Corporate Governance and Private Capital Flows to Latin America

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Abstract[*]

According to recent research, external factors and political governance considerations are key determinants of capital flows in Latin America. We postulate that corporate governance is a crucial determinant as well. We show that while the region is characterized by relatively low levels of corporate governance it shows highly volatile capital flows. The high level of economic volatility that characterizes the region is partly due to the behavior of capital flows which, in turn, are influenced by external factors. The paper shows that by implementing better corporate governance the region could reduce the sensitivity of capital flows to external shocks and hence reduce the volatility of its economy.

Key words: Corporate Governance, Foreign Direct Investment, Capital Flows.
JEL Classification: O1, J45

1. Introduction

Following the debt crisis of the 1980s, Latin America was subject to a surge in private capital flows in the early 1990s. Net private capital flowing to the seven biggest Latin American economies, representing about 90 percent of total net flows to the region for the period 1990-2001, not only quadrupled, but also exceeded official flows by five times.[1] The obvious question is "Why?" In fact, to some extent, capital inflows were due to two factors, external developments, mainly in the United States, and the setting up of the Brady Bonds mechanism.

Evidence on the importance of external factors has been provided recently. For instance, Chuhan, Claessens and Mamingi (1993) show that equity flows seem to be more sensitive to external factors than bond flows, and that bond flows are generally more sensitive to a country's credit rating than equity flows. Similarly, Calvo, Leiderman and Reinhart (1993) show that external factors play a significant role in determining capital flows and real exchange rate behavior. Also, Fernández-Arias (1995) emphasizes the effects of international interest rates on countries' creditworthiness as an additional, indirect channel that may affect capital flow behavior, as improved external conditions in terms of lower interest rates are transmitted both directly and indirectly to capital flow behavior.

Along with external factors, the setting up of a Brady Bond exchange following the debt crisis was a crucial institution, which became a corporate governance enabler that helped smooth out asymmetric information problems between countries and private sector agents. In fact, the Brady mechanism provided the political governance context that influenced the expected returns to investing and contributed at evening out the payoffs between insiders and outsiders. It helped develop to capital markets, as well as influencing the type of capital flows coming to the region, and it permitted the introduction of Latin American assets into high-risk portfolios. This in turn made it profitable to invest in acquiring information about Latin American markets, thus raising investor interest in the region.

The role of external factors, particularly the experience of the Brady mechanism and the subsequent response to it, illustrates a simple but powerful principle: well-

functioning markets cannot survive without well-defined rules. In fact, the Latin American experience in recent years underscores a third element that should be taken into account when exploring the determinants of private capital flows or foreign direct investment flows to Latin America and elsewhere. Not only are external factors and political governance elements important, but also the corporate governance context. While foreign interest rates may affect the performance of Latin American economies and, while institutions such as the Brady exchange, the efficiency of the judiciary or the rule of law may impact those flows, a frequently overlooked element is the role of corporate rules that may enable capital inflows.

The key issue is that effective corporate governance institutions improve information flows, allow more complete contracts, and avoid moral hazard and adverse selection problems. Insiders will have an incentive to provide information about good investment projects, but also have an incentive to withhold information when investment projects go bad or when they have been diverting promised returns. Investors know that bad information is covered up and act accordingly, raising the returns required or refusing to invest at all. In contrast, where information flows to outsiders are timely, accurate, and credible, diversions are more difficult to hide, and resources are more likely to be matched with promising investment projects. To ensure that resources are always being targeted to their most efficient uses, investors need to be able to punish insiders explicitly or implicitly and effective governance institutions play a role in making insiders accountable. Such accountability mechanisms are enhanced when investors have clearly defined powers, the ability to coordinate their actions, and low-cost mechanisms for resolving disputes with insiders (Dyck, 2001).

In this context, the purpose of this paper is to investigate how corporate governance affects the volatility of private capital flows to Latin America and how corporate governance elements can limit the volatility of private capital flows to developing countries. Although the relationship between governance and amount and composition of capital flows is fairly limited, there are some existing related studies. For instance, Klapper and Love (2002) use a corporate governance index and provide firm-level evidence on corporate governance practices across emerging markets. The idea of

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[1] Flows increased from US$14.7 billion in 1990 to US$61.7 billion at their peak in 1997.

their research is to achieve a greater understanding of the environment under which corporate governance matters more. Their empirical tests show that better corporate governance is highly correlated with better operating performance and market valuation. They also provide evidence showing that firm-level corporate governance provisions matter more in countries with weak legal environments. These results suggest that well-governed firms benefit more in bad corporate governance environments and that firms can partially compensate for ineffective laws and enforcement by establishing good corporate governance and providing credible investor protection. On the other hand, Johnson, Boone, Breach et al. (2000) argue that weak corporate governance has an important effect on stock market decline and currency depreciation during the Asian crisis of 1997-1998. These authors explain that in the presence of weak corporate governance, stealing by managers may increase when the expected rate return of investment falls. If this is true, for a given negative shock to investors' confidence, countries with poor corporate governance will experience more theft and hence larger capital outflows, stock market collapses, and currency crises.

The paper is organized as follows. Section 2 describes the evolution of capital flows to Latin America in the 1990s and shows that capital flows to the region have been highly volatile and very sensitive to external factors by focusing on the destructive power of sudden stops in capital flows. Section 3 puts the issues of political governance and corporate governance in context and describes various governance indicators in Latin America. The main finding of the section is that corporate governance in Latin America compares poorly with corporate governance in both industrial countries and other developing countries. Section 4 provides empirical evidence on the idea that while external factors and political governance are important in the determination of capital flows in developing countries, corporate governance reduces the influence of such external factors on capital flows. Section 5 concludes.

2. Recent Evolution of Capital Flows in Latin America

As described above, after the debt crisis of the 1980s, Latin America was subject to a surge in private capital flows. Indeed, these flows, which were negligible in 1990 (on average 0.1 percent of GDP for the seven biggest Latin American economies, or LAC7),

turned into an important feature of macroeconomic developments in the region. At their 1997-peak, they represented on average 3.5 percent of GDP for the LAC7 region and, for some countries like Chile, as much as 8.7 percent of GDP in 1997.[2]

But these flows were also quite volatile. The observed surge in capital flows during the early 1990s was partially offset in 1995 with the emergence of the Mexican crisis, where the refusal of bondholders to roll over short-term government bonds created a liquidity crisis. This event unveiled the fact that liquidity crises could also affect sovereigns. Although in the short run several Latin American countries were stressed by loss of access to capital markets, increasing bond spreads, and, for countries like Argentina, massive withdrawals of bank deposits, this was a short-lived event. This can be partly attributed to the immediate reaction of the official sector, which set up a significant rescue package. Mexico recovered and financial contagion died out. Private capital flows resumed in 1996, reached their peak in 1997, and remained high during 1998. Indeed, the East Asian crisis starting in 1997 did not substantially affect capital flow behavior to Latin America (Figure 1). Although bond spreads increased by about 200 basis points in late 1997, most of this increase was reversed by early 1998.

What really hit the region was the Russian crisis of August 1998. This crisis represents a milestone in the development of emerging capital markets. As previously described, the massive capital inflows that entered Latin America in the early 1990s, financing high growth rates and large current account deficits, came all of a sudden to a standstill following Russia's partial foreign debt repudiation (Calvo, Izquierdo and Talvi, 2002). It was hard to imagine how a crisis in a country with little if any financial or trading ties to Latin America could have such profound effects on the region. This puzzle seriously questioned traditional explanations for financial crises (based on current account and fiscal deficits) and led analysts to focus on the intrinsic behavior of capital markets. Thus, it was argued that prevailing rules for capital market transactions may have been responsible for the spread of shocks from one country to other regions (Calvo, 1999). The high leverage of financial intermediaries in margin operations led to a liquidity crunch when Russian bond prices collapsed, which in turn forced massive sales of emerging market assets, including Latin American paper. Interestingly, although the shock facing the Latin American economies came from developments at the center of

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financial markets, it was not higher risk-free international interest rates that hit Latin American countries. Still the effect of this new type of external shock was devastating for the region.

Bond spreads, as measured by the EMBI+ index, displayed a dramatic increase following the Russian crisis.[3] On average, spreads increased by more by 660 basis points during 1999. Although they have decreased since then, spreads exhibit a substantial gap compared to pre-crisis levels, exceeding 270 basis points on average for 2002. This gap was higher for 2000 and 2001 (307 basis points and 329 basis points, respectively; see Table 1). Higher spreads were accompanied by a large reduction in private capital inflows, which almost halved between 1998 and 1999, from US$59.6bn to US$35.3bn. Since 1998, there has been a steady decline in these flows, reaching by 2001 lower levels than those observed in 1991 (Figure 1).

A key difference with the early 1990s period is that risk-free world interest rates currently stand at very low levels, yet capital inflows are far from returning to the region as they did before. Instead, the capital flow standstill has been quite prolonged after the Russian crisis. Perhaps new information indicating that a standstill in the capital account can materialize for rather exogenous reasons, and generate such drastic effects on government sustainability,[4] may reduce the appetite for holding assets of countries that may be subject to big swings in the real exchange rate, and which are highly dollarized in their liabilities. Several Latin American assets may have been categorized as a riskier asset class in investors' portfolios, reducing their appeal to investors. This may have brought the capital account to a persistent halt.

The fact that this phenomenon stemmed from Russia's crisis indicates that the capital inflow slowdown contained a large unexpected component. To the extent that the slowdown in capital flows was unexpected, it forced countries to engage in a drastic adjustment of their current account deficits to accommodate the shortage of external credit. Starting in the fourth quarter of 1998, the largest Latin American countries showed a steady decline in their current account deficits, which eventually reached a zero balance by the end of 2000. This adjustment of the current account was on average equivalent to

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[3] EMBI stands for the well-known Emerging Markets Bond Index, produced by JP Morgan.
[4] This because of either debt revaluation effects or the emergence of contingent liabilities.

5 points of GDP for the seven largest economies of the region (Calvo, Izquierdo, and Talvi, 2002).

Such drastic changes in capital flow behavior could not go unnoticed in terms of economic activity. Calvo and Reinhart (2000) illustrate the destructive power of sudden stops in capital flows, and show that when access to international capital markets is closed (something that occurs with distressing frequency in Latin America), the collapse in economic activity is dramatic. Fernández-Arias and Panizza (2002) show that there is a close correlation between private net flows and growth, and discuss how the volatility of these net flows is associated with the high growth volatility of Latin American countries. Figure 2 highlights that it is in particular non-Foreign Direct Investment flows that are strongly correlated with the growth process of Latin American countries.

In order to assess the relevance of capital flow volatility in Latin American emerging markets relative to other emerging and developed countries, we compared the size of net capital outflows and their share in financial credit to the private sector for the period 1990-2001. Given that capital flow reversals are typically associated with reduced or no rollover of existing credit lines, the size of these reversals relative to the credit stock is a relevant measure in terms of stress experienced by borrowers. This could be important from a corporate governance perspective, because at high stress levels it may be very difficult to comply with existing (non-contingent) contracts. Given this context, corporate governance institutions may be key in explaining the risk involved in keeping or bringing additional capital to distressed economies.

Figure 3 shows the median percentage capital flow reversal for each country in the sample vis-à-vis the median of capital flow reversals as a share of private sector credit. It highlights two important characteristics.[5] First, reversals in capital flows can be high in percentage terms both for emerging and developed economies.[6] But, second, even when percentage reversals are high, they are small in terms of financial depth for developed economies. The opposite holds for emerging countries, particularly so for Latin American economies, where reversals are high both in percentage terms and as a share of credit. With a few exceptions, this measure of capital flow reversals as a share of

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[5] Where reversal is defined as a negative percentage change in capital flows.
[6] For example, the median percentage change for outflow periods can be high in industrialized countries like Canada or Switzerland, even higher than in many emerging markets.

credit broadly separates countries into cases of small-size reversals, consisting mostly of OECD countries, from cases of larger-size reversals, mainly composed of non-OECD countries. Indeed, when we rank countries from highest to lowest in terms of this measure, all of the seven largest Latin American countries fall within the first 40 percent of the sample, indicating that the effects of volatile capital flows are quite relevant in explaining stress in terms of access to credit.[7]

This fact points towards the relevance of corporate governance issues for Latin American countries. To the extent that informational problems become more relevant during reversals, better corporate governance should limit the impact of external conditions on capital flows. Another characteristic of private capital flows that may be relevant from a corporate governance perspective is their composition by type of financing into foreign direct investment (FDI), equity liabilities, debt liabilities and other flows. Figure 4 depicts the share of each type of flow into total private flows. During the early 1990s debt liabilities dominated as the main source of capital flows. This situation was reversed in 1995, as foreign direct investment flows became predominant, and remained the main source of financing from there on. Indeed, this may be a good sign in terms of reducing volatility, given that de-trended FDI flows in Latin America have been less volatile than non-FDI flows.[8] On average, foreign direct investment flows represented 88 percent of total private net flows to the largest seven Latin American countries, whereas debt liabilities represented on average about 40 percent. By contrast, equity liabilities represented a relatively small share of the total all throughout the 1990-2001 period, on average less than 20 percent. This may indicate that investors prefer to have control of the assets they purchase, as is the case of foreign direct investment, or

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[7] Although the size of these reversals is large in terms of credit to the private sector, this does not necessarily indicate that they were caused by supply shocks. Barajas and Steiner (2002) suggest that the evolution of deposits is by far the dominant factor in credit slowdowns. Credit risk and regulation factors have also played a crucial role, indicating reduced willingness to lend. For instance, in Colombia, where capital inflows were intermediated through the domestic financial system, there is a high correlation between capital flows and credit. There is no systematic evidence for a large set of countries on credit crunches (defined as scenarios where credit demand exceeds credit supply) and Barajas and Steiner (2002) suggest that this was also the case in Peru. Also, Mody and Taylor (2002) find support for capital flow crunches in the recent experiences of Mexico and Brazil.

[8] The standard deviation of the cyclical component of an index of FDI flows (detrended by a Hodrick-Prescott filter) is six times smaller than that of an index of de-trended non-FDI flows for the period 1970-2001.

engage in fixed-income contracts, thus avoiding becoming minor shareholders in investment projects, as is the case of equity flows.

3. Political Governance, Corporate Governance, and Capital Flows

The role of political governance on capital flows has been widely studied in recent years. For instance, Wheeler and Mody (1992) find no correlation between corruption and foreign direct investment, while Fernández-Arias and Hausmann (2001) find that the share of foreign direct investment as a share of total capital flows is negatively correlated with a set of indexes measuring rule of law and creditor rights. Hines (1995), however, finds that U.S. outwards foreign direct investment is negatively correlated with the level of corruption in the host country; Wei (2000) finds that this finding extends to outward foreign direct investment for twelve OECD countries. Wei and Wu (2001) find that, although corruption in the host country is bad for both bank loans and foreign direct investment, it is more harmful for foreign direct investment. These researchers conclude that high levels of corruption tend to increase the share of bank loans and reduce the share of foreign direct investment.

This link, however, is only part of the story, as the role of corporate governance should also be taken into account. In fact, there is a close interaction between the institutions of political and corporate governance, as reflected in the roles of the legislative and the judiciary, and in the extent to which distributional cartels exert their power, and in the importance of monitoring. It has been argued that it is impossible to move to an essentially rules-based system of governance in one area without doing so in the other. In fact, it has been claimed that political governance and corporate governance are inseparable (Oman, 2001).

The crucial question is how can corporate governance be linked with capital flows? Johnson, Boone, Breach et al. (2000) provide a compelling rationale for why better corporate governance may limit the impact of external shocks. In their model, managers' benefits from stealing are inversely correlated with the rate of return of invested resources, and the cost of stealing is positively correlated with corporate governance levels. Therefore, for a given level of corporate governance, a negative shock that reduces the rate of return will lead to higher stealing, and for a given shock,

better corporate governance will reduce stealing. Given that foreign investors internalize managers' behavior, both the magnitude of the shock and the level of corporate governance will affect their investment decision. It should be pointed out that while the paradigm of Johnson, Boone, Breach et al. (2000) neatly applies to portfolio flows, its application might be extended to include foreign direct investment flows. In this latter case, expropriation by managers can be easily substituted with expropriation by politicians who, in periods of economic crisis, may have an incentive to extract more resources from foreign-owned firms.

Our objective is to provide empirical evidence on the extent to which corporate governance plays a role in limiting how capital flows respond to external shocks. We look at both flows in foreign direct investment and flows in portfolio flows, and in addition to the use of political governance indicators, we also employ such corporate governance measures.

In empirical terms there is no single paradigm on corporate governance that works in all countries and all companies. Indeed, there exist many different codes of best practices that take into account different legislation, board structures, and business practices in individual countries. However, there are standards that can apply across a broad range of legal, political, and economic environments. In particular, we can provide a basic description of corporate governance in Latin America by focusing on four key categories: creditor rights; shareholders rights; two indexes of procedural formalism of dispute resolution (check collection and tenant eviction); and accounting standards.

Creditor rights are defined as the ability of creditors to use the legal system to force debtors to meet their credit commitments. Creditor rights are an important determinant of credit availability and are closely related with good corporate governance. Measuring creditor rights, however, is not a simple task because most countries have in place both reorganization and liquidation procedures that are used with varying frequency and confer different levels of protection on different types of creditors. In fact, as creditors do not have homogenous claims against a given debtor, provisions that favor some creditors may hurt others. To deal with these issues, La Porta, López-de-Silanes, Shleifer and Vishny (1999) score creditor rights in both reorganization and liquidation

procedures and then add up the scores to create an aggregate index.[9] Table 2 describes corporate governance in various regions of the world and shows that, on average, Latin America countries offer little legal protection to creditors not only when compared with advanced countries, but also when compared with developing countries as a whole. While this is partly explained by the fact that most Latin American countries have a legal system based on French civil law (which tends to provide less protection to creditors than Common law or German and Scandinavian civil law), it should be pointed out that Latin America compares poorly even with other French civil-law countries. In this respect, La Porta and López-de-Silanes (1998) show that Latin American countries are less likely to place restrictions on going into reorganization, have no-automatic-stay policies, pay secured creditors first, and prevent management from remaining in office.

Shareholder rights measure how strongly corporate law protects minority shareholders against expropriation of managers or dominant shareholders. This is important because shareholders have residual rights to the cash flows of the firm. Therefore the protection of their rights affects the incentives to invest in equities, and it is a key determinant of capital market development. In the case of small shareholders, the right to vote is the main source of control over the resources of the firm. Thus, voting rights and the rights that enhance voting mechanisms are the crucial features of small shareholders rights. In this context, an adequate way of building an index of shareholders rights (or "anti-director rights") is to assign a positive score to all the provisions that make voting easier.[10] Table 2 shows that, as in the case of creditor rights, average shareholder rights in Latin America are well below the averages for industrial countries, the rest of the world, and even the developing countries as a whole. La Porta and Lopez-

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[9] Specifically, creditor rights is defined as an index formed by adding 1 when (i) the country imposes restrictions, such as creditors' consent or minimum dividends to file for reorganization; (ii) secured creditors are able to gain possession of their security once the reorganization petition has been approved; (iii) secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm; and (iv) the debtor does not retain the administration of its property pending the resolution of the reorganization. The resulting index thus ranges from 0 to 4.

[10] Shareholders' rights are defined by aggregating anti-director rights measures into an index. The index is formed by adding 1 when: the country allows shareholders to mail their proxy vote to the firm; shareholders are not required to deposit their shares prior to the general shareholders' meeting; cumulative voting or proportional representation of minorities in the board of directors is allowed; an oppressed minorities mechanism is in place; the minimum percentage of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting is less than or equal to ten (sample median); or shareholders have preemptive rights that can only be waived by a shareholders' vote. The index ranges from 0 to 6.

de-Silanes (1998) argue that this is mostly due to the fact that the legal system adopted by most Latin American countries is based on French civil law. They point out that, while the incidence of one-share-one-vote rules, cumulative voting for directors, and preemptive rights are not very different between Latin America and other regions, other crucial measures are quite different and typically more disadvantageous for civil-law Latin American countries. In fact, common-law countries more frequently allow shareholders to exercise vote by mail, which is not the case in most countries in the region. Similarly, no common law country blocks shares before shareholders' meetings, and most of them have oppressed minority mechanisms in place, both quite uncommon in Latin America.

The Formalism index measures substantive and procedural statutory intervention in judicial cases at lower-level civil trial courts. Djankov, La Porta, López-de-Silanes and Vishny (2002) show that high levels of procedural formalism are associated with longer judicial proceedings and less fairness in judicial decision. We therefore expect judicial formalism to be associated with poor contract enforcement and poor corporate governance.[11] Table 2 shows again that average formalism indexes in Latin America are well below the averages for industrial countries, the rest of the world, and even the developing countries as a whole.

Finally, as recent developments in the United States may attest, accounting standards are central to corporate governance. Without reliable accounting standards, it is extremely difficult to assess management performance. Similarly, with poor accounting standards, cash flows may be very difficult to verify, and this may reduce the menu of financial contracts available to investors and total credit in the economy (La Porta and López-de-Silanes, 1998). As in the case of creditor rights and shareholder rights, Table 2 shows that Latin America has lower accounting standards than industrial countries and the whole set of developing countries.[12] The poor accounting standards that characterize

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[11] In particular, we consider two specific formalism indexes eviction of tenants and check collection. They are calculated by adding up the following indices: (i) professionals vs. laymen, (ii) written vs. oral elements, (iii) legal justification, (iv) statutory regulation of evidence, (v) control of superior review, (vi) engagement formalities, and (vii) independent procedural actions. We rescale the index to range from 0-7, where a higher value indicates lower procedural formalism.

[12] Examining and rating companies' 1990 annual reports on their inclusion or omission of 90 items creates the index of accounting standards. These items fall into seven categories (general information, income statements, balance sheets, funds flow statement, accounting standards, stock data, and special items). A

Latin American countries underscore and amplify the severity of the corporate governance problem in the region.

4. Some Empirical Evidence

The methodology used to estimate the impact of corporate governance on capital flows volatility follows Galindo and Micco (2001) and focuses on the estimation of the following equation:

$$FLOWS_{i,t} = \alpha + \beta SHOCK_{i,t} + \gamma\left(GOV_i * SHOCK_{i,t}\right) + u_i + \tau_t + \varepsilon_{i,t} \tag{1}$$

where $FLOWS_{i,t}$ measures capital flows to country i in period t, $SHOCK_{i,t}$ is an external shock to country i in period t, GOV_i is a governance indicator for country i, u_i is a country fixed effect, τ_i is a time fixed effect, and $\varepsilon_{i,t}$ is the error term. If governance plays a role in attenuating the effect of external shocks on capital flows, we expect β and γ to have opposite signs. We introduce country fixed effects to control for country-specific factors that may affect the level of capital flows and use time dummies to control for international shocks to capital flows that are common to all countries. Therefore, time dummies control for the surge of capital flows in the early 1990s and the international financial crises of the late 1990s.[13]

In estimating Equation (1), we use annual data for up to 36 developing and emerging market countries for the 1990-2000 period.[14] We use two measures of capital flows, Foreign Direct Investments and Portfolio Flows (bonds and equities). In both cases, we normalize flows by average gross domestic product. In particular, our dependent variable is: $\dfrac{FLOW_{i,t}}{\overline{GDP}_i}$, where $\overline{GDP}_i$ is country i's average gross domestic product over the 1990-2000 period. We use average gross domestic product rather than

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minimum of three companies in each country was studied. The companies represent a cross-section of various industry groups where industrial companies numbered 70 percent while financial companies represented the remaining 30 percent.

[13] Notice that time dummies are correlated with external shock and dropping them improves the results discussed below.

[14] The countries in the sample are: Argentina, Bolivia, Brazil, Chile, Hong Kong, Colombia, Costa Rica, Dominican Republic, Ecuador, Egypt, El Salvador, Guatemala, Honduras, India, Indonesia, Israel, Jamaica, Jordan, Kenya, Malaysia, Mexico, Nigeria, Pakistan, Panama, Paraguay, Peru, Philippines, Singapore, South Africa, Sri Lanka, Thailand, Trinidad and Tobago, Turkey, Uruguay, Venezuela, and Zimbabwe.

current gross domestic product in order to isolate changes in capital flows from changes in gross domestic product.[15] We also use two types of external shocks: a real shock and a nominal shock. The real shock is an exogenous demand shock, expressed as the weighted average of the real growth rates of country i's trading partners. As weights, we use total export to each trading partner divided by country i's GDP. Additionally, the nominal shock is defined as $\frac{\overline{EDEBT_i}}{\overline{GDP_i}}(i_{US,t} - i_{US,t-1})$. Where $\overline{EDEBT}_i$ is country's i external debt over the 1990-2000 period and $\overline{GDP_i}$ is country's i average GDP over the 1990-2000 period. As before, we use averages to isolate the effect of interest rate shocks.[16] The nominal shock measures the increase in external debt service due to a change in foreign interest rate and it is expressed as the change in the US interest rate multiplied by average external debt expressed as a ratio to average GDP. In fact, Fernández-Arias (1995) provides a rationale for why such shocks are important for capital flows. We expect a positive correlation between real shocks and capital flows and a negative correlation between nominal shocks and capital flows. As measures of political governance, we use the Kaufmann, Kraay and Zoido-Lobaton (1999) indices of Rule of Law (ROL) and Effectiveness of the Judicial (EJ) and as measures of corporate governance we use the La Porta, López-de-Silanes, Shleifer and Vishny (1997) indexes of Shareholder Rights (SR) and Creditor Rights (CR).[17] We multiply SR and CR by ROL and construct two indexes aimed at measuring effective shareholder rights (EFFSR) and effective creditor rights (EFFCR), correspondingly. We also use the Djankov, La Porta, López-de-Silanes and Shleifer (2002) indexes of procedural formalism of dispute resolution (TEN indicates procedure formalism in evicting a tenant and CHECK measures procedural formalism in the collection of a check). Appendix 2 reports summary statistics for the data used in the empirical analysis.

We start by analyzing how real shocks affect foreign direct investment flows (Table 3). As expected, we always find a positive relationship between real external shocks and FDI flows. This implies that positive shocks lead to more foreign direct

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[15] Our capital flow data are from the IMF's World Economic Outlook database.

[16] It should be noted that weights do not add to one but to export share on GDP. Trade and GDP growth data are from the World Bank's World Development Indicators.

[17] Rather than the original, we use the updated version built by Galindo and Micco (2001).

investment and negative shock to less FDI; in other words, FDI is procyclical and amplifies external demand shocks. The first two columns of the table show that countries with better political governance (measured by Rule of Law and Efficiency of the judiciary) tend to exhibit a lower correlation between real external shocks and FDI flows. In the case of Rule of Law, for instance, a one standard deviation increase in governance reduces the sensitivity of FDI flows to external shocks by more than 20 percent (column 1) and the results for effectiveness of the judiciary are basically identical.[18] We find that creditor rights are even more important than political governance. The point estimates indicate that a one standard deviation increase in creditor rights reduces the sensitivity of FDI to external shocks by approximately 40 percent. At the same time, we find no impact of shareholder rights on the sensitivity of FDI to external shock. This last result is not surprising, because with FDI foreign investors acquire part of the control of the firm and therefore their decision should not be affected by an index that measures the protection of insiders. In fact, we expected shareholder rights to be an important determinant of portfolio equity flows but not FDI.

When we include both political and corporate governance indexes in the same regression (columns 5 and 6), we find that in some cases (for instance column 5) they are not individually significant, but a Wald test shows that they are jointly significant at five percent. Finally, if we interact corporate governance with political governance into an index of effective creditor rights, we find that such an index plays an important role in limiting the procyclicality of FDI flows (columns 7 and 8). Columns 9 and 10 test the role of procedural formalism. Again, we find that FDI to countries with lower levels of procedural formalism (measured by higher values of our rescaled the index) tends to have smaller responses to external demand shocks. We conclude that both political and corporate governance seem to play an important role in limiting the procyclicality of FDI flows to developing countries.

Next we tested whether nominal shocks had an effect on FDI flows to developing countries but found no correlation between the two variables. We also found no correlation between real shocks and portfolio flows to developing countries.[19] However,

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[18] It should be pointed out that there are some outliers in the regression. In particular, dropping Singapore somewhat weakens the results discussed above.
[19] We do not report the results because they are not informative.

we did find a significant correlation between portfolio flows and nominal shocks and, as expected, we find that increases in the US rate lead to lower portfolio flows to developing countries (first row of Table 4). The first four columns of Table 4 also show that better political or corporate governance reduces the response of portfolio flows to external nominal shocks. It should be pointed out, however, that the results are either insignificant (in the case of creditor rights) or only marginally statistically significant. As expected, we now find that shareholder rights are more important than creditor rights. When we include both political and corporate governance indicators in the same regression (columns 5-8), we find that all the coefficients have the same sign but that they are rarely statistically significant. Again, tests on the difference between coefficients show that political and corporate governance are jointly significant. Columns 9-12 show that effective creditor rights and effective shareholder rights play a significant role in limiting how portfolio flows responds to external nominal shocks. This supports our previous finding that both political and corporate governance are important in limiting how capital flows to developing country respond to external factors.[20] The last two columns of the table, however, show that there is no significant correlation between portfolio flows and the interaction between nominal shocks and procedural formalism.

Following the work of Calvo, Leiderman and Reinhart (1993) many authors have shown the importance of external factors in determining capital flows to developing and emerging market countries. The purpose of this section was to test whether better corporate governance may play a role in limiting the impact of external factors.[21] It is fair to conclude that real external shocks are important determinants of foreign direct investment flows and external interest rate shocks are important determinants of portfolio flows. Furthermore, we also find evidence for the fact that better corporate governance reduces the sensitivity of capital flows to these external shocks. This is an important result because the growth experience of most developing countries is stunted by high levels of volatility, and the procyclicality of capital flows contributes to these high levels

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[20] It should be pointed out that the results of the regressions of Table 4 are partly affected by an important outlier (Hong Kong). If Hong Kong is dropped from the sample some of the coefficient become statistically insignificant and decrease in magnitude.

[21] While our results may not be extremely robust, it should also pointed out that we control for a host of factors (included in time and country dummies) that tend to be highly collinear with our variables of

of volatility (Inter-American Development Bank, 1995). The main message of this section is that, by improving corporate governance, developing countries can limit the procyclicality of capital flows and hence limit the volatility of their economies.

5. Conclusions

According to recent research, external factors and political governance considerations are key determinants of capital flows in Latin America. We postulate that corporate governance is a crucial determinant as well. In fact, in this paper we look at the relationship between corporate governance and private capital flows to Latin American countries, in particular, foreign direct investment and portfolio flows. We show that capital flows to Latin America tend to be very volatile and influenced by external factors. Additionally, while we show that the region exhibits low levels of political governance, we also show that there are relative and absolute low levels of corporate governance, as measured by indexes of creditor rights, shareholder rights, and accounting standards. In this context, we pursue the idea that better corporate governance can help in limiting the impact of external shocks on capital flows to developing countries in general, and Latin America in particular. In fact, we find that real external shocks are important determinants of foreign direct investment flows and that external interest rate shocks are important determinants of portfolio flows. Furthermore, we also find evidence for the fact that better governance reduces the sensitivity of capital flows to these external shocks. As explained above, this is relevant given the fact the performance of emerging markets, such as Latin American countries, are typically stunted by high level of volatility and the procyclicality of capital flows. Improving corporate governance can limit the procyclicality of capital flows and hence limit the volatility of their economies.

While one may conclude that the results of this paper yield the simple policy prescription that, by improving governance, Latin American countries can limit capital flow volatility, things are not as easy as they seem. There is, in fact, evidence that corporate governance and political governance tend to be affected by historically predetermined factors (like the origin of the legal code) and, hence, cannot be easily

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interest and hence capture part of their effects. When we drop time dummies we obtain much stronger results.

improved. On the more optimistic side, there is some evidence that by adopting better governance standards, individual firms can improve their performance even in countries characterized by a poor political governance environment. These findings seem to indicate that, in order to limit capital flows' sensitivity to external shocks, countries in the region should, besides addressing political governance issues, provide incentives for better corporate governance as well.

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Figure 1. LAC7 Countries: Private and Official Net Capital Flows (1990-2001)
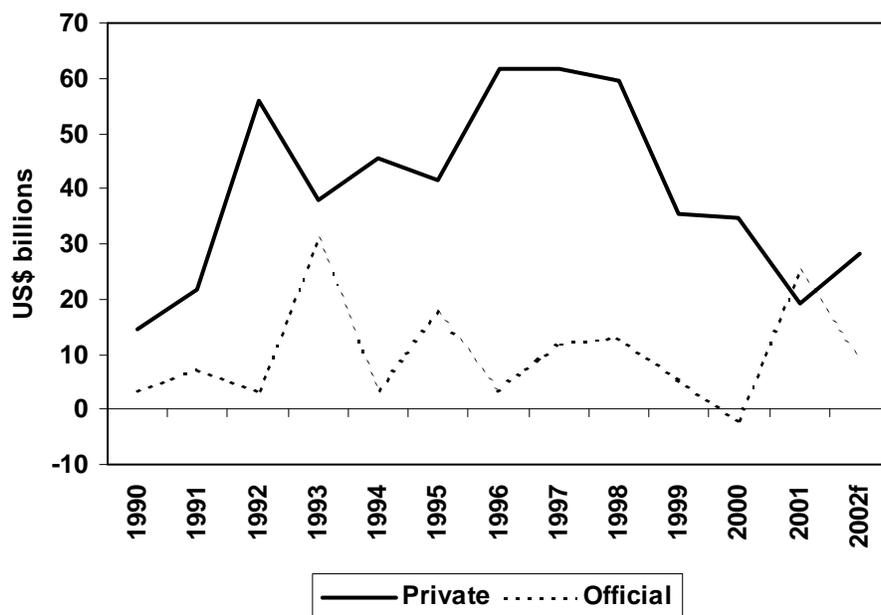
Source: WEO (IMF).

Figure 2.

LAC-7 Business Cycle and Capital Flows

(GDP and Non-FDI Capital Flows, last four quarters)
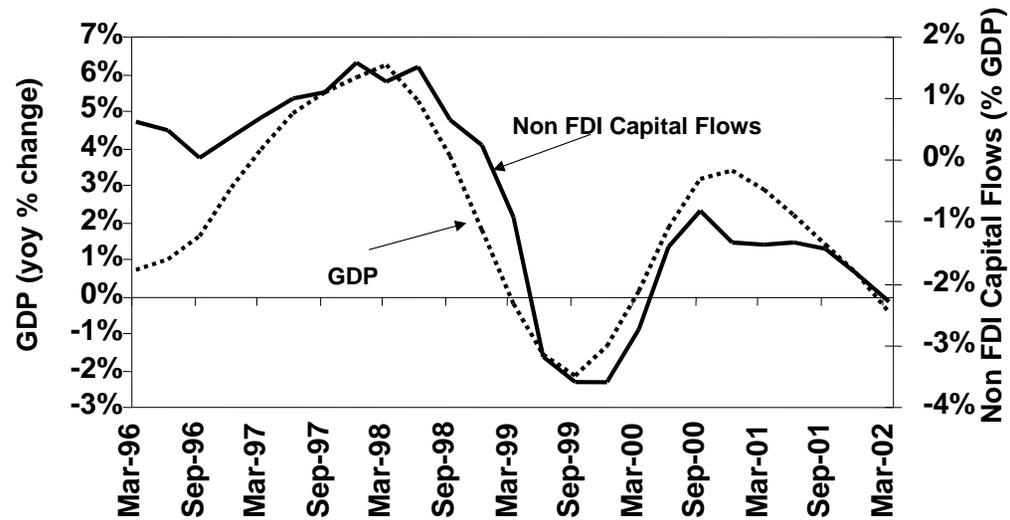
**Includes Argentina, Brazil, Chile, Colombia, Mexico, Peru, Venezuela.
Source: Corresponding Central Banks**

Source: IFS (IMF) and authors' calculations.

Figure 3.

Capital Flow Reversals

Median over the period 1990-2001, Log scale
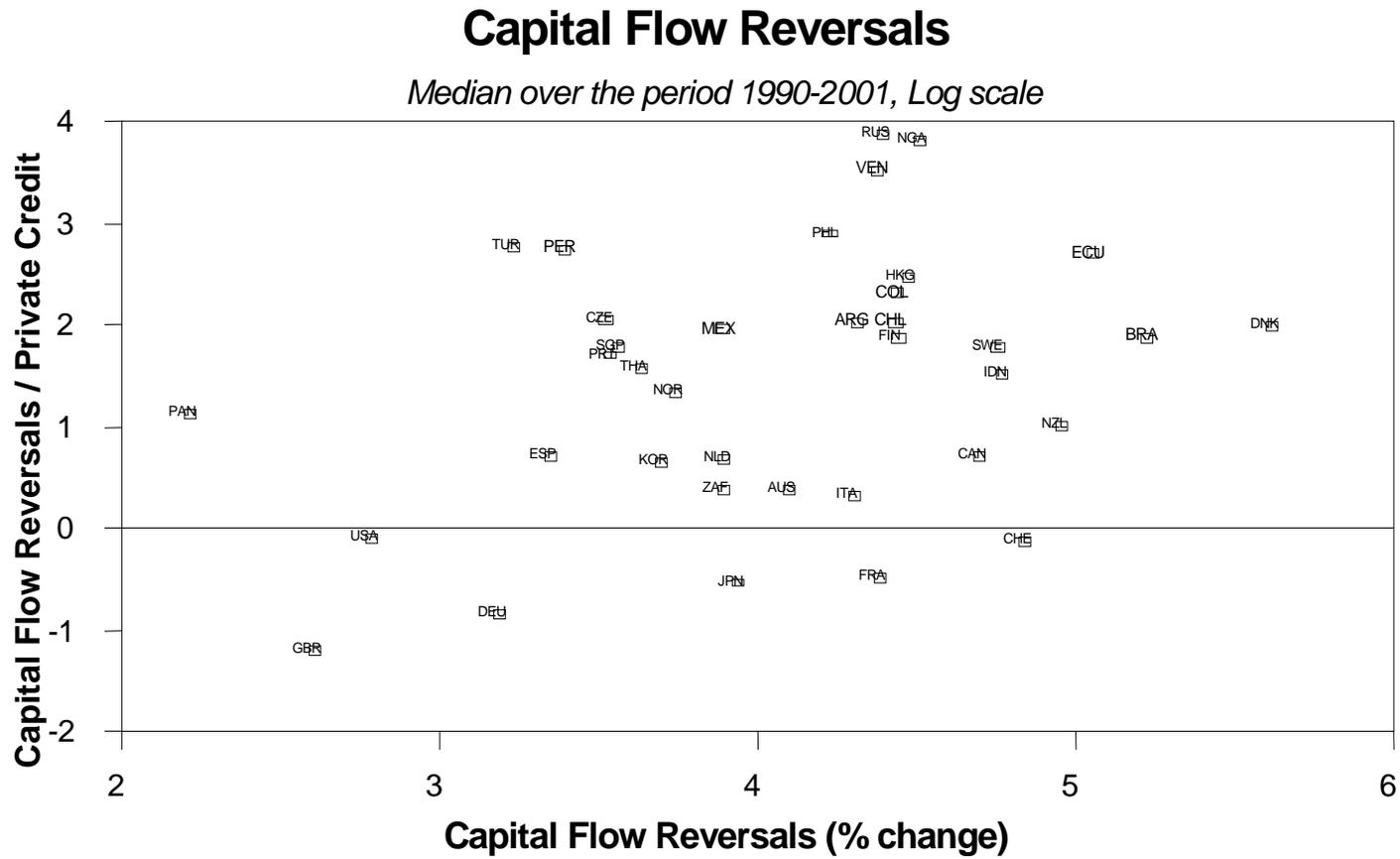
Source: IFS (IMF) and authors' calculations.

Figure 4. LAC7 Countries: Composition of Private Capital Flows (1990-2001)
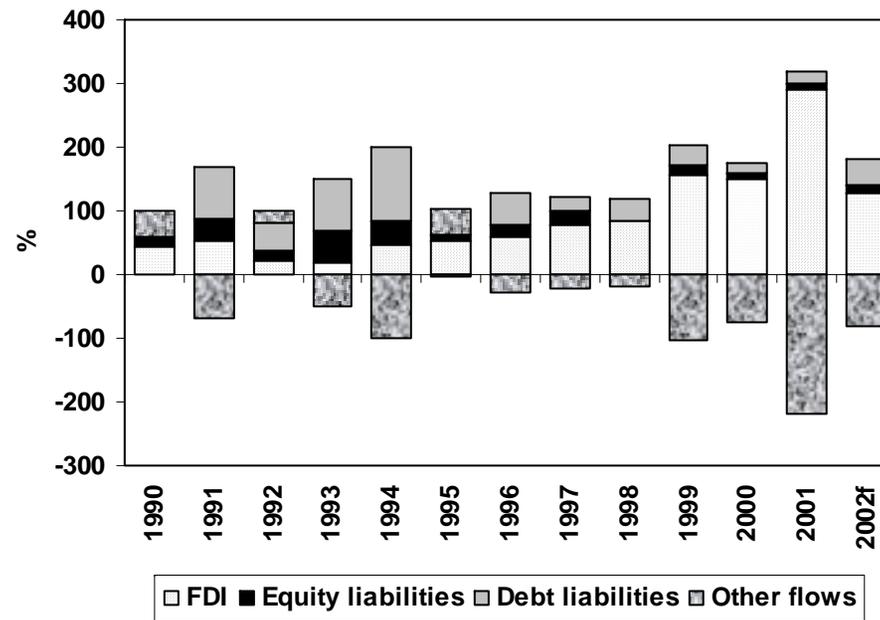
Source: WEO (IMF).

Table 1. Difference in Bond Spreads with Minimum Pre-Crisis Levels

	1999	2000	2001	2002
EMBI +	662	307	393	284
EMBI + w/o Argentina	771	329	273	173

Source: JP Morgan Chase. *Note:* Values are yearly averages.

Table 2. Corporate Governance Measures Around the World

Corporate Governance	LAC	Rest of World	Developing Countries	Industrial
Rights of Creditors	1.00	2.51	2.11	1.80
Rights of Shareholders (Anti-Director Rights)	2.26	3.11	2.72	3.00
Accounting Standards	46.25	64.54	55.10	66.20
Eviction of Tenant (rescaled)	4.30	3.58	3.85	3.34
Check Collection (rescaled)	4.33	3.43	3.77	3.13

Source: La Porta, López-de-Silanes, Shleifer and Vishny (1997); Galindo and Micco (2001); Djankov, La Porta, López-de-Silanes and Shleifer (2002).

Table 3. Real Shocks and Foreign Direct Investment Flows

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	fdi_r	fdi_r	fdi_r	fdi_r	fdi_r	fdi_r	fdi_r	fdi_r	fdi_r	fdi_r
Real Shock	1.606	3.400	2.332	0.156	3.054	3.987	1.740	1.439	3.085	1.555
	(0.772)**	(1.325)**	(0.860)***	(0.618)	(1.007)***	(1.371)***	(0.956)*	(1.497)	(0.886)***	(0.650)**
RSH_RL	-0.185				-0.185		0.243			
	(0.101)*				(0.135)		(0.251)			
RSH_EJ		-0.341				-0.150		0.250		
		(0.139)**				(0.169)		(0.230)		
RSH_CR			-0.547		-0.360	-0.616				
			(0.222)**		(0.260)	(0.274)**				
RSH_EFFCR							-0.112	-0.119		
							(0.048)**	(0.036)***		
RSH_SR				0.022						
				(0.157)						
RSH_CHEK										-0.366
										(0.171)**
RSH_TEN									-1.062	
									(0.321)***	
CONST.	0.006	0.005	0.005	0.007	0.004	0.003	0.003	0.003	0.005	0.006
	(0.004)*	(0.004)	(0.004)	(0.004)**	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)*
N. OBS.	360	300	350	360	350	290	350	290	360	360
N. COUNTRIES	36	30	35	36	35	29	35	29	36	36
R2	0.32	0.31	0.33	0.31	0.33	0.32	0.34	0.34	0.34	0.32

Standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Note: The dependent variable is foreign direct investment normalized by average gross domestic product over the period 1990-2000.

Table 4. Nominal Shocks and Portfolio Flows

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	pp_r	pp_r	pp_r	pp_r	pp_r	pp_r	pp_r	pp_r	pp_r	pp_r	pp_r	pp_r	pp_r	pp_r
IRSH	-1.364	-2.734	-1.286	-1.031	-1.631	-3.184	-1.681	-2.955	-1.431	-3.244	-0.818	-2.300	-0.838	-0.690
	(0.528)**	(1.091)**	(0.575)**	(0.464)**	(0.612)***	(1.202)***	(0.561)***	(1.110)***	(0.557)**	(1.126)***	(0.549)	(1.083)**	(0.840)	(0.747)
IR_RL	0.236				0.199		0.231		0.058		-0.003			
	(0.113)**				(0.122)		(0.113)**		(0.145)		(0.136)			
IR_EJ		0.241				0.192		0.233		0.192		0.166		
		(0.132)*				(0.153)		(0.132)*		(0.152)		(0.132)		
IR_CR			0.145		0.093	0.195								
			(0.135)		(0.138)	(0.169)								
IR_EFFCR									0.063	0.084				
									(0.033)*	(0.033)**				
IR_SR				0.289			0.280	0.236						
				(0.172)*			(0.171)	(0.220)						
IR_EFFSR											0.105	0.108		
											(0.034)***	(0.035)***		
IR_CHECK														0.161
														(0.232)
IR_TEN													0.208	
													(0.269)	
CONST.	0.007	0.005	0.001	0.007	0.003	0.000	0.007	0.004	0.003	0.002	0.007	0.001	0.012	0.012
	(0.006)	(0.007)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.007)	(0.006)	(0.007)	(0.005)	(0.007)	(0.005)**	(0.005)**
N. OBS.	360	300	350	360	350	290	360	300	350	290	360	300	288	288
N. COUNTRIS	36	30	35	36	35	29	36	30	35	29	36	30	36	36
R2	0.06	0.08	0.06	0.06	0.07	0.08	0.07	0.08	0.08	0.10	0.09	0.11	0.02	0.02

Standard errors in parentheses * significant at 10%; ** significant at 5%; *** significant at 1%.

Note: The dependent variable is portfolio flows (bonds and equities) normalized by average gross domestic product over the 1990-2000 period.

Appendix 1. Description of Variables.

Variable	Description
FDI	Annual Foreign Direct Investment for the 1990-2000 period normalized by average gross domestic product over the period 1990-2000. Source: IMF's World Economic Outlook
Portfolio Flows	Annual Portfolio Flow for the 1990-2000 period normalized by average gross domestic product over the period 1990-2000. Source: IMF's World Economic Outlook
Real Shock	Exogenous demand shock, expressed as the weighted average of the real growth rates of country i's trading partners. As weights, we use total export to each trading partner divided by country i's GDP. Source: World Bank's World Development Indicators.
Nominal Shock	The nominal shock is expressed as the change in the US interest rate multiplied by average external debt expressed as a ratio to average GDP. Source: World Bank's World Development Indicators.
Rule of Law	Assessment of the law and order tradition in the country produced by the country-risk rating agency International Country Risk. Scale from 0 to 10 with lower scores for less tradition for law and order. Source: Kaufmann et al. (1999).
Effectiveness of judicial System	Assessment of the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms" produced by the country-risk rating agency International Country Risk. Scale from 0 to 10 with lower scores lower efficiency levels. Source: Kaufmann et al. (1999).
Shareholder Rights	Shareholders rights is defined by aggregating anti-director rights measures into an index. The index is formed by adding 1 when: the country allows shareholders to mail their proxy vote to the firm; shareholders are not required to deposit their shares prior to the general shareholders' meeting; cumulative voting or proportional representation of minorities in the board of directors is allowed; an oppressed minorities mechanism is in place; the minimum percentage of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting is less than or equal to ten (sample median); or shareholders have preemptive rights that can only be waived by a shareholders' vote. The index ranges from 0 to 6. Source: La porta et al. (1997); Galindo and Micco (2001).
Effectiveness Shareholder Rights	Shareholder Rights Index multiply by Rule of law.
Creditor Rights	Creditor rights is defined as an index formed by adding 1 when (i) the country imposes restrictions, such as creditors' consent or minimum dividends to file for reorganization; (ii) secured creditors are able to gain possession of their security once the reorganization petition has been approved; (iii) secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm; and (iv) the debtor does not retain the administration of its property pending the resolution of the reorganization. The resulting index thus, ranges from 0 to 4. Source: La Porta et al. (1997); Galindo and Micco (2001).
Effectiveness Creditor Rights	Creditor Rights Index multiply by Rule of law.
Formalism Index	The index measures substantive and procedural statutory intervention in judicial cases at lower-level civil trial courts, and is formed by adding up the following indices: (i) professionals vs. laymen, (ii) written vs. oral elements, (iii) legal justification, (iv) statutory regulation of evidence, (v) control of superior review, (vi) engagement formalities, and (vii) independent procedural actions. We rescale the original index, so that a higher value indicates lower procedural formalism. Source: Djankov et al. (2002)
Accounting Standards	Index created by examining and rating companies' 1990 annual report on their inclusion or omission of 90 items. These item fall into seven categories (general information, income statements, balance sheet, funds flow statement, accounting standards, stock data and special items). The index ranges from 0 to 100. Source: La Porta et al. (1997).

Appendix 2. Summary Statistics

Variable Name	Obs	Mean	Std. Dev.	Min	Max
FDI	360	0.021	0.028	-0.022	0.182
Portfolio Flows	360	0.005	0.026	-0.137	0.256
Real Shock	360	0.008	0.013	-0.025	0.074
Nominal Shock	324	-0.001	0.008	-0.035	0.033
Rule of Law	36	4.458	1.956	1.320	8.570
Effectiveness of the Judicial System	30	6.741	1.803	2.500	10.000
Shareholder Rights	36	2.722	1.386	1.000	5.000
Effectiveness Shareholder Rights	36	12.921	10.328	1.320	41.100
Creditor Rights	35	2.114	1.530	0.000	4.000
Effectiveness Creditor Rights	35	10.344	9.216	0.000	34.280
Accounting Standards	47	60.795	13.566	24.000	83.000
Eviction of Tenant (rescaled)	36	1.800	0.975	0.000	3.77
Check Collection (rescaled)	36	2.080	1.346	0.000	5.28