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## How Does Country Risk Matter for Foreign Direct Investment?

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**Abstract:** In this paper we empirically investigate the effects on inward FDI of various components of political and financial risk. We also examine the relationship between inward FDI and not only the level of these risks but also their changes over time. Two kinds of findings are noteworthy. One is that among the political and financial risks, only the political risk is associated with the FDI inflow. Specifically, the change in the level of political risk affects FDI inflows, while the initial level of political risk does not. The other is that, particularly in the case of developing countries, payment delays, contract expropriation, and corruption are negatively associated with the FDI inflow. However, significant improvement leads to increased FDI inflow, even if initial levels are high.

**Keywords:** Foreign direct investment; Country risk; Political risk; Financial risk; Institution, MNEs

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## 1. Introduction

The reduction of country risk through the recent political reform in Myanmar has resulted in attracting much attention from multinational enterprises (MNEs). In spite of resource richness, there has been little foreign direct investment (FDI) in that country because of the high risk of investment in a country under military control. After the installation of a civilian government following the general election in 2010, however, country risk in Myanmar is perceived to have drastically decreased, even though its absolute level still looks very high. Some ministers in developed countries, including the U.S. and Japan, have recently visited Myanmar. Also, a number of MNEs are now planning to invest in Myanmar. These casual observations indicate the importance of country risk in attracting inward FDI.

It seems plausible to believe that a lower country risk should attract more FDI. Country risk is a composite concept that relates not only to political risk but also to financial risk. On the one hand, political risk is the risk that the returns to investment may suffer as a result of low institutional quality and political instability. The high sunk costs of FDI discourage firms from investing (Helpman *et al.*, 2004). Such sunk costs include the cost of acquiring information so as to overcome the MNE's lack of knowledge and familiarity with the country. Without sound institutions there would be substantial uncertainties in economic exchanges. 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 from FDI or even implement enforced nationalization. Inefficient institutions and high political risk can also adversely affect operating costs. Excessive "red tape" or lengthy delays in

obtaining permits can greatly increase the 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.

On the other hand, 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 deteriorates. Therefore, foreign firms might be very sensitive to the financial risk of the host country.<sup>1</sup> For example, 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 the financial risk of the country will increase. Multinationals may therefore find those countries with too much foreign debt less attractive for investment, *ceteris paribus*. Also a country's foreign debt and its financial risk will tend to increase gradually if the country experiences a large 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 hence 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 returns, may become smaller due to high inflation.

Empirical evidence remains mixed, however. On the one hand, several papers find

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<sup>1</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.

that country risk has a significant effect on inward FDI.<sup>2</sup> 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 the military being involved 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. 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. On the other hand, there are some papers finding an insignificant effect of country risk on inward FDI. For instance, Wheeler and Mody (1992) in their analysis of firm-level U.S. data find no significant result for corruption in the host country. Also, Noorbaksh *et al.* (2001) and Asiedu (2002) conclude that political risk does not have any significant impact on FDI.

Against this backdrop, we empirically investigate the relationship between FDI inflow and country risk. 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> For political risk, we examine the influences of government stability, socioeconomic conditions, investment profile, internal conflict, external conflict,

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

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

corruption, military in 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 the exports of goods and services, current account as a percentage of the exports of goods and services, net international liquidity in terms of months of import cover, the inflation rate, the budget balance as a percentage of GDP, and the current account as a percentage of GDP will be considered. 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. Because only some components of country risk might be significant, such detailed analyses might contribute to uncovering the reasons for the mixed empirical evidence in the previous studies.

Moreover, we examine the relationship of inward FDI with not only the level of country risk but also its change. All of the previous studies have explored the effect of the absolute risk level on the inward FDI flow. However, as observed in the recent enthusiasm of MNEs towards Myanmar, a perceived change in the level of country risk might have significant influence on inward FDI. In other words, even though the 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. In order to investigate whether or not a drastic reduction in country risk increases inward FDI, we employ a partial adjustment model, which enables us to assess the effects of country risk from both long-run and short-run perspectives. Our paper is the first to examine the roles of country risk in inward FDI,

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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 (e.g., Busse and Hefeker, 2007; *Ali et al.*, 2010).

in terms of both its level and its change. From the policy point of view, this analysis will uncover whether or not there is room to be able to attract inward FDI even in countries with extremely high perceived country risk.

The remainder of this paper is organized as follows. Section 2 describes the empirical framework we employ to investigate the impact of country risk on FDI. In Section 3, we discuss some data issues. Section 4 reports our empirical results. Section 5 concludes this paper.

## **2. Empirical Specification**

This section specifies our estimation equation explaining the magnitude of FDI inflow. 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>5</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.

As our dependant variable, we use the overall FDI inflows for 93 countries (including 60 developing countries), drawn from the UNCTAD FDI database. In this

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<sup>5</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.

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 developing countries. We therefore 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. The list of sample countries can be found in Appendix 1.

Equation (1) below is the basic equation describing the impact of country risk on FDI flows:

$$FDI_{it} = \mathbf{X}_{it} \boldsymbol{\beta} + u_i + u_t + \varepsilon_{it}, \quad (1)$$

where  $FDI_{it}$  is the log of FDI inflows in country  $i$  at time  $t$ ,  $\mathbf{X}$  is a vector of explanatory variables including country risk variables,  $\boldsymbol{\beta}$  is a vector of coefficients to be estimated,  $u_i$  is a country dummy,  $u_t$  is a time dummy, and  $\varepsilon_{it}$  is an error term. Under this basic equation, we run a specification which differentiates the long-run and short-run effects 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:

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

where  $\delta$  is an adjustment parameter. Namely, 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<sup>6</sup>

$$(FDI_{it} - FDI_{it-1}) = -\delta FDI_{it-1} + \mathbf{X}_{it-1} \lambda_1 + (\mathbf{X}_{it} - \mathbf{X}_{it-1}) \lambda_2 + u_i + u_t + \varepsilon_{it}. \quad (3)$$

This can be further rewritten as follows.

$$FDI_{it} = (1-\delta) FDI_{it-1} + \mathbf{X}_{it-1} \lambda_1 + (\mathbf{X}_{it} - \mathbf{X}_{it-1}) \lambda_2 + u_i + u_t + \varepsilon_{it} \quad (4)$$

This is our equation to be estimated. By estimating equation (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.

Choosing the set of explanatory variables  $\mathbf{X}$  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. In specifying the explanatory variables in the regression we follow other researchers in selecting some of the most common; these are GDP per capita, total population, degree of free trade, and country risk. As mentioned above, the three-year average of FDI is regressed on the explanatory variables, 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.

The details of each explanatory variable are as follows. Our main variables, the country risk variables, include political and financial risk variables. Their details are explained in the next section. GDP per capita (log) is to capture the level of income and wages of the host country. A high income means a greater demand for goods and services, which attracts market-seeking FDI. On the other hand, it may also mean a high wage rate, which may deter labor-seeking FDI. Therefore, whether GDP per

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<sup>6</sup> This is a partial adjustment model that can be found in Stone and Lee (1995).

capita attracts or deters FDI is an empirical question. Total population (log) 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. These variables are obtained from the World Development Indicators (World Bank).

We also include the degree of free trade, which measures the influence of trade restrictiveness on FDI. This is an index of free trade (Item 4: Freedom to Trade Internationally) taken from the Fraser Institute's "Economic Freedom of the World"<sup>7</sup>. Its value ranges from zero, indicating the highest trade restrictiveness, to one hundred, indicating the greatest freedom to trade internationally (i.e., the 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 (the tariff-jumping hypothesis) (Ali *et al.*, 2010).<sup>8</sup>

It should be noted that by including a lagged dependent variable on the right hand side of the regression equation, the error term of equation (4) may be correlated with the lagged dependent variables, making standard estimators inconsistent. In order to account for this problem, we employ a system generalized method of moments (GMM),

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<sup>7</sup> <http://www.freetheworld.com/release.html>

<sup>8</sup> Some authors use the ratio of goods and services trade to GDP to capture trade restrictiveness (eg., Busse and Hefeker, 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.

which was proposed by Blundell and Bond (1998). 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. The overall appropriateness of the instruments can be verified by a Sargan test of over-identifying restrictions. We treat our explanatory variables, except for the lagged dependent variable, as exogenous variables because those variables are lagged enough, as mentioned above. As a result, we use the second lagged observations of the dependent variable and the first lagged observations of the other kinds of variables as instruments.

### **3. Data Issues**

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.

The Political Risk Rating includes 12 subcomponents covering both political and social attributes. 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. On the other hand, 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. As mentioned in the previous section, we include them as control variables. Budget balance as a percentage of GDP and current account as a percentage of GDP are related to financial risk, as a larger amount of budget deficit and current account deficit are very likely to lead to a greater debt obligation for the country and hence a lower ability for the country to repay its debt. Inflation rate is also related to 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 as subcomponents of financial risk. As a result, we examine eight components of financial risk 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.

Obviously, all 12 political risk components are related to each other in varying degrees, as all assess political risk from different angles. All eight 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 to a large degree. Because of multi-colinearity 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 in examining the effects of detailed components of each kind of risk.

#### **4. Empirical Results**

In this section, we report our several estimation results. The basic statistics are provided in Table 1. The results for the aggregate effects of political risk and financial risk are reported in Table 2. The second and third columns 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. In addition to the system GMM, we also estimate our models by the ordinary least squares with fixed effect (FE).

**Table 1. Basic Statistics**

	Obs	Mean	Std. Dev.	Min	Max
All Countries					
Log of FDI inflows ( $t$ )	294	21.046	2.144	15.443	26.035
Log of FDI inflows ( $t-1$ )	294	20.224	2.234	13.617	25.931
Log of GDP per capita ( $t-1$ )	294	8.075	1.549	4.433	12.693
GDP per capita ( $d$ )	294	0.255	0.339	-1.030	1.116
Log of total population ( $t-1$ )	294	16.418	1.539	11.938	20.956
Population ( $d$ )	294	0.074	0.050	-0.041	0.280
Degree of free trade ( $t-1$ )	294	6.174	1.818	0.161	9.778
Degree of free trade ( $d$ )	294	0.430	1.097	-2.711	4.331
Political risk ( $t-1$ )	294	6.617	1.504	2.925	9.525
Political risk ( $d$ )	294	0.209	0.852	-1.892	3.375
Financial risk ( $t-1$ )	294	6.377	1.284	1.914	9.265
Financial risk ( $d$ )	294	0.460	0.837	-2.226	3.006
Developing Countries					
Log of FDI inflows ( $t$ )	183	20.131	1.833	15.443	25.057
Log of FDI inflows ( $t-1$ )	183	19.292	1.904	13.617	24.569
Log of GDP per capita ( $t-1$ )	183	7.213	1.091	4.433	10.246
GDP per capita ( $d$ )	183	0.213	0.332	-1.030	1.116
Log of total population ( $t-1$ )	183	16.478	1.348	13.536	20.956
Population ( $d$ )	183	0.090	0.046	-0.041	0.280
Degree of free trade ( $t-1$ )	183	5.414	1.706	0.161	8.305
Degree of free trade ( $d$ )	183	0.605	1.180	-2.711	3.929
Political risk ( $t-1$ )	183	5.780	1.089	2.925	7.942
Political risk ( $d$ )	183	0.283	0.968	-1.892	3.375
Financial risk ( $t-1$ )	183	5.840	1.185	1.914	8.745
Financial risk ( $d$ )	183	0.626	0.908	-2.226	3.006

Note: “ $d$ ” indicates the first difference over time.

**Table 2. Effects of Country Risk on FDI Inflows: Partial Adjustment Model**

	All countries		Developing countries	
	FE	SYS-GMM	FE	SYS-GMM
Log of FDI inflows ( $t-1$ )	0.032** [0.070]	0.261** (0.129)	0.069*** [0.080]	0.393*** (0.151)
Log of GDP per capita ( $t-1$ )	0.538* [0.317]	0.556** (0.222)	0.770** [0.367]	0.538 (0.358)
Log of GDP per capita ( $d$ )	0.420*** [0.259]	0.513* (0.263)	0.711** [0.288]	0.404 (0.301)
Log of Population ( $t-1$ )	0.520 [1.041]	0.763** (0.375)	0.888** [1.396]	0.758** (0.350)
Log of Population ( $d$ )	-1.082* [3.226]	2.205 (2.766)	-7.126* [3.815]	-4.278* (2.588)
Degree of free trade ( $t-1$ )	0.222** [0.089]	0.156 (0.103)	0.236** [0.101]	0.110 (0.129)
Degree of free trade ( $d$ )	0.180** [0.074]	0.127* (0.075)	0.183** [0.084]	0.056 (0.092)
Political risk ( $t-1$ )	0.163 [0.111]	0.131 (0.127)	0.291** [0.122]	0.208 (0.171)
Political risk ( $d$ )	0.244*** [0.089]	0.232** (0.091)	0.244** [0.108]	0.214* (0.114)
Financial risk ( $t-1$ )	-0.201 [0.128]	-0.233 (0.182)	-0.339** [0.157]	-0.196 (0.211)
Financial risk ( $d$ )	-0.107 [0.099]	-0.135 (0.121)	-0.195* [0.113]	-0.083 (0.131)
Time dummy	Yes	Yes	Yes	Yes
Arellano-Bond test				
AR(1)		-2.501		-1.571
p-value		0.012		0.116
AR(2)		0.937		-0.119
p-value		0.349		0.905
Overidentification test (Sargan)				
Chi-squared		10.186		2.212
p-value		0.070		0.819
Number of observations	294	294	183	183
Number of groups	89	89	56	56

*Notes:* Standard errors are in parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively. We use the second lagged observations of the dependent variable and the first lagged observations of the other kinds of variables as instruments. “ $d$ ” indicates the first difference over time.

Let us first focus on the results in FE when using the whole sample of both developed and developing countries. From these results, we can see that clustering effects are visible here with a positive and significant coefficient on the initial level of FDI inflow. That is, a larger FDI inflow in the past 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 inflows in the previous period as the success of other multinationals and hence may be attracted to the countries for further investments. 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 a change in the level of political risk does. The insignificant effect of the level of political risk is consistent with the findings in Noorbaksh *et al.* (2001) and Asiedu (2002).<sup>9</sup> As a result, it appears that even where the initial level of political risk is high, a perceived significant 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 for level and change), even though they are not statistically significant at any conventional level of significance.<sup>10</sup> Thus, multinationals do not seem to give serious consideration to the financial risk of the host country.

The results for the other variables are as follows. Both GDP per capita in the previous period and growth of GDP per capita during the past five years have

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<sup>9</sup> The insignificant result in the initial level of political risk does not change even if we exclude the variable on the political risk change.

<sup>10</sup> This insignificant result in financial risk variables does not change even if we exclude political risk variables.

statistically significant coefficients. This suggests that countries with large market size and high growth potential attract more FDI. However, we find a somewhat contradictory result in the growth of total population because the level and growth of population should be positively associated with market-seeking FDI. In addition, 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 countries with a greater level of free trade receive a greater amount of FDI but also that those countries which have been successful in reducing their trade restrictiveness to a larger extent receive a greater amount of FDI, *ceteris paribus*. This result is not consistent with the characteristics of market-seeking FDI.

Next, the third column of “SYS-GMM” reports the results when the dynamic GMM estimator is applied to the partial adjustment model for the whole sample of countries. The estimation of this model passes the Arellano-Bond tests of first-order correlation and second-order correlation. However, the Sargan test reveals that the results of the GMM estimator might be not appropriate. Thus, we do not interpret the results from the dynamic GMM estimator as being better than those from the fixed effects model. From this column, we can again see that only the change of political risk has a significantly positive coefficient. The noteworthy difference with the results of “FE” is that the coefficient for the initial level of total population turns out to be significantly positive (and that for its change is insignificant).

The results for developing countries only are reported in the last two columns. Let us focus on the results in SYS-GMM. The estimation of this model passes the Arellano-Bond tests of first-order correlation (at 15% significance level) and second-order correlation. Also, the Sargan test reveals the validity of instruments. There are

five noteworthy points. First, the clustering effects continue to be visible. In particular, these effects seem larger in the case of developing countries, as the size of coefficient for the initial FDI inflow is larger with the sample of developing countries only. Second, GDP per capita does not appear to attract or deter FDI. One may argue that this is 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. Third, while countries with large initial levels of population attract greater FDI, a larger increase of population deters FDI. Fourth, the degree of free trade in terms of both its level and trend no longer has a statistically significant effect. Last, we again find that only the change of political risk has a significant effect.

Last, in order to uncover the more detailed components of significant political risk, we examine the effects of different components of political risk on FDI. Specifically, we run 12 different regressions for the whole sample and for developing countries, respectively, while controlling for other variables specified above. The system GMM results from 24 different regressions (= 12 X 2) are reported in Table 3.<sup>11</sup> When using the whole sample, among the 12 political risk components, the changes of socioeconomic conditions, external conflict, and religious tensions have statistically significant effects. When developing countries only are included in the sample, both the initial level and change have significant influence in the cases of investment profile and corruption. Therefore, it is important for developing countries to reduce the possibility of payment delays, contract expropriation, and corruption. Also, these results indicate that significant components of political risk are limited. In other words,

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<sup>11</sup> The more detailed results are available upon request.

the mixed evidence in the previous studies would be due to the differences in how the detailed components of political risk were aggregated into the single political risk index, in addition to differences in the sample of countries.

**Table 3. Effects of Different Components of Political Risk: System GMM**

	All countries				Developing countries			
	Political risk ( $t-1$ )		Political risk ( $d$ )		Political risk ( $t-1$ )		Political risk ( $d$ )	
Government Stability	-0.011	(0.091)	0.041	(0.054)	0.081	(0.109)	0.044	(0.064)
Socioeconomic Conditions	0.059	(0.055)	0.101***	(0.039)	-0.002	(0.103)	-0.002	(0.057)
Investment Profile	0.031	(0.063)	0.061	(0.041)	0.144*	(0.080)	0.102**	(0.049)
Internal Conflict	0.005	(0.069)	0.012	(0.048)	0.036	(0.075)	0.030	(0.049)
External Conflict	0.056	(0.057)	0.101*	(0.053)	0.045	(0.066)	0.081	(0.059)
Corruption	0.028	(0.066)	0.041	(0.054)	0.150*	(0.078)	0.144**	(0.067)
Military in Politics	0.022	(0.044)	0.015	(0.037)	0.015	(0.051)	-0.005	(0.036)
Religious Tensions	-0.033	(0.053)	0.057*	(0.034)	-0.013	(0.065)	0.043	(0.037)
Law and Order	-0.010	(0.059)	0.006	(0.043)	0.052	(0.066)	0.023	(0.050)
Ethnic Tensions	0.038	(0.060)	0.024	(0.047)	0.016	(0.073)	0.014	(0.051)
Democratic Accountability	0.024	(0.045)	0.043	(0.029)	0.014	(0.065)	0.038	(0.037)
Bureaucracy Quality	0.020	(0.053)	-0.023	(0.042)	0.028	(0.052)	0.008	(0.040)

*Notes:* This table reports only the results in risk variables. Standard errors are in parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively. We use the second lagged observations of the dependent variable and the first lagged observations of the other kinds of variables as instruments. “ $d$ ” indicates the first difference over time.

We also examine the effects of different components of financial risk on FDI, obtained from running eight different regressions for the whole sample and for the sample of developing countries, respectively. Thus, the results from 16 different regressions (= 8 X 2) are reported in Table 4. We can see that only the change of current account as a percentage of the exports of goods and services enters with statistically significant negative coefficients in both the cases of the whole sample and the developing countries only. This result suggests that greater amounts of FDI are attracted to countries with the larger decrease of current account deficit as a percentage of exports of goods and services.

**Table 4. Effects of Different Components of Financial Risk: System GMM**

	All countries				Developing countries			
	Financial risk ( $t-1$ )		Financial risk ( $d$ )		Financial risk ( $t-1$ )		Financial risk ( $d$ )	
Foreign Debt as a Percentage of GDP	-0.057	(0.067)	0.028	(0.044)	-0.057	(0.079)	0.009	(0.057)
Exchange Rate Stability	-0.008	(0.060)	0.019	(0.036)	0.040	(0.065)	0.046	(0.041)
Foreign Debt Service as a Percentage of Exports of Goods and Services	-0.034	(0.066)	0.012	(0.041)	-0.076	(0.098)	-0.005	(0.056)
Current Account as a Percentage of Exports of Goods and Services	-0.152	(0.109)	-0.123**	(0.058)	-0.129	(0.103)	-0.110*	(0.058)
Net International Liquidity as Months of Import Cover	-0.020	(0.037)	-0.032	(0.027)	0.053	(0.048)	0.036	(0.028)
Annual Inflation Rate	0.061	(0.071)	-0.033	(0.051)	0.095	(0.068)	0.035	(0.055)
Budget Balance as a Percentage of GDP	-0.105	(0.086)	-0.027	(0.056)	-0.113	(0.109)	-0.074	(0.064)
Current Account as a Percentage of GDP	-0.097	(0.081)	-0.029	(0.054)	-0.087	(0.105)	-0.070	(0.063)

*Notes:* This table reports only the results in risk variables. Standard errors are in parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively. We use the second lagged observations of the dependent variable and the first lagged observations of the other kinds of variables as instruments. “ $d$ ” indicates the first difference over time.

## **5. Concluding Remarks**

In this paper, we empirically investigate the effects on inward FDI of various components of political and financial risks. We also examine the relationship of inward FDI not only to the level of those risks but also to their changes over time. Two kinds of findings are noteworthy. The first is that the initial level of political risk does not appear to affect FDI inflows, while the change in the level of political risk does. The financial risk is not associated with FDI inflow at all. These results imply that, even where the initial level of political risk is high, a significant perceived reduction in political risk can help the country attract more FDI. The other is that, particularly in the case of developing countries, payment delays, contract expropriation, and corruption are negatively associated with FDI inflow but, significant improvement leads to increased FDI inflow, even if initial levels are high.

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## 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:

#### **Government Stability (max 12 point)**

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, and Popular Support.

#### **Socioeconomic Conditions (max 12 point)**

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, and Poverty.

#### **Investment Profile (max 12 point)**

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, and Payment Delays.

**Internal Conflict (max 12 point)**

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, and Civil Disorder.

**External Conflict (max 12 point)**

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, and Foreign Pressures.

**Corruption (max 6 point)**

This is an assessment of corruption within the political system.

**Military in Politics (max 6 point)**

This is an assessment of military involvement in politics.

**Religious Tensions (max 6 point)**

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 (max 6 point)**

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

**Ethnic Tensions (max 6 point)**

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

**Democratic Accountability (max 6 point)**

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 (max 4 point)**

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: GDP per Head (max 5 point), Real GDP Growth (max 10 point), Annual Inflation Rate (max 10 point), Budget Balance as a Percentage of GDP (max 10 point), and Current Account as a Percentage of GDP (max 15 point).

### **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: Foreign Debt as a Percentage of GDP (max 10 point), Foreign Debt Service as a Percentage of Exports of Goods and Services (max 10 point), Current Account as a Percentage of Exports of Goods and Services (max 15 point), Net International Liquidity as Months of Import Cover (max 5 point), and Exchange Rate Stability (max 10 point).

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