

## How does country risk matter for foreign direct investment?

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February 2011

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**Keywords:** FDI; country risk; political risk, financial risk, institution, MNEs

**JEL classification:** D22, F21, F23

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# How Does Country Risk Matter for Foreign Direct Investment? <sup>+</sup>

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## Abstract

In this paper, we aim to identify the political and financial risk components that matter most for the activities of multinational corporations. Our paper is the first paper to comprehensively examine the impact of various components of not only political risk but also financial risk on inward FDI, from both long-run and short-run perspectives. Using a sample of 93 countries (including 60 developing countries) for the period 1985-2007, we find that among the political risk components, government stability, socioeconomic conditions, investment profile, internal conflict, external conflict, corruption, religious tensions, democratic accountability, and ethnic tensions have a close association with FDI flows. In particular, socioeconomic conditions, investment profile, and external conflict appear to be the most influential components of political risk in attracting foreign investment. Among the financial risk components, only exchange rate stability yields statistically significant positive coefficients when estimated only for developing countries. In contrast, current account as a percentage of exports of goods and services, foreign debt as a percentage of GDP, net international liquidity as the number of months of import cover, and current account as a percentage of GDP yield negative coefficients in some specifications. Thus, multinationals do not seem to consider seriously the financial risk of the host country.

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## 1 Introduction

Foreign direct investment (FDI) is widely viewed as beneficial for growth and job creation in the destination countries as it finances domestic investment and can be a vehicle for productivity growth through the use and dissemination of advanced production techniques and management skills. Compared with short-term credits and portfolio investments, FDI is much more stable and resilient to changes in economic environment. For these reasons, countries have tried to attract FDI. Therefore, the really important question is what countries can do to attract more of inward FDI.

Many theoretical and empirical studies have suggested various factors that influence location choices of investment by multinational enterprises (MNEs). Some are firm-level characteristics while others are country-level characteristics, which in turn can be either host country characteristics or home country characteristics. For instance, Helpman, Melitz and Yeaple (2004) suggest that a firm's relative productivity plays a major role in the MNEs' investment decision-making process because only more productive firms can earn enough operating profits to recoup the high sunk costs of investing in a foreign country. Yeaple (2009) further extends this insight to propose theoretically that countries with a more favorable investment environment attract a larger number of MNEs. Using cross-sectional data on outward FDI from the U.S., Yeaple (2009) empirically confirms that countries with better investment environments attract more U.S. MNEs.<sup>1</sup> Hayakawa, Lee, and Park (2010) confirm this finding: using a firm-level database of outward FDI from Japan, Korea, and Taiwan, they show that host countries with better environments for FDI, in terms of larger market size and smaller fixed entry costs, attract more foreign investors. Thus, the quality of a host country's investment environment is very important in attracting FDI. They also examine the role of home country characteristics in FDI by showing that firms from home countries with higher wages are more likely to invest abroad.

This paper focuses on host country characteristics. This is an interesting topic, as while virtually all countries now compete vigorously for FDI inflows, the distribution of those inflows is far from uniform. While some countries pull in enormous amounts of FDI inflows, other countries such as those in Sub-Saharan Africa lag far behind. Therefore, it is important for FDI-seeking policymakers to have a good grasp of the underlying drivers of the MNEs' location decisions in order to attract inward FDI.

In particular, this paper focuses on country risk which is closely related with the level of business risk. It seems intuitively plausible to believe that a sound institutional environment (efficient bureaucracy, low corruption, secure property rights, etc.) should attract more FDI. Likewise, higher business risk due to high country risk of the host countries would discourage foreign investment by multinationals.

Nonetheless, evidence remains mixed.<sup>2</sup> For instance, Asiedu (2002) concludes that neither political risk nor expropriation risk has any significant impact on FDI. Noorbaksh et al (2001)

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<sup>1</sup> He also shows that more productive MNEs can invest in a larger number of countries because those firms can cover the higher total sunk costs associated with investing in a larger number of separate foreign markets.

<sup>2</sup> See Blonigen (2005) for a complete survey.

also report that democracy and political risk are not significantly related to FDI. Wheeler and Mody (1992) in their analysis of firm-level U.S. data find no significant result for corruption in the host country.

However, there are also a number of papers which find that institutional quality (political risk) has a positive (negative) impact on FDI flows. For instance, with a sample of 22 developing countries, Gastanaga et al (1998) find that lower corruption and nationalization risk levels and better contract enforcement are associated with greater FDI flows. Wei (2000) also finds that corruption significantly impedes FDI inflows.

Kolstad and Tondel (2002) find that FDI flows are affected by ethnic tension, internal conflict, and democracy, but not by government stability, bureaucracy, external conflict, law and order, and military in politics. For a sample of 83 developing countries, Busse and Hefeker (2007) find that government stability, internal and external conflict, corruption, ethnic tensions, law and order, democratic accountability of government, and quality of bureaucracy are highly significant determinants of FDI flows.

Lee and Rajan (2009) find that APEC member countries with lower country risk appear to attract more FDI inflows. Particularly, they find that the most important component of this risk pertains to political risk (as opposed to financial or economic risk).

Ali, et al (2010) also find that institutions are a robust predictor of FDI and that property rights security is the most important aspect of institutions in determining FDI flows. Specifically, they find that institutions have a significant impact on FDI in manufacturing and in services but that institutional quality does not matter for FDI in the primary sector. Walsh and Yu (2010) also find a similar result: while FDI flows into the primary sector show little dependence on institutions, secondary and tertiary sector investments are marginally affected by institutions, but only in advanced economies.

As summarized above, most previous studies focus on one aggregate measure of political risk or institutional quality. However, country risk is not a single factor, but rather a composite concept. Broadly, country risk relates not only with political risk but also with financial risk, which refers to a country's ability to repay its foreign liabilities. As will be discussed in the following section, there are strong reasons to believe that high financial risk deters FDI flows.

Therefore, this paper tries to identify those political and financial risk components that matter most for investment decision making by multinationals. Specifically, this paper aims to assess the impact on inward FDI of various components of political and financial risks, using indices sourced from the International Country Risk Guide (ICRG) provided by the Political Risk Services (PRS) Group.<sup>3</sup> Our paper is the first paper to comprehensively examine the impact of various components of not only political risk but also financial risk on inward FDI.

For political risk, we examine the influences of government stability, socioeconomic conditions, investment profile, internal conflict, external conflict, corruption, military in

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<sup>3</sup> <http://www.prsgroup.com/>

politics, religious tensions, law and order, ethnic tensions, democratic accountability, and bureaucracy quality.<sup>4</sup> For financial risk, foreign debt as a percentage of GDP, foreign debt service as a percentage of exports of goods and services, current account as a percentage of exports of goods and services, net international liquidity as months of import cover, inflation rate, budget balance as a percentage of GDP, and current account as a percentage of GDP will be considered.

We use the overall FDI inflow data for 93 countries (including 60 developing countries), drawn from UNCTAD's FDI Online database. Our sample period runs from 1985 to 2007. Noting that evidence on the relationship between institutions (political risk) and FDI remains mixed, we will employ four different empirical specifications which are either most commonly used by other researchers or are theoretically more comprehensive. In particular, we employ a partial adjustment model so as to assess the effects of country risk from both long-run and short-run perspectives.

The remainder of this paper is organized as follows. Section 2 provides an overview of country risk and its relation with FDI. In Section 3, we describe the empirical framework we employ to investigate the impact of country risk on FDI. In Section 4, we report and discuss our main empirical results. Section 5 brings the paper to a close with a summary and some policy implications.

## **2. Discussions on the Relationship between Country Risk and FDI**

As discussed under Introduction, country risk is a composite concept that relates not only with political risk but also with financial risk.

### **2.1. Political Risk and FDI**

Political risk refers to the quality of institutional environment. That is, political risk is the risk that the returns to investment may suffer as a result of low institutional quality and political instability. There are many reasons to believe that sound institutional quality and low political instability (and hence low political risk) should attract more FDI.

High sunk costs of FDI makes investors highly sensitive to uncertainty (Helpman, Melitz and Yeaple, 2004). Such sunk costs include the cost of acquiring information so as to overcome the lack of knowledge and familiarity with the country. Institutions reduce uncertainty associated with human interaction by providing societies with a predictable framework for interaction (Ali et al, 2010). Without sound institutions, there would be substantial uncertainties in economic exchanges, and a risk premium will be included in sunk costs to capture these possibilities. In an extremely poor institutional environment and hence under very high political risk, multinationals may suspect that the host country's government might appropriate some of the returns on FDI or even implement enforced nationalization.

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<sup>4</sup> A number of these political risk components are also closely associated with the quality of political institutions and hence political risk and institutional quality have been treated interchangeably by a number of authors (eg., Busse, 2007 and Ali et al, 2010).

Inefficient institutions and high political risk can also adversely affect operating costs. Excessive red-tape or lengthy delays in obtaining permits can greatly increase production costs of foreign firms. Common forms of corruption such as demands for special payments and bribes connected with import and export licenses, exchange controls, tax assessments, or police protection can make it difficult to conduct foreign business effectively.

In contrast, local competitors or partners, due to better access to the political process, may persuade the government to favor them at the expense of foreign investors, thus reducing the competitiveness of multinationals.

Thus, political risk can adversely affect foreign business in many ways.

## 2.2. Financial Risk and FDI

Financial risk refers to the risk that a country may not be able to repay its foreign liabilities. Without doubt, countries with high financial risk are more likely to face an abrupt financial crisis. Unlike short-term bank loans and portfolio investment, FDI cannot be easily withdrawn when the financial situation of the host country changes. Therefore, foreign firms might be very sensitive to financial risk of the host country.<sup>5</sup>

As the amount of foreign debt increases relative to the borrowing country's GDP, the country's ability to repay its debt will decline and financial risk of the country will increase. Therefore, multinationals may find the countries with too much foreign debt less attractive for investment, *ceteris paribus*. A country's foreign debt and its financial risk will tend to increase gradually if the country experiences a large amount of chronic current account deficit for many years. The government's chronic deficit in budget balance may also lead to an increase in its foreign debt and financial risk.

Exchange rate instability of the host country may also deter FDI as it increases uncertainty in the financial plans of MNEs. A high inflation rate in the host country may also deter foreign investment as the real local currency value of capital already invested and future return may become smaller with high inflation. High inflation can also lower the home country-currency value of FDI as the currency value of the host country is likely to become weaker against other currencies.

## 2.3. Political and Financial Risk Indices

As noted earlier, information on political and financial risk is drawn from the ICRG provided by the PRS Group. One advantage of using the ICRG ratings is that they are widely used by multinational corporations, institutional investors, banks, importers, exporters, foreign exchange traders, and others.

The ICRG rating comprises 22 variables in three categories of risk: political, financial, and economic. A separate index is created for each of the subcategories. The Political Risk index is based on 100 points, Financial Risk on 50 points, and Economic Risk on 50 points.

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<sup>5</sup> Obviously, which type of investment, i.e., FDI, portfolio investment, or bank loans, is more sensitive to financial risk is another interesting research topic.



## Political Risk

The Political Risk Rating includes 12 subcomponents covering both political and social attributes. The table below summarizes the 12 components of political risk with their abbreviations. To ensure comparability among the components and easier interpretation of the results in the regressions, we rescaled the components from 0 to 10, with higher values indicating less political risk (better institutions). Note that originally, different components were assessed on different scales as shown in Appendix 2. Detailed explanations on each component of political risk are also provided in Appendix 2.

<b><i>POLITICAL RISK COMPONENTS</i></b>		
<b>Abbreviation</b>	<b>Component</b>	<b>Points (max.)</b>
Gov_stab	Government Stability	10
Socioec	Socioeconomic Conditions	10
Inv_prof	Investment Profile	10
Int_conf	Internal Conflict	10
Ext_conf	External Conflict	10
Corruption	Corruption	10
Military	Military in Politics	10
Religion	Religious Tensions	10
Law_order	Law and Order	10
Ethnic_ten	Ethnic Tensions	10
Dem_acct	Democratic Accountability	10
Bur_qual	Bureaucracy Quality	10

## Financial Risk

The overall aim of the ICRG financial risk rating is to measure a country's ability to finance its official, commercial, and trade debt obligations. Therefore, the ICRG financial risk rating can be considered as an indicator of a country's likelihood of having a financial crisis in the coming years. Originally, the ICRG financial risk rating had five subcomponents.

As seen in Appendix 2, ICRG originally also reported the economic risk rating based on five subcomponents: GDP per capita, real GDP growth rate, annual inflation rate, budget balance as a percentage of GDP, and current account as a percentage of GDP. GDP per capita and real GDP growth are the usual determinants of FDI flows in most studies. We also include them as control variables. Budget balance as a percentage of GDP and current account as a percentage of GDP are related with financial risk as a larger amount of budget deficit and

current account deficit is very likely to lead to a greater debt obligation of the country and hence a lower ability for the country to repay its debt. Inflation rate is also related with financial risk as noted above.

Therefore, we do not consider the above five risk components as one single kind of risk. Instead, we include the last three components of the original economic risk rating of ICRG also as subcomponents of financial risk. The table below summarizes the eight subcomponents of financial risk considered in this study. Another point to note is that unlike the original ICRG rating, the inflation component here is a 3-year moving average of the original inflation component. Again, we have rescaled the components from 0 to 10.

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***FINANCIAL RISK COMPONENTS***

<b>Abbreviation</b>	<b>Component</b>	<b>Points (max.)</b>
For_debt	Foreign Debt as a Percentage of GDP	10
Debt_serv	Foreign Debt Service as a Percentage of Exports of Goods and Services	10
Caxgs	Current Account as a Percentage of Exports of Goods and Services	10
Intl_liq	Net International Liquidity as Months of Import Cover	10
Xr_stab	Exchange Rate Stability	10
Inflation	Annual Inflation Rate (three year average)	10
Bud_bal	Budget Balance as a Percentage of GDP	10
Cacc	Current Account as a Percentage of GDP	10

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Obviously, all 12 political risk components are related to each other by varying degrees, as all assess political risk from a different angle. All 8 financial risk components are also related to each other for the same reason. In fact, political risk indicators and financial risk components are also related to each other by a large degree.

Because of multicollinearity between the risk components in many cases, most researchers have addressed this in their regression analysis by establishing a baseline specification to control for the usual determinants and then adding each of the institution (risk) variables in turn. We follow this approach.

#### 2.4. Partial Correlations between Country Risk and FDI

As discussed under Introduction, we use the overall FDI inflow data for 93 countries, drawn from UNCTAD's FDI Online database. The list of countries can be found in Appendix 1. Our sample period covers from 1985 to 2007. In order to show simple correlations between country risk and FDI, we obtained the average values of political risk and financial risk during the sample period and examined their partial correlation with the average values of

annual FDI inflows during the same period. Figures 1 and 2 illustrate the scatter diagram of points between country risk (political and financial) and FDI inflows. A predicted regression line is also shown in each diagram.

As can be seen in the figures, there seems to be a very strong association between both type of country risk and FDI. Thus, countries with large annual FDI inflows are those with low political and financial risk. Two points are worth noting. First, the above relationship is cross-sectional and such relationship does not show causality. Second, the close association between FDI and political (and financial) risk may be due to the fact that political and financial risks are highly associated with other variables which are also highly associated with FDI. For example, countries with high income level tend to have low country risk and large FDI flows, and hence without controlling for such effect the close association between FDI flows and country risk maybe superficial.

### **3. Empirical Specification.**

Before proceeding with the analysis, it is worth outlining some data issues. The most common definition of FDI is based on the OECD Benchmark Definition of FDI (3rd Edition, 1996) and IMF Balance of Payments Manual (5th Edition, 1993). According to this definition, FDI generally bears two broad characteristics. First, as a matter of convention, FDI involves a 10 percent threshold value of ownership.<sup>6</sup> Second, FDI consists of both the initial transaction that creates (or liquidates) investments as well as subsequent transactions between the direct investor and the direct investment enterprises aimed at maintaining, expanding, or reducing investments.

We use the overall FDI inflows as our dependent variable, drawn from the UNCTAD FDI database. In this case, FDI refers to the definition from OECD/IMF mentioned above (i.e., foreign investments for which foreign firms own 10% or more of the local enterprise).

Some of the observations for FDI flows are negative in some specific years. FDI flows can vary significantly from year to year, partly due to one or a few large investment projects, especially in small-size developing countries. Therefore, we use 3-year averages for the period from 1985 to 2007. That is, we use the 3-year averages of FDI inflows for 1985-1987, 1990-1992, 1995-1997, 2000-2002, and 2005-2007. To allow for some time lags, the data for the explanatory variables are used for the beginning year of each sub-period. That is, the data for 1985, 1990, 1995, 2000, and 2005 are used for explanatory variables.

Choosing the set of control variables is somewhat problematic because the empirical literature suggests a large number of variables as potential determinants of FDI and various theories of FDI do not seem to agree on a fixed set of determinants. Regarding the control

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<sup>6</sup> This said, the 10 percent threshold is not always adhered to by all economies systematically. For a detailed overview of the FDI definitions and coverage in selected developing and developed economies, see IMF (2003). UNCTAD (2007) discusses data issues pertaining to FDI inflows to China.

variables in the regression, we choose the most common, yet not too many, variables, following other researchers.

**GDP per capita (log):** this is to capture the level of income and wages of the host country. A high level of income means a greater demand for goods and services, which attracts market-seeking FDI. On the other hand, a high level of income may also mean a high wage rate, which may deter labor-seeking FDI. Therefore, whether GDP per capita attracts or deters FDI is an empirical question.

**Growth rate of GDP per capita:** this is to capture the growth potential, which attracts market-seeking FDI as it may signal high investment returns.<sup>7</sup>

**Total population (log):** this is to capture the influence of the market size of the host economy, which may indicate the attractiveness of a specific location for the investment when a foreign firm aims to produce for the local market (horizontal or market-seeking FDI). For example, Resmini (2000) finds that countries in Central and Eastern Europe with larger populations tend to attract more FDI.

**Growth rate of total population:** similar to growth rate of GDP per capita, this is to capture the growth potential, which attracts market-seeking FDI.

**Degree of free trade:** this is to measure the influence of trade restrictiveness on FDI. This is an index of free trade (Item 4: Freedom to Trade Internationally) taken from Fraser Institute's Economic Freedom of the World<sup>8</sup>. Its value ranges from zero, indicating highest trade restrictiveness, to one hundred, indicating greatest freedom to trade internationally (i.e., lowest trade restrictiveness). Foreign firms engaged in export-oriented investment or vertical FDI may favor investing in a country with lower trade barriers, since trade barriers increase transaction costs. In contrast, horizontal FDI may be attracted by higher trade barriers, which also protect the output of the foreign investor in the local market against imports of competitors (tariff-jumping hypothesis) (Ali et al., 2010).<sup>9</sup>

**Stock of FDI (log):** this is to capture the clustering effects. That is, a larger existing FDI stock is regarded as a signal of a benign business climate for foreign investors, and new foreign investors may benefit from the presence of external scale economies by mimicking past investment decisions by other investors. Evidence of these effects is pervasive (for instance, Walsh and Yu, 2010). Multinationals may also see the considerable FDI stocks or FDI inflows in the previous period as the success of other multinationals and hence may be attracted to the countries for further investments.

Equation (1) below is our baseline equation to be estimated to assess the impact of country

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<sup>7</sup> A high growth rate of GDP per capita may also mean a high growth rate of wages of local workers. Therefore, countries with high growth rates of GDP per capita may not attract more FDI.

<sup>8</sup> <http://www.freetheworld.com/release.html>

<sup>9</sup> Some authors use the ratio of goods and services trade to GDP to capture the trade restrictiveness (eg., Busse and Efeker, 2007; Ali, et al., 2010; and Walsh and Yu, 2010). Even though they are closely related, the former is to capture the influence of trade openness of the host economy on FDI. We also tried this variable but found that the results were inferior to our trade restrictiveness index.

risk on FDI flows:

$$FDI_{it} = \alpha + \beta_1 CV_{it} + \beta_2 RISK_{it} + u_i + u_t + \varepsilon_{ijt} \quad (1)$$

where  $FDI$  is the log of FDI inflows,  $CV$  is a vector of control variables described above,  $RISK$  is a country risk variable,  $u_i$  is a country dummy,  $u_t$  is a year dummy, and  $\varepsilon_{ijt}$  is an error term.

As mentioned above, the three year average of FDI is regressed on the control variables and the risk variable which are measured in the beginning year of the three years so as to allow for some time lag between FDI and the explanatory variables.

However, the country risk variables and the trade restrictiveness index may be affected by the future flows of FDI, because in an effort to bring more FDI the governments may try to make the business environment of their country more favorable by reducing their country risk and trade restrictiveness. Another problem with estimating Equation (1) with the usual fixed effects model is that it may involve autocorrelation of the disturbances and hence the estimated coefficients are biased. The problem of autocorrelation can be significantly reduced by including the lagged dependent variable on the right hand side of the regression equation.<sup>10</sup> This procedure is also theoretically plausible as the foreign investment in the previous period is highly relevant for FDI in the current period because of the clustering effect described above. By construction, however, the unobserved panel-level effects are correlated with the lagged dependent variables, making standard estimators inconsistent.

In order to account for the above mentioned problems, some authors (eg. Busse and Hefeker, 2007 and Walsh and Yu, 2010) employ the Generalized Method of Moments (GMM) dynamic estimator of Arellano-Bond methodology. The usual Arellano-Bond estimator is to run the regression using as instruments the first differences of the lagged values of the left and right hand side variables. In a sample of few periods with some persistent explanatory variables, the usual Arellano-Bond estimator can perform poorly. Blundell and Bond (1998) developed a system GMM estimator that uses an additional moment condition. We employ this estimator as an alternative specification to the fixed effects model described in Equation (1). In the case of the GMM estimator, we do not include country dummies because the fixed effects are eliminated using the first differences and an instrumental variable estimation of the difference equation is performed.

One may also be interested in how differently the country risk affects the FDI inflows over time. In other words, even though the current level of country risk is still high, a large improvement in the level of country risk can invite a greater amount of FDI by signaling to foreign investors that this country is moving fast in reforming its business environment.

Therefore, we also run a separate specification which differentiates the long-run and short-run effect of the country risk. Suppose that the steady state of log of FDI inflows into country  $i$  at time  $t$  is  $FDI_{it}^*$ ; then, the relationship between the actual and the steady state of  $FDI_{it}$  may be specified as follows:

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<sup>10</sup> In this case, the FDI stock should be dropped as part of the FDI stock is the FDI flows in the previous period and both account for the clustering effects.

$$(FDI_{it} - FDI_{it-1}) = \delta(FDI_{it}^* - FDI_{t-1}) \quad (2)$$

One formulation assumes that  $FDI_{it}^*$  is determined by the level forms of the determinants of FDI in period  $t-1$  as well as the difference forms (which incorporate changes in the long-run extent of FDI between periods  $t-1$  and  $t$ ). Thus, the equation for changes in FDI is

$$(FDI_{it} - FDI_{it-1}) = -\delta FDI_{it-1} + \lambda_1 X_{it-1} + \lambda_2 (X_{it} - X_{it-1}) + \mu_i + \mu_t + \varepsilon_{it} \quad (3)$$

where  $X$  is a vector of explanatory variables which include both control variables and risk variables, as described in Equation (1).<sup>11</sup>

Equation (3) can be rewritten as follows.

$$FDI_{it} = (1 - \delta) FDI_{it-1} + \lambda_1 X_{it-1} + \lambda_2 (X_{it} - X_{it-1}) + \mu_i + \mu_t + \varepsilon_{it} \quad (4)$$

Therefore, by estimating Equation (3) or (4) we can assess how differently FDI flows are affected by the initial level of country risk and by changes in the level of country risk. That is, we can isolate the short-run effect of the country risk (and other control variables) from its long-run effect.

It should be noted, however, that by including a lagged dependent variable on the right hand side of the regression equations, the error term of Equations (3) and (4) may be correlated again with the lagged dependent variables, making standard estimators inconsistent. Therefore, we also estimate Equation (4) using the system GMM estimator of Blundell and Bond (1998).

Thus, we will run four different specifications: Equation (1) with fixed effects; Equation (1) with the system GMM estimator; Equation (3) with fixed effects; and Equation (4) with the system GMM estimator.

## 4. Empirical Results

### 4.1. Aggregate Effects of Political Risk and Financial Risk

The results for the aggregate effects of political risk and financial risk estimated by the four different specifications are reported separately in Tables 1-4. The first two columns in each table report the results when the whole sample is used, while the last two columns report the results for developing countries only. It should be necessary to differentiate developing countries because developing countries tend to receive different types of FDI, mostly vertical FDI, compared to developed countries with horizontal FDI.

The results from the baseline regression with fixed effects are reported in Table 1. Columns (1) and (3) report the results without country risk variables, and Columns (2) and (4) report

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<sup>11</sup> This is a partial adjustment model that can be found in Stone and Lee (1995).

the results with country risk variables.

Let us first focus on Column 1, which reports the results without country risk variables when using the whole sample of both developed and developing countries. Among the various explanatory variables, two variables stand out as statistically significant. First, the clustering effects are visible here with a positive and significant coefficient on FDI stock. Second, the variable measuring the degree of free trade enters with a statistically positive coefficient. Given that some FDI is intended to serve domestic markets while other FDI flows are aimed at export markets, the positive coefficient for freedom of trade suggests that FDI flows aiming at exports are greater than FDI flows aiming at domestic markets.

On the other hand, GDP per capita does not appear to attract or deter FDI. One may argue that this is so because of the two countervailing effects of FDI as noted earlier. That is, high wage rates of richer countries may deter labor-seeking FDI, while greater demand may attract market-seeking FDI. The size of economy in terms of total population also does not appear to matter for FDI flows. Market prospects in terms of either income growth or population growth do not seem to affect FDI inflows.

When the political risk index and the financial risk index are included (Column 2), a positive and highly significant coefficient is obtained for political risk, which suggests that high political risk of the host countries deters FDI inflows. In contrast, the financial risk variable does not appear to have any linkages with FDI flows.

When only developing countries are included in the sample (Columns 3 and 4), the qualitative results are similar but there are some differences with respect to the size of the estimated coefficients. For instance, clustering effects seem smaller in the case of developing countries, as the size of coefficient for FDI stock is smaller with the sample of developing countries only. On the other hand, freedom of trade seems to matter more in developing countries, as evidenced with a greater coefficient for freedom of trade in the equations for the sample of developing countries only. The effect of political risk also seems greater in developing countries, as the point estimate of the coefficient for the political risk index is greater in the sample of developing countries.

Table 2 reports the results from estimating Equation (1) with the dynamic GMM estimator. The consistency of the dynamic GMM estimator requires the presence of first-order correlation and a lack of second-order correlation in the residuals of the differenced specification. All results except for the one with country risk variables in the sample for developing countries pass the Arellano-Bond test of first-order correlation and all results except for the one without country risk variables in the whole sample (Column 2) pass the Arellano-Bond test of second-order correlation. The overall appropriateness of the instruments can be verified by a Sargan test of over-identifying restrictions. Indeed, the Sargan test reveals that the results of the GMM estimator for the sample of developing countries are not appropriate. Thus, we do not interpret the results from the dynamic GMM estimator as being better than those from the fixed effects model. Instead, we present the results from both specifications to check the robustness of the baseline results.

The clustering effects continue to be visible. On the other hand, the variable measuring the degree of free trade is no longer statistically significant, even though it has positive

coefficients in all columns. In contrast, GDP per capita enters with a positive and statistically significant coefficient when the whole sample is used, and population yields a statistically significant coefficient when only developing countries are included in the sample.

Interestingly, political risk continues to matter, while financial risk does not. Thus, we have strong evidence that political risk is a robust determinant of FDI flows.

When comparing the sizes of the coefficients, the clustering effects seem larger in the developing countries than in the developed countries, while the effect of political risk seems smaller in the developing countries. This finding is opposite to what we found in Table 1, which reports the results from the fixed effects model.

Table 3 reports the results when the partial adjustment model (Equation 3) is estimated with fixed effects. In this case, the dependent variable is the growth rate of FDI inflows. Indeed, as noted earlier, even when the log of FDI is used as the dependent variable, the estimates should be the same, except for the lagged FDI inflows.

In all columns, the coefficient on the initial level of FDI flows is negative and significant at the one percent level, indicating that FDI growth rate is lower for the countries with a high level of FDI flows in the previous period, which is consistent with expectations. The size of the coefficient, being close to one, indicates that the speed of adjustment is very high.

Both GDP per capita in the previous period and growth of GDP per capita during the past five years have statistically significant coefficients in most columns. This suggests that countries with large market size and high growth potential attract more FDI. However, we find a somewhat contradictory result with the initial size of population which carries a significant negative coefficient in the sample of developing countries only.

In all columns, the coefficients both for the initial level of free trade and for a change in the level of free trade during the past five years are positive and significant. This suggests not only that the countries with a greater level of free trade receive a greater amount of FDI but also that the countries which have been successful in reducing trade restrictiveness by a larger extent receive a greater amount of FDI, *ceteris paribus*.

On the other hand, the initial level of political risk matters only when the developing countries are included in the sample, while the change in the level of political risk matters either when all countries or when only developing countries are included in the sample. Thus, political risk appears to have both long-run and short-run effects on FDI in the case of developing countries. In contrast, when developing countries only are included in the sample, the initial level of and the change in the level of financial risk enter with negative coefficients which are statistically significant.

Unlike the political risk index, the financial risk index enters with negative coefficients (both level and change). This is surprising, counterintuitive, and puzzling because the results indicate that countries with greater financial risk receive greater amounts of FDI. We do not interpret these results by suggesting that countries should increase financial risk to attract more FDI. Instead, we can say that multinationals do not consider seriously the financial risk



of the host country, and hence the benefit in reducing financial risk is minimal in attracting additional FDI.

Table 4 reports the results when the dynamic GMM estimator is applied to the partial adjustment model. The initial level of FDI inflows has a significant effect on the current level of FDI inflows, again suggesting clustering effects. The initial level of GDP per capita has a significant positive effect on FDI inflows but the effect seems weaker in developing countries. GDP growth rate also has a significant positive effect on FDI inflows, and again the effect seems weaker in developing countries. On the other hand, the initial level of total population, which proxies the economic size, has a negative coefficient in the sample of developing countries. Nonetheless, population growth rate has positive impact on FDI flows.

Focusing on the results for the political risk and financial risk variables, we observe that the initial level of political risk does not appear to affect FDI inflows, while the change in the level of political risk does. Thus, it appears that even where the initial level of political risk is high, a greater reduction in political risk can help the country attract greater FDI. Unlike the political risk index, the financial risk index enters with negative coefficients (both level and change), even though they are not statistically significant at any conventional level of significance. Thus, as noted above, multinationals do not seem to consider seriously the financial risk of the host country.

It should be noted, however, that the results in the sample for developing countries do not pass the Arellano-Bond test of first-order correlation and the Sargan tests for overidentifying restrictions provide evidence of invalidity of the choice instruments in the case of the sample for developing countries, and therefore the results from the GMM estimator for developing countries should be interpreted with caution.

#### 4.2. Effects of Different Components of Political Risk and Financial Risk

Table 5 reports the effects of different components of political risk on FDI, obtained from running 12 different regressions in four different specifications for the whole sample and for developing countries, respectively, while controlling for other variables specified above. Thus, the results are from 96 different regressions (= 12 X 4 X 2).

When using the whole sample, among the 12 political risk components, government stability, socioeconomic conditions, investment profile, internal conflict, external conflict, religious tensions, democratic accountability, and ethnic tensions enter with statistically significant positive point estimates. Socioeconomic conditions seem to matter the most in attracting FDI as the size of this component's point estimate is the largest and statistically significant in all four specifications. Investment profile and external conflict are the second most influential components of political risk in attracting foreign investment. In contrast, in the whole sample, corruption, military involvement in politics, law and order, and bureaucracy quality do not appear to be associated with FDI flows.

When developing countries only are included in the sample, investment profile continues to enter with significant estimates in all specifications, and corruption appears to matter more in developing countries as the size of its estimates is greater and significant in the two dynamic panel specifications. The Internal conflict component also seems to matter more for

developing countries. On the other hand, estimates of socioeconomic conditions and external conflict, which were significant when the whole sample was used, are no longer significant in any of the four specifications, while democratic accountability now enters with statistically significant estimates in the case of the partial adjustment model with fixed effects.

Table 6 reports the effects of different components of financial risk on FDI, obtained from running 12 different regressions in four different specifications for the whole sample and for the sample of developing countries, respectively, while controlling for other variables specified above. Thus, the results come from 64 different regressions (= 8 X 4 X 2).

It is somewhat surprising that among the eight different components of financial risk, only exchange rate stability (*xr\_stab*) yields statistically significant positive estimates in the baseline model (both with fixed effects and with the dynamic GMM estimator) when estimated for developing countries only. In contrast, current account as a percentage of exports of goods and services (*caxgs*) enters with statistically significant negative coefficients in all specifications when the whole sample is used and in two specifications when the sample includes only the developing countries. This result suggests that greater amounts of FDI are attracted to the countries with greater current account deficit as a percentage of exports of goods and services.

Foreign debt as a percentage of GDP (*for\_debt*), net international liquidity as the number of months of import cover (*intl\_liq*), and current account as a percentage of GDP (*cacc*) also yield negative coefficients in some specifications.

Other financial risk variables that would appear to be important in firms' investment decisions do not appear significant in determining FDI flows. Foreign debt service as a percentage of exports of goods and services (*debt\_serv*), the three year average of inflation (*inflation*), and budget balance as a percentage of GDP (*bud\_bal*) do not show any significant results in any specification.

## **5. Summary and Policy Implications**

The link between political risk and FDI deserves special attention as such a link may be seen as one particular channel through which institutions are able to promote productivity growth (Acemoglu et al., 2005; Bénassy-Quéré et al., 2007). Indeed, good governance infrastructure exerts a positive influence on economic growth through the promotion of investment (domestic and foreign alike), while institutional underdevelopment and high country risk are key explanatory factors for the lack of foreign financing in the developing economies.

There has, however, been no thorough and rigorous study to examine the impact of institutions and country risk on FDI flows. The purpose of this paper is to examine a much wider range of indicators, not only for political risk but also for financial risk, to identify the relative importance of these indicators for FDI flows after controlling for other relevant determinants of FDI flows.

When the aggregate political risk index and the financial risk index are used in regression, a positive and highly significant coefficient is obtained for political risk, which suggests that

high political risk of host countries deters FDI inflows. In contrast, higher financial risk of host countries does not appear to have such a strong adverse effect on FDI inflows.

We also find that among the 12 political risk components, government stability, socioeconomic conditions, investment profile, internal conflict, corruption, external conflict, religious tensions, democratic accountability, and ethnic tensions have close association with FDI flows. In particular, socioeconomic conditions, investment profile, and external conflict seem to be the most influential components of political risk in attracting foreign investment. In contrast, military involvement in politics, law and order, and bureaucracy quality do not appear to be associated with FDI flows in the whole sample.

On the other hand, among the eight components of financial risk, only exchange rate stability yields statistically significant positive estimates when estimated only for developing countries. In contrast, current account as a percentage of exports of goods and services, foreign debt as a percentage of GDP, net international liquidity as the number of months of import cover, and current account as a percentage of GDP yield negative coefficients in some specifications.

Other financial risk variables that would appear to be important in firms' investment decisions do not appear significant in determining FDI flows. Specifically, foreign debt service as a percentage of exports of goods and services, the three year average of inflation, and budget balance as a percentage of GDP do not show any significant results in any specification. Thus, multinationals do not seem to consider seriously the financial risk of the host country and hence, on the part of the host country, the benefit in reducing financial risk may be limited in attracting additional FDI, compared with the benefit in reducing political risk.

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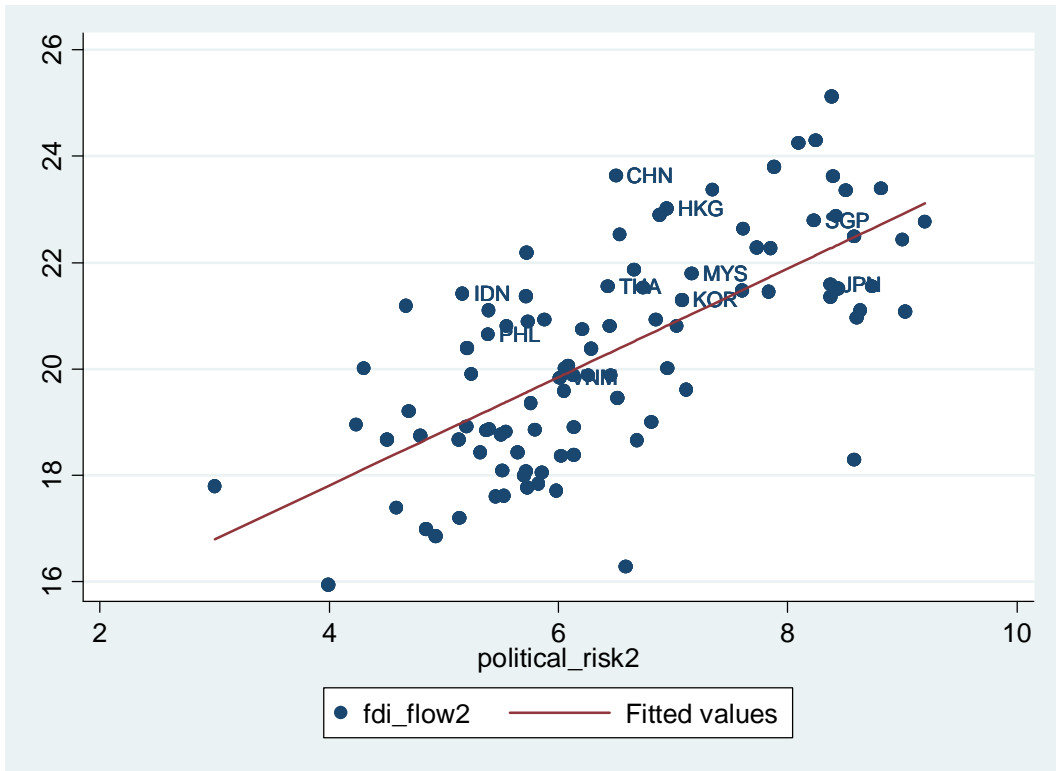
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<Figure 1> Political Risk vs. FDI Flows



<Figure 2> Financial Risk vs. FDI Flows



**Table 1. Effects of Country Risk on FDI: Baseline Fixed Effects Model**

	All countries		Developing countries	
	(1)	(2)	(3)	(4)
Log of Stock of FDI	0.535*** (0.093)	0.593*** (0.105)	0.469*** (0.150)	0.469*** (0.156)
Log of GDP per capita	-0.154 (0.262)	-0.270 (0.282)	-0.038 (0.305)	0.025 (0.349)
GDP per capita growth rate	0.159 (0.176)	0.136 (0.180)	0.272 (0.225)	0.207 (0.234)
Log of total population	0.992 (0.777)	0.063 (0.893)	-0.240 (1.276)	0.049 (1.324)
Population growth rate	2.528 (2.708)	0.344 (2.610)	-2.616 (3.354)	-4.594 (3.348)
Degree of free trade	0.179*** (0.059)	0.149** (0.065)	0.245*** (0.074)	0.194** (0.082)
Political risk		0.262*** (0.081)		0.279*** (0.103)
Financial risk		-0.043 (0.091)		-0.133 (0.114)
Constant	-7.445 (14.002)	5.484 (15.707)	13.174 (23.609)	7.583 (24.066)
Country dummy	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes
Number of groups	93	93	60	60
Number of observations	337	323	212	204
R2	0.691	0.694	0.687	0.692

Notes: Shown in parentheses are standard errors. \*\*\*, \*\*, and \* denote one, five, and ten percent level of significance, respectively.

**Table 2. Effects of Country Risk on FDI: Baseline Dynamic GMM Model**

	All countries		Developing countries	
	(1)	(2)	(3)	(4)
Log of FDI inflows (t-1)	0.257** (0.122)	0.225 (0.137)	0.427*** (0.128)	0.428*** (0.151)
Log of GDP per capita	0.522** (0.212)	0.429* (0.255)	0.382 (0.254)	0.375 (0.288)
GDP per capita growth rate	0.096 (0.145)	0.010 (0.163)	0.025 (0.237)	-0.045 (0.245)
Log of total population	0.579 (0.440)	0.461 (0.449)	0.728** (0.288)	0.619** (0.243)
Population growth rate	3.168 (2.661)	1.954 (2.664)	-1.304 (2.265)	-3.294 (2.598)
Degree of free trade	0.098 (0.065)	0.078 (0.076)	0.083 (0.086)	0.021 (0.089)
Political risk		0.269*** (0.093)		0.218* (0.117)
Financial risk		-0.077 (0.107)		0.006 (0.106)
Constant	0.504 (7.730)	3.950 (7.549)	-3.657 (5.585)	-2.029 (4.676)
Year dummy	Yes	Yes	Yes	Yes
Arellano-Bond test				
AR(1)	-2.971	-2.469	-1.676	-1.622
p-value	0.003	0.014	0.094	0.105
AR(2)	1.819	0.915	0.682	0.158
p-value	0.069	0.360	0.495	0.874
Overidentification test (Sagan)				
Chi-squared	10.877	12.843	1.039	1.703
p-value	0.054	0.025	0.959	0.889
Number of observations	322	313	202	197
Number of groups	93	93	60	60

Notes: Shown in parentheses are standard errors. \*\*\*, \*\*, and \* denote one, five, and ten percent level of significance, respectively.



**Table 3. Effects of Country Risk on FDI Inflows: Partial Adjustment Fixed Effects Model**

	All countries		Developing countries	
	(1)	(2)	(3)	(4)
Log of FDI inflows (t-1)	-0.977***	-0.968***	-0.962***	-0.931***
	(0.064)	(0.070)	(0.076)	(0.080)
Log of GDP per capita (t-1)	0.357	0.538*	0.480	0.770**
	(0.267)	(0.317)	(0.314)	(0.367)
GDP per capita (d)	0.486**	0.420	0.657***	0.711**
	(0.218)	(0.259)	(0.246)	(0.288)
Log of total population (t-1)	-0.529	0.520	-0.438	0.888
	(0.910)	(1.041)	(1.293)	(1.396)
Population (d)	0.117	-1.082	-6.362*	-7.126*
	(3.070)	(3.226)	(3.697)	(3.815)
Degree of free trade (t-1)	0.155**	0.222**	0.196**	0.236**
	(0.074)	(0.089)	(0.093)	(0.101)
Degree of free trade (d)	0.168***	0.180**	0.161**	0.183**
	(0.064)	(0.074)	(0.076)	(0.084)
Political risk (t-1)		0.163		0.291**
		(0.111)		(0.122)
Political risk (d)		0.244***		0.244**
		(0.089)		(0.108)
Financial risk (t-1)		-0.201		-0.339**
		(0.128)		(0.157)
Financial risk (d)		-0.107		-0.195*
		(0.099)		(0.113)
Constant	24.295	5.558	21.843	-2.327
	(15.782)	(18.127)	(22.464)	(24.065)
Country dummy	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes
Number of groups	89	89	56	56
Number of observations	312	294	193	183
R2	0.564	0.567	0.636	0.648

Notes: Shown in parentheses are standard errors. \*\*\*, \*\*, and \* denote one, five, and ten percent level of significance, respectively.

**Table 4. Effects of Country Risk on FDI Inflows: Partial Adjustment Dynamic GMM Model**

	All countries		Developing countries	
	(1)	(2)	(3)	(4)
Log of FDI inflows (t-1)	0.325**	0.261**	0.391***	0.393***
	(0.127)	(0.129)	(0.138)	(0.151)
Log of GDP per capita (t-1)	0.473**	0.556**	0.455*	0.538
	(0.189)	(0.222)	(0.262)	(0.358)
GDP per capita (d)	0.644***	0.513*	0.512**	0.404
	(0.210)	(0.263)	(0.218)	(0.301)
Log of total population (t-1)	0.424	0.763**	0.574**	0.758**
	(0.390)	(0.375)	(0.266)	(0.350)
Population (d)	4.916*	2.205	-1.566	-4.278*
	(2.547)	(2.766)	(2.457)	(2.588)
Degree of free trade (t-1)	-0.001	0.156	0.020	0.110
	(0.085)	(0.103)	(0.114)	(0.129)
Degree of free trade (d)	0.089	0.127*	0.062	0.056
	(0.069)	(0.075)	(0.085)	(0.092)
Political risk (t-1)		0.131		0.208
		(0.127)		(0.171)
Political risk (d)		0.232**		0.214*
		(0.091)		(0.114)
Financial risk (t-1)		-0.233		-0.196
		(0.182)		(0.211)
Financial risk (d)		-0.135		-0.083
		(0.121)		(0.131)
Constant	3.710	-2.230	-0.585	-3.847
	(7.209)	(6.027)	(5.502)	(7.176)
Year dummy	Yes	Yes	Yes	Yes
Arellano-Bond test				
AR(1)	-2.811	-2.501	-1.623	-1.571
p-value	0.005	0.012	0.105	0.116
AR(2)	1.682	0.937	0.612	-0.119
p-value	0.093	0.349	0.540	0.905
Overidentification test (Sagan)				
Chi-squared	12.682	10.186	0.993	2.212
p-value	0.027	0.070	0.963	0.819
Number of observations	312	294	193	183
Number of groups	89	89	56	56

Notes: Shown in parentheses are standard errors. \*\*\*, \*\*, and \* denote one, five, and ten percent level of significance, respectively.

**Table 5. Effects of Different Components of Political Risk in Different Models**

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		
		gov_stab	socioec	inv_prof	int_conf	ext_conf	corruption	military	religion	law_order	ethnic_ten	dem_acct	bur_qual		
All countries	Fixed effects model	Political risk (t)	0.075 (0.047)	0.115*** (0.038)	0.063* (0.038)	0.102** (0.040)	0.101** (0.044)	0.035 (0.042)	0.039 (0.034)	0.041 (0.040)	0.052 (0.041)	0.061* (0.036)	-0.004 (0.034)	-0.019 (0.034)	
		Dynamic GMM	Political risk (t)	0.085* (0.046)	0.120*** (0.039)	0.083** (0.039)	0.003 (0.045)	0.095* (0.050)	0.046 (0.055)	0.004 (0.035)	0.061 (0.037)	0.014 (0.042)	0.036 (0.044)	0.033 (0.029)	-0.032 (0.039)
	Fixed effects model	Political risk (t-1)	-0.043 (0.067)	0.064 (0.060)	0.069 (0.054)	0.067 (0.054)	0.017 (0.056)	-0.009 (0.059)	0.050 (0.043)	-0.031 (0.052)	0.041 (0.053)	0.007 (0.050)	0.063 (0.045)	0.013 (0.045)	
		Political risk (d)	0.016 (0.049)	0.102** (0.041)	0.071* (0.039)	0.063 (0.043)	0.080* (0.047)	0.007 (0.043)	0.036 (0.040)	0.045 (0.043)	0.043 (0.043)	0.007 (0.040)	0.060* (0.036)	-0.016 (0.040)	
	Dynamic GMM	Political risk (t-1)	-0.011 (0.091)	0.059 (0.055)	0.031 (0.063)	0.005 (0.069)	0.056 (0.057)	0.028 (0.066)	0.022 (0.044)	-0.033 (0.053)	-0.010 (0.059)	0.038 (0.060)	0.024 (0.045)	0.020 (0.053)	
		Political risk (d)	0.041 (0.054)	0.101*** (0.039)	0.061 (0.041)	0.012 (0.048)	0.101* (0.053)	0.041 (0.054)	0.015 (0.037)	0.057* (0.034)	0.006 (0.043)	0.024 (0.047)	0.043 (0.029)	-0.023 (0.042)	
	Developing countries only	Fixed effects model	Political risk (t)	0.080 (0.061)	0.026 (0.060)	0.084* (0.049)	0.084* (0.049)	0.072 (0.055)	0.085 (0.053)	0.035 (0.038)	0.041 (0.049)	0.033 (0.051)	0.047 (0.045)	0.045 (0.040)	-0.017 (0.037)
			Dynamic GMM	Political risk (t)	0.034 (0.054)	0.008 (0.049)	0.089* (0.046)	0.029 (0.048)	0.085 (0.062)	0.141** (0.064)	-0.012 (0.035)	0.046 (0.040)	0.032 (0.050)	0.031 (0.050)	0.034 (0.035)
Fixed effects model		Political risk (t-1)	0.059 (0.093)	-0.012 (0.092)	0.145** (0.065)	0.134** (0.058)	0.044 (0.066)	0.102 (0.071)	0.057 (0.045)	-0.036 (0.060)	0.065 (0.060)	0.037 (0.060)	0.104** (0.052)	0.029 (0.047)	
		Political risk (d)	0.065 (0.063)	0.001 (0.061)	0.098** (0.048)	0.081* (0.048)	0.074 (0.057)	0.080 (0.054)	0.009 (0.044)	0.045 (0.051)	0.033 (0.054)	-0.001 (0.047)	0.079* (0.041)	-0.008 (0.043)	
Dynamic GMM		Political risk (t-1)	0.081 (0.109)	-0.002 (0.103)	0.144* (0.080)	0.036 (0.075)	0.045 (0.066)	0.150* (0.078)	0.015 (0.051)	-0.013 (0.065)	0.052 (0.066)	0.016 (0.073)	0.014 (0.065)	0.028 (0.052)	
		Political risk (d)	0.044 (0.064)	-0.002 (0.057)	0.102** (0.049)	0.030 (0.049)	0.081 (0.059)	0.144** (0.067)	-0.005 (0.036)	0.043 (0.037)	0.023 (0.050)	0.014 (0.051)	0.038 (0.037)	0.008 (0.040)	

Notes: Shown here are point parameters estimated for each component of political risk in four different models. Shown in parentheses are standard errors. \*\*\*, \*\*, and \* denote one, five, and ten percent level of significance, respectively.

**Table 6. Effects of Different Components of Financial Risk in Different Models**

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			for_debt	xr_stab	debt_serv	caxgs	int_liq	inflation	bud_bal	cacc
All countries	Ffixed effects model	Political risk (t)	0.019	0.031	0.023	-0.107*	-0.049**	-0.047	0.012	0.017
			(0.037)	(0.033)	(0.042)	(0.060)	(0.024)	(0.049)	(0.044)	(0.048)
	Dynamic GMM	Political risk (t)	0.036	0.024	-0.007	-0.098*	-0.023	-0.033	0.007	0.010
			(0.038)	(0.031)	(0.039)	(0.056)	(0.027)	(0.047)	(0.047)	(0.046)
	Ffixed effects model	Political risk (t-1)	-0.092*	-0.002	0.011	-0.200**	0.002	0.081	-0.019	-0.081
			(0.051)	(0.048)	(0.065)	(0.093)	(0.034)	(0.064)	(0.066)	(0.069)
		Political risk (d)	-0.034	0.024	0.027	-0.124**	-0.025	-0.013	0.029	-0.021
			(0.038)	(0.034)	(0.048)	(0.062)	(0.026)	(0.052)	(0.046)	(0.051)
Dynamic GMM	Political risk (t-1)	-0.057	-0.008	-0.034	-0.152	-0.020	0.061	-0.105	-0.097	
		(0.067)	(0.060)	(0.066)	(0.109)	(0.037)	(0.071)	(0.086)	(0.081)	
Dynamic GMM	Political risk (d)	0.028	0.019	0.012	-0.123**	-0.032	-0.033	-0.027	-0.029	
		(0.044)	(0.036)	(0.041)	(0.058)	(0.027)	(0.051)	(0.056)	(0.054)	
Developing countries only	Ffixed effects model	Political risk (t)	0.015	0.079*	-0.053	-0.106	-0.022	-0.008	-0.056	-0.054
			(0.047)	(0.041)	(0.055)	(0.069)	(0.032)	(0.058)	(0.057)	(0.059)
	Dynamic GMM	Political risk (t)	0.032	0.057*	-0.010	-0.081	0.042	0.050	-0.057	-0.022
			(0.053)	(0.034)	(0.049)	(0.057)	(0.027)	(0.052)	(0.051)	(0.047)
	Ffixed effects model	Political risk (t-1)	-0.087	0.033	-0.139	-0.221**	0.018	0.062	-0.100	-0.148*
			(0.063)	(0.069)	(0.085)	(0.099)	(0.044)	(0.073)	(0.083)	(0.087)
		Political risk (d)	-0.050	0.057	-0.086	-0.141**	-0.001	-0.008	-0.069	-0.109*
			(0.047)	(0.043)	(0.062)	(0.067)	(0.031)	(0.058)	(0.058)	(0.062)
Dynamic GMM	Political risk (t-1)	-0.057	0.040	-0.076	-0.129	0.053	0.095	-0.113	-0.087	
		(0.079)	(0.065)	(0.098)	(0.103)	(0.048)	(0.068)	(0.109)	(0.105)	
	Political risk (d)	0.009	0.046	-0.005	-0.110*	0.036	0.035	-0.074	-0.070	
		(0.057)	(0.041)	(0.056)	(0.058)	(0.028)	(0.055)	(0.064)	(0.063)	

Notes: Shown here are point parameters estimated for each component of financial risk in four different models. Shown in parentheses are standard errors. \*\*\*, \*\*, and \* denote one, five, and ten percent level of significance, respectively.

## Appendix 1: List of countries

Developing countries (60)		Developed countries (33)
Algeria	Morocco	Australia
Argentina	Mozambique	Austria
Bangladesh	Nicaragua	Belgium
Bolivia	Nigeria	Canada
Brazil	Pakistan	Czech Republic
Bulgaria	Panama	Denmark
Cameroon	Papua New Guinea	Finland
Chile	Paraguay	France
China	Peru	Germany
Colombia	Philippines	Greece
Congo, Republic of	Romania	Hong Kong
Costa Rica	Russian Federation	Hungary
Cote d'Ivoire	Senegal	Iceland
Dominican Republic	South Africa	Ireland
Ecuador	Sri Lanka	Israel
Egypt	Syria	Italy
El Salvador	Tanzania	Japan
Ethiopia	Thailand	Korea, Republic of
Gabon	Togo	Luxembourg
Ghana	Tunisia	Netherlands
Guatemala	Turkey	New Zealand
Guyana	Uganda	Norway
Haiti	Uruguay	Poland
Honduras	Venezuela	Portugal
India	Viet Nam	Singapore
Indonesia	Zambia	Slovakia
Iran	Zimbabwe	Spain
Jamaica		Sweden
Jordan		Switzerland
Kenya		Trinidad & Tobago
Malaysia		United Arab Emirates
Mexico		United Kingdom
Mongolia		United States

## Appendix 2: ICRG Methodology

### A. The Political Risk Rating

The aim of the political risk rating is to provide a means of assessing the political stability of the countries covered by *ICRG* on a comparable basis.

The following risk components, weights, and sequence are used to produce the political risk rating:

<i>POLITICAL RISK COMPONENTS</i>		
<b>Abbreviation</b>	<b>Component</b>	<b>Points (max.)</b>
Gov_stab	Government Stability	12
Socioec	Socioeconomic Conditions	12
Inv_prof	Investment Profile	12
Int_conf	Internal Conflict	12
Ext_conf	External Conflict	12
Corruption	Corruption	6
Military	Military in Politics	6
Religion	Religious Tensions	6
Law_order	Law and Order	6
Ethnic_ten	Ethnic Tensions	6
Dem_acct	Democratic Accountability	6
Bur_qual	Bureaucracy Quality	4
Total		100

#### **Government Stability**

This is an assessment both of the government's ability to carry out its declared program(s) and of its ability to stay in office. The risk rating assigned is the sum of three subcomponents:

- Government Unity
- Legislative Strength
- Popular Support

#### **Socioeconomic Conditions**

This is an assessment of the socioeconomic pressures at work in society that could constrain government action or fuel social dissatisfaction. The risk rating assigned is the sum of three subcomponents:

- Unemployment
- Consumer Confidence
- Poverty

### **Investment Profile**

This is an assessment of factors affecting the risk to investment that are not covered by other political, economic, and financial risk components. The risk rating assigned is the sum of three subcomponents:

- Contract Viability/Expropriation
- Profits Repatriation
- Payment Delays

### **Internal Conflict**

This is an assessment of political violence in the country and its actual or potential impact on governance. The risk rating assigned is the sum of three subcomponents:

- Civil War/Coup Threat
- Terrorism/Political Violence
- Civil Disorder

### **External Conflict**

This is an assessment of the risk to the incumbent government from foreign action, ranging from non-violent external pressure (diplomatic pressures, withholding of aid, trade restrictions, territorial disputes, sanctions, etc.) to violent external pressure (cross-border conflict to all-out war). The risk rating assigned is the sum of three subcomponents:

- War
- Cross-Border Conflict
- Foreign Pressures

### **Corruption**

This is an assessment of corruption within the political system.

### **Military in Politics**

This is an assessment of military involvement in politics.

### **Religious Tensions**

Religious tensions may stem from the domination of society and/or governance by a single religious group that seeks to replace civil law by religious law and to exclude other religions from the political and/or social process; the desire of a single religious group to dominate

governance; the suppression of religious freedom; and the desire of a religious group to express its own identity separate from the country as a whole.

The risk involved in these situations ranges from inexperienced people imposing inappropriate policies through civil dissent to civil war.

### **Law and Order**

The risk rating assigned is the sum of two subcomponents, which quantify the strength and impartiality of the legal system:

- Law
- Order

### **Ethnic Tensions**

This is an assessment of the degree of tension attributable to racial, nationality, or language divisions.

### **Democratic Accountability**

This is a measure of how responsive government is to its people, on the basis that the less responsive it is, the more likely it is that the government will fall, peacefully in a democratic society but possibly violently in a non-democratic one.

### **Bureaucracy Quality**

This is a measure of whether the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services.

## **B. The Economic Risk Rating**

The overall aim of the Economic Risk Rating is to provide a means of assessing a country's current economic strengths and weaknesses. In general terms, where its strengths outweigh its weaknesses it will present a low economic risk and where its weaknesses outweigh its strengths it will present a high economic risk.

The following risk components, weights, and sequence are used to produce the economic risk rating:



<b><i>ECONOMIC RISK COMPONENTS</i></b>		
<b>Sequence</b>	<b>Component</b>	<b>Points (max.)</b>
A	GDP per Head	5
B	Real GDP Growth	10
C	Annual Inflation Rate	10
D	Budget Balance as a Percentage of GDP	10
E	Current Account as a Percentage of GDP	15
Total		50

### **C. The Financial Risk Rating**

The overall aim of the Financial Risk Rating is to provide a means of assessing a country's ability to pay its way. In essence, this requires a system of measuring a country's ability to finance its official, commercial, and trade debt obligations.

The following risk components, weights, and sequence are used to produce the financial risk rating:

<b><i>FINANCIAL RISK COMPONENTS</i></b>		
<b>Sequence</b>	<b>Component</b>	<b>Points (max.)</b>
A	Foreign Debt as a Percentage of GDP	10
B	Foreign Debt Service as a Percentage of Exports of Goods and Services	10
C	Current Account as a Percentage of Exports of Goods and Services	15
D	Net International Liquidity as Months of Import Cover	5
E	Exchange Rate Stability	10
Total		50