Empirics on Capital Flight

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Abstract

This paper examines the determinants of capital flight using panel data for 53 developing and 23 developed countries over the period of 1984-2004. Our empirical results show that political risk and the financial incentive for capital flows have a statistically robust relationship to capital flight. For developing countries, first, the relationship between capital flight and political risk remains robust even when macroeconomic variables that significantly affected capital flight in previous studies are taken into account. Second, capital flees less to the extent that a country is financially more open and more developed. Capital account liberalization not only dampens capital flight but also promotes international flows of private capital. Third, capital flight increases with the standard of living up to a certain level of income, but thereafter decreases as income rises. The main policy implication of this study is, finally, that upgrading institutional quality not only encourages private capital inflows but also discourages capital flight, which would enhance economic growth in capital-scarce economies.

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Key words: Capital flight, political risk

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1. Introduction

Capital flight has been an important issue encountered by developing countries. It erodes the tax base, worsens income distribution and impedes economic growth by diverting domestic investment resources abroad. Economists and policy makers try to solve the problem by identifying the determinants of capital flight. However, no consensus has been reached in defining and measuring capital flight. Previous empirical results did not present a complete analysis of the factors affecting flight. This paper employs various measures of capital flight extant in the literature and upgrades empirical investigation on the causes of flight with a new set of data.

Previous theoretical studies on capital flight (Khan and Haque, 1985, Eaton, 1987, Diwan, 1989) seek to explain the simultaneous occurrence of capital flight and large foreign borrowing in developing countries. The main point of these studies is that capital flight takes place as a result of an asymmetric risk of expropriation facing domestic and foreign investors. Their basic assumption was that domestic assets held by residents may be exploited by the government, whereas the risk of similar assets held abroad is negligible. On the other hand, foreign debt is implicitly guaranteed by the debtor's government. The result is that the domestic resident faces a higher risk of expropriation, leading to investment abroad whereas foreign funds finance domestic investment.

The other studies focused on political risk as an important determinant of capital flight: Alesina and Tabellini (1989) modeled that capital flight occurs when two social groups behave noncooperatively. The uncertainty about which group will be in control in the future generates the political risk, which in turn causes economic uncertainty about future economic policies such as the risk of future taxation. Tornell and Velasco (1992) modeled that capital flight is a response to the tragedy of the commons, which occurs because of a weak system of property rights in poor countries. The weak system of property rights allows each interest group to have common access to other groups' domestic capital markets. Thus capital flight can emerge as an attempt to place one's wealth beyond the reach of competing interest groups.[1]

[1] Among other theoretical studies on capital flight are Ize and Oritiz (1987) and Bhattacharya (1999).

These theoretical studies suggest that a weak economic environment and political instability lead to capital flight. Previous empirical studies (Cuddington, 1987; Dooley, 1988; Pastor, 1990; Mikkelsen, 1991; Boyce, 1992; Schineller, 1997; Hermes et al., 2001) that investigated the causes of capital flight focused on return differential and unsound macroeconomic variables such as high inflation rates, overvalued exchange rates and government budget deficits. Only recently, researchers have paid attention to political risk, which triggers uncertainty about future economic policies. A few empirical papers (Lensink et al., 2000; Collier et al., 2001, 2003; Le and Zak, 2006; Le and Rishi, 2006) have shown that political risk is a statistically significant factor leading to capital flight. However, they used cross-section data, or small-panel data, with a limited set of political risk variables.

This paper explores the determinants of capital flight using panel data for 53 developing countries and 23 developed countries over the period 1984–2004. In contrast to previous empirical studies, first, we use the extensive data set of political risk variables, which starts at 1984, obtained from the only one source, the International Country Risk Guide (ICRG) by the PRS Group.[2] Second, we use six types of capital flight, which consist of three hot-money measures and three residual measures (the World Bank, Morgan Guarantee and Cline). Capital-flight data are acquired from the fifth edition of the IMF Balance of Payments (BMP5). Third, we compare the determinants of private capital outflows with those of capital flight. Finally, a sample of developed countries is also employed to examine whether there is any difference between developing and developed countries for the factors that explain capital flight.

Estimation results for developing countries show, first, that in most cases political risk and the financial incentive for capital flows have a statistically robust relationship to capital flight. Second, capital flees less to the extent that a country is financially more open and more developed. Third, capital flight increases with the standard of living, up to a certain level of income, but thereafter decreases as income rises. Fourth, sudden-stop episodes do not lead to capital flight in our sample of countries. Fifth, when macroeconomic variables used in previous empirical studies are added, only a few of them significantly

[2] Alfaro et al. (2005) use the same data to empirically examine the determinants of private capital inflows in developing countries.

affect flight while the statistical robustness of political risk is mostly maintained. Sixth, the sub-components of the political risk index of ICRG that significantly cause flight for both hot money and residual measures are corruption, government stability, and law-and-order. Seventh, the effects of the explanatory variables are not identical between capital flight and private capital outflows. But private capital outflows are also affected by political risk although its statistical significance becomes weaker. For developed countries, finally, the relationship between political risk and flight is robust for a hot-money measure, but not for a residual measure.

In section 2, we describe data and empirical specifications and analyze empirical results. The final section summarizes the paper's main findings and their policy implications.

2. Empirics

The first problem confronting an empirical analysis of the determinants of capital flight is how to define capital flight. Since we cannot observe the actual amounts of capital flight, we employ indirect methods to derive the level of capital flight for each country. There are generally two lines of methods for measuring capital flights: the residual method and the hot-money method. Based on these approaches, we, first, find the flows of capital flight for each sample country, and employ panel analysis for empirical estimation to identify the determinants of capital flight.

2.1 Data and the empirical specification

We estimate the following equation to investigate the determinants of capital flight.

$$\begin{aligned} SCF_{it} = {} & \beta_0 + \beta_1(POL\_RISK_{it}) + \beta_2 \ln(PGDP_{it}) + \beta_3(FI_{it}) + \beta_4(M2_{it}) \\ & + \beta_5(FOPEN_{it}) + \beta_6(TOPEN_{it}) + \beta_7 CRISIS_{it} + \beta_8 X_{it} \\ & + \beta_9(LA) + \beta_{10}(AFRICA) + \beta_{11}(INDEBTED) + \varepsilon_{it} \end{aligned} \tag{1}$$

where *SCF* denotes the ratio of capital-flight stock to nominal GDP; *POL_RISK*, political risk; *PGDP*, per

capita nominal GDP; *FI*, the exchange-rate-adjusted interest rate differential between foreign and domestic assets; *M2*, financial depth; *FOPEN*, financial openness; *TOPEN*, trade openness, *CRISIS*, the crisis dummy; *X*, a set of macroeconomic variables; *LA*, a Latin American dummy; *AFRICA*, a Sub-Saharan African dummy; and *INDEBTED*, a dummy for severely indebted countries, respectively. The subscripts, *i* and *t*, stand for country *i* and year *t*, respectively. Detailed definitions and sources of the variables in equation (1) are provided in Appendix C.

The dependent variable is the capital-flight stock divided by nominal GDP. To measure capital-flight stock, we use three variants of the residual method (the World Bank, Morgan Guarantee and Cline) and three types of hot money (Hot Money 1, Hot Money 2 and Hot Money 3).[3] The annual flows of flight are estimated by adding trade mis-invoicing to those obtained from three residual measures and three hot-money measures. Then the interest rate of US Treasury Bills is employed to convert these flows into stocks. The details on measurement of capital flight are described in Appendix B.

Equation (1) consists of the four elements of the explanatory variables for capital flight. The first one is political risk, a composite index published by International Country Risk Guide that appraises the political instability of a country and comprises twelve sub-components. The index ranges from 0 to 100, where a higher point means lower risk. Thus the coefficient of political risk is expected to be negative. The political-risk index and its sub-components are explained in detail in Appendix D.

The second element is a set of variables that represent economic motivations for cross-border transactions such as returns on capital, the financial incentive for capital flows, and economic infrastructure. First, we consider per capita GDP. According to the neoclassical growth model, capital should flow from rich to poor countries since poor countries have a lower capital/labor ratio, and thus a higher rate of return on capital. In practice, however, we did not observe such flows. Lucas (1990) argued that the return differential between poor and rich countries practically disappears when market

[3] We do not use the Dooley method (1986) that seeks to measure the stock of privately held foreign assets that do not generate income reported to the domestic authorities. The reason is that the annual changes in total stock of capital flight proposed by Dooley are simply those estimates according to the residual method. See Claessens and Naude (1993).

imperfections and external effects of human capital have been taken into account. On the other hand, Tornell and Velasco (1992) asserted that capital may flow from poor to rich countries despite the lower rate of return on capital in rich countries because of a weak system of property rights in poor countries. Empirical evidence on the relationship between capital flight and per capita income has been inconclusive. Collier et al. (2003) found that the estimated coefficients of per capita GDP are not significant for estimated results and their signs are mixed.

The second variable in the second element is the financial incentive for capital flight, measured as the exchange-rate-adjusted interest rate differential between US and domestic financial assets. It is expected to have a positive relationship with flight.

The other variables are financial depth, financial openness, trade openness and the crisis dummy: first, the lack of suitable domestic assets causes capital to flee abroad. Net capital outflows will decrease to the extent that the menu of financial instruments available to domestic residents is expanded. Thus, financial depth[4], measured by M2/GDP, is expected to be negatively correlated with capital flight. Next, capital-account openness is the opposite concept from capital control. If the imposition of capital controls reduces flight, financial openness has a positive coefficient. On the other hand, countries whose capital account is more open may have more advanced domestic financial market and more opportunities for profitable investment. In this case financial openness is negatively associated with flight. Third, external trade in the real side is also relevant to flight. More trade requires an increase in working balances held in foreign banks and allows for more chances of flight through trade-faking. On the other hand, higher trade openness enhances economic stability and growth, thus leading to lower net capital outflows. Thus the coefficient of trade openness is expected to have ambiguous signs. Finally, the crisis dummy is also included in this set of variables because the currency or financial crisis may initiate capital flight. We use a sudden-stop episode constructed by Cavallo and Frankel (2004) as a crisis dummy.

[4] Due to lack of data, we do not use other measures of financial development, private credit and stock-market capitalization. Private credit is defined as credit extended to the private sector by deposit money banks and other financial institutions. Stock-market capitalization refers to the total value of listed shares traded on the official bourses.

The third set of explanatory variables comprises macroeconomic variables that influence the future expected economic motivations for capital flight. Several macroeconomic variables are chosen in a way that they significantly affect capital flight in previous empirical studies. First, the degree of currency overvaluation (*OVER*) is a factor that affects the rate of returns for both domestic and overseas investors. If domestic currency is expected to be devalued, the value of domestic savings is reduced, and thus wealth would be reallocated toward foreign holdings (Cuddington, 1987, Pastor, 1990, and Collier et al., 2001). Second, domestic inflation (*INFLATION*) reduces real returns on domestic capital. More capital tends to flee abroad to the extent that the government depends on taxing domestic financial assets through money creation (Dooley, 1988, Pastor, 1990, Loungani and Mauro, 2000). Third, government budget (*BUDGET*) is also influential to capital movements. Larger budget deficits motivate domestic investors to move capital abroad to escape higher future taxation risk through expectations of higher future inflation (Boyce, 1992, Schineller, 1996, Loungani and Mauro, 2000). Fourth, high indebtedness measured by total debt/GDP (*TDEBT*) can be interpreted as a signal for high future taxation, increasing capital flight (Mikkelsen, 1991, Collier et al., 2001, 2003). Fifth, capital availability (*KAVAIL*) within a country also has an influence on capital flight. Two cases can manifest. An increase in capital inflows provides more resources, thus leading to more capital flight. On the other hand, it may reflect that the investment climate of borrowing countries found favor with creditors. Thus domestic residents have less incentive to invest abroad. Previous studies (Cuddington, 1987; Pastor, 1990; Boyce, 1992) support the first case. Sixth, the level of international reserves (*RESERVE*) also affects capital flight. The country that holds larger reserves would experience less capital flight since the size of reserves is an indicator of a likelihood of the balance-of-payments crisis. Boyce (1992) showed the negative relationship between flight and reserves for the Philippines case. However, higher reserves might permit more capital flight. Public officials can divert resources from government coffers for capital flight. Even private owners of capital may hold more foreign assets when they expect domestic currency to be devalued due to a higher inflationary environment created by higher level of reserves. Finally, net inflow of foreign direct investment (*FDINET*) is an indicator of soundness for foreign investment. A low inflow of foreign direct investment

is closely associated with a country's weak institutions and general economic mismanagement. Using cross-sectional data, Kant (1996) showed that there is a strong relationship between capital flight and foreign direct investment.[5]

The last component of the explanatory variable comprises regional and indebted country dummies. General evidence shows that Sub-Saharan Africa has significantly greater capital flight than other regions. Latin America has experienced episodes of debt and currency crises, and capital flight. Severely indebted countries have been prone to fleeing capital. We control for these by introducing three dummy variables.

2.2 Estimation results

The data set covers 53 developing countries, listed in Appendix A, over the period of 1984–2004. The countries are chosen based on the availability of data on capital flight and other variables for estimation. Since the countries in our sample have different histories and political and financial institutions, we assume the error term $\varepsilon_{it} = \eta_i + \upsilon_{it}$ where $\upsilon_{it} \sim iid\ \mathrm{N}(0, \sigma_v^2)$. As expected, the Breusch-Pagan specification test detects the presence of η_i for all regressions of our study. η_i can be either fixed or drawn from random distribution. We employ the Hausman specification test to determine whether the appropriate error terms are fixed or drawn from random distribution. However, both fixed-effect and random-effect estimation results will be reported, if needed.

The base equation

We estimate equation (1) for three hot-money measures and three residual measures of capital flight, first, excluding macroeconomic variables. Figure 1 plots the annual flows of HM1 against those for each of the other flight measures for 53 developing countries over our sample period. The figure indicates

[5] Other economic variables used in previous studies are tax rates, labor's share of income, black-market premiums, growth and relevant proxy variables. We do not use these variables in estimation due to scarce data or statistical insignificance of their estimated coefficients.

that hot-money measures match each other, but do not match residual measures. For estimation, the crisis dummy is lagged one year to avoid a possible endogeneity problem since capital flight may lead to currency crises. Political risk may also raise simultaneity bias. But we keep a contemporaneous value of political risk because its lagged value makes little difference in estimation results.

Tables 1 and 2 present fixed-effect and random-effect estimation results, respectively. The Hausman tests favor the fixed-effect results for hot-money measures and the random-effect results for residual measures of flight capital, but fixed-effect and random-effect estimated results for both measures are almost identical.

All estimated coefficients of political risk are negative and statistically significant at least at 5% except in one case, Hot Money 3 of random-effect results. The results imply that higher political risk significantly raises capital flight.

The estimated coefficient of per capita income should be positive for neoclassical theory, but negative for theories of Lucas (1990) and Tornell and Velasco (1992). As shown in Collier et al. (2003), however, we also find that they are statistically insignificant with mixed signs. Assuming there may a nonlinear relationship between flight and per capita income, we add the square of per capita GDP to equation (1). The results show that per capita GDP has an inverted-U relationship with capital flight at a 1% significance level for all cases. For our sample of developing countries, capital flight increases with the standard of living up to a certain level of income, but thereafter decreases as income rises.[6]

The financial incentive for capital flight has positive and significant coefficients for all cases except HM3 of random-effect results, implying that capital goes wherever its return is higher.

Regarding financial variables, previous studies have shown that financial depth does not significantly affect flight (Collier et al., 2001). The effectiveness of capital controls is inconclusive. Pastor (1990) found that capital controls were effective at preventing flight for South American countries; but the capital control variable was statistically insignificant in studies by Schineller (1997) and Loungani and

[6] For example, consider the fixed-effect result for HM1, shown in column 2 of Table 1. The income level where capital flight is maximized is roughly 5,130 US dollars. (565.394 -2*33.124*ln(PGDP) = 0, ln(PGDP) = 8,543, PGDP = 5,130)

Mauro (2000).[7] We find that the effects of financial variables are not identical between hot-money measures and residual measures. For hot-money measures, the coefficients of both financial development and financial openness are negative at the 1% significance level, implying that countries that are more open and more developed on the financial side would experience smaller flight of short-term capital. But the statistical significance of both financial variables disappear for residual measures except the Cline measure where the coefficient of financial openness is negative at the 1% significance level. We also use the interaction of financial depth and financial openness, *M2*FOPEN*, as an explanatory variable and re-estimate the same equation, but the results for its statistical significance (not shown here) remain the same as in the case where they are used separately.

The role of trade openness is not unambiguous. Only two out of six cases show its statistical significance. Their signs are positive for fixed-effect results and negative for random-effect results, respectively. On the other hand, Mikkelsen (1991) found a positive relationship between trade and flight in the case of Mexico.

With one exception, the crisis dummy shows no statistical significances, implying that sudden stop episodes do not lead to capital flight in our sample. The present or one-year lead value of the crisis dummy does not significantly affect flight capital either (not shown here).

In addition, we use three regional and debt dummy variables (*LA*, *AFRICA*, and *IDEBTED*) in the random-effect model.[8] The results show that the coefficients of all three dummies are positive, but an African dummy only has significant coefficients at the 1% to 5% levels. One exception is the Cline measure, for which all three dummies have statistical significance.

Macroeconomic variables

Now, we include macroeconomic variables and re-estimate equation (1). For estimation, macroeconomic variables are added to the base equation one by one. The reason is that macroeconomic

[7] These studies used the IMF Annual Report on Exchange Arrangements and Exchange Restrictions to measure the capital control variable. Instead, we use a broader measure, financial openness, as a substitute for capital control.
[8] The fixed-effect model does not estimate the coefficients of time-invariant variables.

variables are highly correlated with each other, and we would like to examine whether the importance of political risk survives with each macroeconomic variable that significantly affects flight in the literature. Second, all macroeconomic variables are lagged one year to account for possible endogeneity. Due to limited space, finally, we consider only two cases of capital flight, HM1 and Cline, which are the narrowest definitions of hot-money and residual measures, respectively. The Hausman test supports the random-effect estimation results for HM1 and Cline, shown in Tables 3 and 4, respectively.

The results for HM1 show that the significant role of political risk remains intact except when government budget and capital availability are added. Among macroeconomic variables, domestic inflation and international reserves affect short-term capital flight at a 5% significance level, but the other variables have no statistical significance. The coefficient of the inflation rate has a negative sign, which is opposite to the result found in previous studies. When its present or one-year lead value is used, the results (not shown here) are not different. On the other hand, when the present value of inflation volatility is used as an explanatory variable, its estimated coefficient becomes positive but statistically insignificant. In contrast to Boyce (1992) who used time-series data, we find that larger reserve holdings increase short-term capital flight.

Without macroeconomic variables, per capita GDP, its squared term, interest-rate differential, financial depth and financial openness all significantly affect HM1 at least at the 10% level as shown in column 1 of Table 2. When macroeconomic variables are included, per capita GDP and its squared term still have their statistical significances at the 1% level. The coefficients of the other variables show expected signs, but not all are statistically significant: the significance of financial incentive is maintained for three out of seven cases while those of financial depth and financial openness do so for five cases. The role of trade openness is not clear; its estimated coefficients that are significant show mixed signs.

For the Cline measure, the estimation results are more clear-cut. With the exception of one case, flight is always significantly affected by the political risk, per capita GDP, its squared term, and financial incentive. Financial openness is negatively associated with flight in most cases, but financial depth never shows statistical significances. The coefficient of international reserve is positive but insignificant; higher

foreign indebtedness significantly raises flight of capital instead. Once the foreign debt ratio is incorporated, most of the other explanatory variables including political risk lose their significance, implying that foreign debt is a strong factor affecting capital flight. Though capital availability and the net inflow of FDI have insignificant coefficients, their negative signs indicate that capital tends to flee less as more capital flows into the country.

Regarding dummy variables, the crisis dummy never significantly affects capital flight. The estimated coefficients of dummy variables for Sub-Saharan African and severely indebted countries are mostly positive and significant for both HM1 and Cline measures.[9] However, the Latin American dummy has no statistical significance for HM1, but does so in four out of seven cases for Cline, suggesting that capital flight from Latin America has not been based on short-term capital outflows.

Up to now, all macroeconomic variables are lagged one period to avoid an endogeneity problem. An alternative way to overcome the problem is to take an instrumental-variable (IV) approach. It is hard to find appropriate instrumental variables for each of seven macroeconomic variables. As instruments for each of seven equations, we use macroeconomic variables that do not significantly affect capital flight and are highly correlated with the macro variable included in that equation. The IV results, shown in Table 3A and 4A, do differ little from those based on noninstrumental variables. The political risk loses its significance for one more case. For macroeconomic variables, inflation does not significantly affect flight any more. Instead, capital availability is negatively correlated with flight at the 5% significance level, which is the opposite of previous studies (Cuddington, 1987; Pastor, 1990; Boyce, 1992). In the case of Cline, the inflows of FDI significantly decrease flight. That is, large inflows of foreign capital reduce domestic capital flight, implying that countries that have a good investment climate win the favor both of creditors and of domestic residents and let them invest at home.[10]

In most cases, in sum, (i) political risk, per capita income and interest-rate differentials are the

[9] Boyce and Ndikumana (2001) estimated capital flight from 25 sub-Saharan African countries in the period 1970 to 1996. The accumulated stock of flight capital for these countries was $285 billion while their external debt stood at $178 billion in 1996, indicating that sub-Saharan Africa was, in fact, a net creditor vis-à-vis the rest of the world.
[10] The IV method is employed only for this case due to difficulties of obtaining instruments and little differences in IV and non-IV estimation results.

factors that significantly affect capital flight measured by both hot-money and residual methods. (ii) Financial depth and financial openness are negatively correlated with flight of short-term capital. However, they do not have statistical significance with residual flight measures with the exception of Cline where financial openness significantly decreases flight. (iii) The role of trade openness is ambiguous. (iv) When macroeconomic variables are incorporated, the random-effect results show that only a few of them have statistical significance while the role of the other explanatory variables including political risk remains mostly intact. Capital flees more to the extent that a country is more indebted. Short-term capital outflows are positively associated with the magnitude of international reserve holdings. Unexpectedly, inflation is negatively correlated with flight. The IV results show, however, that its statistical significance disappears. Instead, larger inflows of foreign capital lead to smaller flight of domestic capital. (v) The crisis dummy has no explanatory power, and the degree of capital flight has been significantly larger in Sub-Sahara African and severely indebted countries.

The sub-components of political risk

Political risk is a composite index, containing twelve sub-components. The estimation results demonstrate that higher political risk significantly increases flight. However, that does not mean that all sub-components are significant factors affecting flight. We replace the political risk index with each of its sub-components and re-estimate equation (1). For estimation, macroeconomic variables are excluded because their inclusion does not virtually affect the significance of political risk, as shown in Tables 3 and 4, and produces too many cases (7 x 12 = 84), which cannot be presented in a limited space. Tables 5 and 6 present the random-effect estimation results for HM1 and Cline.[11]

Most of the sub-components show the expected signs in their estimated coefficients. Among them, corruption, government stability, and law-and-order significantly affect flight for both HM1 and Cline. These variables are closely associated with a threat to domestic and foreign investment, and with

[11] The Hausman test favors the fixed-effects results for HM1. The reason that the random-effects results for HM1 are presented in Table 5 is that they show the effects of dummy variables and can be compared with those of Cline. Moreover, the results of two estimation methods are practically equivalent.

the risk of future taxation. For HM1, another significant variable is the investment profile, which is also related to the risk of investment. For Cline, there are many other significant variables: bureaucracy, internal conflict, external conflict, religious tensions, ethnic tensions and democratic accountability. Unlike other variables, religious tensions and bureaucracy have positive estimated coefficients. "Religious tension" assesses the domination of society and/or governance by a single religious group, implying that less capital runs away to the extent that cultural homogeneity is stronger. The coefficient of bureaucracy is expected to be negative, which is not the case for Cline. Its random-effect estimated coefficient for HM1 shows an expected sign, but it is insignificant. However, its fixed-effect coefficient (not shown here) is negative and significant.

For the other explanatory variables, per capita income, its squared term, financial incentive, and financial openness always have significant coefficients. Financial depth has a significant role for HM1 while it never does for Cline. Trade openness is related negatively with HM1 and positively with Cline, but its estimated coefficients all are statistically insignificant. As before, the crisis dummy never affects flight. HM1 is correlated only with the sub-Saharan African dummy. On the other hand, all three country dummies including Latin America have statistical significance for Cline.

Private capital outflows

Capital flight is a subset of private capital outflows that include normal and legal asset transactions. Private capital outflows are measured as the absolute values of direct, portfolio, and other investment outflows recorded in the financial account of BOP, excluding changes in the assets and liabilities of monetary authorities and general government. The final exercise we do is to examine the determinants of private capital outflows and compare them with those of capital flight. Figure 2 presents scatter plots of private capital outflows versus each of six types of flight, all measured by the ratio of annual flows to nominal GDP. For estimation, the dependent variable is defined as the ratio of the stock of gross private-capital outflows to nominal GDP. The US Treasury Bill rate is used to calculate the stock value of private-capital outflows. Financial openness is excluded from the explanatory variables since by definition the ratio of private capital outflows to GDP is part of financial openness, thus raising

simultaneous bias. The random-effects estimation results for developing countries are shown in Table 7.

The results are quite different from those for capital flight. Summarizing the differences between them, first, the importance of political risk is considerably reduced: it maintains statistical significance for four out of eight cases, only at the 10% to 15% level. Second, per capita GDP and its squared term have significant estimated coefficients at the 1% significance level. Contrary to capital flight, however, per capita GDP has a U relationship with private-capital outflows. That is, private-capital outflows decrease with the standard of living to a certain level of income, but thereafter increase as income rises. Contrary to capital flight, third, trade openness has positive coefficients most of which are significant at the 1% to 5% level. This implies that openness in the real side causes openness in the financial side.[12] Fourth, all coefficients of financial depth are significant at the 1% level but positive, which contrasts with cases of capital flight. Thus, a country faces more capital flow abroad but less capital flight to the extent that it is financially more developed. Among macroeconomic variables, fifth, government budget is significantly and positively correlated with private-capital outflows. Though not significant, the coefficient of capital availability, defined as gross private-capital inflows, is positive in contrast to the case of capital flight. The simple correlation coefficient between outflows and inflows of private capital is 0.92. Thus its implication is that liberalizing capital account discourages flight of domestic capital, and encourages flows of both domestic and foreign private capital. Finally, the African dummy does not show statistical significance, but the Latin American dummy does instead.

Developed countries

Capital flight has been regarded as a problem of developing countries. For example, when an American puts money abroad it is called "foreign investment," and when an African does the same it is called "capital flight." Suppose that capital flight measures are valid for developed countries too. Is there any difference in the determinants of capital flight between developing and developed countries? To

[12] Aizenman and Noy (2004) find that there exists a two-way feedback between trade and financial openness, and Granger causality from financial openness to trade openness is somewhat stronger than that from trade to financial openness.

answer this question, the same method that we used for developing countries is employed to obtain capital flight data of 23 developed countries, listed in Appendix A, over the period of 1984–2004 and we re-estimate equation (1). For comparison, we use the same explanatory variables with some revision in regressions. First, the linear relationship between per capita GDP and flight is found so that the squared term of per capita GDP is excluded. Second, developed countries have well-advanced financial systems. Moreover, the estimated coefficients of M2 turn out to be insignificant; thus M2 is also excluded. Third, we examine the effect of one more variable, *EXCHG*, which denotes the change in the nominal exchange rate, since exchange-rate variability is one of the factors that are closely related with macroeconomic instability.[13] Based on the Hausman test, the random-effect estimation results for HM1 and Cline are shown in Tables 7 and 8, respectively.

The results are summarized as follows: first, political risk is an important factor for Cline but not for HM1. This reflects that political risk does not matter to short-term capital flows for developed countries. Second, per capita income and flight are significantly correlated with each other, but their relationship is negative for HM1 and positive for Cline. Third, hot money (HM1) responds to interest-rate differentials, but a broader measure of flight (Cline) does not. Fourth, financial openness does not play a significant role in determining flight at all. Contrary to the case of developing countries, however, trade openness significantly and negatively affects both flight measures. This implies that trade faking is not prevalent among developed countries.

Developed and developing countries do not differ much in the effects of macroeconomic variables. The variables that significantly affect both HM1 and Cline are exchange-rate variability, inflation and reserves. As expected, capital flees more to the extent that exchange rates are more volatile. Like developing countries, the inflation rate is negatively correlated with flight. Unlike developing countries, however, larger reserve holdings lead to lower flight for the Cline measure. Finally, no significant relationship is found between flight and the crisis dummy as seen in the case of developing

[13] *EXCHG* positively and significantly affects flight for developing countries too. However, its estimated coefficients have extremely low values (for example, it is 1.62e-11 (7.92e-12) for HM1), and thus they are not shown in Tables 3 and 4.

countries.

3. Concluding Remarks

Capital-scarce economies, which need foreign capital to sustain growth, have also suffered from flight of capital, that is, domestic resource transfers abroad. Policies against capital flight in the literature suggest adopting sound macroeconomic policies, changing legal and institutional system ensuring no risk of expropriation, providing attractive financial assets for domestic residents and imposing capital control.

Using panel data for 53 developing countries, we confirm in this study that political risk is the most influential factor in explaining the causes of capital flight; the relationship remains robust even when macroeconomic variables that significantly affected flight in previous studies are taken into account. Most macroeconomic variables such as currency overvaluation and government budget deficits lose their statistical significance once political risk is added. Among sub-components of political risk, the common factors affecting flight are corruption, government stability and law-and-order, all of which are associated with the risk of expropriation and future taxation to domestic residents. Political risk is also a significant factor for flight data measured by a residual method in 23 developed countries. For capital-scarce developing economies, overall, upgrading institutional quality should be the first priority to avoid flight of capital.

Implications of our other findings are summarized as follows: first, the relationship between capital flight and per capita income is not linear but shows an inverted U curve, reflecting that a country would experience a rise in capital flight at the early stage of development, but gradually repatriate funds held abroad as income rises. However, per capita income has a U relationship with private-capital outflows, which is opposite to the case of capital flight. Thus developing countries may face both an increase in abnormal capital outflows and a decrease in normal capital outflows up to a certain stage of economic development. Second, capital goes wherever its return is higher. Third, policy makers are concerned about opening a capital account that may initiate a sudden flight of capital. But our results are exactly opposite. Capital-account liberalization not only dampens capital flight but also promotes

international flows of private capital. Flight of short-term capital can also be avoided by deepening the financial markets, providing various financial assets for domestic residents at attractive terms and thereby reducing the risks of financial investment at home. Fourth, we use data of Cavallo and Frankel (2004) and show that a sudden stop or currency crisis does not initiate capital flight in our sample of countries. However, there are various definitions for crisis episodes (for example, Frankel and Rose (1996) and Frankel and Wei (2004)). Further empirical investigation may be needed to confirm the exact role of a crisis dummy in flight of capital. Finally, Alfaro et al. (2005) empirically show that the lack of capital inflows from rich to poor countries is mainly due to low institutional quality. Our results reveal that the inflows of foreign capital including FDI are negatively correlated with capital flight. Thus we can conclude that low political risk (or, high institutional quality) not only encourages capital inflows but also discourages capital flight, thus enhancing economic growth in capital-scarce economies.

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Appendices

A. Country list

Developing countries	Ecuador	Pakistan	Belgium
	Egypt	Papua New Guinea	Canada
Angola	El Salvador	Philippines	Denmark
Argentina	Guinea	Poland	Finland
Bahamas, The	Honduras	Saudi Arabia	France
Bahrain, Kingdom of	Hungary	Senegal	Germany
Bangladesh	Indonesia	Singapore	Greece
Bolivia	Israel	South Africa	Iceland
Botswana	Jamaica	Sri Lanka	Ireland
Brazil	Kenya	Sudan	Italy
Bulgaria	Korea	Thailand	Japan
Burkina Faso	Kuwait	Togo	Luxembourg
Cote d'Ivoire	Libya	Trinidad and Tobago	Netherlands
Cameroon	Malawi	Turkey	New Zealand
Chile	Malaysia	Uganda	Norway
China,P.R.: Mainland	Mali		Portugal
Colombia	Malta	*Developed Countries*	Spain
Congo, Republic of	Mexico		Sweden
Costa Rica	Morocco	Australia	Switzerland
Cyprus	Oman	Austria	United Kingdom
			United States

B. Measurement of capital flight

We use two methods of measuring capital flight. The first one is the residual or World Bank method, and the second is the hot-money method. Most of the data needed to calculate capital-flight measures are obtained from Balance of Payments (BOP) published by the IMF. In the previous literature, capital flight was defined and calculated on the basis of the old version of BOP (BMP4), which was operational up to 1992, but we use its new version (BMP5) since our data cover through 2004.

Residual Method

This measures capital flight by the *residual* of the *sources* of funds (net increases in external debt and the net inflow of foreign investment) over the *uses* of funds (the current account deficit and additions to foreign reserves). For the residual measure, several variables are redefined to minimize the discrepancies between the old and new versions of BOP. First, the capital account has been renamed the financial account in BMP5. The capital account of BMP5 consists mostly of unilateral capital transfer in the current account of BMP4. Thus capital account deficit/surplus is also added as an element of the *uses* of funds. Second, only foreign direct investment (FDI) was counted as foreign investment in previous studies. Following Claessens and Naude (1993), however, we also include equity securities in portfolio investment. Thus, the *sources* of funds are the sum of net increases in external debt, net FDI and net equity securities. We use three variants of the residual method: the World Bank, Morgan Guaranty and Cline methods. Table A-1 shows how to calculate these three measures.

Table A-1. Capital Flight: Residual Method

A. Current Account (BOP, 4993)
A1. Travel (credit) (BOP, 2236)
A2. Net reinvested FDI income (BOP, 2333+3333)
A3. Other investment income (credit) (BOP, 2370)
B. Capital Account (4994)
C. Net Equity Flows
C1. Net foreign direct investment (BOP, 4500)
C2. Portfolio investment: Net equity securities (BOP, 4610+4652)
D. Change in deposit money banks' foreign assets (IFS, 7A.DZF)
E. Changes in reserves (BOP, 4802)
F. Net errors and omissions (BOP, 4998)
G. Change in debt (GDF)
World Bank: A+B+C+E+G
Morgan Guaranty: A+B+C+E+G-D
Cline: A+B+C+E+G-D-(A1+A2+A3)

Notes: BOP, Balance of Payments, IMF, 2005.
IFS, International Financial Statistics, IMF, 2005.
GDF, Global Development Finance, the World Bank, 2005.

Hot-Money Method

The hot-money measures of Cumby and Levich (1987) are most widely used in the literature, but they are also obtained from the old version of BOP. The items of short-term capital flows in the old version are not compatible with those in the new version. Loungani and Mauro (2000) employ the new version of BOP to define three hot-money measures. Table A-2 presents three measures of hot money (Hot Money 1, Hot Money 2 and Hot Money 3), which are based on definitions offered by Loungani and Mauro.

Table A-2. Capital Flight: Hot Money Method

Hot money 1
Net errors and omissions (BOP, 4998)
plus Net flows of non-FDI, non-portfolio investment assets and liabilities held by entities other than the monetary authorities, general government, and banks. (BOP, 4710+4725+4734+4746+4760+4775+4784+4796)
Hot money 2
Hot money 1
plus Net flows of non-FDI, non-portfolio investment assets and liabilities held by banks (BOP, 4722+4733+4743+4772+4783+4793)
Hot money 3
Hot money 2
plus Net flows of portfolio investment assets and liabilities in the form of debt securities (BOP, 4619+4669)

Source: Loungani and Mauro, 2000.
Notes: BOP, Balance of Payments, IMF, 2005.

Trade Mis-invoicing

The other types of capital flight are export under-invoicing and import over-invoicing. They can be identified by differences in statistics of the reporting country and its trading partners as shown in Table A-3. One adjustment should be made to calculate trade mis-invoicing. Reported imports and exports are normally expressed on a CIF (cost, insurance, freight) and FOB (free-on-board) basis, respectively. To measure them on a comparable basis, imports are adjusted downward by a country-specific CIF/FOB ratio. However, the data are available only for 20 countries in our sample. As the BOP manual suggests, thus, we use CIF/FOP = 1.1 for all countries. Since both export under-invoicing and import over-invoicing add to capital flight, the two are combined for the net effect of trade mis-invoicing on capital flight

Table A-3. Trade Mis-invoicing

Export mis-invoicing	$= M_W/1.1 - X_C$
Import mis-invoicing	$= M_C/1.1 - X_W$
where	
M_W	Imports from that country as reported by the world, CIF
X_C	Exports as reported by the country, FOB
M_C	Imports as reported by the country, CIF
X_W	Exports to that country as reported by the world, FOB

Source: Direction of Trade, IMF, 2005.

Stock of Capital Flight

In regressions, we use the stock of capital flight as the dependent variable. To do this, first, we estimate the annual flows of flight by adding trade mis-invoicing to those obtained from three residual measures and three hot-money measures. Next, the interest rate of US Treasury Bills (*TBill*) is employed to convert these flows into stocks as follows:
$SCF_{it} = SCF_{i,t-1}(1+TBill_t) + CF_{it}$ where *SCF* is the stock of capital flight, *CF* is annual flight, and the subscripts, *i* and *t*, denote country *i* and year *t*. The start of our period of observation is 1970. We treat all the stocks of flight as being zero in 1970, when capital flight is negative. The flow of capital flight can be negative. This arises for two reasons. First, previous flight capital might be repatriated. Second, agents might borrow internationally. Collier et al. (2001) treat negative flows as the repatriation of capital only. Moreover, they do not allow the stock of flight capital to fall below zero. However, we do not distinguish between capital repatriation and foreign borrowing, and do allow the negative stock of flight capital as previous studies did.

C. Data descriptions and sources

Variable	Description and Source
PGDP	GDP per capita, ppp (current US dollar) (WDI)
FI	Financial Incentive. $\dfrac{\dfrac{1+TBill}{1+i}}{1+\ln(NER)-\ln(NER_{-1})}$ where *TBill* is the U.S. Treasury bill interest rate (line 60C, IFS), *i* is the domestic deposit rate (line 60l, IFS, and *NER* is nominal exchange rate (domestic currency per dollar) (line ac, IFS). (IFS)
M2	Money and quasi money (% of GDP) (WDI)
TOPEN	Trade Openness. Sum of exports and imports of goods and services (% of GDP) (WDI)
FOPEN	Financial Openness. Gross private capital flows (% of GDP), which are the sum of the absolute values of direct, portfolio, and other investment inflows and outflows recorded in the balance of payments financial account, excluding changes in the assets and liabilities of monetary authorities and general government. (WDI)
OVER	Real Exchange Rate Overvaluation. Difference between real exchange rate and HP detrended real exchange rate (Hodrick and Prescott filtering parameter: lamda = 10^2) where real exchange rate (RER_i) = $100 \times NER \times CPI_{US} / CPI_i$. (Author's calculation using IFS)
EXCHG	Annual change in nominal exchange rate (%) (Author's calculation using IFS)
INFLATION	Annual change in consumer prices (%) (WDI)
BUDGET	Government budget deficit/surplus (% of GDP) (IFS)
TDEBT	Total debt (% of GDP) (Author's calculation using GDF and BOP)
KAVAIL	Gross private capital inflows (% of GDP) (Author's calculation using BOP)
RESERVE	Total reserves minus gold (% of Imports of goods and services) (Author's calculation using IFS)
FDINET	Foreign direct investment, net flows (% of GDP) (WDI)
CRISIS	A Crisis Dummy. A sudden-stop episode constructed by Cavallo and Frankel (2004) is used as a crisis dummy. $CRISIS_{it}$ takes value 1 if a sudden stop hits country "i" at year "t" and 0 otherwise. A sudden stop is a situation in which at a year "t", the financial account surplus of country "i" (prevailing at year "t-1") falls at least two standard deviations below the sample mean; the current account deficit falls by any amount either in "t" or in "t+1"; and GDP per capita falls by any amount either in "t" or in "t+1". The data set covers 141 countries in total, for the period 1970–2002. The total number of episodes captured using this methodology is 86. (Cavallo and Frankel, 2004)
LA	Latin American dummy = 1 if a country belongs to Latin America and 0 otherwise. (WDI)
AFRICA	Sub-Saharan African dummy = 1 if a country belongs to Sub-Saharan Africa and 0 otherwise. (WDI)
INDEBTED	Dummy for severely indebted countries = 1 if a country belongs to severely indebted countries (World Bank Classification) and 0 otherwise. (WDI)

Notes: IFS, International Financial Statistics, IMF
BOP, Balance of Payments, IMF
WDI, World Development Indicators, the World Bank
GDF, Global Development Finance, the World Bank.

D. Political risk index and its sub-components

Political risk (*POL_RISK*). This is a composite index, which assesses the political stability of the countries covered by the International Country Risk Guide (ICRG), the PRS Group, and comprises 12 sub-components. Starting in 1984, monthly data are available, and we chose the December rating as representative of a particular year. The index value ranges from 0 to 100 where a higher score means lower risk. Each risk component has its own weight, shown in the parentheses below. In every case a higher point means lower risk. The sub-components are as follows:

Government stability (*Gov_stability*). The government's ability to carry out its declared program(s), and its ability to stay in office. (0–12)

Socioeconomic conditions (*Socio*). The socioeconomic pressures at work in society that could constrain government action or fuel social dissatisfaction. (0–12)

Investment profile (*Investment*). Assessment of factors affecting the risk to investment that are not covered by other political, economic and financial risk components. (0–12)

Internal conflict (*Int_conflict*). Political violence in the country and its actual or potential impact on governance. (0–12)

External conflict (*Ext_conflict*). Assessment both of the risk to the incumbent government from foreign action, ranging from nonviolent external pressure (diplomatic pressures, withholding of aid, trade restrictions, territorial disputes, sanctions, etc) to violent external pressure (cross-border to all-out war). (0–12)

Corruption (*Corruption*). Assessment of corruption within the political system. (0–6)

Military in Politics (*Mil_politics*). Protection from the military involvement in politics. (0–6)

Religious tensions (*Rel_tenstion*). Protection from the religious tensions in society. (0–6)

Law and order (*Law_order*). The Law sub-component is an assessment of the strength and impartiality of the legal system, while the Order sub-component is an assessment of popular observance of the law. (0–6)

Ethnic tensions (*Ethn_tenstion*). Assessment of the degree of tension within a country attributable to racial, nationality, or language divisions. (0–6)

Democratic accountability (*Democracy*). This is a measure of how responsive government is to its people. In general, the highest number of risk points is assigned to alternating democracies, while the lowest number of risk points is assigned to autarchies. (0–6)

Bureaucracy quality (*Bureaucracy*). Assessment of the extent to which the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services. (0–6)

Table 1. Hot Money and Residual Measures: Fixed Effects

	HM1	HM2	HM3	WB	MORGAN	CLINE
POL_RISK	-0.637*	-0.794*	-0.553*	-0.616**	-0.82*	-1.254*
	(0.183)	(0.195)	(0.188)	(0.259)	(0.279)	(0.305)
ln(PGDP)	565.394*	652.387*	509.939*	422.067*	532.846*	827.642*
	(79.687)	(84.743)	(80.337)	(76.696)	(83.508)	(94.936)
$[\ln(PGDP)]^2$	-33.124*	-38.645*	-29.541*	-25.174*	-31.728*	-53.190*
	(5.040)	(5.344)	(5.107)	(4.723)	(5.178)	(5.932)
FI	15.262**	19.336*	11.755***	12.526**	19.391*	26.435*
	(6.018)	(6.624)	(6.149)	(5.595)	(6.702)	(7.512)
M2	-0.929*	-0.979*	-0.877*	0.234	-0.040	-0.157
	(0.263)	(0.280)	(0.280)	(0.271)	(0.294)	(0.332)
FOPEN	-0.109*	-0.145*	-0.097*	-0.066	-0.060	-0.236**
	(0.034)	(0.045)	(0.033)	(0.085)	(0.084)	(0.105)
TOPEN	0.207	0.384**	0.128	-0.245	-0.248	0.547**
	(0.142)	(0.156)	(0.142)	(0.256)	(0.271)	(0.273)
CRSIS(-1)	-5.252	-7.502	-10.035***	8.437	4.461	-5.573
	(6.401)	(6.865)	(5.910)	(7.025)	(8.256)	(4.754)
CONSTANT	-2357.3*	-2699.5*	-2143.7*	-1704.8*	-2155.9*	-3207.8*
	(312.1)	(332.9)	(313.8)	(308.0)	(333.2)	(379.2)
Hausman test	82.91*	975.59*	42.00*	-7.15	1.07	8.43
R -squared	0.316	0.378	0.250	0.142	0.181	0.447
Observations	615	615	615	615	615	615

Notes:

1. HM1 denotes Hot money 1. The others are HM2 (Hot money 2), HM3 (Hot money 3), WB (the World Bank measure), MORGAN (Morgan Guarantee measure), CLINE (Cline measure), respectively. The parenthesis, (-1), stands for one year lagged. See Appendix for definitions of the explanatory variables.
2. Huber-White-sandwich corrected standard errors in the parentheses
3. *, ** and *** indicate that the estimated coefficients are statistically significant at 1%, 5% and 10% levels, respectively.

Table 2. Hot Money and Residual Measures: Random Effects

	HM1	HM2	HM3	WB	MORGAN	CLINE
POL_RISK	-0.357**	-0.499*	-0.291	-0.521**	-0.698**	-1.089*
	(0.169)	(0.181)	(0.177)	(0.258)	(0.278)	(0.301)
ln(PGDP)	535.308*	616.511*	475.968*	406.472*	514.659*	827.169*
	(86.151)	(93.043)	(86.597)	(80.561)	(88.198)	(102.318)
$[\ln(PGDP)]^2$	-32.146*	-37.309*	-28.310*	-24.457*	-30.954*	-53.170*
	(5.441)	(5.870)	(5.483)	(5.021)	(5.502)	(6.434)
FI	10.595***	14.050**	7.523	10.667***	16.975**	21.545*
	(6.412)	(7.043)	(6.504)	(5.721)	(6.835)	(8.227)
M2	-0.566**	-0.582**	-0.496***	0.367	0.119	-0.053
	(0.253)	(0.267)	(0.260)	(0.238)	(0.276)	(0.331)
FOPEN	-0.122*	-0.160*	-0.111**	-0.074	-0.069	-0.254**
	(0.046)	(0.058)	(0.044)	(0.090)	(0.089)	(0.117)
TOPEN	-0.128	-0.028	-0.212	-0.412***	-0.444***	0.058
	(0.161)	(0.167)	(0.158)	(0.227)	(0.238)	(0.266)
LA	15.432	17.248	8.342	13.391	16.461	55.386***
	(17.395)	(17.801)	(18.056)	(24.614)	(25.340)	(30.138)
AFRICA	66.509*	69.166*	64.391*	48.132**	59.016**	78.320*
	(16.847)	(16.972)	(16.987)	(23.810)	(24.401)	(27.925)
INDEBTED	18.707	18.226	7.161	26.759	28.608	71.583*
	(11.880)	(12.373)	(11.486)	(19.490)	(20.021)	(22.169)
CRSIS(-1)	-3.182	-4.989	-8.142	9.431	5.691	-1.324
	(6.909)	(7.438)	(6.179)	(7.414)	(8.919)	(6.557)
CONSTANT	-2204.7*	-2519.7*	-1970.7*	-1641.8*	-2079.9*	-3221.0*
	(337.6)	(365.2)	(338.8)	(322.3)	(352.8)	(404.5)
R -squared	0.351	0.322	0.342	0.322	0.357	0.465
Observations	615	615	615	615	615	615

Notes: For others, see the notes in Table 1.

Table 3. Hot Money 1 (HM1): Random Effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
POL_RISK	-0.395**	-0.379**	-0.163	-0.195***	-0.180	-0.377**	-0.260**
	(0.179)	(0.176)	(0.181)	(0.101)	(0.175)	(0.162)	(0.111)
ln(PGDP)	494.452*	471.936*	505.539*	260.334*	507.325*	446.926*	405.011*
	(101.716)	(99.742)	(94.153)	(62.545)	(88.473)	(78.143)	(91.976)
$[\ln(PGDP)]^2$	-29.777*	-28.345*	-30.095*	-15.750*	-30.763*	-27.268*	-24.283*
	(6.370)	(6.240)	(5.966)	(3.936)	(5.579)	(5.013)	(5.761)
FI	10.928	10.411	11.415***	6.812***	7.479	14.759**	2.787
	(7.212)	(6.767)	(6.312)	(3.753)	(6.784)	(5.814)	(5.270)
M2	-0.558**	-0.626**	-0.558**	-0.319*	-0.389	-0.464***	-0.144
	(0.281)	(0.278)	(0.258)	(0.114)	(0.241)	(0.240)	(0.177)
FOPEN	-0.125***	-0.126*	-0.172*	-0.009	-0.134*	-0.115**	-0.012
	(0.049)	(0.048)	(0.050)	(0.009)	(0.052)	(0.046)	(0.008)
TOPEN	-0.117	-0.098	-0.266	0.178*	-0.316**	0.209	-0.265***
	(0.176)	(0.165)	(0.171)	(0.065)	(0.155)	(0.144)	(0.144)
OVER(-1)	-0.000						
	(0.002)						
INFLATION(-1)		-0.006**					
		(0.002)					
BUDGET(-1)			0.002				
			(0.002)				
TDEBT(-1)				-0.021			
				(0.030)			
KAVAIL(-1)					-0.159		
					(0.131)		
RESERVE(-1)						0.188**	
						(0.087)	
FDINET(-1)							0.639
							(1.565)
LA	16.643	15.958	11.858	13.987	12.873	18.892	5.986
	(18.112)	(17.795)	(16.096)	(12.835)	(13.352)	(17.696)	(14.102)
AFRICA	67.878*	66.396*	63.764*	41.973**	58.045*	52.297*	50.116*
	(18.347)	(18.256)	(16.937)	(16.758)	(12.761)	(18.093)	(15.199)
INDEBTED	24.384***	24.569**	17.009	18.316***	13.703	26.270**	11.973
	(12.740)	(12.514)	(11.762)	(11.070)	(9.314)	(12.013)	(10.743)
CRISIS(-1)	-5.056	-4.150	4.912	-3.293	-2.739	-6.184	0.171
	(7.416)	(6.974)	(5.240)	(4.261)	(7.298)	(6.469)	(4.757)
CONSTANT	-2030.5*	-1941.8*	-2099.3*	-1086.4*	-2066.1*	-1842.2*	-1664.0*
	(401.8)	(394.4)	(367.7)	(248.9)	(346.0)	(305.7)	(361.7)
R -squared	0.386	0.370	0.460	0.080	0.474	0.178	0.349
Observations	551	583	520	509	600	591	560

Notes:
1. The parenthesis, (-1), stands for one year lagged. See Appendix for definitions of the explanatory variables.
2. Huber-White-sandwich corrected standard errors in the parentheses
3. *, ** and *** indicate that the estimated coefficients are statistically significant at 1%, 5% and 10% levels, respectively.

Table 4. Cline Measure (CLINE): Random Effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
POL_RISK	-1.143*	-1.173*	-1.020*	-0.063	-0.917*	-1.015*	-0.350**
	(0.327)	(0.318)	(0.341)	(0.140)	(0.306)	(0.305)	(0.154)
ln(PGDP)	807.539*	774.048*	837.101*	19.654	800.301*	848.174*	354.144*
	(118.970)	(113.033)	(105.195)	(75.595)	(109.145)	(97.688)	(99.598)
$[\ln(PGDP)]^2$	-52.178*	-50.124*	-53.560*	-1.801	-51.454*	-55.645*	-22.504*
	(7.462)	(7.095)	(6.775)	(4.740)	(6.893)	(6.098)	(6.246)
FI	22.748**	20.019**	22.113*	10.016***	16.268***	30.132*	9.987
	(9.079)	(8.505)	(8.006)	(5.245)	(8.865)	(7.900)	(6.401)
M2	-0.058	-0.064	-0.057	-0.186	-0.004	0.042	0.164
	(0.362)	(0.351)	(0.338)	(0.172)	(0.327)	(0.336)	(0.220)
FOPEN	-0.265**	-0.267**	-0.355*	-0.001	-0.274**	-0.238**	-0.011
	(0.129)	(0.121)	(0.133)	(0.013)	(0.124)	(0.115)	(0.010)
TOPEN	0.077	0.094	-0.066	-0.270**	-0.313	0.510***	-0.498*
	(0.285)	(0.273)	(0.298)	(0.113)	(0.242)	(0.300)	(0.162)
OVER(-1)	-0.002						
	(0.004)						
INFLATION(-1)		-0.017*					
		(0.005)					
BUDGET(-1)			0.003				
			(0.003)				
TDEBT(-1)				0.361*			
				(0.051)			
KAVAIL(-1)					-0.247		
					(0.289)		
RESERVE(-1)						0.145	
						(0.097)	
FDINET(-1)							-0.306
							(1.730)
LA	54.350***	56.408***	44.227	3.362	41.370***	53.991***	22.738
	(31.554)	(31.959)	(28.552)	(21.492)	(21.649)	(32.771)	(24.679)
AFRICA	76.259**	74.754**	73.095*	-2.807	63.670*	55.392***	45.182***
	(30.732)	(31.275)	(27.009)	(24.553)	(19.605)	(29.984)	(23.255)
INDEBTED	75.235*	76.767*	72.036*	36.169***	60.596*	79.012*	50.110*
	(25.100)	(25.524)	(20.824)	(19.003)	(15.491)	(24.937)	(18.874)
CRISIS(-1)	-1.618	-1.474	6.270	0.071	1.186	-3.795	1.188
	(7.250)	(6.734)	(4.849)	(4.759)	(7.713)	(6.178)	(4.981)
CONSTANT	-3124.1	-2987.0	-3265.8	-72.835	-3087.0	-3264.3	-1395.6
	(471.3)*	(448.9)*	(406.9)*	(299.485)	(428.0)*	(390.9)*	(392.3)*
R -squared	0.477	0.472	0.557	0.214	0.578	0.331	0.602
Observations	551	583	520	509	600	591	560

Notes: See the notes of Table 3.

Table A-1. Hot Money 1 (HM1): Instrumental Variables Method

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
POL_RISK	-0.406***	-0.386***	-0.184	-0.155	-0.206	-0.383**	-0.260***
	(0.215)	(0.216)	(0.217)	(0.106)	(0.215)	(0.188)	(0.156)
ln(PGDP)	494.565*	481.579*	416.891*	85.665**	459.843*	398.101*	329.968*
	(54.919)	(55.938)	(59.135)	(38.765)	(55.161)	(54.248)	(43.190)
$[\ln(PGDP)]^2$	-29.727*	-29.004*	-24.791*	-4.735***	-27.995*	-24.309*	-19.487*
	(3.301)	(3.360)	(3.566)	(2.435)	(3.341)	(3.298)	(2.659)
FI	11.301***	10.894***	10.816***	3.755	7.579	16.073*	1.692
	(6.137)	(6.150)	(6.426)	(3.216)	(6.248)	(5.595)	(4.321)
M2	-0.573*	-0.589*	-0.521*	-0.417*	-0.347**	-0.489*	-0.123
	(0.178)	(0.179)	(0.174)	(0.125)	(0.166)	(0.161)	(0.129)
FOPEN	-0.114*	-0.116*	-0.166*	-0.005	-0.126*	-0.108*	-0.007
	(0.018)	(0.018)	(0.020)	(0.012)	(0.018)	(0.015)	(0.018)
TOPEN	-0.112	-0.112	-0.220**	0.139***	-0.292*	0.216**	-0.174**
	(0.107)	(0.107)	(0.107)	(0.072)	(0.097)	(0.107)	(0.084)
OVER(-1)	-0.000						
	(0.007)						
INFLATION(-1)		-0.005					
		(0.008)					
BUDGET(-1)			0.003				
			(0.007)				
TDEBT(-1)				0.027			
				(0.034)			
KAVAIL(-1)					-0.160**		
					(0.066)		
RESERVE(-1)						0.197**	
						(0.086)	
FDINET(-1)							-0.732
							(0.650)
LA	16.827	16.918	16.540	14.817	15.592	20.217	10.699
	(26.112)	(25.907)	(26.095)	(16.489)	(19.102)	(25.874)	(20.683)
AFRICA	69.052*	66.357*	64.737*	38.218**	58.994*	52.626**	54.810**
	(25.509)	(25.384)	(24.455)	(16.808)	(19.215)	(25.286)	(20.003)
INDEBTED	24.774	24.674	22.580	15.910	19.035	30.327	16.871
	(26.562)	(26.355)	(25.584)	(16.269)	(19.211)	(26.282)	(20.703)
CRISIS(-1)	-5.164	-4.871	4.569	-3.311	-3.798	-6.995	-1.343
	(7.722)	(7.711)	(7.755)	(3.481)	(7.953)	(6.718)	(5.390)
CONSTANT	-2034.8*	-1977.0*	-1738.8*	-398.4*	-1868.5*	-1644.2*	-1381.8*
	(229.8)	(234.3)	(246.2)	(155.0)	(228.8)	(223.7)	(176.1)
R -squared	0.357	0.370	0.449	0.161	0.472	0.168	0.316
Observations	548	546	467	453	540	534	501

Notes: See the notes of Table 3.

Table A-2. CLINE: Instrumental Variables Method

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
POL_RISK	-1.191*	-1.201*	-1.095*	0.066	-1.009*	-1.088*	-0.307
	(0.328)	(0.328)	(0.336)	(0.157)	(0.337)	(0.305)	(0.208)
ln(PGDP)	815.458*	799.193*	811.139*	-202.757*	777.682*	830.655*	268.000*
	(83.623)	(85.012)	(91.705)	(57.578)	(86.383)	(88.119)	(57.743)
$[\ln(PGDP)]^2$	-52.654*	-51.755*	-52.222*	12.165*	-50.271*	-54.763*	-17.170*
	(5.022)	(5.100)	(5.527)	(3.618)	(5.234)	(5.357)	(3.555)
FI	21.986**	20.714**	22.036**	5.710	16.279***	30.419*	9.585***
	(9.323)	(9.318)	(9.936)	(4.760)	(9.798)	(9.079)	(5.755)
M2	-0.071	-0.094	0.015	-0.284	0.021	0.068	0.174
	(0.273)	(0.274)	(0.270)	(0.186)	(0.259)	(0.263)	(0.174)
FOPEN	-0.271*	-0.277*	-0.384*	-0.009	-0.292*	-0.256*	-0.013
	(0.027)	(0.027)	(0.030)	(0.017)	(0.028)	(0.025)	(0.024)
TOPEN	0.112	0.120	-0.032	-0.355*	-0.313**	0.514*	-0.425*
	(0.165)	(0.165)	(0.167)	(0.107)	(0.151)	(0.174)	(0.115)
OVER(-1)	-0.003						
	(0.010)						
INFLATION(-1)		-0.016					
		(0.011)					
BUDGET(-1)			0.003				
			(0.011)				
TDEBT(-1)				0.444*			
				(0.050)			
KAVAIL(-1)					-0.257**		
					(0.104)		
RESERVE(-1)						0.144	
						(0.140)	
FDINET(-1)							-1.752**
							(0.865)
LA	54.288	54.751	45.178	5.699	39.699	53.306	28.047
	(42.467)	(42.786)	(41.977)	(26.279)	(29.415)	(43.408)	(30.894)
AFRICA	77.377***	73.421***	71.135***	-16.036	58.938**	52.591	42.540
	(41.318)	(41.696)	(39.230)	(26.673)	(29.650)	(42.337)	(29.765)
INDEBTED	75.677***	76.388***	75.973***	23.471	62.095**	81.255***	48.625
	(43.276)	(43.624)	(41.195)	(25.940)	(29.563)	(44.123)	(30.998)
CRISIS(-1)	-1.800	-1.966	6.140	-1.117	0.938	-4.049	-1.192
	(11.711)	(11.657)	(11.984)	(5.147)	(12.480)	(10.893)	(7.165)
CONSTANT	-3155.5*	-3080.0*	-3143.0*	805.2*	-2974.0*	-3175.4*	-1057.9*
	(350.3)	(356.6)	(382.1)	(230.3)	(358.2)	(363.4)	(235.7)
R -squared	0.449	0.455	0.544	0.196	0.566	0.317	0.582
Observations	548	546	467	453	540	534	501

Notes: See the notes of Table 3.

Table 5. The Sub-components of Political Risk, HM1: Random Effects

	(1)	(2)	(3)	(4)	(5)	(6)
ln(PGDP)	586.204*	535.230*	541.625*	537.360*	527.988*	525.726*
	(87.734)	(85.973)	(85.389)	(84.951)	(85.798)	(86.792)
$[\ln(PGDP)]^2$	-35.901*	-32.528*	-32.656*	-32.091*	-32.212*	-32.126*
	(5.599)	(5.457)	(5.433)	(5.342)	(5.463)	(5.479)
FI	12.004***	10.821***	11.860***	12.503***	10.983***	11.509***
	(6.685)	(6.424)	(6.542)	(6.561)	(6.524)	(6.508)
M2	-0.619**	-0.511**	-0.525**	-0.575**	-0.486**	-0.489***
	(0.252)	(0.249)	(0.250)	(0.251)	(0.247)	(0.257)
FOPEN	-0.120*	-0.126*	-0.122*	-0.123*	-0.127*	-0.126*
	(0.046)	(0.046)	(0.046)	(0.044)	(0.047)	(0.046)
TOPEN	-0.089	-0.114	-0.122	-0.123	-0.162	-0.133
	(0.192)	(0.159)	(0.161)	(0.158)	(0.161)	(0.160)
Corruption	-4.508**					
	(1.765)					
Bureaucracy		-2.356				
		(1.584)				
Gov_stability			-1.024***			
			(0.568)			
Investment				-2.644*		
				(0.925)		
Int_conflict					0.340	
					(0.714)	
Ext_conflict						0.568
						(0.777)
LA	13.659	16.988	16.554	14.838	16.987	17.837
	(17.748)	(17.948)	(17.874)	(18.741)	(16.854)	(17.796)
AFRICA	56.873*	62.211*	68.007*	71.585*	60.059*	60.318*
	(17.799)	(17.353)	(17.083)	(18.013)	(16.110)	(17.084)
INDEBTED	18.874	19.351	19.683	18.544	18.002	18.600
	(12.825)	(12.103)	(12.287)	(12.648)	(11.575)	(12.121)
CRISIS(-1)	-2.551	-2.971	-2.404	-4.688	-2.947	-3.169
	(6.922)	(7.141)	(7.096)	(6.816)	(7.254)	(7.220)
CONSTANT	-2374.1*	-2198.0*	-2239.8*	-2231.2*	-2164.4*	-2157.3*
	(342.7)	(336.142)	(333.6)	(334.9)	(334.9)	(340.1)
R -squared	0.365	0.379	0.348	0.329	0.405	0.391
Observations	608	617	617	617	617	617

Notes:
1. See Appendix for definitions of the explanatory variables.
2. Huber-White-sandwich corrected standard errors in the parentheses
3. *, ** and *** indicate that the estimated coefficients are statistically significant at 1%, 5% and 10% levels, respectively.

Table 5. (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)
ln(PGDP)	531.559*	535.340*	541.305*	525.551*	527.932*	518.571*
	(86.341)	(86.828)	(85.470)	(85.843)	(88.244)	(83.776)
$[\ln(PGDP)]^2$	-32.390*	-32.652*	-32.378*	-31.847*	-32.153*	-31.496*
	(5.489)	(5.550)	(5.405)	(5.447)	(5.575)	(5.331)
FI	10.763***	11.303***	10.876***	10.142	10.897***	11.385***
	(6.535)	(6.480)	(6.291)	(6.543)	(6.485)	(6.475)
M2	-0.497**	-0.490**	-0.555**	-0.510**	-0.494***	-0.538**
	(0.250)	(0.249)	(0.247)	(0.251)	(0.256)	(0.265)
FOPEN	-0.126*	-0.126*	-0.124*	-0.124*	-0.126*	-0.125*
	(0.046)	(0.046)	(0.046)	(0.046)	(0.047)	(0.046)
TOPEN	-0.164	-0.139	-0.142	-0.123	-0.151	-0.148
	(0.161)	(0.160)	(0.158)	(0.163)	(0.160)	(0.159)
Mil_politics	0.161					
	(1.440)					
Rel_tension		2.103				
		(2.118)				
Law_order			-5.981*			
			(1.582)			
Ethn_tension				-2.081		
				(1.823)		
Democracy					0.312	
					(1.931)	
Socio						-1.187
						(0.981)
LA	16.264	14.730	9.901	20.113	16.924	15.356
	(16.982)	(17.865)	(17.539)	(18.169)	(17.233)	(17.342)
AFRICA	60.811*	60.284*	65.030*	63.493*	61.190*	59.496*
	(16.368)	(17.022)	(17.576)	(17.284)	(16.631)	(16.827)
INDEBTED	18.465	18.812	20.302***	18.143	18.404	17.903
	(11.574)	(12.144)	(11.994)	(11.937)	(11.682)	(11.838)
CRISIS(-1)	-2.755	-3.312	-2.987	-3.456	-2.999	-3.846
	(7.321)	(7.067)	(6.855)	(7.217)	(7.211)	(6.977)
CONSTANT	-2181.6*	-2202.2*	-2237.4*	-2161.6*	-2167.0*	-2125.2*
	(337.6)	(340.4)	(335.0)	(335.9)	(344.1)	(326.3)
R -squared	0.398	0.384	0.356	0.364	0.394	0.388
Observations	617	617	617	617	617	617

Table 6. The Sub-components of Political Risk, CLINE: Random Effects

	(1)	(2)	(3)	(4)	(5)	(6)
ln(PGDP)	981.461*	801.154*	835.498*	811.043*	815.197*	846.209*
	(101.657)	(102.045)	(102.378)	(103.806)	(102.024)	(103.766)
$[\ln(PGDP)]^2$	-64.759*	-53.038*	-54.320*	-53.407*	-53.056*	-54.722*
	(6.437)	(6.512)	(6.535)	(6.498)	(6.485)	(-6.525)
FI	25.145*	23.309*	24.530*	23.099*	19.495**	20.101**
	(8.320)	(8.126)	(8.432)	(8.306)	(8.251)	(8.136)
M2	-0.068	0.122	0.123	0.124	0.028	-0.058
	(0.308)	(0.319)	(0.310)	(0.325)	(0.317)	(0.336)
FOPEN	-0.249**	-0.264**	-0.256**	-0.264**	-0.254**	-0.258**
	(0.117)	(0.117)	(0.119)	(0.117)	(0.119)	(0.117)
TOPEN	0.170	-0.008	0.057	0.039	0.029	0.039
	(0.277)	(0.257)	(0.264)	(0.261)	(0.261)	(0.259)
Corruption	-7.285*					
	(2.784)					
Bureaucracy		4.920***				
		(2.909)				
Gov_stability			-2.591*			
			(0.926)			
Investment				-0.781		
				(1.404)		
Int_conflict					-4.279*	
					(1.213)	
Ext_conflict						-3.956*
						(1.093)
LA	52.264***	60.747**	59.832***	60.431***	54.699***	55.284***
	(31.684)	(30.874)	(31.174)	(31.745)	(28.892)	(31.372)
AFRICA	50.575***	61.686**	78.700*	65.691**	70.664*	72.716**
	(29.268)	(27.763)	(27.384)	(28.573)	(27.034)	(28.201)
INDEBTED	71.801*	70.722*	74.032*	71.890*	72.441*	73.624*
	(24.739)	(21.411)	(21.951)	(21.960)	(21.181)	(22.324)
CRISIS(-1)	0.669	-1.273	0.657	-1.564	-0.470	-0.548
	(6.925)	(7.631)	(7.250)	(7.329)	(6.969)	(7.193)
CONSTANT	-3745.0*	-3094.0*	-3269.4*	-3139.0*	-3160.4*	-3296.2*
	(403.2)	(400.4)	(401.7)	(412.7)	(401.8)	(410.2)
R -squared	0.479	0.489	0.454	0.477	0.475	0.474
Observations	608	617	617	617	617	617

Note: See the notes of Table 5.

Table 6. (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)
ln(PGDP)	817.234*	822.463*	827.892*	776.925*	835.202*	807.957*
	(104.843)	(102.870)	(100.827)	(100.422)	(107.918)	(99.188)
$[\ln(PGDP)]^2$	-54.016*	-54.551*	-53.585*	-50.688*	-54.771*	-53.379*
	(6.703)	(6.589)	(6.422)	(6.356)	(6.789)	(6.329)
FI	22.501*	23.093*	22.128*	16.816**	22.182*	22.666*
	(8.250)	(8.206)	(8.087)	(8.487)	(8.134)	(8.188)
M2	0.139	0.231	0.076	0.171	-0.009	0.135
	(0.315)	(0.322)	(0.305)	(0.307)	(0.342)	(0.333)
FOPEN	-0.263**	-0.267**	-0.262**	-0.253**	-0.265**	-0.265**
	(0.117)	(0.119)	(0.118)	(0.116)	(0.114)	(0.118)
TOPEN	0.008	0.007	0.010	0.117	0.026	0.027
	(0.257)	(0.261)	(0.258)	(0.272)	(0.261)	(0.258)
Mil_politics	2.690					
	(2.050)					
Rel_tension		6.629*				
		(2.590)				
Law_order			-11.046*			
			(2.061)			
Ethn_tension				-13.063*		
				(3.130)		
Democracy					-5.924***	
					(3.516)	
Socio						-0.150
						(1.606)
LA	59.570***	53.627***	47.761	80.957*	56.796***	60.486***
	(31.066)	(30.822)	(30.821)	(30.140)	(31.028)	(31.152)
AFRICA	62.426**	57.869**	68.771**	74.871**	59.950**	62.322**
	(28.031)	(28.338)	(28.546)	(29.483)	(27.137)	(28.332)
INDEBTED	72.432*	71.640*	74.483*	68.282*	70.543*	71.635*
	(21.557)	(20.837)	(22.436)	(21.763)	(21.702)	(21.730)
CRISIS(-1)	-0.479	-1.719	-0.857	-3.546	-0.525	-1.110
	(7.821)	(7.219)	(6.692)	(7.223)	(7.089)	(7.530)
CONSTANT	-3160.5*	-3186.1*	-3225.6*	-3010.3*	-3219.5*	-3118.6*
	(412.3)	(402.8)	(396.6)	(396.5)	(421.6)	(387.8)
R -squared	0.485	0.481	0.483	0.425	0.485	0.484
Observations	617	617	617	617	617	617

Table 7. Private Capital Outflows: Random Effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
POL_RISK	-0.220	-0.293***	-0.266^{+}	-0.190	0 .089	-0.242^{+}	-0.245^{+}	-0.087
	(0.157)	(0.175)	(0.165)	(0.161)	(0.151)	(0.166)	(0.153)	(0.119)
ln(PGDP)	-319.300*	-372.34*	-364.877*	-354.740*	-184.771*	-315.152*	-234.956*	-314.987*
	(57.632)	(66.149)	(63.138)	(58.058)	(65.351)	(57.333)	(55.680)	(57.386)
$[\ln(PGDP)]^2$	19.842*	22.970*	22.521*	22.060*	11.345*	19.579*	14.689*	19.412*
	(3.521)	(4.016)	(3.836)	(3.650)	(3.876)	(3.485)	(3.405)	(3.405)
FI	0.708	1.585	1.251	-2.319	-0.034	0.871	-1.569	0.578
	(4.360)	(4.879)	(4.508)	(4.020)	(3.893)	(4.393)	(3.906)	(4.434)
M2	0.412*	0.399*	0.393*	0.513*	0.166**	0.416*	0.368*	0.424*
	(0.087)	(0.090)	(0.088)	(0.103)	(0.071)	(0.089)	(0.080)	(0.080)
TOPEN	0.268*	0.274*	0.271*	0.240**	0.105	0.263*	0.068	0.340*
	(0.082)	(0.082)	(0.080)	(0.097)	(0.080)	(0.083)	(0.080)	(0.088)
OVER(-1)		-0.000						
		(0.002)						
INFLATION(-1)			-0.001***					
			(0.000)					
BUDGET(-1)				0.005*				
				(0.002)				
TDEBT(-1)					0.137*			
					(0.043)			
KAVAIL(-1)						0.130		
						(0.468)		
RESERVE(-1)							0.006	
							(0.036)	
FDINET(-1)								-0.351
								(0.638)
LA	16.162***	16.707***	16.710***	20.433**	11.335	16.309***	10.118	15.999***
	(9.081)	(8.956)	(8.988)	(10.370)	(8.601)	(9.196)	(7.841)	(9.288)
AFRICA	6.630	2.124	2.304	15.021*	5.543	6.786	8.860**	4.854
	(4.230)	(4.850)	(4.835)	(4.881)	(4.246)	(4.377)	(3.993)	(3.964)
INDEBTED	15.021*	14.517*	14.223*	21.054*	7.035	14.993*	13.407*	14.811**
	(5.177)	(5.395)	(5.159)	(5.071)	(5.058)	(5.286)	(4.832)	(5.982)
CRISIS(-1)	0.281	1.091	0.930	-1.111	2.424	0.618	1.993	-1.190
	(2.766)	(3.007)	(2.765)	(2.836)	(2.666)	(2.896)	(2.756)	(2.860)
CONSTANT	1257.2*	1484.5*	1453.0*	1391.0*	726.8*	1241.9*	935.8*	1239.8*
	(231.9)	(268.9)	(256.2)	(227.8)	(269.1)	(231.0)	(225.1)	(234.2)
R -squared	850	755	814	729	673	847	825	780
Observations	0.359	0.362	0.369	0.419	0.145	0.360	0.160	0.466

Notes: See the notes of Table 3. $^{+}$ indicates that the estimated coefficient is statistically significant at 15% level.

Table 8. Developed countries, HM1: Random Effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
POL_RISK	-0.107	-0.116	-0.156	-0.198	-0.053	0.137	-0.113	-0.013
	(0.186)	(0.199)	(0.195)	(0.194)	(0.153)	(0.184)	(0.183)	(0.172)
ln(PGDP)	-39.926*	-39.712*	-41.288*	-46.666*	-32.535*	-34.294*	-41.756*	-36.671*
	(7.030	(7.274)	(7.532)	(8.120)	(6.307)	(6.102)	(7.390)	(6.562)
FI	4.912*	5.160*	4.964*	4.125**	0.079	4.143*	4.539*	4.754*
	(1.752)	(1.836)	(1.839)	(1.612)	(1.935)	(1.494)	(1.714)	(1.646)
FOPEN	0.067	0.057	0.055	0.056	0.049	0.168	0.072	0.091
	(0.100)	(0.100)	(0.119)	(0.099)	(0.112)	(0.109)	(0.098)	(0.094)
TOPEN	-0.937*	-0.928*	-0.867*	-0.860*	-0.550*	-1.041*	-0.903*	-1.100*
	(0.269)	(0.284)	(0.276)	(0.262)	(0.211)	(0.200)	(0.267)	(0.229)
OVER(-1)		0.242						
		(0.212)						
EXCHG(-1)			0.135***					
			(0.077)					
INFLATION(-1)				-0.518***				
				(0.288)				
BUDGET(-1)					-0.007			
					(0.005)			
KAVAIL(-1)						-0.548**		
						(0.275)		
RESERVE(-1)							0.128**	
							(0.068)	
FDINET(-1)								-0.540
								(0.398)
CRISIS(-1)	0.402	2.471	0.911	0.350*	0.345	-1.099	-0.039	-0.586
	(4.494)	(4.852)	(5.568)	(4.111)	(3.557)	(4.794)	(4.727)	(4.825)
CONSTANT	434.3*	431.7*	446.4*	506.2*	336.8*	357.2*	448.0*	395.5*
	(68.2)	(70.6)	(73.3)	(81.1)	(65.2)	(60.7)	(70.0)	(63.4)
R -squared	0.266	0.264	0.274	0.248	0.168	0.476	0.261	0.381
Observations	272	256	257	272	233	264	272	269

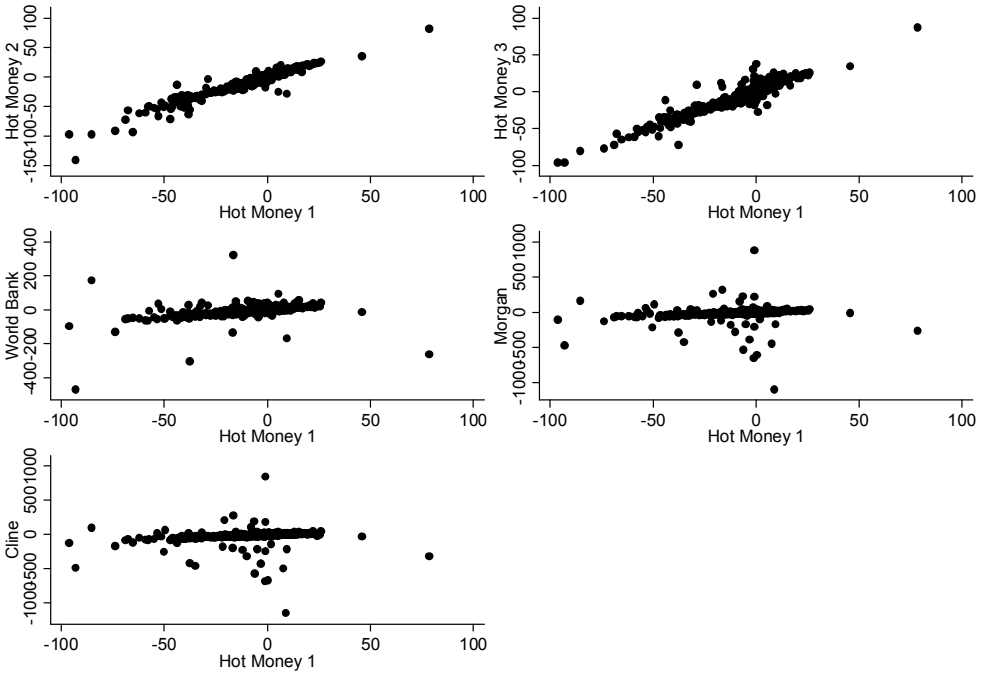
Notes: See the notes of Table 3.

Table 9. Developed countries, CLINE: Random Effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
POL_RISK	-0.586**	-0.599**	-0.669**	-0.653**	-0.638**	-0.482***	-0.547**	-0.464**
	(0.274)	(0.275)	(0.277)	(0.275)	(0.293)	(0.261)	(0.270)	(0.234)
ln(PGDP)	18.961**	19.286**	15.131**	13.652***	11.044	22.974*	23.970*	22.173*
	(7.833)	(7.946)	(7.716)	(8.211)	(8.472)	(7.859)	(8.585)	(7.393)
FI	-1.759	-1.503	-0.924	-2.363	-0.046	-1.782	-0.770	-1.584
	(1.941)	(2.048)	(1.859)	(1.985)	(3.830)	(1.897)	(2.081)	(1.910)
FOPEN	-0.145	-0.172	-0.174	-0.152	-0.121	-0.146	-0.150	-0.174
	(0.148)	(0.148)	(0.175)	(0.148)	(0.203)	(0.137)	(0.152)	(0.135)
TOPEN	-0.854**	-0.869**	-0.808**	-0.804**	-0.812***	-0.973*	-1.008**	-1.058*
	(0.363)	(0.343)	(0.377)	(0.362)	(0.494)	(0.262)	(0.400)	(0.217)
OVER(-1)		-0.240						
		(0.445)						
EXCHG(-1)			0.614**					
			(0.288)					
INFLATION(-1)				-0.411**				
				(0.174)				
BUDGET(-1)					-0.007			
					(0.008)			
KAVAIL(-1)						-0.299		
						(0.328)		
RESERVE(-1)							-0.314**	
							(0.128)	
FDINET(-1)								-0.346
								(0.272)
CRISIS(-1)	4.345	6.411	8.733	4.260	2.303	3.409	5.189	3.469
	(9.220)	(10.694)	(12.101)	(9.041)	(10.699)	(9.645)	(8.322)	(9.441)
CONSTANT	-133.6***	-133.8**	-93.4	-76.5	-57.3	-170.0**	-169.6**	-160.1**
	(73.2)	(75.0)	(72.9)	(78.3)	(82.3)	(76.1)	(78.1)	(67.5)
R -squared	0.160	0.147	0.205	0.156	0.176	0.301	0.176	0.107
Observations	278	261	263	278	239	264	278	273

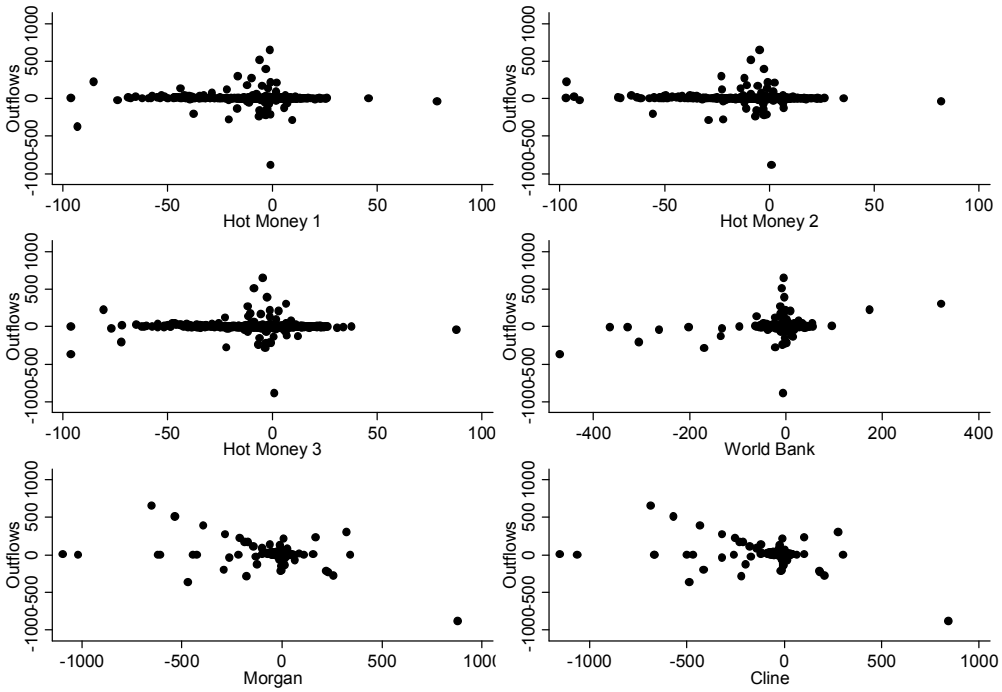
Notes: See the notes of Table 3.

Figure 1. Capital flight: HM1 versus Other Measures (Developing countries)



Note: The ratio of annual flows to nominal GDP

Figure 2. Capital flight and private capital outflows



Note: The ratio of annual flows to nominal GDP