negative and positive effects on profits ($\pi_x < 0;\ \pi_g > 0$).

Accordingly, the corresponding empirical models we estimate are given by:

$$K_{i,t} = \beta_0 + \beta_1 K_{i,t-l} + \beta_2 R_{i,t} + \beta_3 X_{i,t} + \beta_4 (XG)_{it} + Z'\delta_{i,t} + \varepsilon_{i,t} \qquad \textbf{(3)}$$

and

$$K_{i,t} = \beta_0 + \beta_1 K_{i,t-l} + \beta_2 R_{i,t} + \beta_3 G_{i,t} + \beta_4 (XG)_{it} + Z'\delta_{i,t} + \varepsilon_{i,t} \qquad \textbf{(3')}$$

where K is the flows of foreign investment, R is the (risk-free) cost of capital, G is the rate of political risk guarantee on investment, X is the rate of government expropriation of foreign investment, GX is an interaction term, Z is a vector of additional control variables, and ε an error term. The subscripts i, t and l are country, time and lag indicators. The interaction term in equation (3') suggests that political risk guarantees might have different effects on the flows of foreign investment for

countries with different risk levels of investment expropriation. Alternatively the interaction term in equation (3) suggests that political risk might have different effects on the flows of foreign investment for countries with different political risk guarantee levels. The total effect of *G* on a flow of foreign investment *K* a country can attract is $\beta_3 + \beta_4 X$, where β_3 is the direct effect of the political risk guarantee and $\beta_4 X$ is the indirect effect through *X* or the interaction between *G* and *X*.

K could be debt or equity flows of nonresidents relative to GDP.[14] Unlike other studies examining capital flows, we distinguish debt flows into non-guaranteed debt (private non-guaranteed debt - PNG) and guaranteed debt (public and publicly guaranteed debt - PPG) flows to allow us to examine the influence of political risk guarantees. PNG debt is an external obligation of a private debtor, the repayment of which is non-guaranteed by a public entity. PNG debt flows are net flows of long term nature, calculated as the difference between disbursements and principal repayments. Long-term debt has an original or extended maturity of more than one year. PPG debt is an external obligation of public sector or of private sector the repayment of which is guaranteed by a public entity.[15] Similar to PNG debt net flows, PPG debt net flows are of long-term nature, calculated as the difference between disbursements and principal repayments.

[14] This is similar to Campion and Neumann (2004).

[15] The public sector includes the general government, monetary authorities, and public corporations. A public corporation, financial or nonfinancial, is subject to control by government units, where control over a corporation is defined as the ability to determine general corporate policy by choosing appropriate directors, if necessary. Control can be established through government ownership of more than half of the voting shares or more than half of the shareholder voting power (including through ownership of a second public corporation that in turn has a majority of the voting shares), or through special legislation, decree, or regulation that empowers the government to determine corporate policy or to appoint directors. The publicly guaranteed private sector external debt component of PPG is defined as the external debt liabilities of the private sector, the servicing of which is contractually guaranteed by a public entity resident in the same economy as the debtor. Private sector external debt, which is not contractually guaranteed by the public sector is classified as PNG. Chapter 5 of International Monetary Fund (2003) provides a detailed definition of the public sector.

K could also be equity flows, which are decomposed into FDI and portfolio equity. Portfolio equity, as defined by WDI, includes net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts (American or global), and direct purchases of shares in local stock markets by foreign investors. FDI is investment in equity capital, retained earnings, other long-term capital, and short-term capital, which acquires 10 percent or more of the voting stock in an enterprise operating in a foreign economy. FDI net inflows are the difference between new investment inflows and disinvestment.

R is measured by the 3-month treasury bills rate. We expect an increase in the interest rate would increase the cost of capital, reduce profit, and decrease foreign investment flows. Campion and Neumann (2004) also control for the U.S. T-bill rate as an external (push) factor that globally determines capital flows to emerging economies. Accordingly, an increase in interest rates may increase capital flows. Thus the effect of an increase in the 3-month treasury-bills rate is ambiguous.

The rate of political risk guarantee *G* is proxied by the number of bilateral investment treaties ratified with OECD countries relative to the total number of OECD countries. The higher the percentage of ratified treaties, the closer is the degree of property rights protection to that in OECD countries, and the lower is the political risk. While we expect a positive effect of political risk guarantees on capital flows in general, the effect might differ with the type of capital flows. For example, political risk guarantees might encourage more equity flows at the expense of debt flows.

The rate of government expropriation of foreign investment, *X*, is measured by the International Country Risk Guide's (ICRG) investment profile component of the political risk index, which reflects the risk of investment expropriation, profits repatriation, and payment delays. This indicator ranges from 0 to 12, where 0

indicates the highest risk and 12 the lowest risk. The indicator in this paper is expressed as a percentage of the maximum score. Similar to political risk guarantees, we expect a positive effect of the investment profile indicator on capital flows in general. However, the effect might differ with the type of capital flows. For example, an improvement in investment profile might encourage more equity and long-term debt flows but discourage the use of government guaranteed debt and thus public and publicly guaranteed debt flows. It might also lengthen debt maturity and thus reduce short-term debt flows (Mina 2006).

The vector of additional control variables, *Z*, includes variables which have been found to be significant in other capital flows studies. Studies have typically included economic development, trade openness, financial development, and capital control variables, which capture the pull factors in the recipient economy (Binici et al 2010; Campion and Neumann 2004; Okada 2013). We include real GDP per capita (in 2005 US$) to account for economic development, the sum of exports and imports as a percentage of GDP to account for trade openness, domestic credit provided by the banking sector as a percentage of GDP to account for financial development, and the Chinn-Ito financial openness index to account for capital controls.

The Chinn-Ito financial openness index, which was initially introduced in Chinn and Ito (2006), measures the degree of capital account openness. The Chinn-Ito index codifies four restrictions on cross-border financial transactions reported in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions. The four restrictions the index cover are the existence of multiple exchange rates, the presence of restrictions on current and capital account transactions, and the regulatory requirements of the surrender of export proceeds. The index ranges from zero to 100;

the higher the index value the more open the country is to cross-border capital transactions. Chinn and Ito (2008) provide details on the construction of the index.

In addition to these explanatory variables, we add two structural breaks to reflect the two financial crises of 1997 and 2007.[16] The first crisis dummy takes a value of 1 for the years 1997-1998. The second crisis dummy takes a value of 1 for the years 2007-2009.

Data on debt and equity flows, trade, and banking sector credit domestic are obtained from the World Development Indicators (WDI). Data on per capita real GDP are obtained from the UNCTADSTAT database. Data on the 3-month treasury bills rate are obtained from the Board of Governors of the Federal Reserve System website. Data on ratified bilateral investment treaties with OECD countries are extracted and coded from the UNCTADSTAT database. Data on the risk of investment expropriation are obtained from ICRG's investment profile component of the political risk index, as mentioned above. Data on the Chinn-Ito index is available at Chinn-Ito's website.[17]

A sample of 66 countries over the period 1984-2011 are selected from a list of countries classified by the World Bank in July 2012 as middle income countries and on which ICRG's investment profile data are available. Appendix A provides the list of countries together with variable means.

4. Empirical issues and estimation methodology

There are a number of empirical issues that we consider before embarking on estimation. The first issue is the likely presence of unit root in the empirical model

[16] The 2007-2009 financial crisis is a major motivation for this paper as discussed in the introduction.
[17] The index is available at http://web.pdx.edu/~ito/Chinn-Ito_website.htm.

variables, especially in FDI. In presence of non-stationarity, we could end up with spurious regressions. Thus we use a battery of panel unit root tests. The first test is the Levin, Lin and Chu (LLC) common unit root test, which assumes identical first-order autoregressive coefficients across countries. The test involves the following regression equation:

$$\Delta y_{it} = \alpha_i + \gamma_i y_{it-1} + \sum_{j=1}^{k} \alpha_j \Delta y_{it-j} + \varepsilon_{it} \quad \textbf{(4)}$$

The subscripts *i* and *t* are country and time indicators with *i=1,...,N* and *t=1,...,T*. The null hypothesis tested is $\gamma_i = \gamma = 0, \forall\, i$ against the alternative hypothesis $\gamma_1 = \gamma_2 = \cdots = \gamma_N < 0, \forall i$. We also use the Im, Pesaran and Shin (IPS) W-stat and the Augmented Dickey Fuller - Fisher Chi-squared tests, which allow the first-order autoregressive coefficients to vary across countries under the alternative hypothesis $\gamma_i < 0, \forall i$.

The second likely issue is endogeneity, defined in terms of the correlation between the explanatory variables and the error term. Endogeneity may result from the correlation between the lagged dependent variable and the error term, unobservable country-specific effects, simultaneity or reverse causality from the explanatory variables to the dependent variable, and variable omission. Endogeneity results in inconsistent ordinary least squares (OLS) estimates.

A dynamic panel GMM approach is therefore adopted in estimating the empirical model along the line of Arellano and Bond (1991).[18] Consider the simple empirical model below:

$$y_{i,t} = \alpha y_{i,t-1} + \beta' X_{i,t} + \mu_i + v_{i,t} \qquad i = 1, \ldots, N \qquad t = 1, \ldots, T \qquad \textbf{(5)}$$

[18] For recent applications of GMM estimators see for example Che et al (2012), Sen et al (2007), and Rioja and Valev (2004).

where $y_{i,t}$ is the dependent variable and $X_{i,t}$ is the vector of explanatory variables, and the subscripts i and t denote country and time periods. The error term comprises unobservable country effect, μ_i, in addition to a disturbance term $v_{i,t}$. The lagged dependent variable is correlated with the country effect μ_i and thus the error term μ_i + $v_{i,t}$ To eliminate the unobservable country effect, the GMM estimator takes the first difference:

$$\Delta y_{i,t} = \alpha \Delta y_{i,t-1} + \beta' \Delta X_{i,t} + \Delta v_{i,t} \qquad \textbf{(6)}$$

Although unobservable country effect is eliminated with differencing, there can still be an endogneity bias arising from the correlation between the lagged difference of the dependent variable and the error term. In this case instrumental variables are used.

The difference GMM estimator uses the lagged levels of the explanatory variables as instruments on the conditions that the error term of the differenced equation is not serially correlated and that the lagged levels of the explanatory variables are weakly exogenous. However, when the dependent variable is highly persistent over time, as in the case of capital flows, the difference GMM suffers weak instrument problem and its asymptotic properties may be affected; both point estimates and hypothesis tests become unreliable (Che et al 2013).

To address these problems, a system GMM along the lines of Arellano and Bover (1995) and Blundell and Bond (1998) is adopted instead. For system GMM, lagged differences of explanatory variables are used as instruments, assuming the absence of serial correlation in the error term, and between these instruments and the error term. The moment conditions are thus written as:

$$E[\Delta y_{i,t-l}(\mu_i + v_{i,t})] = 0 \qquad \text{for } l=1 \qquad \textbf{(7)}$$

$$E[\Delta X_{i,t-l}(\mu_i + v_{i,t})] = 0 \qquad \text{for } l=1 \qquad \textbf{(8)}$$

To ensure that the above moment conditions are satisfied, we test the lack of second-order serial correlation and use the Hansen/Sargan tests of over-identifying restrictions to test for instrument validity.

With the growth in time dimension, which is 28 years in our sample, instrument proliferation becomes an issue. The Hansen and the difference Hansen *J* tests for orthogonality under difference and system GMM, respectively, might suffer from notable size distortion resulting in poor detection of orthogonality conditions violation (Che et al 2013). To overcome this problem and to also mitigate finite sample bias, Roodman (2009) suggests collapsing the instruments, which we follow.[19] Finally, in identifying the exogeneity or endogeneity of the explanatory variables, Granger causality tests are conducted and variables are identified accordingly.

5. Empirical results

5.1 Sample countries

Appendix A provides information on our sample countries. For the total sample, countries seemed to rely more heavily on debt flows compared to equity flows. PNG and PPG debt flows amounted for more than 0.6 and 1.5 percent of GDP, respectively, compared to 0.15 and 0.16 percent of GDP for FDI and portfolio equity flows, respectively.

A look at individual countries shows that Kazakhstan and Nicaragua had the highest average PNG and PPG debt flows amounting to 7.5 and 10.1 percent of GDP, respectively, while Nicaragua and Latvia had the highest average long- and short-term

[19] Though it is interesting to compare estimation results under (non-collapsed instruments) system and difference GMM, we have decided for paper brevity not to include estimation results in this paper.

debt flows of 11.2 and 5.4 percent of GDP. As far as equity flows are concerned, Mongolia and Vietnam had the highest FDI and portfolio equity flows of 2.7 and 2 percent of GDP, respectively.

As far as political risk and political risk guarantees are concerned, the correlation coefficient between ICRG's investment profile and the total number of ratified treaties with OECD countries is 0.46 suggesting that low political risk is positively correlated with political risk guarantees. At the country level, the risk of investment expropriation was lowest in Lithuania and highest in Venezuela. The total number of bilateral investment treaties ratified with OECD countries was highest in China, with a total number of 22 treaties.[20] Brazil and Iraq on other hand ratified no treaties with OECD countries though the former signed 11 treaties and the latter signed 1 only.[21]

Libya had the highest real GDP per capita amounting to nearly $7,300. Guyana had the highest average trade and banking credit amounting to 188 and 157 percent of GDP. Panama reached the maximum score possible (2.44) on financial openness followed by Latvia (2.31).

5.2 Empirical issues diagnostics and treatment

Panel unit root test results reject the null hypothesis of the presence of unit root process for almost all variables, as shown in table 1. LLC tests results support the rejection of the null hypothesis of common unit root for all variables with the exception of PNG debt flows, real GDP per capita and the Chinn-Ito financial openness index. IPS and ADF-Fisher test results also support the rejection of the null

[20] Mean FDI inflows to China amounted to over $60 billion and reached a maximum of nearly $244 billion in 2010.
[21] Mean FDI inflows to Brazil amounted to nearly $18 billion and reached a maximum of nearly $72 billion in 2011.

hypothesis of individual unit root for all variables except for real GDP per capita only. The second difference of PNG debt flows, the first difference of real GDP per capita and the second difference of the financial openness index are stationary under the three panel unit tests and are used in the empirical model.

[Insert Table 1 here.]

Granger causality test results, based on 5 lags to account for persistent relationships, suggest the presence of reverse causality between the dependent variable(s) and the explanatory variables, which we account for in GMM estimation. The results are reported for 5 lags to account for persistence in capital flows and reflect long-term relationship. As table 2 shows, the null hypotheses that the second difference of PNG flows do not Granger-cause the first difference of real GDP per capita, and banking credit and trade as a percentage of GDP could not be accepted. The null hypotheses that PPG flows do not Granger-cause banking credit and trade as a percentage of GDP could not be accepted. On the equity side, the null hypothesis that FDI flows do not Granger-cause the 3-month treasury bills rates and ICRG's investment profile could not be accepted. Also the null hypothesis that portfolio equity flows do not Granger-cause the number of ratified treaties with OECD countries and the first difference of real GDP per capita could not be accepted. Accordingly these variables are included as endogenous variables in estimation in addition to the lagged dependent variable.

[Insert Table 2 here.]

We report *p* values for the Arellano-Bond and Hansen *J* test statistics. Failure to reject both hypotheses indicates consistency of estimates. We also

report Windmeijer's (2005) robust standard errors, which provide consistent estimates and correct for finite sample biases found in two-step system GMM.[22]

5.3 Empirical results

Tables 3, 4, 5, and 6 report the estimation results for PNG, PPG, portfolio equity and FDI flows, respectively. Tables with letter A (B) present the results for empirical model 3 (3'). We introduce the explanatory variables gradually to be able to examine how the influence of political risk guarantees responds to increasing model complexity.

5.3.1 PNG and PPG debt flows

Table 3A shows that an improvement in expropriation risk increases PNG debt flows. An improvement in risk by one percentage point increases debt flows by 0.06 percentage point, in specification 2 for example. The negative interaction term suggests however that the positive influence of risk improvement diminishes as more treaties, and thus higher percentage, with OECD countries are ratified. The total influence of expropriation risk improvement is positive for all but one specification, and ranges between 0.01 percentage point in specification 3 to about 0.02 percentage point in specifications 5-7. Results of table 3A also suggest that the higher the degree of economic development, the more PNG debt flows a country can attract.

Table 3B shows a seemingly opposite influence of political risk guarantees. The influence of ratified bilateral investment treaties is negative, possibly due to the increase in portfolio equity flows, as discussed further below. The interaction term suggests however that the negative influence improves with expropriation risk improvement. This result seems to confirm Mina's (2012) MENA countries finding

[22] See Okada (2013) for example.

that the positive influence of bilateral investment treaties hinges on strong domestic institutional functions. Despite the primarily (direct) negative influence of bilateral investment treaties, the total influence is positive. An increase in the percentage of ratified OECD treaties by 1 percentage point increases PNG debt flows between 60-65 percentage points. We should note that such high influence may depend partially on how we account for or count bilateral investment treaties.

Table 4A shows that an improvement in expropriation risk decreases PPG debt flows, unlike the positive influence on PNG debt flows. The positive and consistently, statistically significant interaction term suggests however that such negative influence improves as more treaties, and thus higher percentage, with OECD countries are ratified. Similar to the influence of expropriation risk, bilateral investment treaties also have negative influence. However, the statistical significance of the coefficients of bilateral investment treaties and the interaction term is very sensitive to model specification. Economic development has inverse relationship with PPG debt flows; the more developed the country the less PPG debt flows it attracts.

5.3.2 Portfolio equity and FDI flows

Table 5A shows in specifications 2-9 that an improvement in expropriation risk has a surprisingly direct negative influence on portfolio equity flows. It is possible that this negative influence results from the increase in other types of capital flows, in particular PNG debt flows, in response to risk improvement. The negative influence however improves with the increase in ratified bilateral investment treaties, a point we turn to. Table 5B shows positive influence of bilateral investment treaties on portfolio equity flows, which diminishes with improvement in expropriation risk. In both tables a higher level of financial development increases portfolio equity flows.

The results of tables 6B are surprising and do not match the recent evidence of statistically significant positive relationship between bilateral investment treaties and FDI flows. The results of table 6A are yet more surprising. Apart from their statistical insignificance, the coefficient signs are sensitive to model specification. However, both tables render intuitive result: Trade openness encourages more FDI inflows.

6. Conclusion

The results above highlight a number of interesting points. First, less political risk and more political risk guarantees do not have the same type of direct influence on non-guaranteed debt flows. Non-guaranteed debt flows increase with the improvement in political risk but decreases with more political risk guarantees. Second, the total (combined) influence of less political risk and of more political risk guarantees each on non-guaranteed debt flows is positive, however. Third, in the case of public and publicly guaranteed debt flows, less political risk and more political risk guarantees share the same type of influence; both reduce debt flows. Fourth, unlike non-guaranteed debt which increases with economic development, public and publicly guaranteed debt decreases with economic development. Fifth, political risk guarantees have positive influence on portfolio equity flows, which diminishes with political risk improvement. Sixth, both financial development and trade openness matter for equity flows, with the former encouraging portfolio equity flows and the latter encouraging FDI flows.

This research has several important policy implications. First, political risk guarantees, which bilateral investment treaties provide, can help increase increasing financial integration in world capital markets. Second, from a regulatory view point countries pondering regulating the financial system should consider the impact of

political risk guarantees in designing and implementing a regulatory framework. In addition, countries should also consider the impact of these guarantees on the capital account when contemplating capital account liberalization or restrictions.

This paper brings to the forefront two important research questions. First, do political risk guarantees affect country credit rating and risk premia? Second, do these guarantees affect financial institutions investments decisions? We leave these questions open for future research.

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Figure 1: Equity and Debt Flows to Middle Income Countries

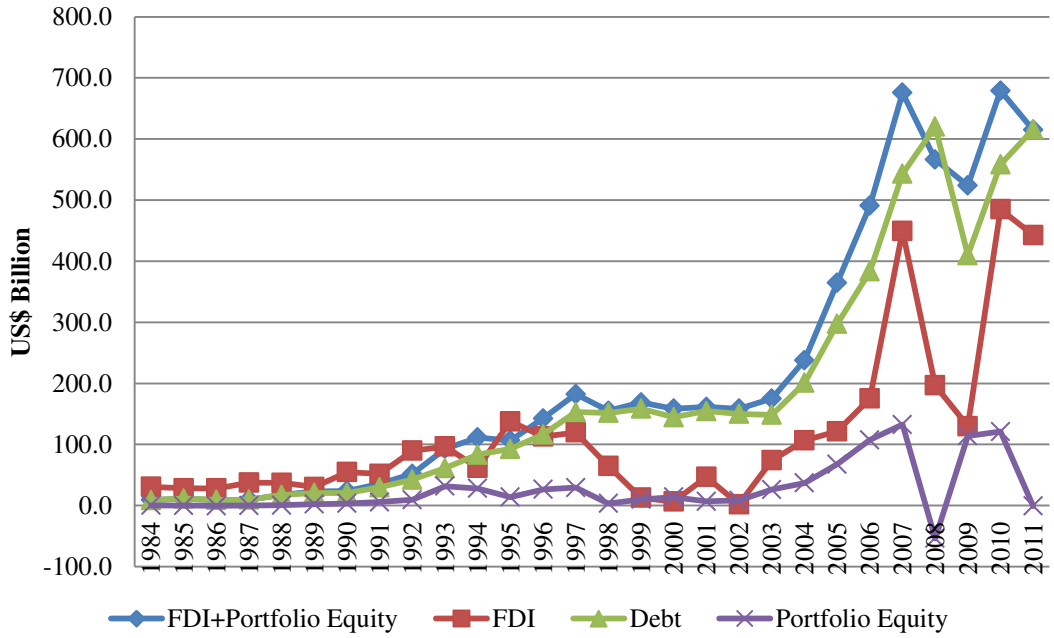

Table 1
Panel Unit Root Tests

Variable Form	LLC	IPS	ADF-Fisher
Dependent Variable			
PNG	0.015	0.000	0.000
PPG	0.000	0.000	0.000
Long -term Debt	0.000	0.000	0.000
Short-term Debt	0.000	0.000	0.000
FDI	0.000	0.000	0.000
Portfolio Equity	0.000	0.000	0.000
Explanatory Variables			
Treasury Bills (3 months)	0.007	0.000	0.002
Annual OECD Treaties Ratified (Ratio)	0.000	0.000	0.000
Investment Profile Ratio	0.000	0.000	0.000
Real GDP per Capita			
Level	0.567	0.996	0.210
First Difference	0.000	0.000	0.000
Banking Credit	0.023	0.257	0.029
Trade	0.000	0.000	0.000
Financial Openness Index			
Level	0.976	0.002	0.003
First Difference	1.000	0.000	0.000
Second Difference	0.000	0.000	0.000

Notes: LLC tests for common unit root, while IPS and ADF-Fisher test for individual unit roots. Panel unit root tests include individual intercept and trend. *p* values are reported for test statistics.

Table 2
Granger Causality Test Statistics

	R	*G*	*X*	*Development*	*Finance*	*Openness*	*KA*
PNG							
H0: *A* NOT→*B*	**0.000**	0.959	0.571	**0.000**	**0.036**	**0.004**	0.338
H0: *B* NOT→*A*	0.000	0.957	0.146	0.000	0.687	0.095	0.545
PPG							
H0: *A* NOT→*B*	0.084	0.803	0.081	0.655	**0.000**	**0.008**	0.372
H0: *B* NOT→*A*	0.557	0.843	0.833	0.353	0.000	0.002	0.208
Long -term Debt							
H0: *A* NOT→*B*	0.141	0.757	**0.030**	**0.044**	**0.000**	0.513	0.894
H0: *B* NOT→*A*	0.052	0.864	0.261	0.000	0.000	0.000	0.623
Short-term Debt							
H0: *A* NOT→*B*	**0.014**	0.634	0.453	0.124	**0.000**	**0.000**	0.184
H0: *B* NOT→*A*	0.051	0.034	0.070	0.001	0.000	0.000	0.009
FDI							
H0: *A* NOT→*B*	**0.007**	0.967	**0.004**	0.183	0.119	0.198	0.587
H0: *B* NOT→*A*	0.075	0.938	0.961	0.181	0.017	0.000	0.338
Portfolio Equity							
H0: *A* NOT→*B*	0.099	**0.023**	0.406	**0.001**	0.063	0.349	0.098
H0: *B* NOT→*A*	0.010	0.021	0.896	0.895	0.002	0.366	0.071

Notes: *H0*: *A* NOT→*B* is the null hypothesis that the dependent variable does not Granger-cause the explanatory variable, while *H0*: *B* NOT→*A* is the null hypothesis that the explanatory variable does not Granger-cause the dependent variable. *p* values are reported for test statistics using 5 lags. The first difference of real GDP per capita and the second difference of financial openness are used.

Table 3A: Political Risk and PNG Debt Flows

	(1)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
L.K	**0.477a**	**0.445a**	**0.485a**	0.263	0.266	0.272	**0.306c**	**0.310c**	**0.309c**
	(0.176)	(0.159)	(0.160)	(0.190)	(0.190)	(0.174)	(0.181)	(0.178)	(0.184)
X	**0.011b**	**0.060a**	**0.031a**	**0.027a**	**0.032a**	**0.035a**	**0.032a**	**0.031a**	**0.026b**
	(0.005)	(0.021)	(0.009)	(0.009)	(0.012)	(0.013)	(0.011)	(0.012)	(0.011)
GX		**-2.491b**	**-0.681a**	**-0.579b**	**-0.561b**	**-0.557b**	**-0.537b**	**-0.514b**	**-0.457b**
		(0.970)	(0.222)	(0.261)	(0.256)	(0.273)	(0.233)	(0.249)	(0.204)
R			0.065	**0.078c**	**0.085b**	**0.097b**	**0.093b**	**0.090b**	0.059
			(0.043)	(0.043)	(0.042)	(0.048)	(0.040)	(0.039)	(0.038)
Development (D1)				**0.003b**	**0.003a**	**0.003a**	**0.003a**	**0.003a**	**0.003a**
				(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Openness					-0.007	-0.012	-0.009	-0.010	-0.008
					(0.009)	(0.009)	(0.010)	(0.010)	(0.011)
Finance						0.002	-0.000	-0.000	-0.002
						(0.005)	(0.004)	(0.005)	(0.004)
KA (D2)							-0.063	-0.106	-0.049
							(0.100)	(0.101)	(0.120)
Crisis1								-0.003	0.087
								(0.214)	(0.187)
Crisis2									**0.353c**
									(0.211)
Constant	-0.414c	-1.358b	-1.216b	-1.186a	-0.991c	-0.920	-0.934	-0.848	-0.571
	(0.219)	(0.652)	(0.538)	(0.393)	(0.602)	(0.640)	(0.609)	(0.672)	(0.597)
Observations	1,509	1,509	1,509	1,430	1,418	1,392	1,320	1,320	1,320
Countries	62	62	62	62	62	62	62	62	62
Instruments	31	31	58	82	109	136	136	137	138
Wald test	0.000	0.012	0.000	0.001	0.001	0.000	0.000	0.003	0.000
A-B	0.947	0.505	0.838	0.293	0.296	0.290	0.270	0.267	0.281
Hansen *J* statistic	0.122	0.762	0.412	0.948	1.000	1.000	1.000	1.000	1.000
Expropriation risk effect	0.011	-0.089	0.010	0.011	0.014	0.016	0.015	0.015	0.014

Notes: Windmeijer's robust standard errors are reported in parentheses. a, b, c denote significance at 1%, 5%, 10% level, respectively. *p* values are reported for diagnostic tests. A-B reports the Arellano-Bond (AR2) test for autocorrelation. Hansen *J* statistic reports the test statistic of the null hypothesis that instruments as a group are exogenous. Dependent variable *K* is net flows as a percentage of GDP, except for FDI where it is net inflows as a percentage of GDP. PNG, PPG, FDI, and PE are private non-guaranteed debt, public and publicly guaranteed debt, foreign direct investment, and portfolio equity, respectively. *X* is the risk of investment appropriation. *G* is political risk guarantees. *GX* is interaction term. *R* is risk free interest rate. *Development* is the degree of economic development (in first difference). *Openness* is trade openness. *Finance* is the degree of financial development. *KA* is the Chinn-Ito capital control index (in second difference). *Crisis1* is 1997-1998 financial crisis dummy. *Crisis2* is 2007-2009 financial crisis dummy. Two-step system GMM is used in estimation with instruments collapsed. Risk improvement effect is the estimated effect of expropriation risk on the dependent variable calculated as $ß_3+ß_4X$, where the sample mean (1.12) of *G* is used.

Table 3B: Political Risk Guarantees and PNG Debt Flows

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
L.K	**0.496a**	**0.489a**	**0.520a**	0.290	0.305	**0.311c**	**0.333c**	**0.337c**	**0.309c**
	(0.181)	(0.175)	(0.158)	(0.184)	(0.190)	(0.187)	(0.178)	(0.176)	(0.185)
G	0.002	-1.315	-0.322	**-0.699b**	-0.640	**-0.743b**	**-0.736b**	**-0.731b**	**-0.710c**
	(0.016)	(1.830)	(0.576)	(0.356)	(0.414)	(0.320)	(0.360)	(0.355)	(0.378)
GX		2.176	0.513	**1.105c**	1.010	**1.158b**	**1.119b**	**1.107b**	**1.081c**
		(3.052)	(0.970)	(0.567)	(0.667)	(0.506)	(0.554)	(0.552)	(0.581)
R			-0.013	0.027	0.020	0.021	0.022	0.023	0.028
			(0.040)	(0.048)	(0.050)	(0.043)	(0.045)	(0.045)	(0.041)
Development (D1)				**0.003a**	**0.004a**	**0.004a**	**0.004a**	**0.004a**	**0.004a**
				(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Openness					-0.002	-0.006	-0.004	-0.005	-0.003
					(0.007)	(0.005)	(0.005)	(0.005)	(0.005)
Finance						0.004	0.003	0.002	0.002
						(0.004)	(0.004)	(0.004)	(0.004)
KA (D2)							-0.092	-0.105	-0.060
							(0.075)	(0.090)	(0.102)
Crisis1								-0.074	0.010
								(0.152)	(0.163)
Crisis2									0.401
									(0.257)
Constant	0.214a	0.235a	0.382a	0.142	0.335	0.307	0.278	0.348	0.176
	(0.081)	(0.090)	(0.148)	(0.317)	(0.704)	(0.461)	(0.576)	(0.543)	(0.477)
Observations	1,552	1,509	1,509	1,430	1,418	1,392	1,320	1,320	1,320
Countries	62	62	62	62	62	62	62	62	62
Instruments	31	31	58	82	109	136	136	137	138
Wald test	0.002	0.037	0.002	0.037	0.047	0.051	0.093	0.121	0.003
A-B	0.994	0.995	0.933	0.383	0.372	0.365	0.333	0.327	0.360
Hansen *J* statistic	0.106	0.087	0.271	0.908	1.000	1.000	1.000	1.000	1.000
Guarantees effect	-	-	-	61.7	-	64.7	62.5	61.8	60.4

Notes: Windmeijer's robust standard errors are reported in parentheses. a, b, c denote significance at 1%, 5%, 10% level, respectively. *p* values are reported for diagnostic tests. A-B reports the Arellano-Bond (AR2) test for autocorrelation. Hansen *J* statistic reports the test statistic of the null hypothesis that instruments as a group are exogenous. Dependent variable *K* is net flows as a percentage of GDP, except for FDI where it is net inflows as a percentage of GDP. PNG, PPG, FDI and PE are private non-guaranteed debt, public and publicly guaranteed debt, foreign direct investment, and portfolio equity, respectively. *G* is political risk guarantees. *GX* is interaction term. *R* is risk free interest rate. *Development* is the degree of economic development (in first difference). *Openness* is trade openness. *Finance* is the degree of financial development. *KA* is the Chinn-Ito capital control index (in second difference). *Crisis1* is 1997-1998 financial crisis dummy. *Crisis2* is 2007-2009 financial crisis dummy. Two-step system GMM is used in estimation with instruments collapsed. Guarantees effect is the estimated effect of political risk guarantees on the dependent variable calculated as $ß_3+ß_4X$, where the sample mean (56.5) of *X* is used.

Table 4A: Political Risk and PPG Debt Flows

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
L.K	**0.209a**	**0.213a**	**0.209a**	**0.211a**	**0.220a**	**0.181a**	**0.172a**	**0.166b**	**0.169a**
	(0.044)	(0.044)	(0.044)	(0.047)	(0.046)	(0.056)	(0.060)	(0.074)	(0.064)
X	-0.011	**-0.036a**	**-0.027b**	**-0.054a**	-0.018	-0.027	-0.027	-0.028	-0.029
	(0.011)	(0.011)	(0.013)	(0.013)	(0.017)	(0.022)	(0.024)	(0.027)	(0.026)
GX		**1.293a**	**0.886a**	**2.437a**	**0.944c**	**1.082b**	**1.316b**	**1.418b**	**1.424b**
		(0.293)	(0.335)	(0.529)	(0.560)	(0.545)	(0.574)	(0.568)	(0.627)
R			0.041	-0.008	0.085	0.063	0.032	0.070	0.090
			(0.045)	(0.060)	(0.063)	(0.075)	(0.079)	(0.071)	(0.070)
Development (D1)				**-0.002c**	**-0.002b**	**-0.002b**	**-0.002c**	-0.002	-0.002
				(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Openness					-0.014	-0.020	-0.023	-0.017	-0.020
					(0.013)	(0.017)	(0.026)	(0.028)	(0.026)
Finance						**0.041b**	0.028	0.032	0.030
						(0.021)	(0.030)	(0.030)	(0.032)
KA (D2)							0.199	0.555	0.440
							(0.220)	(0.470)	(0.326)
Crisis1								-1.268	-1.143
								(0.898)	(0.745)
Crisis2									0.520
									(0.341)
Constant	1.500b	2.112a	1.719b	2.358a	2.112b	1.107	1.958	1.276	1.459
	(0.754)	(0.656)	(0.716)	(0.732)	(0.954)	(1.410)	(2.187)	(1.990)	(2.215)
Observations	1,509	1,509	1,509	1,430	1,418	1,392	1,320	1,320	1,320
Countries	62	62	62	62	62	62	62	62	62
Instruments	31	31	32	32	59	86	87	88	89
Wald test	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004
A-B	0.478	0.45	0.439	0.478	0.398	0.323	0.327	0.349	0.33
Hansen *J* statistic	0.053	0.182	0.187	0.606	0.333	0.938	0.966	0.985	0.981
Expropriation risk effect	-	1.4	1.0	2.7	-	1.2	1.5	1.6	1.6

Notes: Windmeijer's robust standard errors are reported in parentheses. a, b, c denote significance at 1%, 5%, 10% level, respectively. p values are reported for diagnostic tests. A-B reports the Arellano-Bond (AR2) test for autocorrelation. Hansen J statistic reports the test statistic of the null hypothesis that instruments as a group are exogenous. Dependent variable K is net flows as a percentage of GDP, except for FDI where it is net inflows as a percentage of GDP. PNG, PPG, FDI, and PE are private non-guaranteed debt, public and publicly guaranteed debt, foreign direct investment, and portfolio equity, respectively. X is the risk of investment appropriation. G is political risk guarantees. GX is interaction term. R is risk free interest rate. Development is the degree of economic development (in first difference). Openness is trade openness. Finance is the degree of financial development. KA is the Chinn-Ito capital control index (in second difference). Crisis1 is 1997-1998 financial crisis dummy. Crisis2 is 2007-2009 financial crisis dummy. Two-step system GMM is used in estimation with instruments collapsed. Risk improvement effect is the estimated effect of expropriation risk on the dependent variable calculated as ß3+ß4X, where the sample mean (1.12) of G is used.

Table 4B: Political Risk Guarantees and PPG Debt Flows

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
L.K	**0.237a**	**0.198a**	**0.219a**	**0.239a**	**0.214a**	**0.184a**	**0.175a**	**0.184a**	**0.184a**
	(0.051)	(0.048)	(0.042)	(0.073)	(0.049)	(0.064)	(0.062)	(0.056)	(0.057)
G	0.009	**2.137c**	-2.507	**-10.789a**	**-1.970c**	-1.035	-0.723	-0.950	-0.992
	(0.040)	(1.158)	(1.974)	(3.870)	(1.062)	(0.706)	(0.822)	(0.883)	(0.921)
GX		**-3.568c**	4.182	**17.724a**	**3.229c**	1.652	1.135	1.493	1.574
		(1.919)	(3.318)	(6.259)	(1.749)	(1.159)	(1.347)	(1.427)	(1.528)
R			**0.191b**	**0.461b**	**0.212b**	0.170	0.163	**0.175c**	**0.172c**
			(0.088)	(0.196)	(0.105)	(0.106)	(0.101)	(0.101)	(0.093)
Development (D1)				-0.003	**-0.002b**	**-0.002b**	**-0.002b**	**-0.002b**	**-0.002b**
				(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Openness					-0.013	-0.013	-0.006	-0.005	-0.006
					(0.013)	(0.013)	(0.021)	(0.020)	(0.018)
Finance						**0.036b**	0.026	0.024	0.023
						(0.018)	(0.027)	(0.028)	(0.028)
KA (D2)							0.233	0.162	0.151
							(0.191)	(0.250)	(0.244)
Crisis1								-0.674	-0.683
								(0.533)	(0.557)
Crisis2									0.003
									(0.238)
Constant	0.853a	0.960a	0.201	-0.801	1.284	-0.346	-0.332	-0.296	-0.103
	(0.173)	(0.177)	(0.347)	(0.725)	(1.082)	(1.850)	(2.960)	(2.959)	(2.699)
Observations	1,552	1,509	1,509	1,430	1,418	1,392	1,320	1,320	1,320
Countries	62	62	62	62	62	62	62	62	62
Instruments	31	31	32	32	59	86	87	88	89
Wald test	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
A-B	0.540	0.521	0.454	0.639	0.396	0.340	0.346	0.350	0.351
Hansen *J* statistic	0.071	0.118	0.147	0.116	0.288	0.972	0.975	0.972	0.974
Guarantees effect	-	-199.5	-	990.7	180.5	-	-	-	-

Notes: Windmeijer's robust standard errors are reported in parentheses. a, b, c denote significance at 1%, 5%, 10% level, respectively. *p* values are reported for diagnostic tests. A-B reports the Arellano-Bond (AR2) test for autocorrelation. Hansen *J* statistic reports the test statistic of the null hypothesis that instruments as a group are exogenous. Dependent variable *K* is net flows as a percentage of GDP, except for FDI where it is net inflows as a percentage of GDP. PNG, PPG, FDI and PE are private non-guaranteed debt, public and publicly guaranteed debt, foreign direct investment, and portfolio equity, respectively. *G* is political risk guarantees. *GX* is interaction term. *R* is risk free interest rate. *Development* is the degree of economic development (in first difference). *Openness* is trade openness. *Finance* is the degree of financial development. *KA* is the Chinn-Ito capital control index (in second difference). *Crisis1* is 1997-1998 financial crisis dummy. *Crisis2* is 2007-2009 financial crisis dummy. Two-step system GMM is used in estimation with instruments collapsed. Guarantees effect is the estimated effect of political risk guarantees on the dependent variable calculated as $ß_3+ß_4X$, where the sample mean (56.5) of *X* is used.

Table 5A: Political Risk and Portfolio Equity Flows

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
L.K	0.022	**-0.120c**	-0.111	0.018	0.020	0.004	-0.010	-0.009	-0.001
	(0.087)	(0.072)	(0.077)	(0.073)	(0.072)	(0.065)	(0.065)	(0.064)	(0.066)
X	**0.004b**	**-0.018b**	**-0.023b**	-0.006	-0.006	-0.007	**-0.008c**	**-0.008c**	-0.007
	(0.002)	(0.008)	(0.011)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)
GX		**1.204a**	**1.232a**	**0.445a**	**0.430a**	**0.430a**	**0.447a**	**0.458a**	**0.391a**
		(0.369)	(0.401)	(0.152)	(0.154)	(0.158)	(0.158)	(0.164)	(0.138)
R			**-0.064c**	-0.020	-0.019	**-0.025c**	-0.022	-0.021	-0.016
			(0.034)	(0.013)	(0.013)	(0.015)	(0.017)	(0.016)	(0.016)
Development (D1)				0.000	0.000	0.000	0.000	0.000	**0.000c**
				(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Openness					0.000	-0.000	-0.000	0.000	-0.000
					(0.001)	(0.001)	(0.002)	(0.002)	(0.001)
Finance						**0.005a**	**0.005a**	**0.005a**	**0.005a**
						(0.002)	(0.002)	(0.002)	(0.002)
KA (D2)							0.020	0.021	0.017
							(0.036)	(0.037)	(0.034)
Crisis1								-0.064	-0.042
								(0.075)	(0.072)
Crisis2									0.042
									(0.093)
Constant	-0.123	0.374	0.885c	0.272	0.239	0.151	0.138	0.144	0.087
	(0.081)	(0.284)	(0.507)	(0.175)	(0.178)	(0.215)	(0.242)	(0.242)	(0.224)
Observations	1,375	1,375	1,375	1,304	1,296	1,261	1,189	1,189	1,189
Countries	66	66	66	66	65	65	64	64	64
Instruments	31	31	32	57	58	59	60	61	62
Wald test	0.042	0.008	0.017	0.021	0.053	0.012	0.012	0.016	0.025
A-B	0.221	0.770	0.778	0.969	0.979	0.994	0.994	0.985	0.927
Hansen *J* statistic	0.081	0.399	0.407	0.378	0.357	0.474	0.522	0.547	0.453
Expropriation risk effect	0.004	1.34	1.37	0.50	0.49	0.49	0.50	0.51	0.44

Notes: Windmeijer's robust standard errors are reported in parentheses. a, b, c denote significance at 1%, 5%, 10% level, respectively. p values are reported for diagnostic tests. A-B reports the Arellano-Bond (AR2) test for autocorrelation. Hansen J statistic reports the test statistic of the null hypothesis that instruments as a group are exogenous. Dependent variable K is net flows as a percentage of GDP, except for FDI where it is net inflows as a percentage of GDP. PNG, PPG, FDI, and PE are private non-guaranteed debt, public and publicly guaranteed debt, foreign direct investment, and portfolio equity, respectively. X is the risk of investment appropriation. G is political risk guarantees. GX is interaction term. R is risk free interest rate. Development is the degree of economic development (in first difference). Openness is trade openness. Finance is the degree of financial development. KA is the Chinn-Ito capital control index (in second difference). Crisis1 is 1997-1998 financial crisis dummy. Crisis2 is 2007-2009 financial crisis dummy. Two-step system GMM is used in estimation with instruments collapsed. Risk improvement effect is the estimated effect of expropriation risk on the dependent variable calculated as ß3+ß4X, where the sample mean (1.12) of G is used.

Table 5B: Political Risk Guarantees and Portfolio Equity Flows

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
L.K	0.045	0.083	0.082	0.063	0.059	0.058	0.062
	(0.091)	(0.094)	(0.093)	(0.087)	(0.089)	(0.089)	(0.088)
G	**0.704c**	**0.317b**	**0.289c**	**0.307c**	**0.573b**	**0.569b**	**0.589b**
	(0.386)	(0.152)	(0.155)	(0.170)	(0.237)	(0.225)	(0.237)
GX	**-1.111c**	**-0.469c**	-0.422	-0.447	**-0.851b**	**-0.843b**	**-0.877b**
	(0.635)	(0.257)	(0.263)	(0.284)	(0.369)	(0.352)	(0.373)
R	**-0.037c**	**-0.025c**	-0.022	**-0.022c**	**-0.025c**	**-0.027b**	**-0.030c**
	(0.020)	(0.014)	(0.015)	(0.013)	(0.015)	(0.014)	(0.017)
Development (D1)		0.000	0.000	0.000	0.000	0.000	0.000
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Openness			0.000	-0.000	0.000	0.000	0.000
			(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Finance				**0.005a**	**0.005a**	**0.005a**	**0.005a**
				(0.002)	(0.002)	(0.002)	(0.002)
KA (D2)					-0.001	-0.002	-0.003
					(0.029)	(0.029)	(0.030)
Crisis1						0.112	0.117
						(0.114)	(0.142)
Crisis2							-0.047
							(0.084)
Constant	0.284b	0.226b	0.180	-0.002	-0.047	-0.041	-0.039
	(0.113)	(0.088)	(0.116)	(0.114)	(0.135)	(0.129)	(0.135)
Observations	1,375	1,304	1,296	1,261	1,189	1,189	1,189
Countries	66	66	65	65	64	64	64
Instruments	59	83	84	85	86	87	88
Wald test	0.238	0.081	0.101	0.007	0.029	0.03	0.046
A-B	0.179	0.521	0.542	0.489	0.427	0.438	0.491
Hansen *J* statistic	0.263	0.923	0.927	0.973	0.982	0.989	0.959
Guarantees effect	-62.1	-26.2	0.3	0.3	-47.5	-47.1	-49.0

Notes: Windmeijer's robust standard errors are reported in parentheses. a, b, c denote significance at 1%, 5%, 10% level, respectively. *p* values are reported for diagnostic tests. A-B reports the Arellano-Bond (AR2) test for autocorrelation. Hansen *J* statistic reports the test statistic of the null hypothesis that instruments as a group are exogenous. Dependent variable *K* is net flows as a percentage of GDP, except for FDI where it is net inflows as a percentage of GDP. PNG, PPG, FDI and PE are private non-guaranteed debt, public and publicly guaranteed debt, foreign direct investment, and portfolio equity, respectively. *G* is political risk guarantees. *GX* is interaction term. *R* is risk free interest rate. *Development* is the degree of economic development (in first difference). *Openness* is trade openness. *Finance* is the degree of financial development. *KA* is the Chinn-Ito capital control index (in second difference). *Crisis1* is 1997-1998 financial crisis dummy. *Crisis2* is 2007-2009 financial crisis dummy. Two-step system GMM is used in estimation with instruments collapsed. Guarantees effect is the estimated effect of political risk guarantees on the dependent variable calculated as $ß_3+ß_4X$, where the sample mean (56.5) of *X* is used.

Table 6A: Political Risk and FDI Flows

	(1)	(2)	(3)	(4)	(5)	(6)
L.K	**0.366a**	**0.330a**	**0.326a**	**0.318a**	**0.321a**	**0.341a**
	(0.028)	(0.028)	(0.028)	(0.027)	(0.029)	(0.028)
X	0.005	-0.023	-0.018	-0.020	-0.028	0.015
	(0.017)	(0.028)	(0.030)	(0.032)	(0.039)	(0.021)
GX	0.197	0.328	0.026	-0.259	-0.444	-0.350
	(0.265)	(0.290)	(0.274)	(0.253)	(0.309)	(0.345)
R	-0.093	-0.048	-0.017	0.010	-0.031	-0.082
	(0.067)	(0.058)	(0.062)	(0.064)	(0.073)	(0.093)
Development (D1)	**0.003a**	**0.003a**	**0.003a**	**0.003b**	**0.003b**	**0.002b**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Openness		**0.035a**	**0.035b**	**0.038a**	**0.039a**	**0.032b**
		(0.012)	(0.014)	(0.015)	(0.015)	(0.013)
Finance			-0.006	-0.008	-0.007	-0.006
			(0.007)	(0.008)	(0.009)	(0.007)
KA (D2)				0.004	-0.065	-0.117
				(0.178)	(0.216)	(0.185)
Crisis1					1.448	1.326
					(1.194)	(1.246)
Crisis2						**0.655c**
						(0.337)
Constant	1.650	0.602	0.764	0.829	1.352	-0.670
	(1.246)	(1.177)	(1.341)	(1.546)	(2.063)	(1.225)
Observations	1,501	1,467	1,443	1,363	1,363	1,363
Countries	66	65	65	65	65	65
Instruments	83	84	85	85	86	87
Wald test	0.000	0.000	0.000	0.000	0.000	0.000
A-B	0.277	0.277	0.286	0.300	0.306	0.300
Hansen *J* statistic	0.905	0.886	0.895	0.918	0.939	0.958
Expropriation risk effect	-	-	-	-	-	-

Notes: Windmeijer's robust standard errors are reported in parentheses. a, b, c denote significance at 1%, 5%, 10% level, respectively. p values are reported for diagnostic tests. A-B reports the Arellano-Bond (AR2) test for autocorrelation. Hansen J statistic reports the test statistic of the null hypothesis that instruments as a group are exogenous. Dependent variable K is net flows as a percentage of GDP, except for FDI where it is net inflows as a percentage of GDP. PNG, PPG, FDI, and PE are private non-guaranteed debt, public and publicly guaranteed debt, foreign direct investment, and portfolio equity, respectively. X is the risk of investment appropriation. G is political risk guarantees. GX is interaction term. R is risk free interest rate. Development is the degree of economic development (in first difference). Openness is trade openness. Finance is the degree of financial development. KA is the Chinn-Ito capital control index (in second difference). Crisis1 is 1997-1998 financial crisis dummy. Crisis2 is 2007-2009 financial crisis dummy. Two-step system GMM is used in estimation with instruments collapsed. Risk improvement effect is the estimated effect of expropriation risk on the dependent variable calculated as ß3+ß4X, where the sample mean (1.12) of G is used.

Table 6B: Political Risk Guarantees and FDI Flows

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
L.K	**0.361a**	**0.373a**	**0.386a**	**0.344a**	**0.312a**	**0.310a**	**0.306a**	**0.311a**	**0.330a**
	(0.056)	(0.083)	(0.049)	(0.031)	(0.028)	(0.028)	(0.029)	(0.030)	(0.030)
G	0.028	19.703	0.184	1.286	1.667	1.415	1.525	1.942	0.560
	(0.037)	(13.513)	(0.625)	(1.257)	(1.262)	(1.114)	(1.185)	(1.694)	(1.256)
GX		-32.676	-0.246	-2.062	-2.668	-2.270	-2.364	-3.050	-0.853
		(22.453)	(1.034)	(2.108)	(2.102)	(1.865)	(1.925)	(2.694)	(2.045)
R			-0.068	-0.074	0.012	0.031	0.046	-0.001	-0.123
			(0.068)	(0.058)	(0.064)	(0.071)	(0.081)	(0.070)	(0.080)
Development (D1)				**0.004a**	**0.003a**	**0.003a**	**0.003b**	**0.003b**	**0.002b**
				(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Openness					**0.035a**	**0.036a**	**0.038a**	**0.037a**	**0.032a**
					(0.012)	(0.012)	(0.014)	(0.014)	(0.011)
Finance						-0.005	-0.006	-0.005	-0.005
						(0.007)	(0.008)	(0.009)	(0.005)
KA (D2)							-0.045	-0.057	-0.045
							(0.130)	(0.127)	(0.119)
Crisis1								1.229	1.362
								(1.008)	(1.094)
Crisis2									**0.805a**
									(0.273)
Constant	1.674a	1.703a	2.085a	2.008a	-0.716	-0.624	-0.783	-0.693	0.058
	(0.278)	(0.465)	(0.289)	(0.337)	(0.767)	(0.772)	(0.857)	(0.799)	(0.628)
Observations	1,629	1,583	1,583	1,501	1,467	1,443	1,363	1,363	1,363
Countries	66	66	66	66	65	65	65	65	65
Instruments	31	31	58	57	58	59	59	60	61
Wald test	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
A-B	0.273	0.508	0.274	0.268	0.270	0.274	0.280	0.225	0.285
Hansen *J* statistic	0.041	0.589	0.180	0.181	0.245	0.234	0.211	0.708	0.286
Guarantees effect	-	-	-	-	-	-	-	-	-

Notes: Windmeijer's robust standard errors are reported in parentheses. a, b, c denote significance at 1%, 5%, 10% level, respectively. *p* values are reported for diagnostic tests. A-B reports the Arellano-Bond (AR2) test for autocorrelation. Hansen *J* statistic reports the test statistic of the null hypothesis that instruments as a group are exogenous. Dependent variable *K* is net flows as a percentage of GDP, except for FDI where it is net inflows as a percentage of GDP. PNG, PPG, FDI and PE are private non-guaranteed debt, public and publicly guaranteed debt, foreign direct investment, and portfolio equity, respectively. *G* is political risk guarantees. *GX* is interaction term. *R* is risk free interest rate. *Development* is the degree of economic development (in first difference). *Openness* is trade openness. *Finance* is the degree of financial development. *KA* is the Chinn-Ito capital control index (in second difference). *Crisis1* is 1997-1998 financial crisis dummy. *Crisis2* is 2007-2009 financial crisis dummy. Two-step system GMM is used in estimation with instruments collapsed. Guarantees effect is the estimated effect of political risk guarantees on the dependent variable calculated as $ß_3+ß_4X$, where the sample mean (56.5) of *X* is used.

Appendix A

Dependent and Explanatory Variable Means

	PNG	PPG	FDI	PE	LT	ST	X	G	Development	Openness	Finance	KA
Albania	0.57	2.97	0.41	0.01	3.55	1.26	0.52	15	2004.03	58.18	53.63	-0.36
Algeria	0.03	-0.69	0.04	0.00	-0.66	-0.08	0.58	12	2823.40	53.86	42.34	-1.27
Angola	0.00	-1.53	-0.27	0.00	-1.53	0.41	0.50	2	1669.28	113.66	10.34	-1.46
Argentina	0.18	0.93	0.06	0.07	1.12	-0.21	0.48	19	4405.72	26.68	35.82	-0.17
Armenia	1.31	3.67	0.33	0.02	4.98	0.90	0.63	12	1193.49	77.85	17.12	2.20
Azerbaijan	0.43	1.82	-0.23	0.00	2.25	0.30	0.74	11	1397.14	91.02	19.79	-0.79
Belarus	0.37	1.16	0.38	0.01	1.53	2.02	0.48	12	2584.68	125.11	25.69	-1.32
Bolivia	0.39	2.72	0.13	0.00	3.10	0.14	0.51	12	961.09	54.82	44.25	0.62
Botswana	0.00	0.85	-0.06	0.05	0.85	0.11	0.77	2	4015.58	93.04	-30.92	0.63
Brazil	0.56	0.32	0.08	0.52	0.87	0.13	0.53	0	4436.82	20.61	91.05	-1.05
Bulgaria	2.50	0.84	0.23	0.09	3.34	1.65	0.69	18	3145.29	104.00	59.71	0.18
Cameroon	-0.31	1.06	0.04	-0.01	0.75	0.02	0.57	4	958.77	47.36	18.12	-0.94
Chile	2.03	0.86	0.24	0.53	2.89	0.64	0.72	17	5598.12	62.17	77.88	-0.23
China	0.05	0.85	0.09	0.25	0.90	0.64	0.56	22	1144.23	43.45	108.97	-1.32
Colombia	0.43	1.04	0.09	0.10	1.47	0.08	0.57	2	3138.43	34.11	43.12	-1.05
Costa Rica	0.36	0.28	0.15	0.00	0.63	0.35	0.62	8	3942.51	81.09	33.80	0.11
Cote d'Ivoire	-0.42	0.71	0.04	0.02	0.28	0.82	0.49	1	970.90	74.35	30.42	-0.94
Dominican Rep.	0.01	1.15	0.13	0.00	1.15	0.25	0.60	4	3011.21	72.09	32.89	-0.56
Ecuador	0.51	1.02	0.02	0.01	1.52	0.00	0.42	9	2453.75	59.59	25.45	0.26
Egypt	-0.04	0.95	-0.10	0.02	0.92	-0.15	0.53	18	1074.13	51.27	89.53	0.36
El Salvador	0.24	1.89	0.03	0.00	2.13	0.44	0.53	10	2349.02	59.98	45.52	0.66
Ghana	0.00	4.09	0.30	0.10	4.10	0.59	0.58	5	685.29	67.40	25.19	-1.37
Guatemala	0.24	0.48	0.07	0.00	0.71	0.36	0.61	9	1972.01	50.10	31.40	0.97
Guyana	-0.02	6.21	0.20	0.00	6.19	1.83	0.52	2	1566.40	187.55	157.36	0.74
Honduras	0.39	3.10	0.20	0.00	3.49	0.19	0.54	8	1275.10	95.95	39.46	-0.54
India	0.35	0.66	0.06	0.56	1.02	0.22	0.58	20	556.37	27.22	53.50	-1.17
Indonesia	0.24	0.72	0.07	-0.02	0.96	0.33	0.56	11	1355.74	54.81	43.11	1.71
Iran	0.00	-0.52	0.01	0.00	-0.52	0.76	0.45	10	2430.92	38.29	46.91	-1.00

	PNG	PPG	FDI	PE	LT	ST	X	G	Development	Openness	Finance	KA
Iraq	na	na	0.00	0.04	na	na	0.42	0	615.75	na	-7.35	-0.63
Jamaica	1.23	2.27	0.03	0.00	3.50	0.21	0.63	8	3930.32	98.82	50.44	0.83
Jordan	0.09	2.73	0.13	0.09	2.82	3.11	0.63	15	2081.43	122.59	93.56	0.87
Kazakhstan	7.49	0.80	0.35	0.36	8.30	1.19	0.70	11	3042.99	88.76	25.63	-1.17
Latvia	3.75	2.03	0.25	0.09	5.79	5.35	0.83	21	5290.13	101.79	47.62	2.31
Lebanon	0.18	4.41	0.19	1.91	4.59	1.65	0.50	15	5072.82	71.16	138.37	1.79
Libya	na	na	0.09	0.00	na	na	0.58	8	7282.21	68.45	39.56	-1.22
Lithuania	1.81	2.60	0.17	0.12	4.41	1.64	0.83	20	6147.94	111.53	32.22	2.26
Malaysia	0.90	-0.06	0.07	0.01	0.84	0.70	0.65	10	4193.53	170.33	125.85	0.91
Mexico	0.34	0.82	0.03	0.37	1.16	0.22	0.69	19	7163.76	49.23	41.28	0.39
Moldova	2.03	1.93	0.18	0.12	3.96	3.29	0.52	15	697.05	116.26	33.66	-1.12
Mongolia	0.20	3.58	2.67	0.57	3.78	0.16	0.53	16	871.18	107.14	21.81	1.02
Morocco	0.22	1.14	0.08	0.09	1.36	0.10	0.62	14	1688.30	62.02	67.51	-1.11
Namibia	na	na	0.29	0.40	na	na	0.70	7	3148.03	105.12	46.10	-1.21
Nicaragua	1.11	10.08	0.38	0.00	11.19	-0.12	0.48	9	828.22	64.55	84.61	0.76
Nigeria	-0.01	-0.76	0.11	0.23	-0.76	1.08	0.46	10	620.05	68.78	25.17	-1.04
Pakistan	0.09	1.35	0.02	0.25	1.45	0.17	0.46	12	591.00	34.59	49.00	-1.19
Panama	0.63	0.82	0.54	0.00	1.45	-0.18	0.61	13	4162.54	153.64	76.82	2.44
Papua New Guinea	4.14	0.16	-0.26	0.00	4.30	0.11	0.54	3	810.12	109.10	29.25	-0.27
Paraguay	0.32	0.63	0.06	0.00	0.95	0.52	0.64	12	1308.81	88.90	25.25	0.15
Peru	0.62	0.69	0.19	0.12	1.31	0.24	0.55	18	2621.72	36.22	19.32	1.15
Philippines	0.26	1.33	0.03	0.33	1.59	0.08	0.58	16	1079.03	78.00	45.19	-0.30
Russia	0.75	0.60	0.14	0.15	1.35	0.45	0.57	20	4587.56	55.90	29.17	-0.32
Senegal	0.07	2.72	0.03	-0.01	2.79	-0.05	0.59	4	728.85	63.85	28.18	-0.72
South Africa	0.08	0.62	0.04	1.36	0.70	0.26	0.68	15	4801.41	51.87	145.01	-1.28
Sri Lanka	0.14	2.90	0.04	-0.45	3.04	0.24	0.57	14	971.61	70.64	40.34	-0.14
Sudan	0.00	0.99	0.11	-0.01	0.99	0.03	0.41	1	724.97	25.70	15.92	-1.09
Suriname	na	na	0.43	0.00	na	na	0.45	1	3292.85	65.63	56.13	-1.52
Syria	0.00	2.17	0.10	0.00	2.17	0.19	0.44	7	1366.52	62.53	50.33	-1.86

	PNG	PPG	FDI	PE	LT	ST	X	G	Development	Openness	Finance	KA
Thailand	0.10	0.16	0.05	0.85	0.26	0.66	0.60	9	2066.76	101.38	122.39	-0.26
Tunisia	0.26	1.55	-0.02	0.14	1.80	0.78	0.61	14	2607.93	87.89	67.52	-1.02
Turkey	1.23	0.88	0.07	0.20	2.12	0.76	0.56	18	5794.68	42.53	38.59	-0.73
Ukraine	2.76	0.50	0.22	0.27	3.26	2.08	0.51	20	1619.83	90.25	41.98	-1.34
Uruguay	-0.04	1.77	0.17	0.00	1.74	0.18	0.68	16	4868.27	45.77	46.32	1.77
Venezuela	-0.24	0.74	0.06	0.22	0.49	0.08	0.39	12	5532.70	50.17	28.85	-0.31
Vietnam	0.04	1.39	0.23	1.97	1.43	0.58	0.54	18	446.46	103.18	57.92	-1.19
Yemen	0.00	1.18	0.01	0.00	1.18	-0.53	0.58	10	762.22	66.69	23.31	2.08
Zambia	0.60	3.02	0.36	0.07	3.62	0.57	0.51	1	650.21	72.02	46.42	0.60
Total sample	0.61	1.53	0.15	0.16	2.14	0.59	0.57	22.00	2534.89	74.25	50.40	-0.16
No. of Countries	62	62	66	66	62	62	66	66	66	65	66	66
Max	Kazakhstan	Nicaragua	Mongolia	Vietnam	Nicaragua	Latvia	Lithuania	China	Libya	Guyana	Guyana	Panama
Min	Cote d'Ivoire	Angola	Angola	Sri Lanka	Angola	Yemen	Venezuela	Brazil, Iraq	Vietnam	Brazil	Botswana	Syria

Notes: PNG, PPG, FDI, PE, LT, and ST are flows of private non-guaranteed debt, public and publicly guaranteed debt, foreign direct investment, and portfolio equity, long-term debt, short-term debt, respectively, as a percentage of GDP. *X* is the ratio of ICRG's investment profile to the maximum score of 12. G is the total number of treaties ratified with OECD countries. Development is Real GDP per capita is in US$. Openness is the sum of exports and imports as a percentage of GDP. Finance is domestic credit provided by the banking sector as a percentage of GDP. KA is the Chinn-Ito's financial openness index. The maximum score of Chinn-Ito financial openness index is 2.439. "na" indicates non-availability of data.