Economic Policy, Institutions, and Capital Flows: Portfolio and Direct Investment Flows in Developing Countries

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Scholars examining the cross-national mobility of capital have followed two distinct paths. Economists tend to focus on the determinants and economic effects of cross-country capital movements while political scientists largely concentrate on the political impact of capital mobility. This study fills an important gap in the literature by examining the effects of economic policy outcomes on capital inflows to developing countries, explicitly comparing the reactions of portfolio and direct investors. I find that portfolio investors are in fact sensitive to past government behavior and fiscal policy outcomes; portfolio investors reallocate funds as new information about government policy becomes available. Direct investors, on the other hand, are not sensitive to macrolevel economic policy outcomes but are concerned with political institutions. Countries with more stable and democratic political institutions attract more FDI. These findings have implications for developing country governments as they consider the sequence of market liberalizing reforms.

The conventional wisdom holds that legally and technologically liberated capital is free to move to jurisdictions offering the highest return. To the extent government policies reduce returns to capital owners, countries will be punished in the form of reduced investment, restricted access to capital markets, and generally slower growth. Proportionately large government outlays “crowd out” private investment (Barro 1990); sizable budget deficits drive up interest rates, spur inflation, and destabilize currency regimes. A large public sector, particularly one funded by government borrowing, is inimical to growth and thus undesirable. Governments are increasingly constrained in their economic policy-making ability in two complementary ways: mobile asset holders can use the threat of exit to demand a higher price for riskier prospects and asset holders can actually withdraw or withhold their assets, imposing a hard budget constraint on profligate states.

This extreme version of the “race-to-the-bottom” hypothesis predicts convergence in economic and social policies. These predictions of convergence have not held up well under empirical scrutiny of rich democracies. But newer findings suggest that experiences in developing countries, so-called “emerging markets,”

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may not mirror those from the OECD. Several recent works (Rudra 2002; Mosley 2003; Wibbels, forthcoming) argue that governments in developing countries are particularly prone to face capital markets qua fiscal disciplinarian. Do the macro-level economic outcomes of government policies affect the perceptions of investors? Does this induce capital to exercise its exit option (Hirschman 1970)? If so, what determines when this exit option becomes attractive? Does this vary depending on the nature of the capital invested, that is, do portfolio and direct investors respond differently?

In this paper I examine the causal mechanism underlying virtually all arguments relating capital account openness and economic policy, namely that investors will reallocate their investments when policies diverge from those they prefer. I build on prior work examining the price of access to international capital markets by empirically considering the responses of portfolio and direct investors to economic policies in developing countries. I argue that there is little reason to expect congruence between direct and portfolio investors in their interests or actions vis-à-vis host country fiscal policies. Portfolio investors react to macrolevel policy variables and more readily exercise their exit option when default is a salient concern. As a result, poor countries with a past history of default are more likely to see portfolio capital exit in response to heterodox fiscal policies. Direct investors are more likely to be concerned with the stability of the political apparatus as well as more meso- and microlevel industrial and regulatory policies. I do not expect foreign direct investment (FDI) to show much sensitivity to macrolevel fiscal policy outcomes but should respond to changes in institutional variables. I test my contentions using a large data set covering more than 80 developing countries for the period 1985–2002.

This paper makes several contributions to the literature on the causes and implications of international capital flows. First, I explicitly compare portfolio and direct investment. In so doing, my analysis combines insights from literature that is heretofore not connected. I show how the responses of capital owners vary with the ownership structure and risk profile of different investments. Portfolio flows do exhibit a consistent relationship with economic policies, though it is hardly the rapid and dramatic adjustment that underpins the race-to-the-bottom hypothesis. I also find FDI to be more sensitive to political institutions than portfolio flows, consistent with existing contentions that FDI tends toward more democratic regimes. The analysis also yields results consistent with transaction cost theories of multinational corporations and direct investment: direct investment is more sensitive to institutional persistence than to any particular set of fiscal policies. This heterogeneity of interests and responses across important types of investment capital adds much needed nuance to the discussion of government relations with capital markets. Second, this paper extends existing research by testing the linkage between fiscal policy and capital markets in arenas beyond bond markets in the OECD. I concentrate on the developing world, where the risk of default is salient and political institutions are less stable. I contrast findings from work on rich democracies with the situation in poorer parts of the world. Third, this paper examines actual capital flows as a measure of investor response, rather than relying on interest rates (Mosley 2000, 2003), bond ratings (Sobel 1999; Jensen 2003; Mosley 2003) or interviews with market actors (Sobel 1999; Mosley 2000, 2003). I conclude that portfolio investors actually “vote with their feet,” albeit at the margins, when default is salient. Fourth, I employ novel statistical tools in the analysis of panel time series data, combining the sequential estimation of between-country and within-country models (Zorn 2001; Goodrich 2005) with the flexible error correction specification (De Boef and Keele 2005). In this way I am able to make statements concerning both the panel and time dynamics of the processes at work. Finally, the analysis has policy implications consistent with Eichengreen’s (2000) recommendations for the financing strategies and sequence of market-opening reforms in developing countries. Depending on the history of the country, investors respond differently to similar policy outcomes.
Their decisions have consequences for the economic stability of countries. Portfolio flows are especially volatile in countries with histories of default. Developing country governments inheriting such a history run greater risks in borrowing on international markets than their counterparts in countries with better credit histories. To the extent they suffer from greater "debt intolerance" (Reinhart, Kenneth, and Savastano 2003) they may be better off reducing spending rather than taking these additional risks. Since direct investment is less volatile and less sensitive to macro-policies, sequential liberalization (rather than "shock therapy") in which countries open to direct investment first and then financial markets once appropriate institutions are in place seems to make the most sense.

The argument is organized into four parts. The next section briefly summarizes the relevant literature from political science, economics, and international business. In the second section I outline a simple model of investor decision making in both portfolio and FDI contexts. From this model I derive the propositions that I test in section three using panel time series data. Section four concludes with some observations on the limits of the analysis performed, policy implications and directions for future research.

**Capital Mobility and Fiscal Discipline**

Observers have employed every form of hyperbole to describe the post-1960s increase in global flows of investment capital. Whether in the form of corporate or government bonds, currency, equities, or direct investment, the data show impressive growth in capital flows across borders.

Figures 1 and 2 illustrate two of the more striking aspects of this economic trend: the rapidity of growth in capital flows and extreme volatility. Also apparent are the differences across income groups: the poorest countries rely disproportionately on direct investment—when they can get it.

Paralleling the dramatic growth in international capital flows, several types of large multi-disciplinary literature has developed over the last 15 years. Some of this

**Fig. 1. Capital Flows Compared at Different Income Levels**

*Source: World Bank (2005).*

*Note: Country groupings are as reported by the World Bank. HIPC are "heavily indebted poor countries."*
academic literature and virtually all discussion in the popular press has distinct normative overtones, particularly in the context of economic development. At one extreme of the normative continuum, some hope increasingly mobile global capital will tame profligate governments and discipline wage demands. The other extreme pillories volatile speculative investment ("hot money") as uniquely responsible for recent economic crises in Asia, Latin America, and Russia. FDI has been both hailed as the path out of poverty for the developing world and vilified as simply another tool of neocolonial exploitation. FDI proponents argue that foreign investment provides employment and tax revenue as well as positive technological and human capital externalities leading to increases in total factor productivity. Critics blame mobile capital for the erosion of social protection and general government autonomy or point to multi-national enterprises (MNEs) implicated in propping up corrupt, predatory, and abusive regimes.

While the normative aspects of this literature demonstrate the importance of the topic and the distributional consequences that changes in factor mobility imply, the positive literature in political science and economics remains divided. Economists tend to focus on the causes and economic consequences of capital flows while political scientists, with some notable exceptions (Garrett 2000; Jensen 2003; Li and Resnick 2003; Mosley 2000, 2003), tend to use degree of capital mobility as an independent variable when examining policy outcomes. Rarely have authors in either discipline compared different types of capital. I fill a gap here by incorporating recent findings from political science with the empirical results from the economics literature, investigating the allocation decisions of investors as a function of macroeconomic policy outcomes.

**Causes of Capital Flows to Developing Countries**

International flows of investment capital (leaving aside currency markets and secured bank loans) take two forms: direct investment and portfolio flows. Broadly

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**Fig. 2. Portfolio Flows to Developing Countries by Region**


Note: Country grouping are as reported by the World Bank.
speaking, the critical difference between the two is the degree of managerial control taken by the investor. Portfolio investors purchase equities and bonds in open markets while direct investors take a significant stake in fixed productive assets. The returns to both types of investment are in part determined by the actions of foreign governments, implying roughly congruent sources for rents and similar types of risks. In the limit the risks are the same: expropriation and political and economic collapse. On a more quotidian basis, however, the differences in ownership and liquidity have implications for the respective determinants of direct and portfolio flows. The influence of political variables on capital flows will depend on how different ownership structures influence risk and return.

**Portfolio Flows**

Much of the economics literature examining capital flows between countries, especially to developing countries, has focused on the relative importance of “push” versus “pull” factors (Fernandez-Arias and Montiel 1996; Taylor and Sarno 1997). Push factors are those exogenous to any particular country that induce investment to flow outward whereas pull factors are attributes of the country in question. A critical pull factor is the rate of return on domestic assets weighed against the riskiness of the investment. Mosley (Mosley 2003:743) categorizes these risks into three groups: default risk, currency risk, and inflation risk. Deficits are widely viewed as signals of a country’s inflation and currency risks (depending on the exchange rate regime and independence of the monetary authority). I argue below that, depending on the default history of a country, deficits also provide signals of default risk.

In a similar vein, Lucas (1990) poses a critical question: given that the rates of return to capital in poor countries greatly exceeds those of wealthy ones why is there not more portfolio investment flowing from rich to poor countries? His provocative question induced a flurry of activity and several plausible answers. Reinhart and Rogoff (2004) argue that credit market imperfections and political risk play a central role; countries that do not repay their debts find it harder to borrow on international markets and poorer countries are those most in danger of default. From this perspective they develop the notion of “debt intolerance” in which the debt levels that particular countries can sustain are a function of past default history and current economic outcomes; some countries show signs of economic distress at debt levels that are quite manageable by others. Reinhart et al.’s work implies that information about past defaults and current policies plays an important role in portfolio allocation decisions; when default risk is salient investors behave differently than when it is less of a concern. Whenever information is critical, asymmetries and moral hazard abound. The effects of information flows and asymmetries can be seen in the well-documented “home bias” by investors (Tesar and Werner 1995) as well as in the herding dynamic in portfolio flows (Wermers 1999). Froot, O’Connell, and Seasholes (2001) find significant regional effects in bilateral portfolio flows as well as persistence in flows over time. They find that past returns predict future flows and, most relevant to the problem at hand, that past flows are

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1 The IMF and World Bank define FDI as “investment to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments” (World Bank 2005).
2 For my purposes, push factors will be treated as confounding variables. The primary push factor in the literature looking at North–South portfolio flows is the rate of return on risk-free investment (proxied by U.S. long-term interest rates, see Taylor and Sarno 1997). Thus there should be less portfolio investment into risky assets (like those in LDCs) in a high interest rate environment.
3 Lucas’ answer was that expropriation risk could not explain this; rather he hypothesized externalities in human capital formation.
4 See Reinhart and Rogoff (2004) for a summary of recent work.
able to predict future returns in developing countries. I build on these arguments below in developing a theory of investor information acquisition.

**FDI**

MNEs are another set of key actors in international capital markets, both as borrowers and as “lenders,” or, better put, distributors. The international business literature has seized on the idea of transaction costs to explain why firms undertake export operations for some transactions, licensing arrangements in others, and direct ownership of overseas operations (FDI) in others. Transaction cost theories of the MNE argue that a firm will take ownership of foreign investment when the firm is attempting to exploit market imperfections to earn quasi-rents (Buckley and Casson 1976; Hymer 1976; Dunning 1981; Williamson 1985; Caves 1996; Henisz and Williamson 1999). If local markets (either for factors or for products) were perfectly competitive foreign investors would do better to engage in portfolio investment or license productive technology since local firms likely possess advantages in their domestic markets. The implication for transnational investment is that FDI is a specific organizational choice made by investing firms to take advantage of opportunities for quasi-rents in the host country. This gives FDI several attributes that make it both analytically as well as practically distinct from portfolio flows. First, once invested, FDI is highly illiquid (though this plausibly varies across sector, industries, firms, and even specific ventures) and costly to divest. Foreign investors thus typically have longer time horizons than portfolio investors and the returns on their investments are tied to more microlevel considerations than aggregate fiscal policies. Direct investors surely care deeply about the policies governments enact. The level of policy that they consider, however, will be much more fine grained. Second, FDI is characterized by substantial information asymmetries between the relatively well-informed owners/managers and potential buyers of those assets (Goldstein and Razin 2005). Both these results imply that FDI should be less volatile than portfolio flows, as empirical studies show (Albuquerque 2003). Invested firms are also subject to the political version of default: ex post adverse changes in policy and institutions up to and including appropriation of assets. As the political risk literature (Kobrin 1976, 1979) would indicate, MNEs take the stability of host country governments and institutions into account.

Political scientists picked up this thread, beginning with O’Neal (1994). More recently, Jensen (2003) argues that democracies, with their allegedly more credible commitments and stable policy environments, are better investment choices. Using a sample of both OECD and developing countries, he empirically demonstrates that FDI is more prone to democratic regimes, all else equal. Li and Resnick (2003) argue that democratic institutions have conflicting effects on FDI inflows in emerging markets while Ahlquist and Prakash (under review) show in a cross-sectional analysis that the efficiency of commercial contract enforcement is positively associated with prior levels of FDI. The expectation emerging from the literature, though heretofore unexamined empirically, is that FDI should be less sensitive to overall fiscal policies and more sensitive to political institutions than portfolio investment.

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5 These imperfections include the public goods nature of intrafirm knowledge, organizational or technological advantages subject to dissipation, or location-specific characteristics like natural resource deposits, legally granted monopolies, or artificially suppressed factor prices.

6 These can include everything from language and cultural factors to better local supplier networks, labor relations, access to government, etc.

7 Aside from institutions what makes a particular country attractive to direct investors? Numerous empirical studies have identified the major variables as size of the economy (either GDP or population), wealth, wages and other human capital variables, and openness to trade. The relationship of institutional variables to FDI inflows is typically modest when compared to the magnitude of the association of FDI and the major economic variables: GDP and wealth.
While economists and international business scholars were busy discussing the determinants of capital flows, much of the initial research into the political effects of mobile capital predicted policy convergence, at least in economic matters. This convergence was often framed as the result of the erosion (or abdication) of state autonomy in economic policy (Goodman and Pauly 1993; Notermans 1993; Andrews 1994). A stylized version of these arguments claims that capital managers adhere to beliefs about a generally accepted set of “good” economic policies embodied in the “Washington Consensus.” Key among these policies are open capital markets, low trade barriers, low inflation, and highly restricted government spending, deficits, and debt. As technological and legal barriers to transnational capital flows declined in the post-Bretton Woods era, capital managers became free to invest in locales promising the best returns and, more importantly, to avoid jurisdictions that implemented heterodox policies.

Continued research has demonstrated that increasing economic interdependence has not affected all countries equally nor has it caused the predicted race to the bottom in policies or outcomes. This convergence hypothesis has not been borne out in empirical studies of tax rates (Basinger and Hallerberg 2004) while Garrett (1995, 1998) shows that domestic political considerations shape the manner in which trade liberalization affects macroeconomic policies in rich democracies. Clark (2003) argues that individual national responses will be conditioned by levels of capital mobility, exchange rate regime and central bank independence. Recent work in the “varieties of capitalism” literature (Hall and Soskice 2001) highlights apparently robust and persistent differences in labor market bargaining institutions (Iversen 1999; Western 1997), unemployment and job training regimes (Estevez-Abe, Iversen, and Soskice 2001; Mares 2003), and the size of the welfare state (Swank 2002) across OECD countries. Iversen and Cusak (2000) argue that there is no inherent reason for capital account openness to lead to changes in domestic welfare policies. They find long-term secular changes in labor markets more important. Evidence also shows that bond market participants, despite their alleged power to dictate policy, tend to examine only aggregate measures of macroeconomic performance such as inflation, debt and deficit levels (Sobel 1999; Mosley 2000, 2003), paying little attention to the actual distributional decisions of governments. Tytell and Wei (2004) find no disciplining effect of capital account openness on deficits or inflation.8 Rich democracies seem capable of at least maintaining, if not growing, public expenditures in the face of demonstrably more mobile capital.

Does this mean that capital is not as strict a taskmaster as first argued? Perhaps not. Results for the developing world seem to diverge from those of the OECD in many respects. Contrary to the experiences of rich democracies, Rudra (2002) shows that increasing exposure to the global economy decreases rather than increases welfare state effort in the developing world. Wibbels and Arce (2003) find that portfolio flows are negatively associated with higher tax burdens on capital in Latin America, while FDI is not. Wibbels (forthcoming) argues that developing countries face an inherently disadvantaged position in the world economy due to their dependence on foreign capital and an undiversified base of commodity exports as primary sources of hard currency. This dependent position relative to capital markets prevents developing countries from borrowing to engage in counter-cyclical aggregate demand management. Mosley (2003) and Sobel (1999) both interview bond market participants and find that developing countries face “strong and broad” scrutiny from financial markets in which more indicators are taken into account and the interest rates react accordingly.

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8 Although Kim’s (2003) finding that deficits decrease in advance of capital account liberalization may explain this.
To sum up, there has been extensive study of policies as a function of capital mobility but less work examining the effect of policies on capital. Virtually all of the work that does examine markets' reactions to policies focuses on the core fifteen to twenty-five rich democracies. Direct and portfolio investment have not been compared systematically. While in the OECD it appears that governments have substantial “room to move,” it is still an open question whether and how international investors react to economic policy in countries where default risk is salient. The economics literature on the determinants of portfolio investment flows points to an informational model that will condition how market participants will react to policy; to see whether economic policy outcomes matter for portfolio flows, we must take into account a country’s debt intolerance. The literature on the determinants of FDI implies that FDI and portfolio flows should not be expected to behave similarly vis-à-vis high-level economic policies. Fiscal policies are not likely to have as pronounced an effect on FDI inflows.

A Model of Investor Decision Making

In this section, I present a simple heuristic model of investor decision making, building on Mosley’s theoretical framework and Reinhart et al.’s notion of debt intolerance. Mosley emphasizes the informational constraints facing market participants (i.e., bond traders and fund managers) as they assess the riskiness of a particular security, usually a government bond. She invokes a standard signaling framework in which governments possess private information as to their riskiness along the three dimensions outlined above. Policy outcomes are, in part, signals to investors of the government’s “type.” Investors observe some of these policy outcomes and reallocate funds in response to incoming signals, contingent on their prior beliefs as to the riskiness of the investment in question. Reinhart and co-authors’ point is a special case, arguing that past credit history is a key signal. Countries that have shown themselves to be credit risks will face markets that are less tolerant of negative signals and will be correspondingly worse off for the same fiscal outcomes. In other words, controlling for other factors, countries that have poorer credit histories will find capital managers more leery.

To make the model more concrete, I specify the problem facing investors and the effect of new information. The investors’ decision problem in each period is to allocate resources such that the allocation maximizes total returns over all investments, given the investor’s beliefs about the risks of each investment. Risk in this context can be thought of as the (subjective) probability that an adverse event occurs. In the language of Bayesian statistics, investors have prior beliefs about this risk, where beliefs are represented by a specific probability distribution. I assume that beliefs are influenced by past adverse events. In each period investors update their priors according to Bayes’ Rule as new information becomes available, that is, the current risk evaluation is a function of the prior and the data gathered. Assuming that investors are not risk-loving, that all investors have sufficiently similar
priors and that all have access to the same information, the following propositions follow immediately:

**Proposition 1:** Adverse signals will induce investors to increase their expectations about the riskiness of an investment, reducing its (subjective) expected value.

**Proposition 2:** Controlling for the riskiness of investment, adverse signals will induce a reallocation of investment away from riskier investments.

The question now is what constitutes a meaningful signal and an “adverse event” to different types of investors. I argue that deficits are particularly important to portfolio investors. Portfolio investors face three kinds of risk: inflation, currency, and default. Deficits are potentially linked to all three. Governments deficits can inflate the money supply.\(^{13}\) Inflationary pressures can cause currency volatility and depreciation. Taking deficits to represent the rate of debt growth, deficits send negative signals about the government’s commitment to honor its obligations; more indebted countries face the temptation to inflate away their debts. Those developing countries that show themselves to be risky investments (e.g., by defaulting in the past) will face an even stiffer penalty. Not only will they typically have to pay higher rates on the money they can raise, but investors will be less disposed to invest in the first place. These countries therefore must toe a very restrictive line to avoid a strong reaction from capital markets. In addition to deficits, actual inflation levels and currency volatility should be relevant signals to investors.

As demonstrated in the previous section, there are theoretical reasons to expect direct investors to behave differently than portfolio managers. The returns on direct investment, though influenced by macroeconomic fluctuations, are largely determined by plant-, firm-, and industry-level considerations. These considerations include subsidies, tax breaks and other agreements with governments implying that direct investors should be sensitive to both the market-based and the political contracting environments. Several studies, most notably Jensen’s (2003), argue that democratic governments are more reliable transaction partners; FDI should tend toward more democratic regimes, all else equal. As an alternative hypothesis to Jensen’s contention, firms may simply prefer stability. To the extent these opportunities exist across regime types,\(^{14}\) MNEs simply prefer institutional stability. While not directly opposed, these two claims clearly imply subtle differences in the goals of investing firms. By Jensen’s logic, MNEs prefer democracies on the basis of a veto player argument: policy is more stable in democracies because there are more veto players. The regime stability argument implies that firms care not so much about policy stability but rather about the stability of the decision making apparatus, be it democratic or otherwise. Volatile political structures eviscerate the value of any political agreement; broken political agreements can be thought of as political default.

Before moving on to data analysis, I summarize the empirical hypotheses derived from the simple investor decision model outlined above:

**Hypothesis 1:** Portfolio investors’ perceptions of a country’s creditworthiness will decline with more past defaults and negative policy signals, especially budget deficits.

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13 The extent to which deficits and inflation are linked clearly depends on the stance of the monetary authority. Attempts to include controls for central bank independence, however, resulted in a drastic reduction in sample size with no meaningful alteration in the findings reported below. Since I make no claims regarding the influence of central banking institutions on capital flows, I defer further investigation of this important topic to future research. I thank a reviewer for emphasizing this point and Chris Adolph and Jakob de Haan for making available their data on central bank independence.

14 Whether different regime types offer MNEs greater or fewer investment opportunities or, more plausibly, whether MNEs in different sectors or industries find more opportunities under different regimes is an interesting question I defer to future research.
Hypothesis 2: Portfolio flows will be negatively associated with higher deficits especially in countries with poor credit histories.

Hypothesis 3: FDI will be more sensitive to political institutions than portfolio investment.

Hypothesis 4: FDI will be increasing with more democratic institutions.

Hypothesis 5: FDI will be increasing in institutional stability.

Analysis and Results

In the preceding section I presented five hypotheses derived from a model of investor decision making and the literature on capital flows of portfolio and direct investment. I claim that investors observe policy outcomes, update their perceptions about the desirability/credit-worthiness of various investments and reallocate resources accordingly. To evaluate these hypotheses I have assembled a data set covering up to 90 developing countries from 1985 to 2002. In this section, I examine each step in the argument in turn. First, following Reinhart Rogoff, and Savastano (2003), I use Institutional Investor’s country credit ratings, henceforth IIR, as a measure of investor perception of default risk and debt intolerance. Second, I model portfolio flows into developing countries, using IIR to account for debt intolerance, or, equivalently, investors’ subjective beliefs. Third, I examine FDI flows and compare the findings with those for portfolio investment. I first describe the data and statistical models used.

Methods and Models

The basic structure of the data set is an unbalanced panel time series. In political science, there are two models commonly fit to this type of data: pooled ordinary least squares (OLS) with a lagged-dependent variable (LDV) and pooled OLS with some sort of autoregressive process for dealing with error correlation over time. These models often employ panel fixed effects and some sort of sandwich estimator to correct standard errors for panel heteroskedasticity. As Zorn (2001) points out, a significant drawback of these models is that they do not explicitly address panel dynamics, that is, what are the relative contributions of within-country and between-country variation? Can we say that countries with certain characteristics on average, are more (less) likely to demonstrate a particular response, on average? Or would we rather say that a change in a particular country’s independent variable would be associated with a change in its dependent variable? More specifically, it is well known that a model that includes panel fixed effects is isomorphic with one including de-meaned independent variables and therefore only estimates the within-country effects of changes in the independent variables. Any cross-country variation is excluded from the model, potentially inducing bias in coefficient estimates. Perhaps more importantly, ignoring panel dynamics precludes asking (and answering) interesting questions.

Zorn’s recommendation for dealing with this problem is to simultaneously estimate both within and between effects by including the panel mean17 for each independent variable as well as the de-meaned independent variables. This

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15 The sources for all variables are outlined in the Appendix. Country-years in the sample are listed in the web appendix. Inclusion of country-years was determined by data availability. Some countries are included in the between-country sample but not within-country sample due to the vagaries of data reporting. Results do not change substantively by excluding these observations, so I retain them.


17 A panel- or country-mean of a random variable X, observed t times is simply \( \frac{1}{T} \sum_{t=1}^{T} x_t \). I use data for all available years between 1980 and 2002 to calculate means.
solution, however, also induces bias by artificially including numerous\textsuperscript{18} “observations” of the panel means. Goodrich (2005) identifies this problem and proposes several solutions. Since my panel is unbalanced, the most appropriate solution here is his so-called “consecutive parsed estimator” in which I first estimate a model for the between-country variation and then one for the within-country variation.\textsuperscript{19}

A few comments on this choice of models are warranted. First, aside from addressing possible bias in parameter estimates, this strategy admits statements about the extent to which investors have benchmarks common to all developing countries as well as the nature of their idiosyncratic concerns within particular countries over time. The between-country models address the former while the within-country model address the latter. Second, I am not interested in determining the relative importance of within-country variation and between-country variation though it is possible to do so. I am more concerned with comparing how the same independent variables relate to the behavior of direct and portfolio investors. Finally, what does it mean if a variable shows up as significant in a between-country model and not in the within-country model (or vice versa)? A difference of this sort simply implies that the variable in question shows a common effect across (within) countries but does not have an additional country-specific (between) component. I will highlight differences of this sort in the discussion of findings below.

The between model can be expressed as follows:

$$\bar{Y} = \bar{X}\beta + \varepsilon,$$

where $\bar{Y}$ is a $c \times 1$ vector of country-means of the dependent variable; $\bar{X}$ is the $c \times k$ matrix of country-means for each of $k$ covariates, $\beta$ is the vector of regression parameters (including a constant) and $\varepsilon \sim N(0, \sigma^2)$. This model can be estimated using OLS and is amenable to all the usual ex post corrections for violations of the OLS assumptions. With this model I can make statements about the country averages, e.g., countries that ran higher deficits on average had lower average credit ratings over the same period.

To formulate the within-country model, I combine Goodrich’s recommendations with an error correction specification. The within-country estimator requires using de-meaned independent and dependent variables and excluding the constant term. The error correction model (ECM), known for its use in cointegration and non-stationary time series work, also provides a convenient and intuitive way to explore temporal dynamics (Beck 1991; Beck and Katz 1996; De Boef and Keele 2005). Let $\Delta$ be the first difference operator and let $\bar{Y}_t = Y_t - \bar{Y}$ and $\bar{X}_t = X_t - \bar{X}$, that is the de-meaned dependent and independent variables, respectively. We can write the within-country ECM as

$$\Delta \bar{Y}_t = \beta_1 \bar{Y}_{t-1} + \Delta \bar{X}_t \beta_2 + \bar{X}_{t-1} \beta_3 + Z_t \beta_4 + \varepsilon_t.$$  \hspace{1cm} (2)

Note first that $X$ is a matrix of covariates believed to tend toward an equilibrium relationship with $Y$; $Z$ is a matrix of exogenous variables. While equation 2 looks a mess, estimating a model of this form yields coefficients that are directly interpretable in terms of panel and time dynamics. Interpretation of an error-correction model is slightly different from the more standard LDV or AR(1) specifications. First, $\beta_1$ represents the correction parameter, that is, how fast the system returns to equilibrium given a change in the value of one of the independent variables. $\beta_1$ should fall in the interval $(-1, 0]$ if the process is stationary. Coefficients on the first-differenced terms, $\beta_2$, represent the short-term, transitory results of a one-time

\textsuperscript{18} Specifically, if there are $c$ countries and $t$ observations per country, then simultaneous estimation of both within and between-effects includes $t - 1$ additional “observations” for each country for each covariate. These “observations” are simple duplicates of information already present in the data and therefore downwardly bias the standard errors of the estimated between-country relationships.

\textsuperscript{19} “The [between-country model] gives unbiased estimates since all variables that do not change within countries are orthogonal to the de-meaned variables used in the within-country model” (Goodrich 2005:24).
change in the independent variable whereas the coefficients on the lagged level terms ($\beta_3$) are persistent longer term relationships for any change in $X_t$. The actual magnitude of this relationship, the so-called “long-term multiplier,” is $\beta_3 / \beta_1$.

In fitting all models there was evidence of panel heteroscedasticity and so I employ panel-corrected standard errors as described by Beck and Katz (1995, 1996) for the ECM within-country specifications and White standard errors for the between-country models.

**Portfolio Investor Perceptions**

The first step in the argument is showing that investors’ perceptions of riskiness do in fact depend on policy signals and past “credit history.” Following Reinhart et al. (2003), I use IIR as a measure of investors’ beliefs about creditworthiness and default risk, or, equivalently, debt intolerance. IIR are the dependent variable here but will be employed as explanatory variables in subsequent sections. IIR are compiled from surveys of fund managers and economists at major investment banks and investment houses, making them ideal for my purposes here. In principle the ratings range from 0 (high risk of default) to 100 (low).

Reinhart and company present an extensive analysis of the relationship between IIR, default and debt. They find that past defaults, external debt levels and inflation all have significant influence on investor’s perceptions. I include all three variables in my models. I measure default history in two ways. In the between-country model, I use the total number of years a country spent in default or restructuring international debt between 1980 and 2002. These data are taken from Beim and Calmoris (2001:32–25) supplemented by reports from Standard and Poor’s (Beers and Chambers 2004). In the within-country time series models, I include dummy variables indicating whether the country was in default in the current period and previous two periods. External debt levels are taken from the World Bank’s *World Development Indicators* (WDI) CD-ROM and reported as percent of GDP. Inflation is measured as percent change in the price deflator, as reported in the WDI. I use this measure rather than consumer price inflation for two reasons: the price deflator measure has marginally better cross-country and time series coverage and international investors are arguably interested in overall price stability in the economy, not just prices for final consumption goods.

Economic policy variables are my primary independent variables of interest. I restrict the scope of my investigation to central government budget deficit, overall government consumption, inflation and currency volatility. I identified these variables above as theoretically crucial. Indeed, deficit levels are the single most salient variable cited by bond investors when examining countries’ accounts (Mosley 2003). Deficits also have the added virtue of encompassing both the revenue and expenditure sides of the national income statement. I examine general government consumption because it is held to be significantly less salient to bond investors (Mosley 2003) and thus provides a good check in assessing results for deficits. Deficits are measured using overall budget balance as percent of GDP. I multiply this measure by $-1$ so that positive quantities are directly interpretable as larger deficits. For government spending I use general government final consumption expenditure as percent of GDP. Both deficits and spending are expected to have a negative impact on capital inflows. Exchange rate volatility is measured using the annual percent change in the official exchange rate. The effect of exchange rate volatility on investor perceptions is a priori indeterminate, once inflation and deficits are controlled for. All data are taken from the WDI.

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20 Derivation of these relationships is relatively straightforward. See De Boef and Keele (2005) for a detailed discussion of the ECM and its relationship with ADL models.
Political institutions and instability may affect investor’s beliefs about country credit risk. There are many ways to operationalize measures of political institutions. Since I am concerned with the decision-making apparatus and the observable rules employed in organizing government, I use Polity IV scores (Marshall, Jaggers, and Gurr 2004), scaled from 0 to 20 (authoritarian to democratic). Among the major regime type measures, Polity IV is particularly well suited to institutional questions (Casper and Tufis 2003) and is used in prior studies of a similar nature (Jensen 2003). Polity, however, is a very high-level measure of institutional design and hence varies little over time within countries. To measure institutional stability I use two transformations of Polity IV. To measure duration I use Polity persistence, that is, number of years since the last change in Polity score. This measure does not readily incorporate the size of the changes so, following Ward and Gleditsch (1998), I also calculate the variance in each country’s Polity IV score for moving 5-year windows. Note that persistence does not have a readily useful interpretation in the between-country models, so variance is employed. In all within-country models I report persistence unless variance was discovered to be significant.21 I expect investors to dislike instability, but both the literature and my model above are silent as to whether portfolio investors have any preference for regimes with more or less constrained executives.

Investors can be expected to pay more attention and be positively disposed toward bigger and wealthier countries. Major macroeconomic controls are therefore included, following standard practice in virtually all models of investment and capital flows. Wealth is operationalized in the standard way, using the natural log of GDP per capita. Market size is measured using the natural log of GDP. Cyclical fluctuations are included using GDP growth rates.22

In Table 1 I report results from the estimation of the within-country model in the left hand columns and the between-country model on the right. Recall that in equation 1 all variables are panel-means and interpretation is in terms of averages over the entire time period. For the within-country ECM, interpretation requires some nuance. All variables here are de-meaned implying that coefficients represent the effects of a change in an independent variable relative to the country mean for that variable. To avoid the cumbersome language of repeated references to the mean, I emphasize the point here but will discuss ECM results as “a unit increase (decrease) in $X_i$,” leaving the relationship to the mean implied. Long-term effects of a one-time change in an independent variable are given by the coefficients on the lagged terms while short term (i.e., in the next period) are reflected in the differenced terms. A variable that shows influence in the long term but not in the next interval is one whose effects take longer than one period to filter through. When the opposite is true, the system re-equilibrates faster, implying that the effect washes out quickly. Examining the results, we see that the coefficient for the LDV is in $(-1,0]$ and significant, as required. The relatively small absolute value of this correction term implies that long-term effects of one-time changes take a long time to filter through and return the system to an equilibrium. Investor beliefs tend to change relatively slowly, with the notable exception of default in current and lagged periods.

Looking first at credit history and default, countries with a longer default history had lower average IIR scores but this relationship is not significant. Debt levels are also not significant, which contrasts with Reinhart et al.’s findings though they use cross-sectional models. In the within-country model, however, default is strongly negatively associated with IIR. Unexpectedly, however, the two-period lag of

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21 All models were fit by including variance, persistence and the two jointly. I report only persistence for consistency across models. In models where persistence is not significant, results are unchanged in any important way by substituting variance for persistence.

22 Note that due to the within-country ECM specification there is no need to include terms in the model to account for business cycles or otherwise detrend GDP. The model explicitly captures the effects of times when growth is above or below the county’s average for the years in question.
default is significant and positive. This may reflect the fact that investors forgive past defaults, once the current default status is taken into account.

The policy variables show mixed results. Average deficits are significant (at the .1 level) and negatively associated with average IIR, as expected. Deficits do show a negative and significant long-term relationship to IIR within countries, however. A 1% increase in deficits induces a decrease in IIR of 0.5 in the long term. Inflation shows a minor short run relationship within countries but no average effect across countries. Interestingly average government expenditures are significant and positive. Within countries, though, the short-run effect is the strongest. Currency fluctuation, as measured here, has no relationship with IIR.

IIR does seem to vary with political institutions across countries. Average Polity variance shows a relationship with investor perceptions; investors tended to view countries showing institutional instability as greater credit risks. Within countries, political changes show no effect. The message here is that democratic institutions are viewed favorably but the mechanism for getting there (some manner of social and political upheaval) is not.

### Table 1. Investors’ Beliefs

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**Note:** Independent variables for the between model are country means for all available years. In the ECM specification, all non-differenced variables are lagged except those marked with an asterisk. Entries in italics are significant at the .1 level while bolded values are significant at the .05 level or better using two-tailed tests. Reported standard errors are panel corrected for the ECM and employ White corrections for the between-country model.
Macroeconomic controls are all significant and reinforce that investor perceptions are, in large measure, driven by aggregate economic outcomes. Controls reflect the known fact that IIR tends to be procyclical (Reinhart et al. 2003).

Summarizing, there is evidence that history matters in investors’ perceptions of credit risk. Defaults are associated with more wary investors within countries, providing support for hypothesis 1. Investors also update their beliefs in response to negative policy signals, especially deficits. High-level institutional variables seem to have some relationship to investor beliefs, but only between countries.

Portfolio Flows

I now turn to actual capital flows. I operationalize portfolio capital flows using net inflows of bonds and equity as reported in the WDI. I use the sum of these two as total net portfolio inflows. In the analysis below I report results using net portfolio flows in millions of U.S. dollars. Prior studies (Mosley 2000, 2003) emphasize the use of risk premia, bond and country risk ratings, and interest rate spreads as the appropriate measure of capital market participants’ evaluations of particular securities and countries. She argues persuasively that capital flow data do not fully incorporate the reaction of market participants. While this is surely the case, I use actual capital flows in this study for four reasons. First, her argument against using flow data stems from the fact that she concentrates on the OECD where default risk is “nonexistent” (Mosley 2000:747). No OECD nation has defaulted on sovereign debt since World War II (Beim and Calmoris 2001). Default, however, is highly salient in the developing world: LDCs in the sample spent an average of 7.2 years in default between 1960 and 2003. We would expect capital managers to reallocate resources more drastically in high-risk settings. Second, in order to compare the reaction of direct and portfolio investors I require a comparable measure. There is no readily available analog for interest rates when looking at FDI. I can, however, observe flows. Third, data on bond yields for a large number of developing countries are not available. Fourth, the race-to-the-bottom argument emphasizes the “exit” option possessed by owners of mobile capital. I am examining the extent to which they exercise this option in the face of policy outcomes they are presumed to oppose. In any event, this study is in several ways a test of Mosley’s argument. The results presented below largely confirm her findings although I employ different dependent variables.

Figure 3 gives some initial insight into how investor beliefs relate to actual capital flows. The figure plots portfolio capital inflows against IIR. The higher broken line represents the simple bivariate regression line. The lower line is the non-parametric local regression (loess) line. The kink in this line at about 30 dramatically illustrates the fact the high-risk countries are virtually shut out of international capital markets. Countries with an average IIR less than 30, with the exception of Lebanon received no portfolio capital in the 1980–2002 period.

To explore this further, I estimate both within- and between-country models for portfolio flows. I include the same covariates in these models as I did in the previous section while also including IIR. By including IIR as well as all the variables used to predict it, the coefficients on IIR can be interpreted as the relationship between investor beliefs and portfolio flows not explained by policy signals, macroeconomic performance or past behavior. In addition, a key “push” factor for international portfolio capital is the interest paid on less-risky investments. Taylor and Sarno (1997) find that portfolio flows are inversely proportional to U.S. long-

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23 In keeping with virtually all the empirical literature on FDI flows, the subsequent analysis of FDI uses FDI inflows as percent GDP as the dependent variable. Replacing portfolio flows with portfolio flows as % GDP attenuates results for deficits and IIR somewhat; they only attain the 0.09 threshold. The default dummies become significant in the ECM.
term interest rates. I therefore include real U.S. interest rates in the ECM model and expect a negative relationship with portfolio inflows to developing countries.

Table 2 presents results for the within- and between-country models just as in the last section. As before, the LDV is in the appropriate interval. Comparing the within- and between-country models is especially illuminating here.

The strong positive relationship between capital flows and IIR across countries is immediately apparent, even accounting for the signaling variables, etc. A country with a 1 unit larger average IIR will have an average of U.S.$17 million more in portfolio inflows. Within countries, however, IIR has a less robust relationship to capital inflows, all of it in the short term. A one time increase in capital inflows of U.S.$41 million is associated with a country that manages to increase its IIR by one point. This association does not persist over time. Surprisingly, defaults are not significant once IIR is controlled for.

Another seemingly counterintuitive finding is the positive and significant coefficients on deficits between countries. Upon further consideration, however, this finding actually exemplifies both the importance of first examining the determinants of investors’ beliefs as well as the utility of estimating the between- and within-models. This coefficient is positive because the countries able to borrow are the least risky in the group, as shown so clearly in Figure 3. Within countries, however, we see that a country that increases its deficit by 1% of GDP can expect portfolio inflows to be reduced by close to US$91 million, once the persistence of the relationship is accounted for. Government expenditure continues to show a positive and significant association with portfolio inflows. The stability of the exchange rate is also

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24 Since U.S. interest rates are invariant across panel members I cannot include it in the between-country model.
25 This relationship remains significant at the .1 level when IIR is removed from the model, though its magnitude is somewhat diminished.
26 Disaggregating portfolio flows into equities and bonds (not reported here) shows that government expenditure has a positive relationship with bond inflows but none on equities.
significantly different from zero in these models, but the actual magnitude of the effect is tiny. The inflation rate shows no effect either within or between countries. Political variables show no relationship with portfolio flows. Controls for macroeconomic outcomes are uninformative.

Across all these models, a clear picture is starting to emerge. Investors’ beliefs appear to influence actual capital inflows into developing countries, whether in the form of bonds or equities. The positive relationship between IIR and portfolio flows between countries implies that portfolio investors do have some cross-country benchmarks regarding riskiness and default. This influences actual portfolio flows. Within countries, however, policy signals become more important. This is not such a surprising finding. What is new is the demonstrated link between policy outcomes, investor beliefs, and portfolio inflows. Investors are taking account of policy outcomes and reallocating accordingly (though perhaps not in such a simplistic manner as the model here purports). This reallocation is not drastic nor immediate;

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<th>Variable</th>
<th>Within ECM</th>
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<tr>
<td>Δ log GDP</td>
<td>720.47</td>
<td>367.21</td>
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<tr>
<td>USIR</td>
<td>1.15</td>
<td>11.65</td>
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<tr>
<td>(Intercept)</td>
<td>–1679.60</td>
<td>896.40</td>
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</table>

Note: Independent variables for the between model are country means for all available years. In the ECM specification, all non-differenced variables are lagged except those marked with an asterisk. Entries in italics are significant at the .1 level while bolded values are significant at the .05 level or better using two-tailed tests. Reported standard errors are panel corrected for the ECM and employ White corrections for the between-country model.
only one third of the long-term change in capital inflows due to a 1% increase in deficit occurs in the first year. Political institutions, however, are absent once policy outcomes and macroeconomic variables are taken into consideration.

**FDI Flows**

Having seen qualified support for the first two hypotheses regarding portfolio flows, I now turn to direct investment. Recall that Hypothesis 3 asserts FDI inflows to be less sensitive to fiscal policy variables than portfolio flows while Hypotheses 4 and 5 state that FDI will be more sensitive to political institutions, broadly construed. To examine these hypotheses and for comparison to the results for portfolio flows, I estimate equations (1) and (2) using a similar set of covariates, but with FDI inflows as the dependent variable.

My measure of FDI inflows is the World Bank’s net FDI inflows, as percent of GDP. FDI inflows are direct investments into a country from abroad and should be distinguished from FDI outflows, which are investments abroad by domestic firms. FDI inflows can be either positive or negative. Negative inflows represent disinvestment by foreign firms. In previous studies, FDI has been shown to respond to market size, wealth, and growth, justifying their inclusion in the models below. I also include the policy outcome variables (inflation, government spending, deficits, and currency stability) for comparison purposes. IIR is included for the same reason. Of direct concern are the institutional variables: polity and the measures of its variance and persistence.

As before, Table 3 presents regression findings. The first thing to point out is the poor fit of the between-country model. The only strongly significant variable is GDP per capita.27 The $F$-statistic, though significant, is not inspiring given the number of parameters estimated. While the model yields little insight into cross-country variation in FDI inflows, it does illustrate two important points. First, a similar model does usefully explain some variation in portfolio inflows across countries. Second, direct investors seem to have country-specific criteria rather than global benchmarks when making investment decisions.

The within-country model here gives more insight. When compared with portfolio flows we see a marked difference. Policy signal variables are uniformly uninformative.28 FDI inflows do not respond to deficits, at least not in the same fashion as portfolio flows, consistent with prior research in more restricted samples (Wibbels and Arce 2003). IIR is significant and positive, but the longer-term effect is small.

Polity is significant in both the long and short term, while the persistence of polity is significant at the 0.1 level. This second finding is not robust to altering the measure of institutional stability (not reported here); polity variance is not significant when replacing persistence. If I include both variance and persistence, however, the finding for persistence remains. These findings are consistent with the hypothesis that FDI shows more sensitivity to institutions than portfolio investment while not responding to policy signals in the same manner.

A couple of more words are in order about FDI and institutions. This final set of regressions addresses the hypothesis that FDI should respond to political institutions. The results here provide further support to existing contentions that more democratic regimes should receive more FDI. The magnitude of this relationship is quite modest: a country whose Polity score increases by one receives about 0.1% GDP more FDI, or about U.S.$11 million at sample mean GDP levels. Hypothesis 5 claims that more stable regimes should attract FDI. I employed two measures of institutional stability: polity variance and persistence. Although both have intuitive

27 This lack of finding does not change when IIR is removed or when regional dummies are included. The model simply does not usefully explain cross-country variation in average FDI inflows over 1980–2002.
28 This nonrelationship does not change if IIR is removed.
resonance, they also address two different aspects of stability. The variance measure is more closely analogous to recent/short term fluctuations likely to play into investment decisions. Some of these fluctuations could be viewed positively, however, especially if they lead to market openings, etc. Persistence, on the other hand, is more of a measure of long-term experience with a particular system. The model above shows a relationship with persistence; there is none for variance. In other words, once institutions have changed in a fundamental enough manner to register on the Polity scale, the size of the shift is not as important. Direct investors tend toward regimes that are more persistent.

**Concluding Remarks**

In this paper I have examined the causal mechanism underlying virtually all arguments relating capital account openness and economic policy, namely that investors will reallocate their investments when policies diverge from those they

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<table>
<thead>
<tr>
<th>Variable</th>
<th>Within ECM</th>
<th>Between</th>
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<tbody>
<tr>
<td>Lagged-dependent variable</td>
<td>−0.647, 0.092</td>
<td>−0.000, 0.081</td>
</tr>
<tr>
<td>Deficit</td>
<td>0.013, 0.028</td>
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</tr>
<tr>
<td>Δ deficit</td>
<td>0.012, 0.029</td>
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<tr>
<td>Government experiment</td>
<td>−0.031, 0.026</td>
<td>0.078, 0.058</td>
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<td>Δ govt’ experiment</td>
<td>−0.0473, 0.0411</td>
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<tr>
<td>Inflation</td>
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<td>0.001, 0.001</td>
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<tr>
<td>Δ inflation</td>
<td>−0.000, 0.000</td>
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</tr>
<tr>
<td>XR volatility</td>
<td>−0.000, 0.000</td>
<td>−0.000, 0.000</td>
</tr>
<tr>
<td>Δ XR volatility</td>
<td>−0.000, 0.000</td>
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<tr>
<td>IIR</td>
<td>0.028, 0.010</td>
<td>0.061, 0.032</td>
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<td>0.014, 0.024</td>
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<td>Default*</td>
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<td>Default (1 lag)</td>
<td>0.183, 0.300</td>
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<tr>
<td>Default (2 lags)</td>
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<td>Years in default</td>
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<tr>
<td>Debt</td>
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<td>Δ debt</td>
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<td>−0.002, 0.007</td>
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<tr>
<td>Polity</td>
<td>0.045, 0.016</td>
<td>0.004, 0.057</td>
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<tr>
<td>Δ polity</td>
<td>0.057, 0.035</td>
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<tr>
<td>Polity persistence*</td>
<td>0.002, 0.0012</td>
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<tr>
<td>Polity variance</td>
<td>0.034, 0.041</td>
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<tr>
<td>Growth</td>
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<td>−0.061, 0.137</td>
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<td>Δ growth</td>
<td>0.014, 0.023</td>
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<tr>
<td>Log GDPpc</td>
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<td>0.260, 0.388</td>
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<td>Δ log GDPPc</td>
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<tr>
<td>Log GDP</td>
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<td>Δ log GDP</td>
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<td>(Intercept)</td>
<td>1.908, 3.480</td>
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| N                             | 1073           | 90              |
| No. of countries              | 81             | 90              |
| $R^2$                         | 0.33           | 0.25            |

$\chi^2(df)/F(df)$ 77.94 (25) 2.1 (12,77)

**Note:** In the ECM specification, all non-differenced variables are lagged except those marked with an asterisk. Entries in italics are significant at the .1 level while bolded values are significant at the .05 level or better using two-tailed tests. Reported standard errors are panel corrected for the ECM and employ White corrections for the between-country model.
prefer. I posit that investors allocate funds in response to perceived risk and return rates. As new information becomes available, investors update their beliefs and reallocate funds. The nature of the relevant signals and the degree of responsiveness in capital flows will vary depending on the ownership structure of the investment. Since default is a salient concern for portfolio investors in developing countries, I argue that capital managers use information from policy-based signals to update their beliefs and reallocate investment. In this way, their responses to fiscal policy signals from developing countries will differ from those derived from signals emanating from wealthier states where default is not a concern. Available evidence from a large panel of time series data broadly supports this notion, though it also points to the limitations of the simple decision-theoretic model. I presented evidence that FDI flows and more liquid portfolio flows behave quite differently in relating to both policy outcomes and the political institutions of particular countries. FDI is relatively insensitive to deficits. FDI inflows do appear to increase under more stable and more democratic regimes. The longer experience MNEs have with a particular decision-making environment the more likely they are to increase their investments there.

My analysis has clear limitations that indicate directions for future research. The findings reported here presented some anomalous results and suffer from non-random sample selection. Further research with more expansive data sets will help pin down the robustness of the relationships identified above. Because of data availability, analysis here has necessarily been at a high level, with much interesting variation already netted out. Although there may not be a strong net aggregate systematic component to the relationship between FDI flows and fiscal policy there may still be more microlevel relationships. A more nuanced understanding of the relationship between capital markets, MNEs, and host country politics will require a further disaggregation of capital and government outlays. As noted above, investors of different types (portfolio, direct) have differing incentives when facing the political system. Within direct investment, investors in different sectors, industries, or even firms may have divergent interests, expectations, and criteria. Some may be more prone to exit than others. Some may be more sensitive to macroeconomic variation than others. Expenditures may not all be equivalent either; MNEs may prefer some expenditures (e.g., in human capital development and law enforcement) while eschewing others (transfers, military expenditures). Understanding the choice to exit or exercise political voice clearly requires both more granular data and explicit investigation of firm- and industry-level decision making. Much of the most interesting behavior will be visible in specific policy debates, electoral cycles, institutional transitions, and international organizations.

I only investigate one way in which global capital managers can respond to and influence policy, namely through the use of the “exit” strategy, that is, diverting capital to other uses away from the allegedly undesirable locale. Capital owners, however, have several strategies at their disposal. Most obviously, they can simply raise the price they charge for their capital. These price increases would take the form of higher interest rates on bonds or risk premia on equities. Direct investors can demand other concessions in policy arenas more directly germane to their ventures (regulatory policy, taxation, etc.). Governments may in fact be willing to pay these higher costs. Capital managers can also use “voice,” and engage in nonmarket activities like lobbying directly in host countries, through their home governments, and via multilateral organizations like the WTO, IMF, and ISO. Both market and nonmarket options are costly, however, and their effectiveness is largely backed by the implicit threat of exit. The degree to which this threat is credible in different situations is outside the scope of this paper. What I have shown is that this threat is invoked more readily when countries present significant default risk.

My findings provide further empirical support for recent hypotheses that capital markets relate to poorer countries differently. While hardly constituting a resur-
rection of dependency theory, I have added to the growing literature that docu-
ments how the developing world remains at a relative structural disadvantage vis-à-
vis capital markets. Some findings for the OECD may not automatically translate
into developing countries. I here document one mechanism as to why this might be
the case.

How governments anticipate and respond to capital market movements in the
developing world is the next obvious extension of this research program. Although
I formulated a simple model in decision theoretic terms, my argument works within
the broader framework of a signaling game between investors and governments.
The “government,” however, is not typically a unitary actor that is time invariant.
In particular, in democratic states the government may change quite frequently. It
stands to reason that investors may have more diffuse priors \(^{29}\) over the credibility
of a brand new government with no past history. Their reactions to heterodox
policies should be correspondingly more violent, ceteris paribus. While Mosley
examines the influence of elections on bond ratings, wider consideration of the
uncertainty induced by elections is an avenue open for future research. Extending
this idea to authoritarian governments may be harder but not impossible as Fis-
man’s (2001) clever study demonstrates in the case of Suharto-era Indonesia.

Finally, the propensity of investors to exit has implications for development
strategies. As Hirschman notes, if the most desirable members of an organization
are the first to exit at the sign of trouble, then the prospects for improvement are
darker. If, however, the most valuable members (from the organization’s stand-
point) actually stay, then the loss of the others may not be as tragic. Mapping this
analogy onto international capital flows, to the extent FDI is more development
and growth enhancing than portfolio flows, then developing countries may not be
in such a weak position. The negative economic consequences of volatility in capital
flows, especially large capital outflows and speculative attacks, are well documented.
We have seen that investor beliefs are determined by past credit history and current
signals. Developing country governments inheriting weak national “credit reports”
run greater risks in borrowing on international markets than their counterparts in
countries with better credit histories. Such countries should wait to borrow heavily
on international markets until they set a precedent that permits them some leeway
with investors. As Reinhart et al. note in the case of Chile, formerly a “serial de-
faulter,” this could take some time and involve forgone spending in the current
periods, often a politically difficult task. The relative stability of FDI combined with
its theorized growth-enhancing attributes makes it that much more attractive to
capital-poor developing countries. This difference between two major sources of
investment capital has some bearing on the debates surrounding the sequence and
pace of market-opening reforms. The findings here, congruent with Eichengreen’s
(2000) proposal, imply that opening markets to direct investors is perhaps a less
risky initial entry point into international economic relations, at least from a macro-
policy perspective. Sequential liberalization (rather than “shock therapy”) in which
countries open to direct investment first and then financial markets once appro-
priate institutions are in place seems to make the most sense.

Data Appendix

*Portfolio Net inflows:* Equity and bond issues purchased by foreign investors. Net
portfolio inflows is the sum of net bond and net equity inflows. Data are in millions

*FDI:* Net FDI inflows as %GDP as taken from the WDI CD-ROM (2005).

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\(^{29}\) A probability density is called “diffuse” if its mass is widely distributed over the support. In Bayesian statistics a
diffuse prior represents expectations about which there is considerable uncertainty, implying that the shape of the
posterior distribution will be largely determined by the observed data.
IIR: Institutional Investor’s (various issues) country credit risk ratings.

Default: Dummy variable indicating whether a country was in default or rescheduling negotiations on international bonds, loans, or suppliers’ credits. Data taken from Beim and Calmoris (2001:32–32) and supplemented with data from Standard & Poor’s (Beers and Chambers 2004).

Deficit: \(-1 \times \) overall budget balance as %GDP, taken from the WDI CD-ROM (2005).

Government expenditure: General government final consumption expenditure as %GDP, taken from the WDI CD-ROM (2005).

XR volatility: Year-on-year percent change in the official exchange rate as reported in the WDI CD-ROM WDI CD-ROM (2005).

Inflation: Annual % change in the GDP deflator, taken from the WDI CD-ROM (2005).

Debt: Total external debt as %GDP taken from the WDI CD-ROM (2005).

GDP and GDPpc: GDP and GDP per capita in current dollars at purchasing power parity, taken from the WDI CD-ROM (2005).

Growth: Annual % change in the GDP, taken from the WDI CD-ROM (2005).

Polity, Polity persistence, and Polity variance: Polity IV score (Marshall et al. 2004) scaled from 0–20. Persistence is the number of years since last change in Polity score. Polity variance is the variance in Polity score between year \(t\) and \(t - 5\).


References


Li, Quan, and Adam Resnick. (2003) Reversal of Fortunes: Democratic Institutions and Foreign Direct Investment Inflows to Developing Countries. *International Organization* 57:175–211.


