

Ceballos, Francisco; Didier, Tatiana; Schmukler, Sergio L.

**Working Paper**

## Financial globalization in emerging countries: Diversification vs. offshoring

ADB Working Paper, No. 389

**Provided in Cooperation with:**

Asian Development Bank Institute (ADBI), Tokyo

*Suggested Citation:* Ceballos, Francisco; Didier, Tatiana; Schmukler, Sergio L. (2012) : Financial globalization in emerging countries: Diversification vs. offshoring, ADB Working Paper, No. 389, Asian Development Bank Institute (ADBI), Tokyo

This Version is available at:

<https://hdl.handle.net/10419/101141>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



## **ADB Working Paper Series**

### **Financial Globalization in Emerging Countries: Diversification vs. Offshoring**

---

Francisco Ceballos,  
Tatiana Didier, and  
Sergio L. Schmukler

No. 389  
October 2012

**Asian Development Bank Institute**

Francisco Ceballos is a consultant at the World Bank's Development Research Group. Tatiana Didier is research economist at the World Bank's Office of the Chief Economist for Latin America and the Caribbean. Sergio L. Schmukler is lead economist at the World Bank's Development Research Group.

This paper derives from the background work prepared for the World Bank Flagship Report "Financial Development in Latin America and the Caribbean: The Road Ahead." We received very helpful comments from Augusto de la Torre, Alain Ize, Eduardo Levy Yeyati, Eswar Prasad, and Luis Servén, among many others, and participants at presentations held at the ADBI (Tokyo), American University (Washington), Casas das Garcas (Rio de Janeiro), the Central Bank of Brazil (Brasilia), the Central Bank of Colombia and the Global Development Network Annual Meeting (Bogota), the Chamber of Commerce (Lima), the IMF (Washington), the ITAM and the National Banking and Securities Commission (Mexico City), the NIPFP-DEA Workshop (Delhi), and the World Bank (Washington, DC). We are grateful to Luciano Cohan, Juan Cuattromo, Gustavo Meza, Julian Kozlowski, Lucas Nuñez, Paula Pedro, Virginia Poggio, Andres Schneider, Patricio Valenzuela, Luis Fernando Vieira, and Gabriel Zelpe for outstanding research assistance at different stages of this project. For help in gathering unique data, we thank the ADR Team from the Bank of New York, among many others. We thank the Office of the Chief Economist of the Latin American and the Caribbean Region, the SFLAP Trust Fund, and the Knowledge for Change Program (KCP) of the World Bank for financial support.

The views expressed in this paper are the views of the author and do not necessarily reflect the views or policies of ADBI, the ADB, its Board of Directors, the World Bank, or the governments they represent. ADBI does not guarantee the accuracy of the data included in this paper and accepts no responsibility for any consequences of their use. Terminology used may not necessarily be consistent with ADB official terms.

The Working Paper series is a continuation of the formerly named Discussion Paper series; the numbering of the papers continued without interruption or change. ADBI's working papers reflect initial ideas on a topic and are posted online for discussion. ADBI encourages readers to post their comments on the main page for each working paper (given in the citation below). Some working papers may develop into other forms of publication.

Suggested citation:

Ceballos, F., T. Didier, and S. L. Schmukler. 2012. Financial Globalization in Emerging Countries: Diversification vs. Offshoring. ADBI Working Paper 389. Tokyo: Asian Development Bank Institute. Available: <http://www.adbi.org/working-paper/2012/10/18/5267.financial.globalization.emerging.countries/>

Please contact the authors for information about this paper.

Email addresses: [fceballos1@worldbank.org](mailto:fceballos1@worldbank.org), [tdidier@worldbank.org](mailto:tdidier@worldbank.org) and [sschmukler@worldbank.org](mailto:sschmukler@worldbank.org).

Asian Development Bank Institute  
Kasumigaseki Building 8F  
3-2-5 Kasumigaseki, Chiyoda-ku  
Tokyo 100-6008, Japan

Tel: +81-3-3593-5500  
Fax: +81-3-3593-5571  
URL: [www.adbi.org](http://www.adbi.org)  
E-mail: [info@adbi.org](mailto:info@adbi.org)

© 2012 Asian Development Bank Institute

**Abstract**

Financial globalization has gathered attention since the early 1990s because of its macro-financial and crisis implications and its perceived large expansion. But financial globalization has taken different forms over time. This paper examines two important concurrent dimensions of financial globalization relevant for emerging countries: diversification and offshoring. The diversification dimension of globalization refers to the increase in foreign assets and liabilities in countries' portfolios. Offshoring, instead, is related to the reallocation of financial activities to international markets, namely, to where transactions take place regardless of who holds the assets. We find that globalization via the diversification channel has expanded throughout during the 2000s as domestic residents invested more abroad and foreigners increased their domestic investments. However, financial globalization via offshoring has displayed more mixed patterns, with variations across markets and countries. We also show that the nature of financing through both diversification and offshoring has improved for emerging countries.

**JEL Classification:** F36, G15, G20

## Contents

1.	Introduction.....	3
2.	The Diversification and Offshoring Dimensions.....	6
3.	Financial Diversification .....	8
4.	Financial Offshoring.....	2
5.	Conclusions .....	16
	References .....	18

## 1. INTRODUCTION

The interest in financial globalization has increased substantially as developed and emerging countries became more integrated with the global financial system, and especially because of the large perceived expansion in international transactions starting in the early 1990s (Obstfeld and Taylor 2004; Lane and Milesi-Ferreti 2007; Obstfeld 2011). Since then, many have questioned the links between financial globalization and economic growth and have revisited the overall costs and benefits of financial integration (Rodrik 1998; Stiglitz 2002; Kose, Prasad, Rogoff, and Wei 2010). In principle, financial globalization should increase access to capital and lower its costs (Foerster and Karolyi 1999; Stulz 1999; Errunza and Miller 2000; Errunza 2001). But financial globalization may also expose countries to foreign shocks and crises, thus raising several new macro-financial challenges, such as the regulation and use of domestic financial markets and the conduct of macro-prudential policies (Dornbusch, Goldfajn, and Valdes 1995; Calvo and Reinhart 2000; Allen and Gale 2000; Reinhart and Reinhart 2009; ADBI 2010; Calvo 2011).

Despite all the attention to financial globalization, its concept and extent have remained somewhat elusive. For example, different authors have used alternatively net capital flows, gross capital flows, and country portfolios as measures of financial globalization (Lane and Milesi-Ferretti 2001 and 2007; Kraay, Loayza, Servén, and Ventura 2005; Devereux 2007; Gourinchas and Rey 2007; Reinhart and Reinhart 2009; Broner, Didier, Erce, and Schmukler 2010). Many have also measured globalization through the participation of foreigners in domestic markets, while a number of other papers have focused on the access of domestic firms and governments to foreign capital (Forbes 2006; Kose, Prasad, Rogoff, and Wei 2010; Henry 2007; Gozzi, Levine, and Schmukler 2010). Moreover, while there has been much discussion on the increased financial globalization around the world, little is known about whether the trend of sharp globalization that took place during the 1990s has continued during the 2000s and whether the nature of financial globalization has changed over time. One exception is Levy Yeyati and Williams (2011).

In this paper, we explore two dimensions of the financial globalization process during the 1990s and 2000s.<sup>1</sup> The first is *financial diversification*, that is, the cross-country holdings of foreign assets and liabilities. As home bias is reduced, domestic investors increase their investments abroad and foreigners expand their investments at home. This first dimension of globalization is determined by *who* holds the assets and liabilities in domestic and international markets. The second dimension is *financial offshoring*, that is, the use of foreign jurisdictions to conduct financial transactions. In particular, we investigate how the use of foreign markets is

---

<sup>1</sup> Before the Great Depression, several emerging countries had access to international markets. But that earlier globalization period seems more restricted than the one experienced after 1990.

associated with the use of domestic markets. This second dimension of globalization is determined by *where* assets are traded, irrespective of *who* is trading them.

Although we study evidence from around the world, including developed countries, we concentrate our analysis on emerging countries. The latter are perceived to be the ones that produced the most significant financial liberalization since the early 1990s (Kaminsky and Schmukler 2008) and a large part of the literature has focused on the effects of globalization on these countries, reaching very different conclusions. Our analysis is based on a sample of countries from a selected set of emerging regions in Asia, Eastern Europe, and Latin America for which the challenges associated with the process of financial globalization are particularly relevant. We also analyze trends in G7 countries and other developed countries.<sup>2</sup> Moreover, we focus on the 1990s and 2000s because the extent of financial globalization before 1990 was rather limited, especially for the broad spectrum of emerging countries.

Our findings suggest that, according to widely used *de facto* measures, financial diversification continued rising across emerging countries during the 2000s when compared to the 1990s. Namely, the stock of foreign assets and liabilities (a stock measure) and capital flows by domestic and foreign agents (a gross flow measure) increased.<sup>3</sup> Interestingly, this trend has been more accentuated in developed countries than in emerging ones. Despite starting from a higher level of financial diversification, developed countries experienced on average a greater expansion of flows as a percentage of gross domestic product (GDP) and a significantly larger increase in the stock of foreign assets and liabilities during the 2000s. Therefore, while the notion that emerging countries became more financially globalized during the 2000s seems correct, in relative terms they lagged behind the deeper globalization process observed across developed countries. Furthermore, this increased financial globalization has been characterized by a two-way process that entailed a higher participation of both foreigners in local markets and domestic agents in foreign markets. Interestingly, the large expansion in cross-country holdings led by greater volumes of capital flows has not been matched by an expansion in net capital flows (Broner, Didier, Erce, and Schmukler 2010). Valuation effects

---

<sup>2</sup> The following regions (countries) are included in our sample: Asia (Indonesia, Malaysia, Philippines, The Republic of Korea, and Thailand), The People's Republic of China, Eastern Europe (Croatia, Czech Republic, Hungary, Lithuania, Poland, Russian Federation, and Turkey), G7 (Canada, France, Germany, Italy, Japan, United Kingdom, and United States), India, Latin America (Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Uruguay), and other developed countries (Australia, Finland, Israel, New Zealand, Norway, Spain, and Sweden).

<sup>3</sup> Note, however, that these measures of diversification capture only part of the financial globalization process, which also entails the ability to trade assets across countries, the ability of financial institutions to operate in different jurisdictions (most notably foreign banks operating at home), and the equalization of asset prices and returns across borders (even without actual transactions taking place). These other aspects of financial globalization are nonetheless beyond the scope of this paper, and some of them are related to *de jure* measures of financial globalization.



have been one of the drivers of this increase in financial diversification, especially for equity investments.

A noteworthy feature of the process of financial diversification during the 2000s is the safer form of integration of many emerging countries arising from the changing structure of their external assets and liabilities. More specifically, emerging countries have typically become net creditors in debt assets and net debtors in equity assets. This contrasts sharply with the structure prevalent in the 1990s, when emerging countries held large debtor positions, especially in debt assets. This new structure of foreign assets and liabilities is particularly beneficial in times of turbulence when balance sheet effects work in their favor. For example, during global crises the local currency value of emerging countries' foreign assets tends to increase given that they own hard currency debt (which appreciates vis-à-vis emerging countries' currencies), while that of their foreign liabilities shrinks given that they owe equity to the rest of the world. As observed during the global financial crisis of 2008–2009, with the collapse in economic growth and asset valuations in financial markets, the local currency value of emerging countries' equity liabilities contracted. This seems to have substantially benefited emerging countries at the expense of some developed countries, particularly the U.S., and might have helped strengthen their resilience to the global financial crisis (Gourinchas and Rey 2007; Lane and Milesi-Ferretti 2010; Kose and Prasad 2010; Didier, Hevia, and Schmukler 2011).

In contrast to the widespread expansion in international financial diversification during the 2000s, we provide evidence of more mixed patterns regarding the evolution of financial offshoring. A large expansion occurred in the 1990s, mostly because it was basically non-existent before (at least in recent history). But the relatively large offshoring of the 1990s was not widely sustained during the 2000s as its expansion varied significantly across countries and markets. For example, capital raising activity in foreign markets through syndicated loans expanded around the world as a percentage of GDP during the 2000s, and especially so across developed countries. On the other hand, capital raising activity through debt and equity issues as a percentage of GDP has remained somewhat stable in the 2000s, and even declined in several countries. Moreover, offshoring has remained highly concentrated, that is, not many firms have participated in this process.

Compared to domestic markets, there is also heterogeneity in the use of foreign markets. For example, in some emerging countries and in developed countries more broadly, offshoring through corporate bonds has been gaining importance and foreign markets have become relatively important as a source of new financing for the private sector. However, when equity markets are analyzed, this trend is limited to a much smaller set of countries, being particularly marked in the Republic of China (PRC) and Latin American countries. In addition, for this latter set of countries, the apparent migration to foreign equity markets by the private sector has been accompanied by increased liquidity abroad relative to domestic liquidity, suggesting a shift of equity trading to foreign markets. In contrast, public sector bond financing has shifted

away from foreign markets towards domestic markets for most countries in our sample, reflecting to some extent the authorities' attempts to reduce their dollar exposure and to develop their local currency public debt markets, which have proved successful to some extent.

The nature of foreign financing has changed too, in general towards the better across emerging countries. Mirroring changes in local bond markets, there has been a reduction in credit risk in foreign markets through an increase in maturity and a lower degree of dollarization. For instance, bond maturities at issuance abroad were longer in the 2000s compared to the 1990s for both the private and public sectors in emerging countries. Moreover, some firms, as well as some governments, were able to place local currency bond issues abroad, although foreign placements typically remain almost exclusively denominated in foreign currency.

In sum, since the early 1990s there has been a broad-based increase in financial diversification through larger gross capital flows, tightening the linkages across countries. But this trend was not accompanied by such a widespread increase in financial offshoring, through the use of foreign capital markets as a financing source or trading place.

The rest of the paper is organized as follows. Section 2 discusses in more detail the diversification and offshoring dimensions of globalization. Section 3 documents and provides a broad overview of where emerging countries stand on commonly used and simple measures of financial diversification. Section 4 examines financial offshoring, evaluating recent trends for both the public and private sectors in absolute and relative terms (i.e., the relative size of domestic and foreign capital markets for financial activities). Section 5 concludes with a discussion of some of the issues for further research regarding financial globalization.

## **2. THE DIVERSIFICATION AND OFFSHORING DIMENSIONS**

The diversification dimension of financial globalization is macroeconomic in essence. It relates to country-level capital flows and gross foreign positions in assets and liabilities—that is, domestic residents investing in foreign markets and foreigners at home. In theory, this process allows risk to be diversified more efficiently and provides opportunities for exploiting cross-border risk-adjusted return differentials, effectively exerting pressure to equalize returns across countries and instruments. In addition to enhancing the efficiency of resource allocation, the increased degree of financial diversification might play an important role in the development of local capital markets. It can enhance liquidity, boost research, improve the quantity and quality of information available, increase transparency, and promote the adoption of better corporate governance practices, thereby reducing agency problems.

Despite these positive effects, the process of financial diversification might also have its downsides. Over the years, countries have witnessed widespread problems associated with volatile capital flows that led to heightened booms and bust patterns. In particular, surges in capital inflows to countries with shallow domestic financial markets and a limited menu of financial assets can generate systemic problems. Increased diversification of financial systems can also be associated with a greater exposure to external crises through the financial channel. This channel often involves international investors (“common creditors”) in the financial centers that propagate shocks across the various countries in their portfolios in response to changes in liquidity, asset quality, or other factors.<sup>4</sup> Thus, a crisis in one country can prompt international investors to sell off assets or curtail lending to other countries. To the extent that these patterns characterize the behavior of foreign investors more broadly, a greater dependence on foreign financing might bring additional volatility to domestic economies by importing the fluctuations in international markets. Furthermore, because foreigners tend to provide financing in foreign currency, their involvement can lead to currency mismatches. Similarly, while domestic residents’ investments abroad might help smooth their consumption, such investments may also facilitate capital flight episodes caused by deteriorating conditions at home (due to risk of devaluation, default, or expropriation), which, other things equal, can reduce the capital available for domestic financing.

In contrast to the macroeconomic essence of financial diversification, the offshoring dimension of globalization is mainly microeconomic and is related to the functioning of the financial sector. This dimension is based on the use by local residents of offshore (or external) markets or the use of foreign intermediaries (rather than onshore ones). Instead of issuing a stock locally, a firm might prefer to list it on a foreign exchange. The tradeoffs inherent to the use of domestic and foreign markets are somewhat different in nature than those implied by the diversification dimension, and hence entail different dynamics. A number of reasons could be behind offshoring, including access to markets with greater depth and liquidity as well as better regulatory environments. The financial services provided offshore may also be cheaper or have specific features that make them preferable for specific transactions. Thus, domestic and offshore markets may complement each other (Henderson, Jegadeesh, and Weisbach 2006; Gozzi, Levine, and Schmukler 2010). When domestic and offshore activities are complements, the correlation between financial development (understood as deeper domestic capital

---

<sup>4</sup> When leveraged investors such as banks and hedge funds face regulatory requirements, internal provisioning practices, or margin calls, they might rebalance their portfolios by selling their asset holdings in other countries. When open-end mutual funds foresee future redemptions after a shock in one country, they might raise cash by selling assets in other countries. See, for example, Kaminsky and Reinhart (2000), Martinez Peria, Powell, and Vladkova-Hollar (2005), and Cetorelli and Goldberg (2011) for the role of banks. Borensztein and Gelos (2003), Kaminsky, Lyons, and Schmukler (2004), Broner, Gelos, and Reinhart (2006), and Raddatz and Schmukler (2011), among others, discuss the role of mutual funds.

markets) and financial offshoring might be positive as firms and agents use both markets for different purposes.

Nonetheless, domestic and international markets might also be substitutes and the correlation between financial activities in these markets might turn negative. An emblematic case is the use of more developed financial centers by firms and agents from emerging countries with relatively unsophisticated financial markets. Furthermore, increased offshoring may also be associated with some negative spillovers. For example, increased trading activity in foreign markets might have adverse effects on the liquidity of domestic stock markets through different channels (Levine and Schmukler 2007). Issuing securities abroad may shift a firm's trading volume out of the domestic market, a so called "liquidity migration" effect. Moreover, it may lead to a drop in the trading and liquidity of stocks from the remaining domestic firms.<sup>5</sup> Because not all companies can access international markets, the negative externalities to domestic firms can be sizeable. In particular, as smaller firms typically remain constrained to local financing sources, such a migration can reduce not only the liquidity of the remaining firms in local markets, but also their ability to raise capital, jeopardizing the intended broad base nature of domestic capital markets.

### 3. FINANCIAL DIVERSIFICATION

The financial diversification dimension of financial globalization can be generally analyzed through both *de jure* and *de facto* measures. While the former is based on regulations and restrictions, including capital flow controls, the latter is related to the intensity of cross-border movements of capital. As these two types of measures are not necessarily closely correlated, some recent papers have leaned towards the more practical relevance of *de facto* measures (Kose, Prasad, Rogoff, and Wei 2010). We thus examine two commonly used *de facto* measures in the financial globalization literature: a stock-based one (the stock of foreign assets and liabilities compiled by Lane and Milesi-Ferretti 2007) and a flow-based one (gross

---

<sup>5</sup> The negative effect on the remaining domestic firms might happen through two effects. The first one ("negative spillovers") is linked with the increase in cost per trade at home due to fixed costs. The second effect ("domestic trade diversion") follows from the fact that a firm's internationalization is related to improvements in its reputation, disclosure standards, analyst coverage, and shareholder base, which could induce investors to shift their attention away from firms trading onshore. Levine and Schmukler (2007) find empirical evidence of a significant negative effect of offshoring on domestic stock market liquidity. However, others argue instead that offshoring may enhance integration and thereby stimulate domestic trading and boost the liquidity of domestic firms. See, for example, Alexander, Eun, and Janakiraman (1987), Domowitz, Glen, and Madhavan (1998), and Hargis (2000).

capital flows by domestic and foreign residents compiled by Broner, Didier, Erce, and Schmukler 2010).

As documented in a number of papers, these *de facto* measures suggest an increasingly globalized world. Figure 1 shows the level of cross-border capital flows and the stock of cross-border assets and liabilities, scaled by GDP, for several emerging and developed regions during the 1980s, 1990s, and 2000s. All regions have witnessed an increase in financial diversification over the past three decades, particularly during the 2000s. However, emerging regions still lag behind developed ones. The increase in financial diversification experienced by emerging countries, measured through either the stock or the flow measures, was considerably lower than that observed across developed countries. As a result, the overall extent of financial integration, in its diversification dimension, remains much more developed in developed countries than in emerging ones. For example, foreign assets and liabilities represented about 300% of GDP in developed countries in the 2000s, whereas in emerging countries they stood at less than half of that amount, around 130% of GDP in Asian, Eastern European, and Latin American countries.

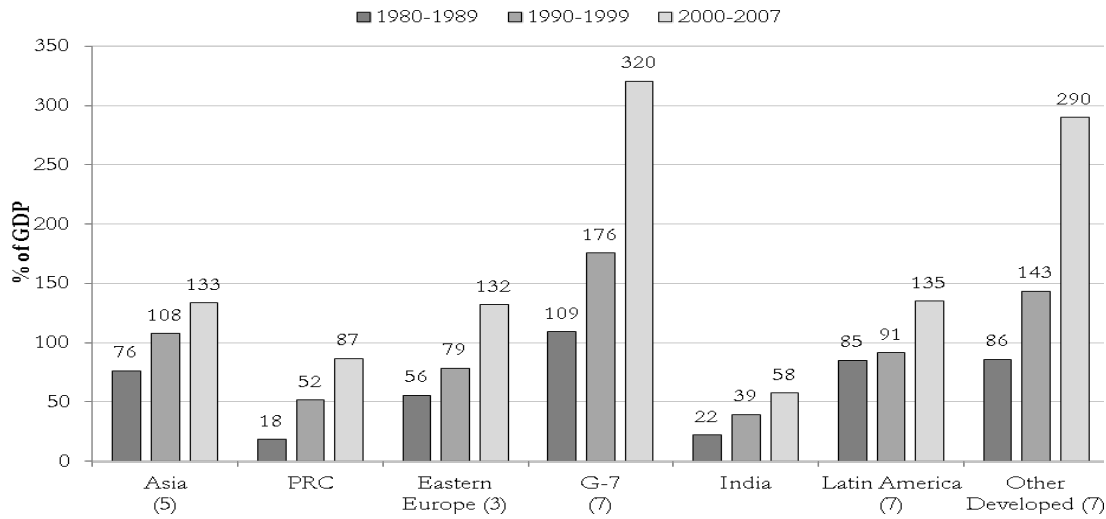
This has been a generalized process of two-way financial diversification, according to which not only foreign residents have invested more in local markets, but also domestic residents have expanded their investments in foreign markets. Panel B of Figure 1 segments capital flows by the residency of the agents completing the transaction, thus distinguishing between capital inflows by foreign residents and capital outflows by domestic residents. The figure shows that the cross-border flows by both domestic and foreign residents have been on the rise during the past decades in almost all emerging and developed regions. Perhaps the only exception to this broad trend has been Asia during the 2000s, where flows by foreign residents declined significantly as a percentage of GDP, though flows by domestic residents still grew considerably.

The expansion of financial diversification, as measured by these *de facto* indicators, reflects not only increased volumes of gross capital flows, but also positive valuation effects, stemming from the re-pricing of assets and liabilities. As many have argued, capital gains and losses on outstanding holdings of foreign assets and liabilities can be indeed sizeable.<sup>6</sup> Figure 2 illustrates these valuation effects by showing the increase between 1999 and 2007 in foreign holdings of domestic equity, scaled separately by GDP (as in Figure 1) and by domestic market capitalization. In fact, the increase in cross-border equity holdings (a component of the stock of foreign assets and liabilities in Figure 1) is significantly smaller across all emerging regions when the growth of equity prices (proxied by market capitalization) is taken into consideration, turning even negative for Latin American countries. This suggests that the evidence of financial globalization needs to be considered with some care.

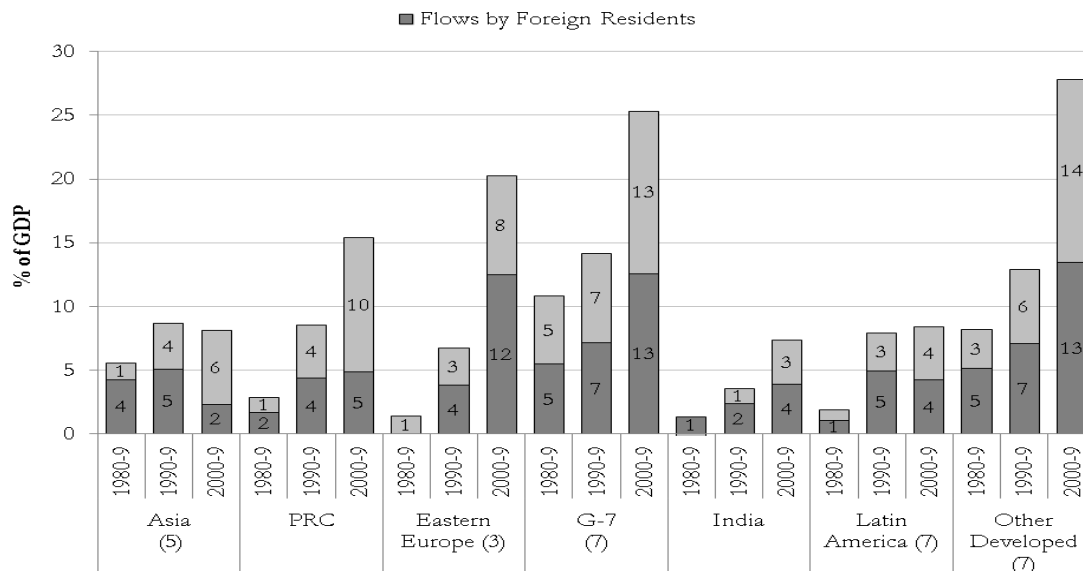
---

<sup>6</sup> See for example Lane and Milesi-Ferretti (2001, 2007), Gourinchas and Rey (2007), and Gourinchas, Govillot, and Rey (2010).

**Figure 1: De Facto Financial Diversification**  
**Panel A. Stock of Foreign Assets and Liabilities**



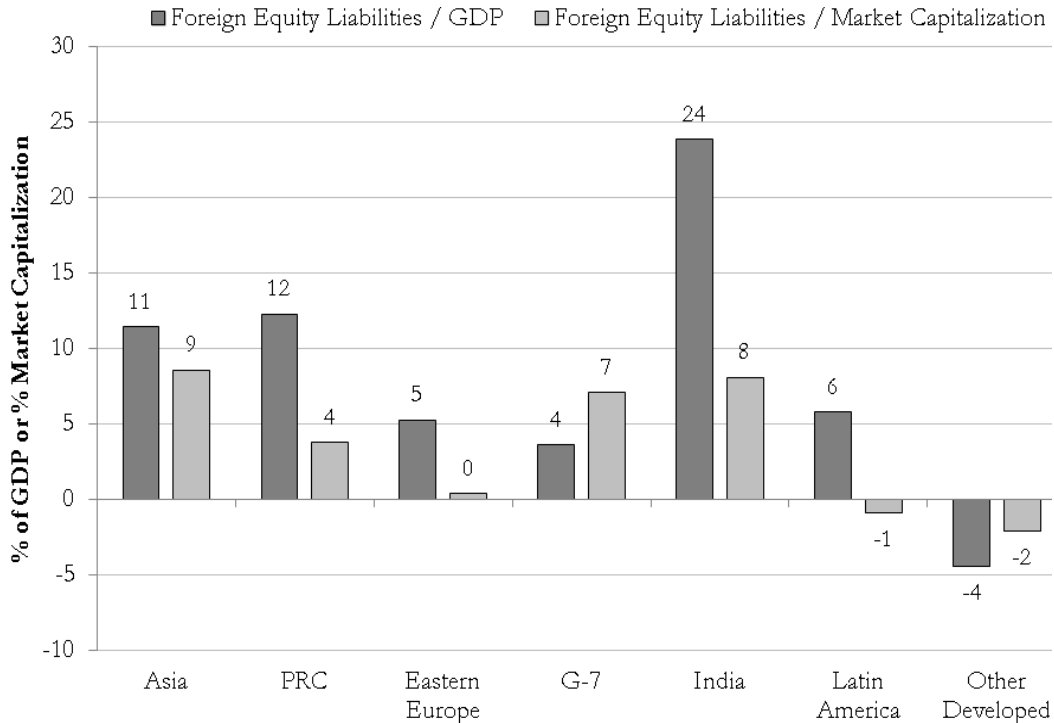
**Panel B. Gross Capital Flows**



Note: This figure shows two de facto measures of financial diversification during the 1980s, 1990s, and the first decade of the 2000s. Panel A shows the stock of foreign assets and liabilities as a percentage of GDP. Panel B shows gross capital flows by foreign and domestic residents as a percentage of GDP. Numbers in parentheses show the number of countries in each region.

Source: IMF's Balance of Payments Statistics (BOP), the World Bank's WDI, and Lane and Milesi-Ferretti (2007).

**Figure 2: Financial Diversification: Valuation Effects**  
*Foreign Equity Liabilities scaled by GDP and by Market Capitalization*



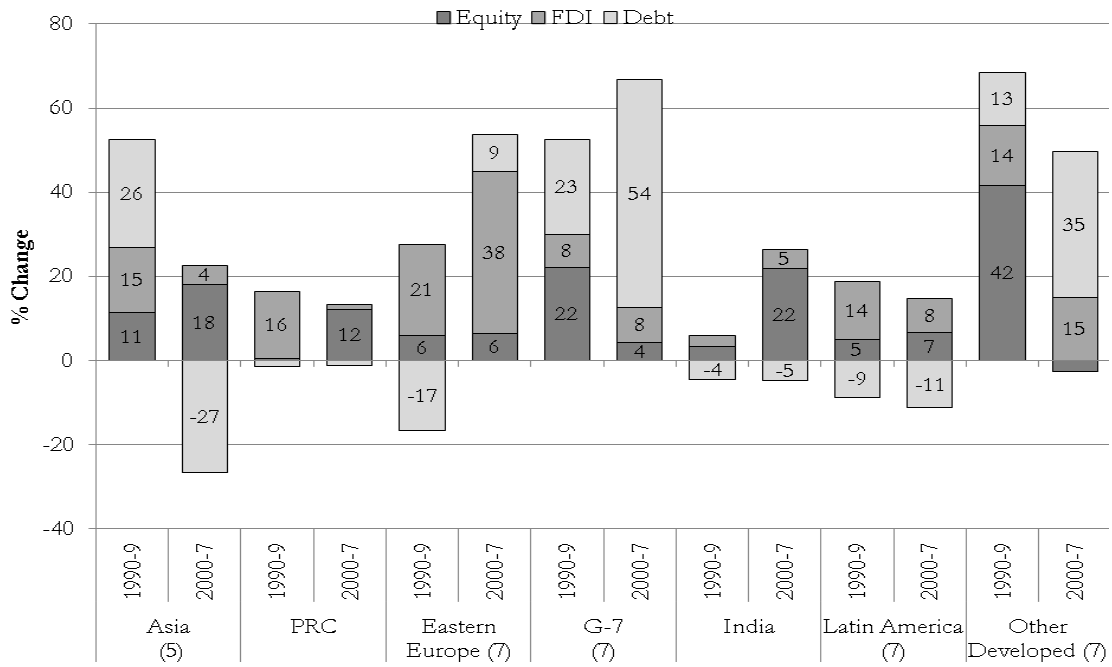
Note: This figure shows the percentage change between 1999 and 2007 of the level of foreign holdings of domestic equity scaled, alternatively, by GDP and domestic market capitalization.

Source: World Bank's WDI and Lane and Milesi-Ferretti (2007).

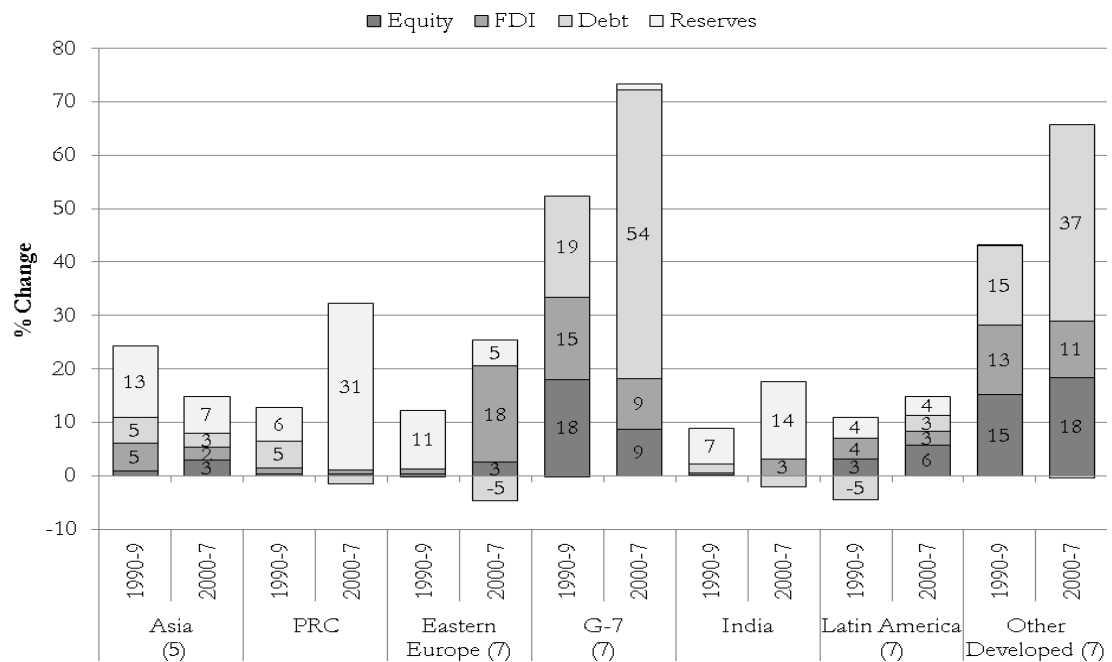
In addition to this expansion in the size of foreign assets and foreign liabilities over the past three decades, their composition has evolved in a significant way. Figure 3 presents the changes in the different components of the stock of external liabilities (Panel A) and external assets (Panel B) as a share of GDP during the 1990 and 2000 decades. When focusing on the liability side (which captures the stock of foreign investments in domestic economies), equity investments—including foreign direct investment (FDI)—have increased on average across emerging countries during both decades.<sup>7</sup> Debt investments, on the other hand, have generally declined during both decades for this set of countries, with the exception of Asia in the 1990s and Eastern Europe in the 2000s. This last trend stands in sharp contrast to that of developed countries, where debt investments have greatly expanded over the same period.

<sup>7</sup> Even though the increases in equity investments are larger than in debt investments, this trend may reflect to some extent larger valuation effects, as discussed above.

**Figure 3: Structure of Financial Diversification**  
**Panel A. Changes in the Stock of Foreign Liabilities**



**Panel B. Changes in Stock of Foreign Assets**





Note: This figure shows the percentage change between 1990 and 1999 and 2000 and 2007 of the different components of the stock of foreign liabilities (Panel A) and foreign assets (Panel B) as a share of GDP. FDI stands for foreign direct investments. Numbers in parentheses show the number of countries in each region.

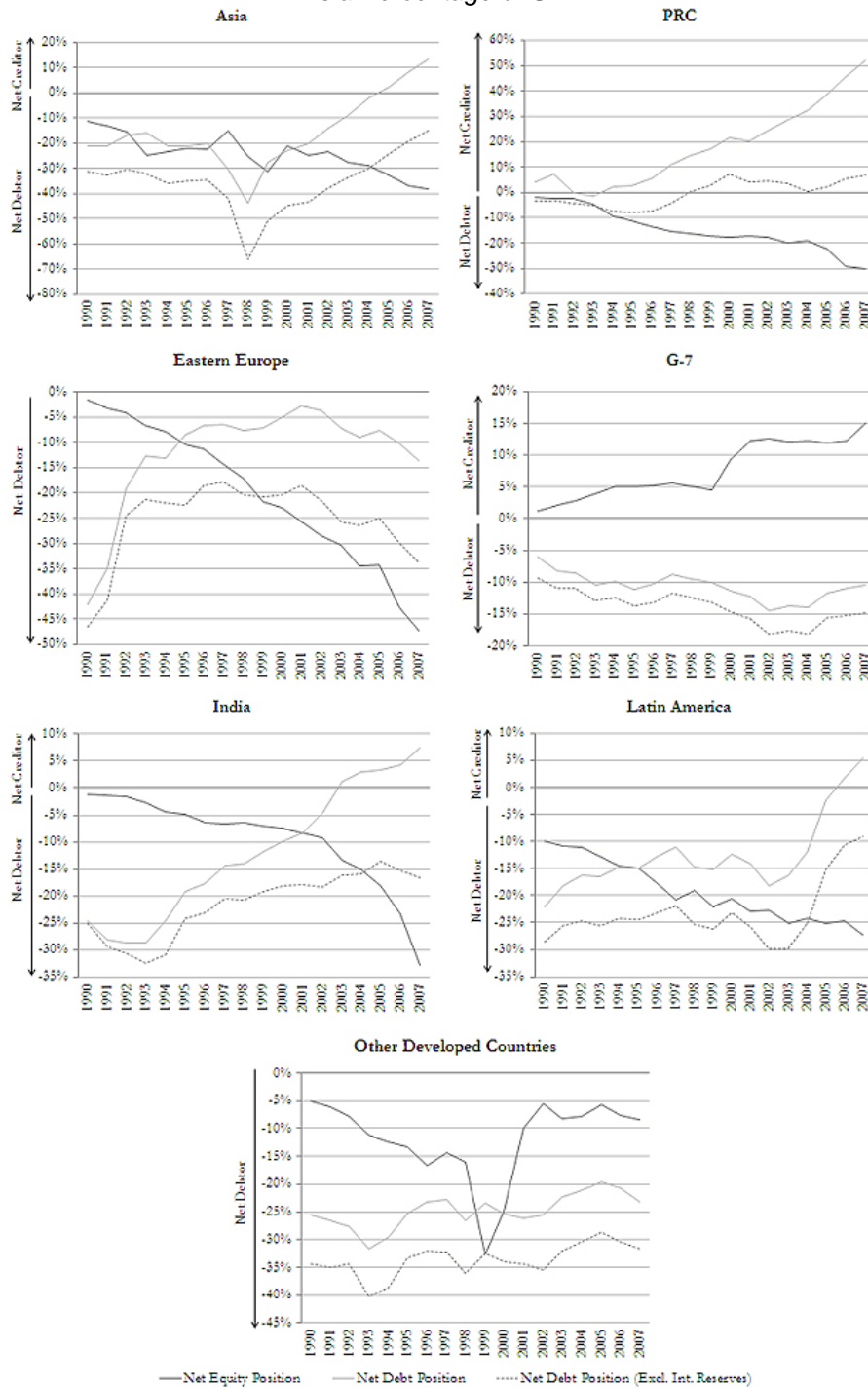
Source: World Bank's WDI and Lane and Milesi-Ferretti (2007).

On the asset side (which captures the stock of foreign investments by domestic agents), emerging countries have largely accumulated international reserves, a trend that has accelerated since the Asian crises of the late 1990s. This has been an important feature underlying the emerging countries' improved macroeconomic and financial stances, albeit not the only one. The patterns of the other components of the stock of foreign assets are somewhat mixed. For example, Latin American countries have increased their external asset positions mainly through equity investments over the 2000s, while Eastern Europe has done so through a large increase in debt investments. In the case of developed countries, debt investments capture the lion's share of the rise in their external assets during both the 1990s and the 2000s, though the increases in equity investments and FDI are still sizeable.

These trends have led to important changes in countries' overall positions as net creditors or net debtors. As discussed above, emerging countries have typically experienced a decline in debt liabilities and an expansion in debt assets, especially when reserves are considered. Consequently, a number of them have become net creditors with respect to the rest of the world as regards debt contracts. On the equity side, both assets and liabilities have increased, albeit at different speeds. In net terms however, there has been a shift towards net debtor positions with respect to equity contracts among emerging countries, and increasingly so in recent years. Figure 4 shows the net foreign assets positions (that is, the difference between foreign assets and foreign liabilities) as a share of GDP for both equity and debt investments from 1990 to 2007. Asian and Latin American countries, together with India, became net creditors during the second half of the 2000 decade as regards debt contracts, while the PRC increased its already positive position as a net creditor. At the same time, they continued deepening their net debtor stances as regards equity contracts. This stands in contrast to the mixed patterns observed in developed countries.

**Figure 4: Net Foreign Equity and Debt Assets**

*As a Percentage of GDP*



Note: This figure shows the evolution of the stock of net foreign equity assets and net foreign debt assets (with and without international reserves) as a percentage of GDP across regions between 1990 and 2007.

Source: World Bank's WDI and Lane and Milesi-Ferretti (2007).

This evolution in the structure of countries' external assets and liabilities might play a role in avoiding the downside risks of financial globalization. For instance, when the 2008–2009 global financial crisis hit emerging countries, balance sheet effects worked in their favor. In emerging countries' not too distant past, exchange rate nominal devaluations that typically accompanied financial crises tended to increase the burden of foreign currency debt. In contrast, during the global financial crisis, the devaluations led to improvements in the external positions of emerging countries (when measured in local currency) due to their net creditor stances in debt contracts. Moreover, external liabilities were reduced when equity prices plummeted, thereby shrinking their net debtor equity positions. At the same time, the large pools of international reserves might have not only slowed down the appreciation of the domestic currency during the pre-crisis expansionary period, but they might also have later served as a self-insurance mechanism during the heightened turmoil period, deterring currency crises and banking panics. In fact, many countries held international reserves in excess of their stock of short-term foreign liabilities. This in practice eliminated concerns about debt rollover difficulties in many emerging countries, limiting investors' incentives to attack the domestic currencies.<sup>8</sup> In sum, this evolution of emerging countries from a net debtor to a net creditor position—vis-à-vis the rest of the world—in terms of debt contracts, along with a reduction of foreign currency and short-term debt liabilities documented below, might have made these countries more resilient to external shocks, thus giving rise to a safer form of financial globalization.

## 4. FINANCIAL OFFSHORING

As the wave of financial liberalization swept the emerging world during the 1990s, financial offshoring took off, with the use of foreign markets ranging from syndicated loans to equities and bonds. Such an expansion in offshoring contrasts sharply with the lack of activity abroad during the 1980s. Nonetheless, during the 2000s, mixed patterns emerged regarding the use of foreign markets for financial transactions by emerging countries. In fact, there has been a marked heterogeneity in the extent of offshoring across markets and countries.

Regarding debt contracts, somewhat opposing trends have been observed in new capital raising activity through syndicated loans and bonds abroad across emerging countries.<sup>9</sup> As shown in Panel A of Figure 5, new syndicated loans have continued to expand around the world over the last ten years. In contrast, as seen in Panel B of Figure 5, the overall volume (as a percentage of GDP) of new bonds in foreign markets has declined across a number of emerging countries, albeit it remains at relatively high levels. For example, bond issuance abroad fell from 3.2 to 2.4% of GDP per year for Asian countries and from 2.2 to 1.9% for Latin

---

<sup>8</sup> See Aizenman and Pasricha (2010), Frankel and Saravelos (2010), and Aizenman (2011), among others.

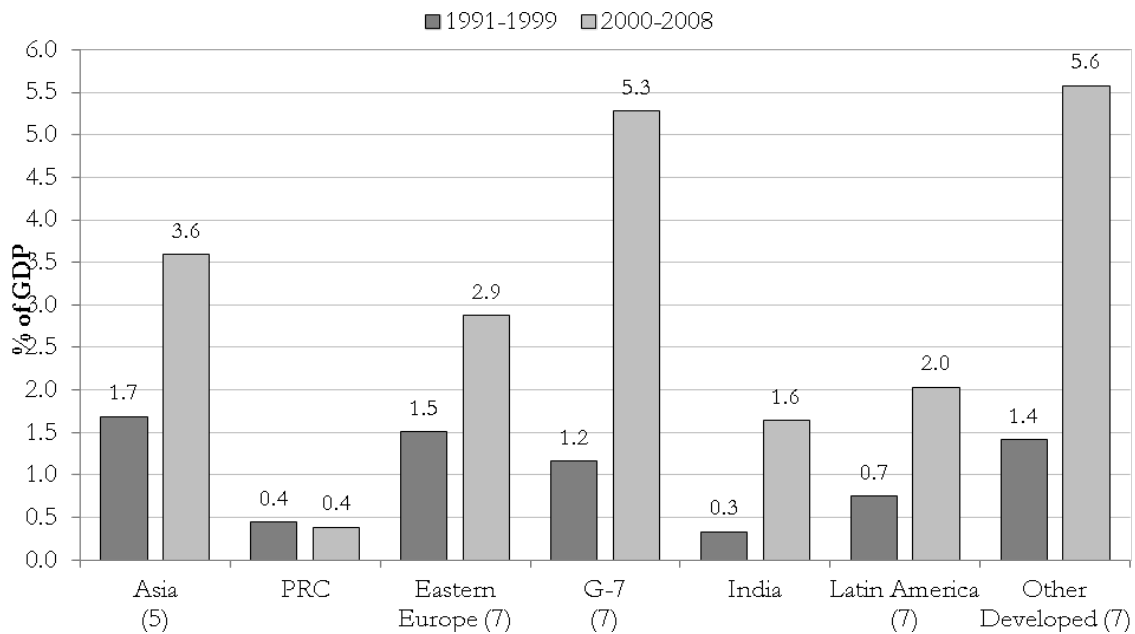
<sup>9</sup> For more analysis on how firms use domestic and international bond markets, see Gozzi, Levine, Martinez Peria, and Schmukler (2012).

American countries in the 2000s vis-à-vis the 1990s. Interestingly, this decline has been concentrated on the new issuance of bonds by the private sector, as governments of countries in these two regions have increased their issuance abroad as a percentage of GDP. Eastern Europe however stands as an exception, with bond issuance by the private sector actually expanding in foreign markets.

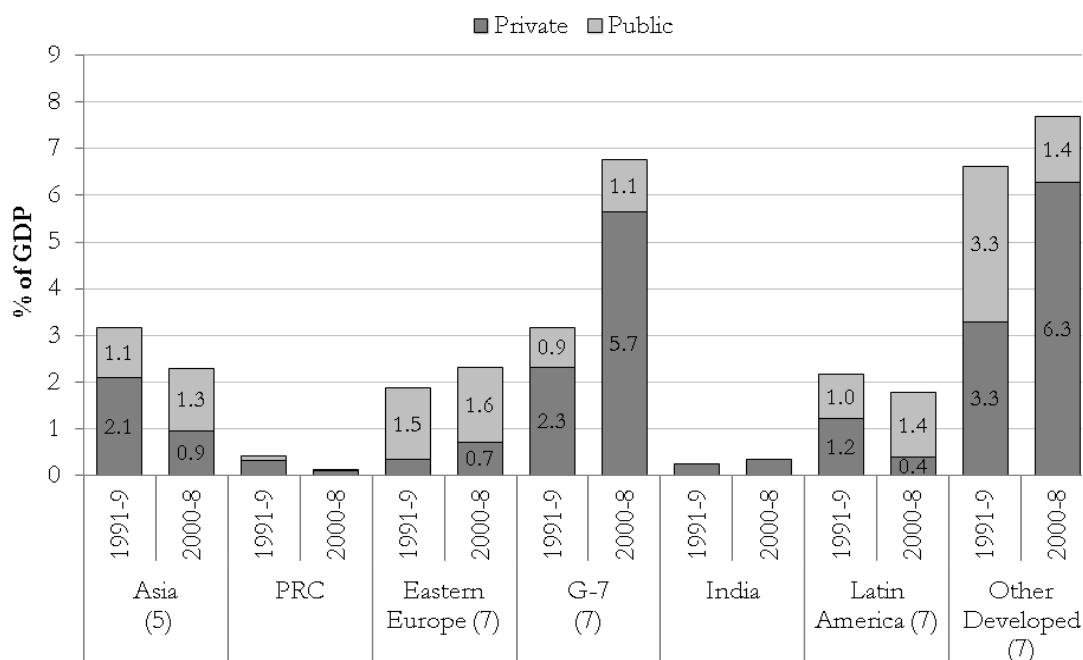
Mixed trends are also observed in capital raising activity through equity issues in foreign markets as a percentage of GDP. As shown in Panel C of Figure 5, the use of foreign markets for new capital raising equity issues has greatly expanded for firms from the PRC and Eastern Europe, and to a lesser extent from India. On the other hand, it has declined for firms from Asian and Latin American countries. Contrasting trends are also observed across the developed world—while firms from G7 countries increased their use of foreign markets, those from other developed countries reduced it.

**Figure 5: Financial Offshoring: Capital-Raising Activity in Foreign Markets**

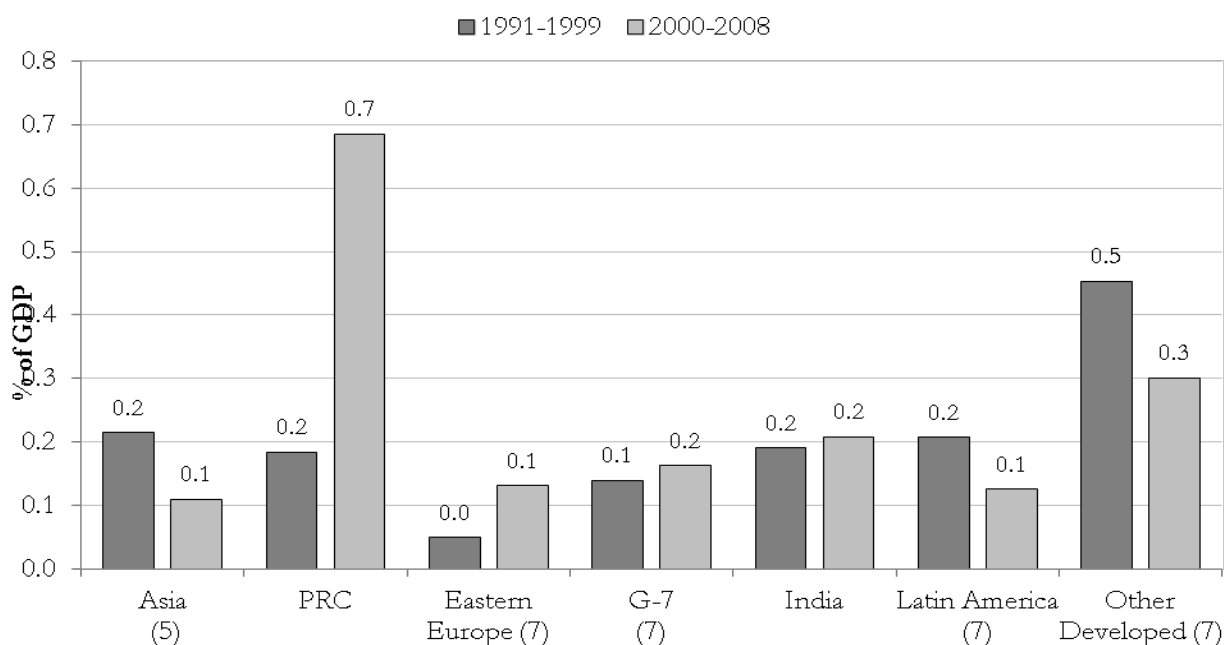
**Panel A. New Syndicated Loans**



**Panel B. New Capital-Raising Bond Issues by the Private and Public Sectors**



**Panel C. New Capital-Raising Equity Issues**



Note: This figure shows the average capital-raising activity in foreign markets per year through syndicated loans, bonds, and equity during the 1990s and the first decade of the 2000s. Panel A shows the amount of new syndicated loans in foreign markets as a percentage of GDP. Panel B shows total bond issuance abroad by the private and public sectors as

a percentage of GDP. Panel C shows total capital-raising equity issuance in foreign markets as a percentage of GDP. Numbers in parentheses show the number of countries in each region.

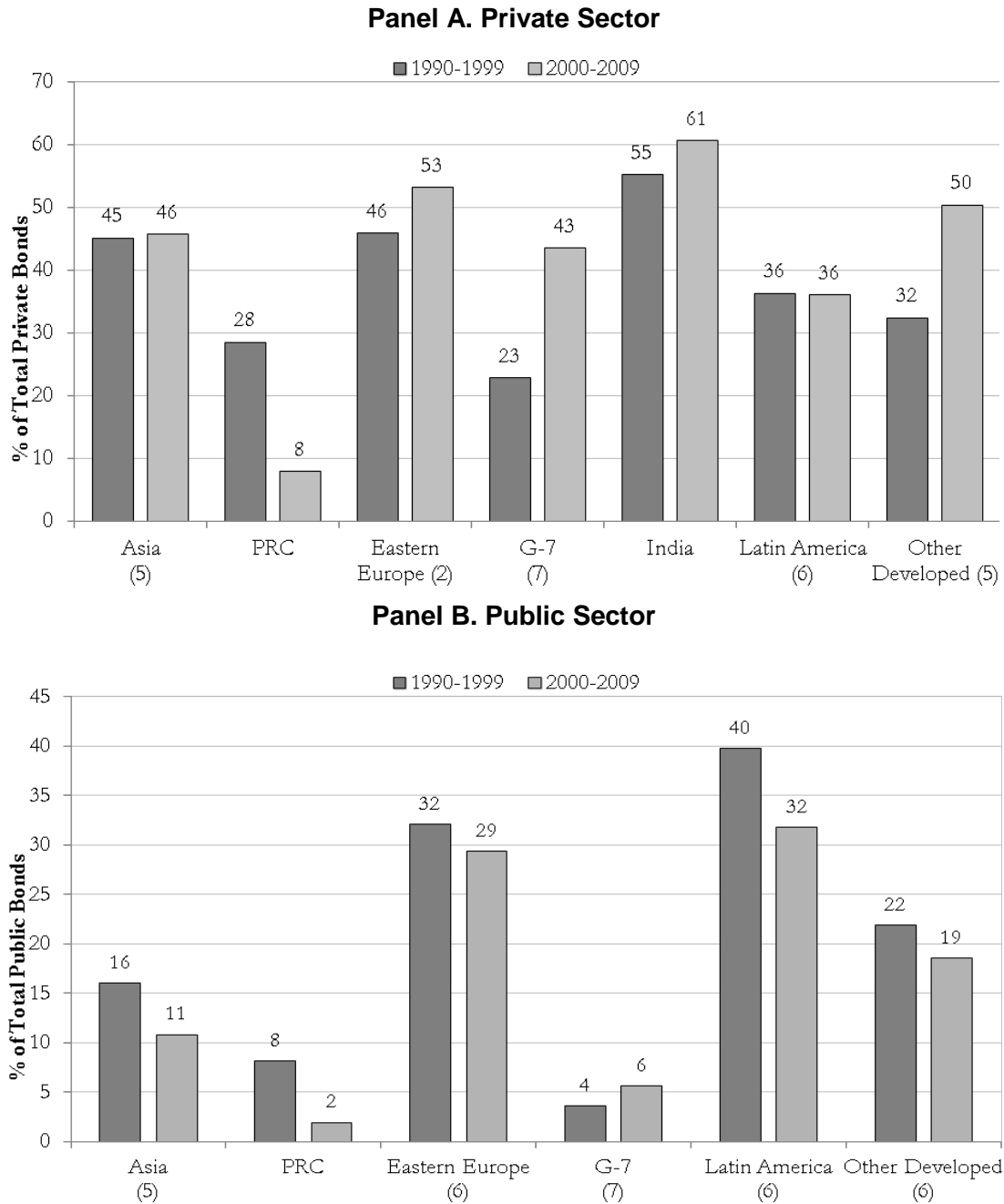
Source: World Bank's WDI and Thomson Reuters' SDC Platinum.

Although the volume of new capital raising activity abroad as a percentage of GDP has not shown a consistent growth trend over the 2000s, private bond and equity financing in foreign markets have still gained space relative to domestic markets in many—albeit not all—emerging regions. The top panel of Figure 6 shows the amount outstanding of private sector bonds in foreign markets as a share of total private outstanding bonds. Bond financing in foreign markets has typically increased in relevance over the 2000s for emerging countries, though significantly more so for developed countries. Moreover, bond financing abroad has represented more than half of total bond financing by the private sector for a number of emerging countries. For example, outstanding amounts in foreign markets represented more than 50% of total outstanding bonds during the 2000s for Eastern European countries and India and about 46% for Asia. The PRC, however, is an exception, with bonds in foreign markets representing only eight% of total outstanding bonds for the private sector in the 2000s, down from 28% in the 1990s.

With respect to equity financing, there is more heterogeneity in the observed trends regarding to the use of foreign markets relative to domestic markets. Panel A of Figure 7 shows the ratio of equity issuance abroad to total equity issuance. Asian and Eastern European countries, along with developed ones, have relied more on domestic markets for new equity issues, which already accounted for the bulk of new capital raising issues during the 1990s.

**Figure 6: Relative Size of Foreign Bond Markets**

*Amount Outstanding in Foreign Markets as % of Total Amount Outstanding*



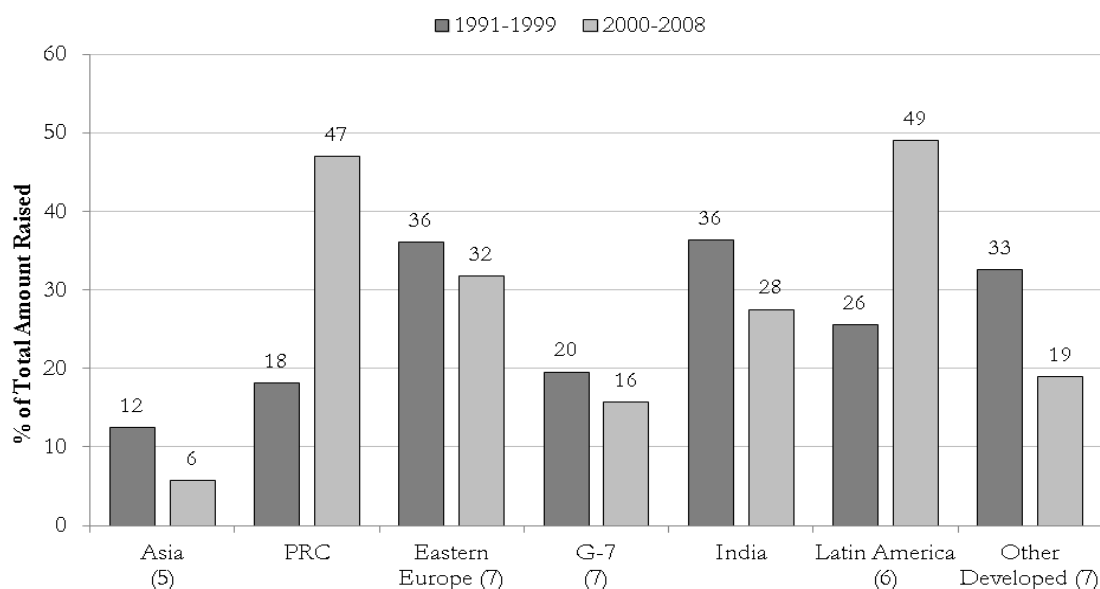
Note: This figure shows the relative size of foreign bond markets for the private and public sectors during the 1990s and the first decade of the 2000s. Panel A shows the average ratio of outstanding bonds in foreign markets by the private sector divided by the total outstanding (domestic and foreign) private bonds. Panel B shows the average ratio of outstanding bonds in foreign markets by the public sector divided by the total outstanding (domestic and foreign) public

bonds. International debt securities are defined as those that have not been issued by residents in domestic currency or targeted at resident investors. Numbers in parentheses show the number of countries in each region.

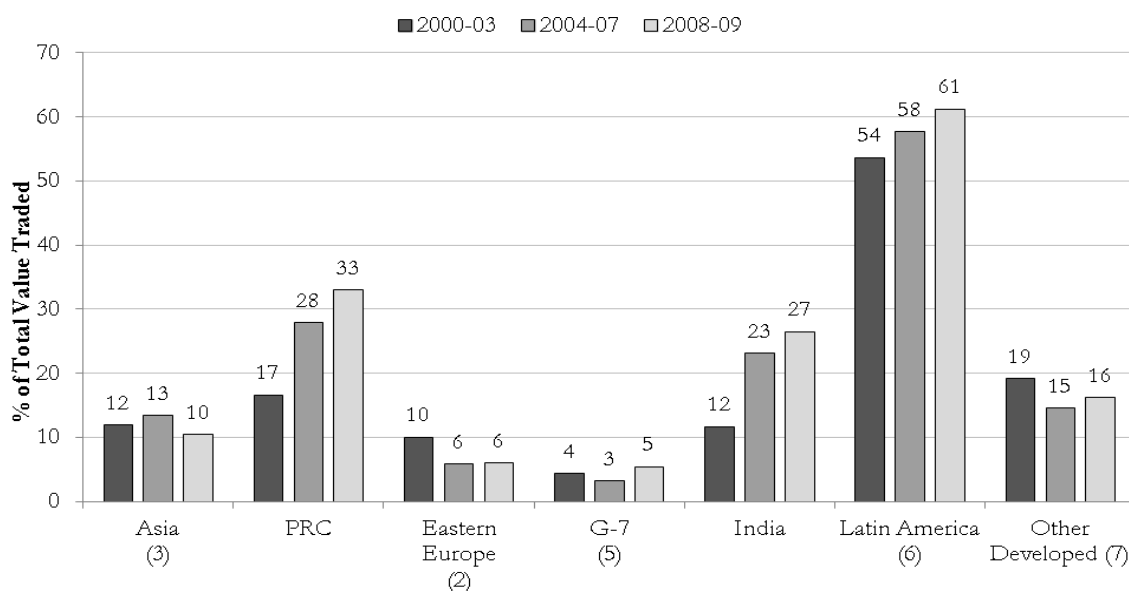
Source: World Bank's WDI and Bank for International Settlements.

**Figure 7: Relative Size of Foreign Equity Markets**

**Panel A. Amount Raised in Foreign Markets**



**Panel B. Value Traded in Foreign Markets**





Note: This figure shows the relative size of equity capital-raising activity and equity trading in foreign markets. Panel A shows the average amount raised through new equity issues in foreign markets over the total (domestic plus foreign) equity amount raised on a yearly basis during the 1990s and the first decade of the 2000s. Panel B shows the firm-level average ratio of value traded abroad in depository receipts (DRs) over total value traded (in domestic markets and DRs) on a yearly basis during the first decade of the 2000s. Only firms with DR programs identified in the DR Directory of the Bank of New York and with trading data reported in Bloomberg are considered in Panel B. Numbers in parentheses show the number of countries in each region.

Source: Thomson Reuters' SDC Platinum, Bank of New York, and Bloomberg.

For instance, only 32% of the issues from Eastern European companies and six% of the issues from Asian ones have taken place in foreign markets during the 2000s. In stark contrast, Latin America and the PRC have seen a greater degree of offshoring through equity markets during the 2000 decade. Equity financing abroad in these countries has gained space relative to domestic markets, and have come to represent almost 50% of total equity issues, up from about 20% during the 1990s.

Foreign stock issuance by emerging countries has typically taken the form of cross-listings through depository receipts (DRs), which are particularly useful to analyze the dynamics of trading activity in domestic and foreign markets. Although DRs represent ownership of stocks listed in local markets, they are traded in stock exchanges abroad, mostly in financial centers such as the New York Stock Exchange (NYSE), NASDAQ, and the London Stock Exchange (LSE). Panel B of Figure 7 shows the evolution over the 2000s of the average share of value traded abroad through DRs relative to total value traded (domestic plus abroad through DRs). A clear pattern emerges—the apparent migration to foreign equity markets by the private sector from the PRC and Latin American countries has been accompanied by increased trading abroad relative to domestic trading activity. In fact, the share of trading activity abroad has grown to represent the bulk of trading at 60% on average throughout the 2000s for Latin American countries and more than 30% in the PRC. This trend suggests a shift of liquidity to foreign markets and a potentially diminishing role for domestic markets in light of the increased offshoring of equity markets.<sup>10</sup> For most other emerging regions however, the trading in foreign markets accounts for a small share of total trading activity, about 10%. Moreover, a stable balance between the trading activity in domestic and foreign markets throughout the 2000s was maintained.

While the relevance of domestic markets in bond and equity financing relative to foreign markets declined for the private sector of many emerging countries during the 2000s, the use of foreign bond markets by the government has typically followed opposite trends. It has actually increased for the public sector in most emerging countries. Public bond financing has shifted towards domestic markets, though, as pointed out above, the issuance of public bonds

---

<sup>10</sup> See, for instance, Didier and Schmukler (2012a and 2012b).

abroad as a percentage of GDP has increased during the 2000s. Panel B of Figure 6 shows the amount outstanding of bonds in foreign markets over the total public sector outstanding bonds. It is clear from this figure that the relative importance of foreign bonds decreased in the 2000s vis-à-vis the 1990s across all emerging regions. This trend has been particularly sharp among Asian and Latin American countries, consistent thus with the significant expansion of local markets for government bonds in many of these countries. Despite this declining trend, governments from emerging countries still tend to rely more on foreign markets for the placement of their debt than those from developed countries. While about 6% of outstanding government bonds were in foreign markets during the 2000s across G7 countries, around 30% was observed across Eastern Europe and Latin America.

Notwithstanding these mixed trends in the overall degree of financial offshoring, the 2000s have witnessed some interesting changes in the nature of the external bond financing across a number of emerging countries. While total bond issuance in foreign markets has on average not increased for these countries during the 2000s, a number of them have changed the nature of their bond financing, apparently through a conscious effort to reduce currency and maturity mismatches following the series of financial crises during the 1990s.

As a consequence, the maturity profile of both public and private sector bonds in foreign markets has been extended during the 2000s, especially so for Eastern European and Latin American countries, as shown in Figure 8.<sup>11</sup> For example, the maturity of bonds at issuance was lengthened by about one and five years for Latin America's private and public sectors, respectively. Asian countries however stand out as exceptions, where both public and private sector bond maturities declined in the 2000s relative to the 1990s.

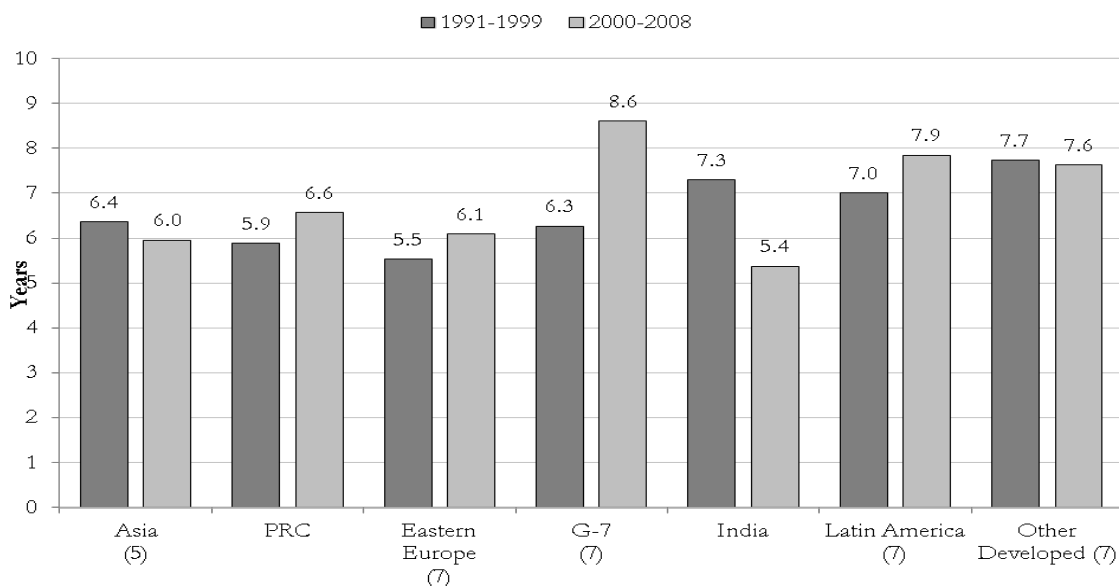
Furthermore, many emerging countries have been able to issue bonds in local currency in foreign markets. The private sector from most emerging regions has succeeded in issuing some bonds in foreign markets in their own local currencies, while a few governments have also been able to do so. For example, Figure 9 shows that 7% of private sector bonds and 8% of public sector bonds issued abroad by Latin American countries in the 2000s were denominated in local currency, as opposed to a virtually non-existent amount during the 1990s. While these figures remain somewhat small, especially when compared to those in developed countries, they signal that emerging countries' have started to overcome the "original sin" (generally understood as the inability to issue local currency, long-term debt in foreign markets). Clearly, these are positive strides in the long road towards a more balanced pattern of issuance activity.

---

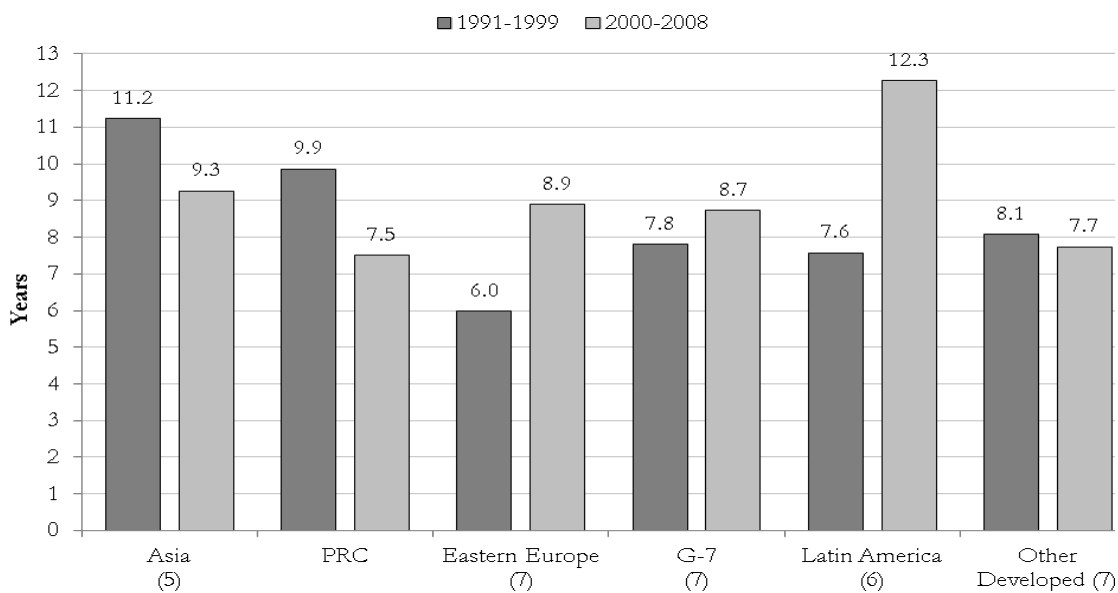
<sup>11</sup> The long maturities could also be associated with relatively short durations if most of the debt is issued at floating rates. Currently, the data do not allow us to identify such effects.

**Figure 8: Average Maturity at Issuance in Foreign Bond Markets**

**Panel A. Private Sector**



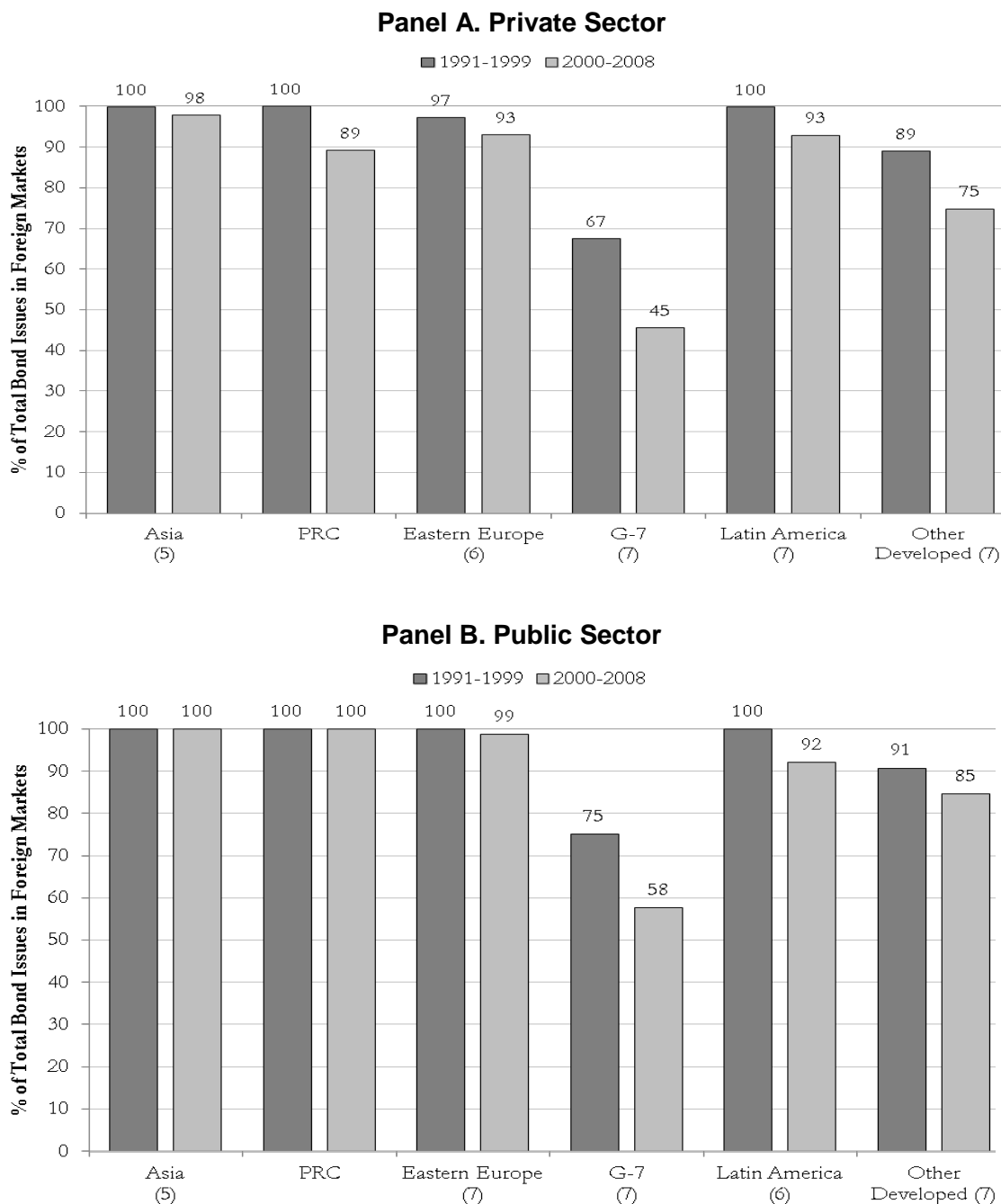
**Panel B. Public Sector**



Note: This figure shows the average maturity (in years) of new bonds issued in foreign markets by the private and public sectors during the 1990s and the first decade of the 2000s. Panel A shows the average maturity of foreign private sector bonds at issuance. Panel B shows the average maturity of foreign public sector bonds at issuance. Numbers in parentheses show the number of countries in each region.

Source: Thomson Reuters' SDC Platinum.

**Figure 9: Currency Denomination at Issuance in Foreign Bond Markets**  
*New Foreign Currency Issues as % of Total Issues in Foreign Markets*



Note: This figure shows the ratio of foreign currency denominated new bond issues in foreign markets by the private and public sectors during the 1990s and the first decade of the 2000s. Panel A shows data for the private sector while Panel B reports the data for the public sector. Numbers in parentheses show the number of countries in each region.

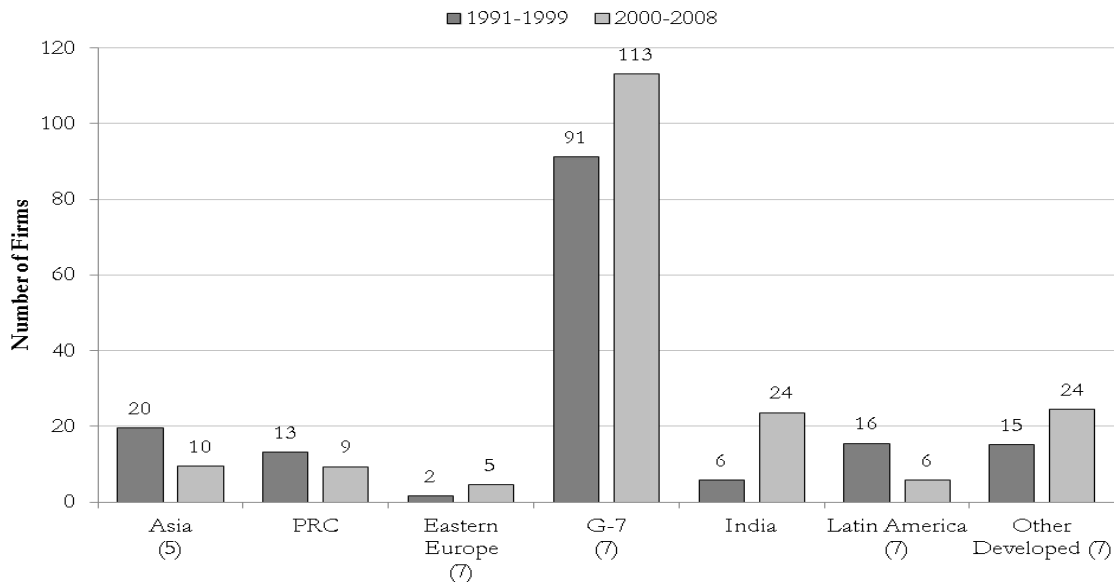
Source: Thomson Reuters' SDC Platinum.

Despite all these developments, the use of foreign markets is limited to few firms and thus remains a concern for many emerging countries, especially when contrasted with the observed patterns in developed countries. For instance, Panel A of Figure 10 clearly shows that only a small number of firms from most emerging regions actually used foreign bond markets as a source for new capital in the 2000s, typically less than ten firms compared to more than 100 in the G7 countries. Moreover, the number of firms has actually declined vis-à-vis the 1990s for Asia, the PRC, and Latin America. In addition, markets remain largely concentrated, top issuers capture a significant fraction of the total new bond financing abroad. For instance, Panel B of Figure 10 shows that the amount raised by the largest five bond issues in foreign markets by the private sector in Asia, Eastern Europe, and Latin America represented on average about 75% of the total amount of bonds issued abroad during the 2000s. In contrast, the largest five issues from firms of G7 countries represented only 14% of the total amount raised through bonds in foreign markets. Strikingly, market concentration on issuance has in fact increased for many emerging countries over the last ten years. In other words, few firms seem to capture, and increasingly so, the bulk of the foreign market for bond financing.

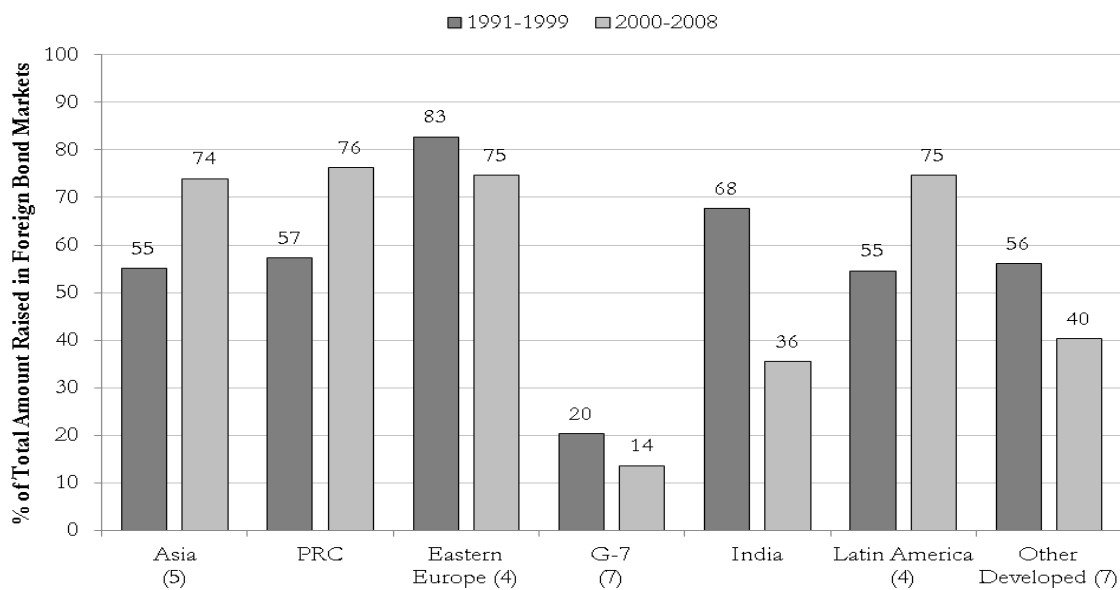
As regards equity markets, the scope of offshoring has also remained somewhat limited, in line with the trends observed in bond markets. As seen in Figure 11, the number of firms using foreign equity financing on a regular basis is rather small in emerging countries when compared to developed countries. For instance, only two firms on average issued equity on any given year during the 2000s from Asian, Eastern European, or Latin American countries, in comparison to over 15 firms from developed countries. Similarly to the patterns observed in the use of foreign bond markets, the average number of firms raising capital in equity markets abroad has not increased for many emerging countries during the 2000s. In contrast, it has been on the rise for developed countries over the same period. Equity financing in foreign markets has also remained highly concentrated on few issues. For most emerging countries, the largest five international issues have represented around 90% of the market, though this is more in line with the levels of concentration seen in developed countries. Furthermore, the share of total amount raised abroad by the largest five issues has increased for a number of emerging countries. Lastly, trading activity in foreign equity markets has also been highly concentrated in few firms as shown in Panel C of Figure 11, with the top five firms from Latin American countries capturing more than 90% of the total trading activity in foreign markets. Note however that some emerging regions, such as Asia and Eastern Europe, have shown a reduction in trading concentration during the 2000s.

**Figure 10: Use of Foreign Private Bond Markets**

**Panel A. Average Number of Firms Issuing Bonds in Foreign Markets per Year**



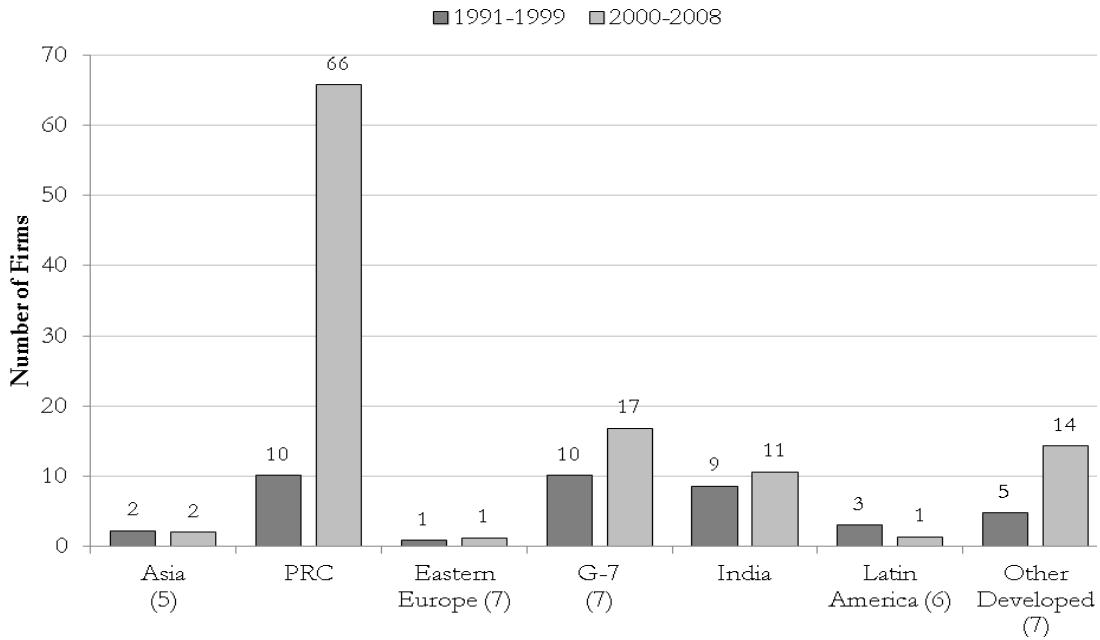
**Panel B. Share of Amount Raised by Top Five Bond Issues in Foreign Markets**



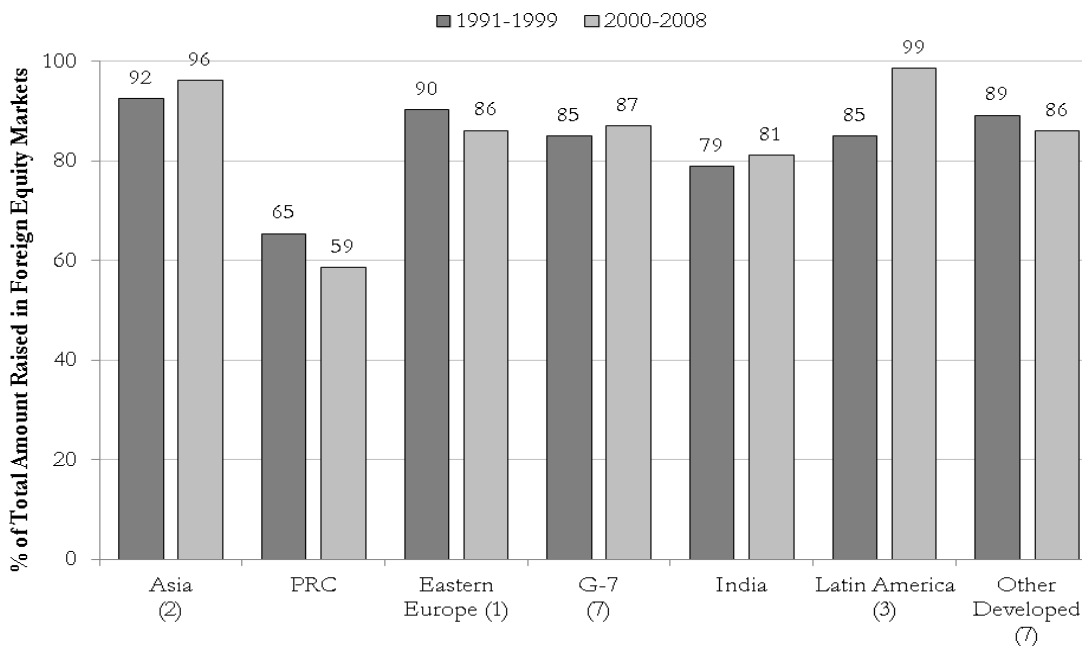
Note: This figure shows the use of foreign bond markets on a yearly basis by the private sector during the 1990s and the first decade of the 2000s. Panel A shows the average number of firms issuing bonds in foreign markets per year. Panel B shows the amount raised by the largest five private bond issues in foreign markets as a percentage of the total amount raised in foreign bond markets by the private sector. Only country-years with at least five issues are considered in Panel B. Numbers in parentheses show the number of countries in each region.

Source: Thomson Reuters' SDC Platinum.

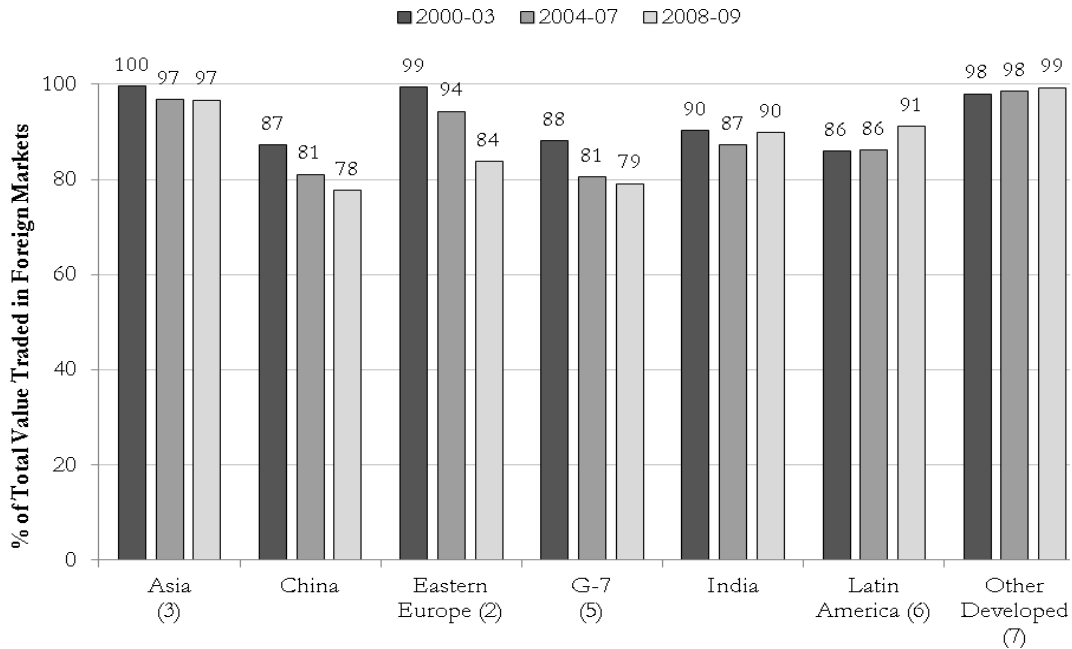
**Figure 11: Use of Foreign Equity Markets**  
**Panel A. Average Number of Firms Issuing Equity in Foreign Markets per Year**



**Panel B. Share of Amount Raised by Top Five Equity Issues in Foreign Markets**



**Panel C. Share of Value Traded by Top Five Firms in Foreign Markets**



Note: This figure shows the use of foreign equity markets during the 1990s and the first decade of the 2000s. Panel A shows the average number of firms raising capital through equity in foreign markets per year. Panel B shows the average amount raised by the largest five equity issues in foreign markets as a percentage of the total amount raised in foreign equity markets on a yearly basis. Only country-years with at least five issues are considered. Panel C shows the share of value traded abroad through depository receipts (DRs) by the five firms with the largest trading activity. Only countries with more than five firms with DR programs are considered. All DRs identified in the DR Directory of the Bank of New York and with trading data reported in Bloomberg are considered in Panel C. Numbers in parentheses show the number of countries in each region.

Source: Thomson Reuters' SDC Platinum, Bank of New York, and Bloomberg.



## 5. CONCLUSIONS

The topic of financial globalization continues to receive extensive attention. In this paper, we put in perspective what this means for emerging countries, how much it has expanded, and to what extent its nature has shifted over time. In particular, we distinguish between two aspects of financial globalization: (i) financial diversification, the cross-country holdings of assets and liabilities, and (ii) financial offshoring, the use of international financial markets by firms and governments to perform their financial transactions. The former focuses on who holds the assets, the latter on where assets are transacted.

We show that during the 2000s emerging countries have continued their process of financial globalization through greater diversification. Foreign assets and liabilities increased as domestic residents invested more abroad and foreigners at home. Moreover, the nature of the integration into the global financial system has changed in several important respects. Emerging countries in particular have reduced the extent of credit risk, making themselves less vulnerable to external financial shocks.

Despite this increase in diversification, the extent of offshoring has not expanded as consistently across markets or across emerging countries. Whereas in the 1990s emerging countries increased their use of international markets for their financial transactions, in the 2000s mixed patterns are observed. There is significant heterogeneity in the trends regarding the use of foreign markets as a percentage of GDP as well as relative to the use of domestic markets. For example, while the corporate sector of many countries has used more intensively foreign debt markets, governments started using more actively domestic debt markets. Domestic equity markets in some regions, but not in others, have also gained more relevance. Furthermore, the positive developments in domestic markets in terms of the nature of financing have been matched by similar developments in foreign markets.

The continuing integration of emerging countries into the global financial system poses many questions to policymakers. What are the net effects of globalization? On the one hand, it allows agents to diversify risk and tap into other investment opportunities. It also allows firms and governments to reduce the cost of capital by accessing funds that would otherwise be harder to obtain. On the other hand, globalization can have several potential negative spillovers that need to be understood in more detail, let alone netted out from the benefits. One possible negative spillover suggested is the migration of activity to international markets, reducing the financing and trading activity at home. Since not all companies can access international markets, this migration can generate negative domestic spillover effects. However, the under-development of local markets is unlikely due to the globalization process alone.

Does financial globalization entail more risk? On the equity side, the answer appears to be negative. On debt, globalization might entail exchange rate risk, though to some extent it might reduce the maturity risk. Hence, to reduce the exchange rate risk, domestic markets seem to play an important role. Moreover, what is the relation between domestic and international markets? Do domestic and international capital markets act as complements or substitutes? This paper has argued that the evidence suggests that they are complements. More broadly though, what are the drivers of the globalization process? Is it just a search for more and cheaper capital from segmented markets? Is it a quest for better corporate governance? The literature has put forward arguments supporting both reasons and some evidence suggests that the former cannot be rejected. Furthermore, because several of the trends documented in this paper are similar across countries, what is the role for domestic policymaking given these secular forces? These questions remain unanswered and call for further research.

## REFERENCES

- Aizenman, J., 2011. The Impossible Trinity, forthcoming in *The Encyclopedia of Financial Globalization*, edited by G. Caprio. Elsevier.
- Aizenman, J., and G. K. Pasricha,. 2010. Determinants of Financial Stress and Recovery during the Great Recession. NBER Working Papers 16605.
- Alexander, G., C. Eun, and S. Janakiraman. 1987. Asset Pricing and Dual Listing on Foreign Capital Markets: A Note. *Journal of Finance* 42(1): 151–158.
- Allen, F., and D. Gale, 2000. Bubbles and Crises. *The Economic Journal* 110: 236–255.
- Asian Development Bank Institute (ADBI). 2010. *Managing Capital Flows: The Search for a Framework*, edited by M. Kawai and M. Lamberte. Cheltenham, UK: Edward Elgar Publishing.
- Borensztein, E., and G. Gelos, 2003. A Panic-Prone Pack? The Behavior of Emerging Market Mutual Funds. *IMF Staff Papers* 50(1): 43–63.
- Broner, F., T. Didier, A. Erce, and S. Schmukler. 2010. Gross Capital Flows: Dynamics and Crises. Bank of Spain Working Paper 1039.
- Broner, F., G. Gelos, and C. Reinhart, 2006. When in Peril, Retrench: Testing the Portfolio Channel of Contagion. *Journal of International Economics* 69(1): 203–230.
- Calvo, G., 2011. Capital Inflows, Liquidity and Bubbles. Columbia University. *mimeo*.
- Calvo, G. and C. Reinhart, 2000. When Capital Flows Come to a Sudden Stop: Consequences and Policy. In: *Reforming the International Monetary and Financial System*, edited by P. B. Kenen and A.K. Swoboda. Washington, DC: International Monetary Fund.
- Cetorelli, N., and L. Goldberg. 2011. Foreign Banks in the Great Recession: Diversity in Internal and External Lending. New York Federal Reserve Bank. *mimeo*.
- Devereux, M. 2007. Financial Globalization and Emerging Market Portfolios. *Monetary and Economic Studies* 25: 101–30.
- Didier, T., C. Hevia, and S. Schmukler. 2011. How Resilient Were Emerging Economies to the Global Crisis? World Bank Policy Research Working Paper 5637.
- Didier, T., and S. Schmukler. 2012a. Financial Development in Latin America: Stylized Facts and the Road Ahead. LAC Financial Development Flagship, Office of the Chief Economist for Latin America and the Caribbean. Washington, DC: The World Bank.

- Didier, T., and S. Schmukler. 2012b. Financial Globalization: Some Basic Indicators for Latin America and the Caribbean. LAC Financial Development Flagship, Office of the Chief Economist for Latin America and the Caribbean. Washington, DC: The World Bank.
- Domowitz, I., J. Glen, and A. Madhavan. 1998. International Cross-Listing and Order Flow Migration: Evidence from an Emerging Market. *Journal of Finance* 53(6): 2001–27.
- Dornbusch, R., I. Goldfajn, and R. Valdes. 1995. Currency crises and collapses. *Brookings Papers on Economic Activity* 2: 219–93.
- Errunza, V. 2001. Foreign Portfolio Equity Investments, Financial Liberalization, and Economic Development. *Review of International Economics* 9: 703–726.
- Errunza, V. and D. Miller. 2000. Market Segmentation and the Cost of Capital in International Equity Markets. *Journal of Financial and Quantitative Analysis* 35: 577–600.
- Foerster, S. and G. A. Karolyi. 1999. The Effects of Market Segmentation and Investor Recognition on Asset Prices: Evidence from Foreign Stocks Listing in the United States. *Journal of Finance* 54: 981–1013.
- Forbes, K., 2006. The Microeconomic Evidence on Capital Controls: No Free Lunch in Capital Controls and Capital Flows. In: *Emerging Economies: Policies, Practices, and Consequences*, edited by S. Edwards. Chicago, IL: University of Chicago Press.
- Frankel, J.A., and G. Saravelos 2010. Are Leading Indicators of Financial Crises Useful for Assessing Country Vulnerability? Evidence from the 2008–09 Global Crisis. NBER Working Paper 16047.
- Gourinchas, P. O., N. Govillot, and H. Rey 2010. Exorbitant Privilege and Exorbitant Duty. IMES Discussion Paper Series 10-E-20. Bank of Japan.
- Gourinchas, P.O. and H. Rey. 2007. International Financial Adjustment. *Journal of Political Economy* 115(4): 665–703.
- Gozzi, J. C., R. Levine, S. Martinez Peria, and S. Schmukler. 2012. How Firms Use Domestic and International Corporate Bond Markets. NBER Working Paper No. 17763.
- Gozzi, J.C., R. Levine, and S. Schmukler. 2010. Patterns of International Capital Raisings. *Journal of International Economics* 80(1): 45–57.
- Hargis, K.. 2000. International Cross-Listing and Stock Market Development in Emerging Economies. *International Review of Economics and Finance* 9(2): 101–22.
- Henderson, B. J., N. Jegadeesh, and M. S. Weisbach. 2006. World Markets for Raising New Capital. *Journal of Financial Economics* 82: 63–101.
- Henry, P. B. 2007. Capital Account Liberalization: Theory, Evidence, and Speculation. *Journal of Economic Literature* 45: 887–935.

- Kaminsky, G., R. Lyons, and S. Schmukler. 2004. Managers, Investors, and Crises: Mutual Fund Strategies in Emerging Markets. *Journal of International Economics* 64 (1): 113–134.
- Kaminsky, G., and C. Reinhart. 2000. On Contagion, Crisis and Confusion. *Journal of International Economics* 51 (1): 145–168.
- Kaminsky, G., and S. Schmukler. 2008. Short-Run Pain, Long-Run Gain: The Effects of Financial Liberalization. *Review of Finance* 12(2): 253–292.
- Kose, M.A., and E. Prasad, 2010. *Emerging Markets: Resilience and Growth amid Turmoil*. Washington, DC: Brookings Institution Press.
- Kose, M. A., E. Prasad, K. Rogoff, and S. J. Wei 2010. Financial Globalization and Economic Policies. *Handbook of Development Economics* 5: Chapter 65.
- Kraay, A., N. Loayza, L. Servén, and J. Ventura. 2005. Country Portfolios. *Journal of the European Economic Association* 3: 914–45.
- Lane, P. R., and G. M. Milesi-Ferretti. 2001. The External Wealth of Nations: Measures of Foreign Assets and Liabilities for Industrial and Developing Countries. *Journal of International Economics* 55: 263–94.
- Lane, P. R. and G. M. Milesi-Ferretti. 2007. The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities, 1970–2004. *Journal of International Economics* 73: 223–250.
- Lane, P. R. and G. M. Milesi-Ferretti. 2010. The Cross-Country Incidence of the Global Crisis. IMF Working Paper No. 10/171. July.
- Levine, R. 2001. International Financial Liberalization and Economic Growth. *Review of International Economics* 9; 688–702.
- Levine, R., and S. Schmukler. 2007. Migration, Liquidity Spillovers, and Trade Diversion: The Effects of Internationalization on Stock Market Activity. *Journal of Banking and Finance* 31(6): 1595–1612.
- Levy Yeyati, E., and T. Williams. 2011. Financial Globalization in Emerging Economies: Much Ado about Nothing? World Bank Working Paper 5624.
- Martinez Peria, M., A. Powell, and I. Vladkova-Hollar. 2005. Banking on Foreigners: The Behavior of International Bank Claims on Latin America, 1985–2000. *IMF Staff Papers* 52(3): 430–461.
- Obstfeld, M., 2011. Financial Flows, Financial Crises, and Global Imbalances. CEPR Discussion Paper No. DP8611.

- Obstfeld, M., and A. Taylor. 2004. *Global Capital Markets: Integration, Crises, and Growth*. Cambridge, UK: Cambridge University Press.
- Raddatz C., and S. Schmukler. 2011. On the International Transmission of Shocks: Micro-Evidence from Mutual Fund Portfolios. NBER Working Papers 17358.
- Reinhart, C. M., and V. Reinhart. 2009. Capital Flow Bonanzas: An Encompassing View of the Past and Present. In: *NBER International Seminar on Macroeconomics 2008*. Chicago, IL: University of Chicago Press.
- Rodrik, D. 1998. Who Needs Capital-Account Convertibility? *Essays in International Finance* 207.
- Stiglitz, J. 2002. *Globalization and Its Discontents*. New York, NY: W.W. Norton and Company.
- Stulz, R. 1999. Globalization of Equity Markets and the Cost of Capital. NBER Working Papers 7021.