

# Financial Globalization

## A Glass Half Empty?

*Facundo Abraham*

*Sergio L. Schmukler*



**WORLD BANK GROUP**

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Macroeconomics and Growth Team

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## Abstract

Since the 1970s, the world has embarked on a new financial globalization era. Cross-country capital flows have significantly increased in developed and developing countries. However, the characteristics of financial globalization differ from what was originally expected. Various examples illustrate this point. Although the literature predicted large gains from financial globalization (such as additional funding, broad diversification, and deeper financial systems), the positive effects have been more limited. In developed and developing countries, financial

globalization has manifested in increasing gross capital flows (inflows and outflows) rather than larger net flows. Capital markets are segmented and only a few large firms access international markets. International institutional investors do not seem to have played a stabilizing role, helping to exacerbate and transmit crises across countries. Although financial globalization has brought several beneficial changes, its net effects and spillovers to the overall economies participating in it have yet to be understood.

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# Financial Globalization: A Glass Half Empty?

Facundo Abraham

Sergio L. Schmukler \*

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Email addresses: [facundoabraham@gmail.com](mailto:facundoabraham@gmail.com), [sschmukler@worldbank.org](mailto:sschmukler@worldbank.org).

## 1. Introduction

Since the 1970s, the world economy has witnessed a sharp rise in financial globalization. This process is only comparable to the period of capital mobility and integrated capital markets across the world that took place at the turn of the twentieth century. This first globalization wave lasted from 1870 to 1914, when it came to a halt because of the outbreak of the First World War. The inter-war period, with the Great Depression in between, reversed the globalization of the international economy, drastically reducing capital flows. It took nearly 60 years for financial globalization to make a comeback. Not until the 1970s, when the Bretton Woods system of fixed exchange rates was dismantled, did capital mobility start to slowly increase again. This process accelerated rapidly during the 1990s when financial globalization became a central topic in academic and policy debates. Ever since, it has continued to receive much attention (Bordo et al., 1999; Eichengreen and Bordo, 2003; Obstfeld and Taylor, 2003; Caprio et al., 2006; Calomiris and Neal, 2013).

Initial expectations were that financial globalization would boost economic growth by increasing financial development, particularly in developing countries. First, by allowing foreign investors into domestic markets, this process would expand the availability of capital and lower its cost. Capital would flow from capital-abundant countries to capital-scarce countries, because the latter offer larger returns to capital (Barro et al., 1995; Stiglitz, 2000; Mody and Murshid, 2005; Henry, 2007). Second, by granting domestic investors access to international markets, financial globalization would expand the range of financial instruments, allowing for better risk diversification (Obstfeld, 1994,1995). Third, by promoting reforms to the financial infrastructure, financial globalization would reduce information asymmetry problems and improve the efficiency of the financial sector (Schmukler, 2004; Mishkin, 2009). In other words, financial globalization would increase the availability and quality of financial services. In turn, higher financial development would promote growth. The financial sector performs a series of functions that lead to higher capital accumulation and technological innovation, both of which

are channels to economic growth. These functions include: mobilize savings, facilitate risk management, enhance allocation of resources, increase corporate control, and ease the exchange of goods and services (Levine, 1997).<sup>1</sup>

Following the academic and policy discussions on whether financial globalization can lead to higher economic growth, a large body of empirical literature has flourished trying to measure different effects of financial globalization and how it has worked in practice. Several studies have reviewed this extensive literature and concluded that, in contrast to the early theoretical predictions, the evidence on the effects of financial globalization is overall mixed. Whereas some authors find that financial globalization increases economic growth, others argue that the growth effect of financial globalization is negligible or nonexistent (Mishkin, 2007; Rodrik and Subramanian, 2009; Mougani, 2012; Moore 2014). Other surveys conclude that financial globalization is beneficial but the relation between financial globalization and growth is not straightforward. For example, only countries with specific characteristics benefit from financial globalization (Prasad et al., 2003). Also, the positive effects on growth might originate not from the direct effects of financial globalization, such as growth of the stock of capital, but from its indirect effects. In particular, financial globalization can lead to technological spillovers, better economic policies, deeper banking sectors, and larger and more stable finance markets, among others (Kose et al., 2009). On the other hand, the empirical evidence shows that financial globalization has increased risks such as higher macroeconomic instability, vulnerability to financial crises, and contagion effects spilling across borders (Eichengreen, 2001; Schmukler, 2004; Stavarek et al., 2012).

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<sup>1</sup> A large body of theoretical and empirical literature has shown that more finance is conducive to higher economic growth. See, for example, King and Levine (1993a), Jayaratne and Strahan (1996), Levine and Zervos (1998), Rajan and Zingales (1998), Beck et al. (2000), Levine et al. (2000), Guiso et al. (2004), Hassan et al. (2011), and Madsen and Ang (2016), among many others. Other papers discuss the different functions of the financial sector and how they can affect growth. For example, King and Levine (1993b) and Laeven et al. (2015) study the link between screening of investors by financial institutions, productivity enhancement, and growth; Levine (1991) and Bencivenga and Smith (1991) analyze how financial intermediation can help cope with liquidity risk; Obstfeld (1994) discusses the link between financial diversification and growth; Aghion and Howitt (2008) examine the relation between finance, corporate governance, and growth. For a review of the theoretical and empirical literature on finance and growth, see Levine (2005).

The surveys mentioned above have typically focused on the findings in the literature related to the effects of financial globalization on aggregate macroeconomic variables. Namely, they discuss whether the existing academic papers find that financial globalization affects positively, negatively, or has no effect on variables such as gross domestic product (GDP) growth and volatility, investment, consumption, asset prices, exchange rates, and financial stability indicators, among other macroeconomic indicators.

In this paper, we complement these previous studies by surveying empirical evidence on some of the major driving forces of financial globalization that affect the financial sector. This information is relevant because it can provide a more complete understanding of (i) how financial globalization has affected different parts of the financial system and (ii) why some of the effects of financial globalization at the macro level could have played out differently than anticipated. The three forces we study are: risk diversification, firms seeking financing abroad, and institutional investors that invest internationally. For each of these driving forces, we review the initial expectations and how they have worked once globalization took place. We show that these forces have affected the financial system differently than originally expected.

The main arguments of the paper can be summarized as follows. First, theoretical models posit that two main channels would foster financial globalization. One is the net financing from rich to poor countries, because the latter have higher returns to capital. Another one is risk diversification, because financially globalized capital markets would allow investors to diversify their assets worldwide, reducing risk and consumption volatility. Whereas initially these two channels were expected to be comparably important, new evidence suggests that financial globalization is (in relative terms) less about capital accumulation in developing countries and more about risk diversification. Developed and developing countries have simultaneously experienced a sharp increase in both inflows and outflows, whereas net capital flows are small and do not exhibit a clear trend. Therefore, movements of gross capital flows have outweighed

those of net capital flows, and the latter do not necessarily move from the “North” (the developed countries) to the “South” (the developing ones).

A possible explanation for why net financing is not an important force behind globalization could come from the fact that, whereas risk diversification can expand without bounds, net financing cannot increase indefinitely. Financing eventually needs to be paid back. In addition, as countries become richer, returns to capital diminish (reducing the attractiveness of net financing). At the same time, domestic investors and financial intermediaries become more sophisticated and increase their investments overseas (boosting risk diversification). Although more risk diversification is beneficial to the economies involved and some temporary net financing has occurred, the drawback is that capital flows are large, volatile, and pro-cyclical, which can exacerbate business cycles. Moreover, gross outflows that contract during crises imply that several adjustments might need to take place as capital gets reallocated, possibly disrupting the financial sector.

Second, in the movement of gross capital flows across borders, firms play a key role because they are large participants in the demand side of funds. In a globalized world, capital markets are expected to be integrated, allowing a wide range of firms with similar growth opportunities to access financial services at similar costs, regardless of their location. But contrary to these predictions, domestic and international capital markets are not substitutes. Instead, international markets offer advantages to firms in terms of cost and maturity of financing, number of investors, corporate governance, and informational environment, complementing the financing offered in domestic markets. However, only a few firms have proven to access international markets. Typically, these are the larger and better performing firms within each country.

Limited access to international markets could be explained by the high costs of listing in these markets, which smaller firms cannot afford, as well as a preference of international investors for larger and well-known firms for which information is more widely available. Firms

that participate in international capital markets are not only larger and more desirable to begin with, but also outperform non-participants because of their ability to issue and trade in these global markets. In addition, whereas the benefits of financial globalization seem to be restricted to a small number of firms, firms not participating in the globalization could become worse off. For example, as firms in a country become international, they can migrate their trading abroad, which can reduce the potential size and liquidity of domestic capital markets.

Third, institutional investors are expected to channel private and public savings, diversify risk internationally, and behave in a counter-cyclical and long-term way, possibly mitigating the volatility of capital flows and taking advantage of profitable investment opportunities in distressed markets with short-term liquidity needs. However, several institutional investors have tended to exhibit herding behavior, follow momentum trading, and withdraw funds from countries hit by a negative shock. Part of this behavior could be associated with the underlying investors getting in and out of those funds as market conditions change, but also with the actions of managers who are monitored on a short-run basis and face some incentives to act pro-cyclically. In addition, institutional investors are not diversifying risk as expected, limiting their investments only to a small group of countries and firms. Agency problems seem to play an important role in their behavior.

Overall, the empirical evidence in this paper shows how financial globalization might have failed to fulfill its initial expectations. Net financing from rich to poor countries, which can help the latter increase their capital stock and promote growth, is rather limited. In addition, the benefits of financial globalization are not extended to all firms and countries. Moreover, whereas institutional investors have helped channel funds to some countries and firms that otherwise would have not received funding, an increased presence of these investors has also been accompanied by unanticipated negative effects. Thus, financial globalization has had a somewhat limited positive impact on countries and its benefits have not necessarily been broadly shared, which could explain why the financial globalization literature has failed to find strong and

consistent positive effects of this process on overall growth, and why some of the earlier proponents have later detracted.

Some of the arguments in this paper relate to those mentioned in Stulz (2005), who claims from a different angle that agency problems impose limits on financial globalization. In particular, Stulz argues that agency problems arise from corporate insiders and state rulers that maximize their own benefits at the expense of outside investors. This behavior results in concentrated ownership and countries failing to reap the full benefits of financial globalization. These limits are manifested in investment being closely related to domestic savings, domestic factors being important for stock returns, varying financial development across countries, investors showing significant home bias in consumption, and restricted risk sharing. Our paper contributes to this analysis by showing other aspects in which financial globalization materialized differently than expected, and how these are related to how firms and investors have participated in this process.

The rest of the paper is organized as follows. Section 2 defines financial globalization and briefly shows how it has evolved in recent decades. Section 3 describes the behavior of capital inflows and outflows in developed and developing countries. Section 4 analyzes evidence on access of firms to international capital markets. Section 5 discusses the role of institutional investors. Section 6 concludes by mentioning some of the policy challenges and issues that remain for further research.

## **2. Financial Globalization: Brief Overview**

As a starting point, it is important to clearly define what we understand by financial globalization as well as present some stylized facts of this process. Throughout the paper, we discuss different aspects of financial globalization. Thus, we find it useful to state upfront the working definitions of the different terms we use to avoid confusion. In addition, presenting some evidence on the

evolution and extent of financial globalization would help readers understand the context in which the topics discussed take place.

Despite being widely used, there is no universal definition of what financial globalization means. Different authors have defined it in various ways and many times have associated it with other related terms, such as international financial integration and, sometimes, financial liberalization. We start by defining these three important terms that are used throughout the paper.<sup>2</sup>

First, we call financial liberalization the process by which countries reduce legal or “de jure” controls that restrict cross-country capital movement. Financial liberalization includes, for example, eliminating restrictions on capital inflows and outflows, removing limits on equity holdings by foreigners, and abandoning multiple exchange rates or limits to the acquisition of foreign currency.

Second, we characterize financial integration as the actual or “de facto” increase in cross-country capital movement (or the potential for those movements to take place), tightening the linkages between the economies.<sup>3</sup> As the world moves toward deeper financial integration and the potential for arbitrage disappears, the returns of identical internationally traded assets will be the same in different markets, a sign that markets are indeed integrated. One manifestation of this condition is known as the interest rate parity and can occur in two ways: covered and uncovered. Covered interest rate parity is satisfied when investors can obtain the same returns in a given currency on identical assets in domestic and international markets using forward contracts to hedge the exchange rate risk. Uncovered interest rate parity occurs when, taking into account the expected volatility of the exchange rate, the ex-ante expected returns on identical

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<sup>2</sup> For more discussion on the different definitions see, for example, Pavel and McElravey (1990), Baele et al. (2004), Arestis et al. (2005), Gudmundsson (2008), Schmukler (2004), Kose et al. (2010), Coeuré (2013), and Levy Yeyati and Williams (2014).

<sup>3</sup> Capital movement will tend to occur as long as there are price differentials that can be exploited. The mere possibility that capital can flow across countries could tend to produce a convergence in prices, without capital actually needing to move.

assets in a given currency is the same in domestic and international markets. In this case, investors are not covered against exchange rate risk because the ex-post return could differ in different markets depending on the actual movements of the exchange rate. Although financial integration means that the same assets are valued identically domestically and abroad in a given currency, there are several indicators of financial integration that focus on quantities rather than prices, as described below.

Third, we refer to financial globalization as the process in which financial markets and institutions around the globe increasingly allow agents and firms from any country to buy and sell securities, lend and borrow, or perform any other financial transaction. In a fully financially globalized world, financial services are provided in a global manner, irrespective of the country of origin of the creditor/investors and debtor/issuer. In this sense, financial liberalization is a precondition for financial globalization to occur (with restrictions, it is more difficult to move across borders), whereas financial integration is one dimension or one manifestation, among others, of financial globalization.

In general, barriers to financial globalization tend to be more relevant for borrowers than for savers. Typically, in the absence of legal restrictions to cross-border capital flows, savers have few impediments to invest internationally, even in small amounts. This is especially true in the more sophisticated financial systems of developed countries, where there are fewer limits to cross-border activities and transaction cost are relatively low. In those cases, investors have a wider set of options available to invest internationally. In contrast, even if legal restrictions are eliminated, information asymmetries, cultural barriers, and others frictions might make it more difficult for borrowers to obtain financing abroad, unless firms and international financial intermediaries, such as banks, bring those services domestically.

There are many measures used throughout the financial globalization literature to quantify the extent of this process. Several of these indicators focus on measuring the degree of financial integration, as it is a key outcome of financial globalization. Financial integration

measures can be classified into two groups depending on whether they focus on prices or quantities.

The so-called “price-based measures” focus on the law of one price, and calculate the interest rate differentials or price differentials of similar assets in different markets. The presumption is that, as the world becomes more financially integrated, these differentials should disappear due to arbitrage. Studies that use these indicators have supported the view that the world is more financially integrated. For example, there is an extensive literature that focuses on evaluating whether the interest rate parity holds in practice. Overall, these studies find that covered interest rate parity and, even in some cases, uncovered interest rate parity seem to hold in the long run, such as in a five- or ten-year horizon. In the short run, there are deviations from interest parity but these are explained by unexpected shocks, such as monetary policy shocks (Goldberg et al., 2003; Obstfeld and Taylor, 2004; Lothian and Wu, 2011; Chinn and Quayyum, 2012; Obstfeld, 2015).

Some have argued that measuring financial integration through the interest rate parity condition can be misleading. Studies of interest rate parity typically select a specific type of asset (for example, government bonds) and analyze the behavior of interest rate differentials for those assets across countries in a specific period. However, interest rates can reflect country risk, and many times this risk is not taken into account when comparing interest rate differentials. For example, before 2008, the convergence of long-term sovereign bonds yields in Europe was interpreted as a sign of sovereign bond market integration (Ehrmann et al., 2011). However, as the European debt crisis showed, even if interest rates were similar at some point, government bonds in Germany entailed different credit risk than bonds in Greece or Spain, and yields that converged before the crisis diverged afterwards. In other words, European bond markets were less integrated than initially thought.

A more precise analysis would examine price differentials of equivalent assets traded in more than one market at the same time. For example, some studies compare the price of an

equity share with the price of the corresponding depositary receipt (or DR). DRs are shares of other countries' corporations, issued by international depositary banks, which are traded in international financial centers, such as London and New York. Because DRs are not a different security but rather claims on shares traded in domestic markets, they do not have a different credit risk than the original share. Thus, to the extent that there are no barriers to cross-market arbitrage, such as capital controls, the price of these similar assets should remain similar over time. Studies that use this methodology find that, for assets traded in different free markets simultaneously, the price differentials (or cross-market premiums) are close to zero and are mean reverting because they are arbitrated away rather quickly (Alaganar and Bhar, 2001; Levy Yeyati et al., 2009).

On the other hand, "quantity-based measures" focus on the extent of actual capital flows moving across borders. Financial integration is characterized by an increase in cross-border capital flows as investors buy and sell foreign assets, and firms and sovereigns in need of financing obtain these funds internationally. These capital flows accumulate over time into foreign assets and liabilities.

Among the quantity indicators, a very popular one is that constructed originally by Lane and Milesi-Ferretti (2007). This variable calculates the sum of aggregate foreign assets and liabilities of countries relative to their GDP. The evolution of this index (aggregated for all countries) suggests that since the 1970s the trend has been toward greater financial integration. The stock of foreign assets and liabilities in the world has grown exponentially over time. In 1970, foreign assets and liabilities represented 66 percent of world GDP. By 1980 this figure had grown to 73 percent, and by 1990 the value almost doubled and reached 132 percent. The world's cross-border assets and liabilities reached a peak in 2009, when they represented 360 percent of world GDP. Since the 2008-09 global financial crisis, financial integration experienced a reversal worldwide. After shrinking in 2008, financial integration stagnated. As of 2011, foreign assets and liabilities stood at 341 percent, below the pre-crisis value.

Although the world as a whole advanced toward greater financial integration over the decades, the trends in developed and developing countries look different (Figure 1). In developed countries, financial integration consistently increased over time and only reversed during the 2008-09 global financial crisis. In contrast, in developing countries financial integration started at a lower level and did not proceed smoothly. Instead, developing countries experienced alternated periods of integration with times of reversals during crises. The financial integration process that started in the 1970s reversed in the late 1980s during the debt crises in Latin America, but then increased sharply during the early 1990s. However, by the end of the 1990s and early 2000s, this process reversed again when the developing world suffered a series of financial crises. Financial integration resumed shortly afterward in the mid-2000s, only to reverse once again during the 2008-09 global financial crisis. As a result of starting behind and of these fluctuations, developing countries are nowadays less financially integrated than developed countries. Whereas in 2011 developing countries had foreign assets and liabilities representing 109 percent of GDP, in developed countries this figure reached 437 percent.

In developed countries, debt has always been by far the predominant instrument, accounting for the largest share of the sum of foreign assets and liabilities. In 2011, the aggregate stock of debt assets and liabilities in these countries amounted to 220 percent of GDP, largely exceeding the stock of foreign direct investment (FDI) and equity, which represented 87 and 60 percent of GDP, respectively. However, since the 1990s, developed countries have experienced a significant expansion in FDI and equity foreign holdings. This increase is partially explained by changes in the external balance sheet of the United States, which has increased its share of high-return risky assets becoming what some authors call “the venture capitalist of the world.” This behavior has expanded investments in equity and FDI abroad (Gourinchas and Rey, 2007).

In developing countries, historically the most important type of foreign holding has been debt, followed by FDI. But this trend has changed since the late 1990s when the relative importance of debt started to diminish and, instead, FDI became increasingly more important.

Part of this behavior is explained by the reduction in fiscal deficits and governments' reliance on foreign debt. Another significant change was the rise of the stock of foreign equity, which was practically negligible before the 1990s. Because of these changes, in 2011 the aggregate stocks of debt and FDI assets and liabilities represented 35 percent of GDP, and the stock of equity reached 11 percent. This contrasts with the values in 1999, when the aggregate stock of debt amounted to 51 percent of GDP, FDI represented 21 percent, and equity reached 7 percent.

The composition of assets and liabilities is useful not only to understand the evolution of financial globalization but also the exposure to shocks and crises. In particular, a noteworthy feature of the nature of foreign assets and liabilities in developing countries is the transition toward safer forms of financial integration. On the liability side, these economies increased equity investment and reduced debt instruments. On the asset side, they largely accumulated international reserves. Because of these changes, developing countries have become net creditors in debt assets and net debtors in equity assets. This new composition of foreign assets and liabilities is safer compared to the one back in the 1990s when developing countries had large net debtor positions in debt assets. For example, in earlier crises, large amounts of foreign currency liabilities implied that, as currencies depreciated, the debt burden grew in local currency and crises deepened. Instead, during the 2008-09 global financial crisis, due to the new composition of foreign assets and liabilities, currency devaluations increased the external positions of developing countries (measured in local currency). At the same time, because these countries were net debtors in equity positions, external liabilities fell as equity prices plummeted. Moreover, large international reserves were useful to deter currency and banking crises (Milesi-Ferretti and Tille, 2011; Didier et al., 2012). This performance in a crisis period shows how developing countries have become better prepared to withstand financial shocks, especially when they involve currency devaluations and asset price collapses.

### 3. The Behavior of Capital Flows

#### 3.1 *Net vs. Gross Flows*

As cross-border assets and liabilities increased, signaling greater financial globalization, a new debate has emerged among academics on whether this growth has been driven by gross or net capital flows.<sup>4</sup> A central question is whether financial globalization is propelled by countries simultaneously buying and selling foreign assets or, instead, by some countries accumulating net foreign asset positions that finance foreign liabilities in other countries.

Economic theory has conjectured that financial globalization would mainly proceed through two different channels: efficient allocation of capital around the world and risk diversification (Fischer, 1997; Obstfeld and Taylor, 2004). On the one hand, standard theoretical models predict that financial globalization leads to resources flowing from rich (North) countries (where capital is abundant and expected returns are lower) to poorer (South) countries (which are capital scarce and have higher returns to capital). These capital inflows would temporarily boost investment and economic growth, permanently raising the living standards in developing economies (Barro et al., 1995; Eichengreen et al., 1998; Henry, 2007; Gourinchas and Rey, 2014). On the other hand, financial globalization allows investors to diversify their portfolio worldwide. Investors could purchase assets from other countries where risk is imperfectly correlated and, therefore, attain higher risk-adjusted rates and higher consumption smoothing, increasing welfare (Obstfeld, 1994).<sup>5</sup>

The trends in gross and net capital flows can shed light on the relative importance of these two mechanisms (Figure 2). Gross capital flows in the world have experienced a significant increase. Whereas the median value of average gross capital flows across all countries amounted

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<sup>4</sup> Throughout the paper, we use the definition of capital flows of the International Monetary Fund (IMF). Capital inflows are defined as net acquisition of domestic assets by nonresidents. Capital outflows are defined as net acquisition of foreign assets by residents, excluding reserve assets. Net capital inflows are defined as the difference between capital inflows and outflows (IMF, 2016).

<sup>5</sup> To be clear, net financing from rich to poor countries could be partly driven by risk diversification motives as well, but for simplicity we omit that aspect from the discussion in this paper.

to 6 percent of GDP in the 1980s, this value had grown to 15 percent in the 2000s. All country groups, irrespective of the income, experienced an increase in the median value of average gross capital flows during this period. In contrast, net capital flows in the world are relatively small and have not shown a clear pattern over time. In the 1980s, the median value of average net capital flows as percentage of GDP across all countries was 1.6 percent. By the 2000s, this figure not only remained small but had also dropped and stood at 1.1 percent. The trend was dissimilar across country groups sorted by income, with the median value of average net capital flows increasing in upper-middle-income countries but decreasing in lower-middle-income and high-income countries.

A significant part of gross flows takes place among developed countries, but developing countries have also started participating in this process. Although financial integration has advanced at a slower pace in developing countries, recent data show a rising importance of developing countries in cross-border capital movement, particularly after the 2008-09 global financial crisis. Not only have cross-border investments from developing to developed countries increased, but financial transactions between developing countries have expanded as well. For example, FDI transactions between developing countries as a ratio of total FDI grew from 8 to 12 percent between 2001 and 2014. Likewise, in the same period, the share of cross-border portfolio investment and bank flows that took place between developing countries increased from 1 to 3 percent and from 5 to 9 percent, respectively (Broner et al., 2017).

In developed countries, inflows and outflows consisted mainly of bank flows before the 2008-09 global financial crisis. This two-way cross-border bank flows were explained by an increase in cross-border ownership of banks and an expansion of bank lending in international markets (OECD, 2011). Round-tripping between the United States and Europe also seemed to have been important before the crisis. European banks raised wholesale funds in the United States that were lent back to the United States through the purchase of mortgage-backed securities. Regulatory arbitrage fostered this practice, given that European banks did not have a

cap on non-risk-adjusted bank leverage. Round-tripping translated into an increase in gross capital flows between these two regions, but not in net capital flows because inflows and outflows canceled out (Shin, 2012; Avdjiev et al., 2016). The 2008-09 global financial crisis was followed by a retrenchment of banks as they reduced their foreign exposures and brought money back home. The decline in bank flows was greater than the fall in portfolio and FDI flows, which also rebounded more quickly. Because of these trends, the composition of inflows and outflows in developed countries changed. Since the crisis, they consist mainly of portfolio flows and FDI (Forbes 2014; IRC, 2016).

In the case of developing economies, FDI has been the main source of capital inflows since the 1990s. International investors looking for lower costs, high growth potential, and market size have driven investments in developing market firms. Also, privatization of government-owned companies was important to foster FDI flows. The emergence of FDI as the predominant type of inflow is also partly explained by the fall in public debt flows, as governments scaled back the issuance of sovereign bonds. Since the late 1990s, equity inflows have also increased significantly because developing countries' securities became more attractive as economic growth accelerated, developing country firms increased international issuances, and institutional investors in developed countries have sought to diversify their portfolio. In terms of capital outflows, since the late 1990s and early 2000s, developing countries have become important investors in FDI and debt flows. FDI emanates from developing countries because firms in these countries engage in M&A activities in both developed and developing countries abroad. The increase in debt outflows is mainly associated with domestic residents purchasing more foreign debt securities, partly in the form of foreign reserves (CGFS, 2009). In some cases, developing regions are exporters rather than importers of capital. For example, this is the case of East Asia and the Pacific region, which is a net exporter of capital to both developed and developing countries. In particular, this region plays an important role as sender of M&A and syndicated loans (Didier et al., 2017).

After the 2008-09 global financial crisis, non-financial corporations from developing countries have aided the financial globalization process by borrowing in international financial markets. Between 2010 and 2014, annual international bond issuances by these corporations in major emerging economies almost doubled, reaching 400 billion U.S. dollars (Acharya et al., 2015). Overall, in the period 2000-13 non-financial corporations in emerging markets issued on aggregate almost 1 trillion U.S. dollars in international bond markets. Firms in Latin America accounted for more than half of these issuances, followed by Emerging Asia and Emerging Europe (Fuentes and Serena, 2014). As a result, corporate debt of non-financial firms in major developing countries surpassed 18 trillion U.S. dollars at the end of 2014, whereas in 2004 this value stood at 4 trillion U.S. dollars (IMF, 2015). This expansion resulted in an increase of the aggregate ratio of non-financial corporate debt to GDP in emerging markets from below 60 percent in 2006 to 110 percent in 2015, surpassing the value of this ratio in advanced economies (Tarashev et al., 2016).

Carry trade might have played an important role in this borrowing activity by non-financial corporations. Carry trade implies that firms take advantage of interest rate differentials by borrowing funds at a low interest rate abroad and investing the proceeds domestically in assets with higher returns (Galati et al., 2007). Some authors argue that funds obtained in international markets are not used to fund new investments or other expenditures, but instead are being lent in domestic markets at higher rates (Caballero et al., 2016a; Bruno and Shin, 2017). For example, there is evidence of a positive relation between foreign debt issuance by firms and domestic credit in East Asia and Latin America (Powell, 2014). A possible reason for this behavior is that, in a post-crisis scenario characterized by low interest rates and quantitative easing in developed economies, developing countries have increased capital controls. Because corporations can more easily circumvent these controls than banks, they could have become a conduit through which foreign funds enter into developing economies (Caballero et al., 2016b). However, the validity of this argument is not clear because corporations do not necessarily have

an easy time circumventing capital controls, most countries have not imposed capital controls, and a significant part of the capital raising activity has gone to investment and growth (Didier et al., 2015; Calomiris et al., 2017). Carry trade has its risks as it increases vulnerability to currency depreciations and spikes in international interest rates (Chui et al., 2014). In fact, the more recent economic slowdown and currency depreciations in the developing world coupled with tightening monetary policy in developed countries have raised concerns because they could negatively affect the capability of highly-leveraged corporations to pay back their debts (Alfaro et al., 2017).

Tax avoidance might also explain the borrowing pattern by developing country corporations. As the world became more globalized, large corporations started to increasingly use within-firm financial transactions (intra-firm debt, royalty payments, dividend repatriations, etc.) to transfer profits to related parties located in low-tax countries (also known as “tax havens”) to reduce their tax burden (Desai et al., 2006). These corporate financial arrangements have translated into increasing cross-border financial flows between developing countries and international financial centers (IMF, 2014). For example, companies can shift profits across jurisdictions by lending to firms in high tax jurisdictions through related parties in low tax countries, which translates into increasing debt flows (Arena and Roper, 2010). Data on the Coordinated Portfolio Investment Survey (CPIS) show that in 2016, 9 percent of foreign debt securities liabilities of Brazil were held in Cayman Islands and 8 percent in Luxembourg. Similarly, Luxembourg and Mauritius ranked third and six, respectively, as the top holders of debt securities liabilities of India, accounting for 9 and 5 percent of all liabilities, respectively. Tax avoidance is particularly important for developing countries that have weak tax legislations (Arezki et al., 2013). Still, a significant part of the borrowing activity of corporates has taken place in countries that do not necessarily present tax advantages nor are regarded as tax havens, such as the United Kingdom and the United States, especially when compared with the offshore markets mentioned above.

The evidence presented above suggests that the financial globalization might have less to do with net financing from rich to poor countries than was originally anticipated. Whereas net financing has indeed taken place, it has been limited, has not necessarily occurred from developed to developing countries, and has been outweighed in magnitude by gross capital flows. Financial globalization seems to be more about asset diversification in which foreign residents invest more in domestic markets, domestic residents expand their investment overseas, and firms participate by borrowing abroad from foreign investors and bring the proceeds to domestic markets. This argument relates to previous studies that have also found that financial globalization is characterized by large gross capital flows and small net capital flows, and concluded that risk diversification might be a much more important driver of financial globalization than net financing (Obstfeld and Taylor, 2003; Schularick and Steger, 2010).

Different reasons could explain the rise in gross flows. First, net financing cannot increase indefinitely because countries eventually need to return the foreign financing obtained. In contrast, gross flows can grow as long as investors have resources to invest abroad. Therefore, to the extent that financial globalization involves investors purchasing assets across countries, it will involve gross flows but not necessarily net flows, because outflows and inflows can compensate each other. Second, when economies become richer, investors seek to diversify their portfolios and financial intermediaries seek to participate in financial activities in other countries. At the same time, returns to capital tend to equalize across countries reducing net financing. Hence, gross flows tend to increase over time whereas net flows decrease. This argument also explains why between developed countries the basic channel of financial globalization is risk diversification.

### ***3.2 Capital Flows during the Business Cycle***

Although the cross-country movement of capital flows has allowed more risk diversification and some net financing, both of which are beneficial, capital flows are not free of risks. By enabling

foreign investors to purchase domestic assets and domestic residents to invest abroad, countries increase their exposure to foreign shocks.

Capital flows in the world are pro-cyclical with both capital inflows and outflows expanding during booms and decreasing during downturns (Broner et al., 2013). In particular, the pro-cyclicality of capital flows seems to be explained by the behavior of flows from the private sector (banks and corporates). In contrast, flows from the public sector are typically counter-cyclical, particularly in developed countries (Avdjiev et al., 2017). Financial frictions (such as risk aversion, sovereign risk, or information asymmetries between domestic and foreign agents) could explain this empirical regularity. In the absence of financial frictions, inflows and outflows would not necessarily respond in the same way to business cycle fluctuations because domestic negative shocks would be matched by decreasing inflows by foreign investors but increasing outflows by domestic investors. Instead, the above-mentioned frictions could explain why retrenchments by domestic investors can occur during domestic crises (Broner et al., 2010; Tille and van Wincoop, 2014). Another possible explanation for this positive correlation is that global rather than domestic risk is the main driver of extreme capital flows episodes. In this scenario, increases (decreases) in global risk lead to sudden stops (surges) in capital flows by foreigners and retrenchment (flight) in capital flows by domestic investors. In other words, during good times, investors seek to diversify risk by investing abroad, but during bad times they return home (Forbes and Warnock, 2012).

Another important and related feature on capital flows is that they are volatile, increasing financial and macroeconomic instability. Higher volatility of capital flows is associated with country characteristics such as lower income, worse institutions, and lower financial development. There are substantial differences between capital flows to developing and developed countries. Capital flows are more volatile in developing countries, where shocks to capital flows are more frequent, persistent, and correlated across countries (Broner and Rigobon, 2006; Broto et al., 2011).

As a result of being pro-cyclical and volatile, capital flows can trigger or intensify financial crises. Empirical studies have shown that financial liberalization can increase the probability of a country facing banking and currency crises (Kaminsky and Reinhart, 1999; Ranciere et al., 2006; Joyce, 2011; Furceri et al., 2012; Caldera Sánchez and Gori, 2016). Although financial liberalization can increase financial volatility in the short-run, financial markets can become more stable in the long-run (Kaminsky and Schmukler, 2008).

Most of the earlier literature connecting capital flows to crises has centered on net capital flows. In particular, studies have argued that a drop in net capital inflows can trigger repayment problems and generate balance of payment/exchange rate, banking, or debt crises (Calvo, 1998; Calvo et al., 2004; Edwards, 2004; Levchenko and Mauro, 2007; Cavallo and Frankel, 2008). However, movements in gross capital flows can also be informative to the crisis literature and can complement the more traditional analysis associated with net flows.

The literature on gross flows suggests that financial crises have a different impact depending on whether they are triggered by a drop in capital inflows by foreign investors or a surge in capital outflows by domestic investors. Compared to sudden flights by domestic investors, sudden stops by foreign investors are associated with sharper drops in economic activity and larger currency depreciations. Also, sudden stops tend to occur in multiple places simultaneously, which suggests a common shock or a contagion effect (Cowan et al., 2008; Rothenberg and Warnock, 2011). Foreign investors are more likely to stop funding to countries with volatile exports base (such as commodities) and poor economic performance. In turn, domestic investors are more prone to capital outflows when the domestic performance is poor, the financial system is weak, and there are high external savings (Calderón and Kubota, 2013).

In addition, even when capital inflows and outflows are matched and move in tandem or when a country is not a net debtor, crises can ensue. For example, countries with large foreign net creditor positions might not be able to mobilize assets with external debtors on a short notice to cancel their debts with external creditors. This could happen if there is a mismatch in

the maturity of assets and liabilities such that assets are long-term but liabilities are short-term, and might take place even when a country is accumulating foreign assets on aggregate but has a high level of external liabilities (Obstfeld, 2012a,b). Moreover, when the maturity of assets and liabilities is similar, there could also be problems if assets and liabilities are invested in different markets. For instance, when foreign liabilities in a country are concentrated in the banking sector and foreigners decide to withdraw their funds, the domestic banking sector could suffer instability if domestic investors do not compensate for that withdrawal, by, for example, repatriating their foreign savings. In other words, even though a country can have on aggregate a similar amount of assets and liabilities, there is still risk that capital outflows increase financial instability if these flows hit particular markets, with potential spillover effects on other markets.

Focusing on net (instead of gross) capital flows can also give a misleading assessment of the sources of global financial instability and who is exposed to different risks. For example, on the run-up to the 2008-09 global financial crisis, the size of net capital flows might have given the impression that the rapid increase in credit to subprime borrowers in the United States was financed by large current account surpluses in developing countries. However, when the crisis hit, investors in emerging economies did not bear the largest losses. Instead, European investors were the ones that did so. As mentioned earlier, gross capital flows between the United States and Europe before the crisis show that subprime lending was partly fueled by round-tripping of European banks that borrowed money in the United States and lent it back to the U.S. market. Because inflows were matched by outflows, analyses that only focused on net capital flows would have failed to disclose this pattern (Avdjiev et al., 2016).

#### **4. Which Firms Access Global Capital Markets?**

Important drivers of cross-border capital flows are firms, which issue securities bought by foreign investors and traded abroad. Financial globalization benefits firms by allowing them to obtain necessary funding from foreign investors and international capital markets. The

emergence of these investors and markets as a funding source offers firms new sources to raise capital, new financial services and instruments, lower costs, and better financing terms (Kim and Singal, 2000; Chari and Henry, 2008; Larrain and Stumpner, 2017).

At the initial stages of financial globalization, when capital markets are yet not fully globalized, access to international capital markets is considered particularly important because it can offer additional benefits compared to domestic markets. International financial markets offer a bigger investor base, larger variety of financial instruments, more liquidity, and capital at a lower cost compared to domestic markets (Stulz, 1999; Chouinard and D'Souza, 2004). In addition, the “bonding hypothesis” argues that by cross-listing in foreign markets with enhanced disclosure standards, protection of minority shareholder, and enforcement of regulations, among other advantages, firms can improve corporate governance and attract more investments (Coffee, 2002; Benos and Weisbach, 2004). Cross-listing is also assumed to increase the visibility and prestige of firms (Bancel and Mittoo, 2001). As time goes by and financial globalization deepens, the differences between international and domestic markets are expected to vanish. Capital markets are likely to harmonize their rules and allow any worthwhile firm to participate in them. As a result, capital markets are expected to eventually become universal, and firms might be able to access the whole range of investors and financial services at similar costs across countries, irrespective of their location.

The empirical evidence suggests that, despite the increase in issuance and trading activity, capital markets have globalized slower than anticipated. Only a few firms have access to international markets, particularly in developing countries. As shown in Panel A of Figure 3, during the period 2000-08 only two firms on average issued foreign equity per year in developing regions, whereas among G-7 countries 17 firms did so. Furthermore, the average number of firms that issued foreign bonds was below ten in developing regions and 113 in G-7 countries.

Moreover, the use of foreign markets is concentrated in the largest issuances (Panel B of Figure 3). For G-7 countries and developing regions, the largest five international equity

issuances during the period 2000-08 accounted on average for around 90 percent of the total amount raised in foreign equity markets each year. Bond issuances were still concentrated in developing regions but not so much in developed ones. Whereas the average amount raised per year by the top five international bond issuances in G-7 countries represented only 14 percent of total foreign bond issuances, this figure amounted to around 75 percent of the total in developing regions.

Firms more likely to go abroad are those located in specific countries with bigger economies, higher income levels, and better macroeconomic environments. In addition, only a small group of firms with special characteristics access international markets. Apart from being larger, faster growing, and more profitable, firms that issue in foreign markets are already more linked to the international economy, as their foreign sales are larger and, thus, their revenues are more dependent on foreign markets and consumers (Claessens and Schmukler, 2007). Furthermore, firms with better corporate governance frameworks, such as limited power to controlling shareholders or higher transparency, are more likely to list on foreign markets (Doidge et al, 2009; Chen et al., 2014).

International capital markets offer some advantages to firms because issuers in foreign markets outperform non-issuers. After cross-listings, firms seem to enhance their corporate governance as well as their informational environment. Relative to non-issuers, firms that cross-list in international markets tend to exhibit higher protection to minority shareholders and are more prone to dismiss poor performing managers (Doidge, 2004; Lel and Miller, 2008). In addition, these firms seem to improve their reporting standards, receive greater media attention and analyst coverage, and have higher forecast accuracy (Baker et al., 2002; Lang et al., 2003; Herrmann et al., 2015). At the same time, cross-listed firms enjoy access to a larger investor base that result in increased issuances and higher trading volumes (Foerster and Karolyi, 1999; Reese and Weisbach, 2002). The finance obtained by firms in international markets is cheaper and at longer maturities than funding from their domestic markets (Hail and Leuz, 2005; Schmukler

and Vesperoni, 2006; Turk Ariss, 2016; Ball et al., 2017). As a result, firms with wider access to international capital markets grow faster in terms of assets, sales, and employment than non-issuing firms (Didier et al., 2015). However, measured by the Tobin's Q that captures the market value of a firm relative to its book value, it is not clear whether firms perform better after internationalization. There is some evidence that cross-listed firms have higher ratios than non-cross-listed firms (Doidge et al., 2004; Cetorelli and Peristiani, 2015). But other studies also show that after firms cross-list the Tobin's Q does not change or increases only temporarily (King and Segal, 2009; Gozzi et al., 2015).

To the extent that globalization implies that financial services can be provided anywhere in the world, access to foreign markets allows firms and investors to choose the markets where their assets are traded. An international liquid market might offer them attractive alternatives relative to domestic markets. In fact, there is evidence that the domestic trading of firms that go international tends to decrease. This migration effect can reduce the size and liquidity of domestic markets (Karolyi, 2004; Levine and Schmukler, 2006). In the extreme, migration could even make small domestic exchanges unsustainable (Claessens et al., 2002).

These patterns seem to suggest that capital markets across the world are still segmented offering different financial instruments, and featuring different issuers and investors. Thus, both international and domestic markets are relevant for firms because they can act as complements, rather than substitutes. Depending on their own characteristics and different needs, firms will either issue at home or abroad (Gozzi et al., 2010).

Several reasons could explain why access to international markets might be restricted to only a set of firms. Smaller firms might not have incentives to cross-list. To list abroad, firms need to pay high transaction costs, comply with cumbersome listing requirements, and conform to stringent regulatory requirements. For smaller firms, these costs might be too high and offset the benefits of cross-listing (Pagano et al., 2002). At the same time, investors' demand for securities issued by certain types of firms might be limited. Investors usually have large portfolios

to manage and prefer to invest in few liquid securities (as described in the next section). Moreover, there is evidence that foreign investors have less information on foreign firms than local investors in the country (Bae et al., 2008; Ferreira et al., 2017). In addition, they tend to prefer firms that are close culturally and use the same language (Grinblatt and Keloharju, 2001). Thus, information asymmetries and cultural bias could partly explain why investors restrict their investments to larger and better-known firms from specific countries.

## **5. Institutional Investors**

On the supply side of funding, institutional investors are new and important drivers of financial globalization, at least compared to the previous wave of globalization.<sup>6</sup> As the assets they manage have grown over time and as investors in developed countries have sought to reduce their home bias and obtain higher yields, institutional investors based in these countries have increased their foreign exposure (Figure 4). The Organization for Economic Co-operation and Development (OECD) estimates that in 2013 pension funds, insurance companies, and investment funds in member countries held assets for 86 trillion U.S. dollars. This figure represents a 153 percentage increase compared to 2001, when these institutional investors held assets for 34 trillion U.S. dollars (OECD, 2014). These investors have an international perspective, holding around one-third of their assets in foreign markets. Their holdings range from traditional investments, such as bonds and stocks, to more alternative investments, including real estate, private equity, and infrastructure (IMF, OECD, and World Bank, 2015). Following the trends in developed countries, institutional investors in developing countries have grown as well, and some of their investments go abroad as a way to diversify risk. In Chile, for example, pension funds are very large and invest up to 30 percent of their assets internationally.

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<sup>6</sup> Institutional investors comprise public and private pension funds, life insurance companies, non-life insurance companies, and mutual funds (World Bank, 2015).

Institutional investors are expected to play a key role in financial markets across the globe. Because institutional investors are deep pocket investors and have a long-term horizon, they are natural providers of stable and long-term finance to domestic firms and governments. Institutional investors could provide long-term finance that, in principle, could facilitate productive long-term investments that promote economic growth. Likewise, they have incentives to invest in riskier assets and act in a counter-cyclical manner, continuing to hold assets during market downturns. In addition, competition among governments to attract funds from institutional investors is expected to promote reforms that enhance corporate governance, financial regulations, public disclosure of information, and better accounting standards. Institutional investors are also assumed to be more sophisticated. Thus, a larger presence of these investors could enhance efficiency in capital markets as prices adjust to better reflect fundamentals. Furthermore, institutional investors could offer significant benefits to small investors. Due to their large size, economies of scale, and efficiency to process and absorb information, institutional investors can diversify risk appropriately, provide a better trade-off between risks and return, and reduce transaction costs (Davis, 2000; Stein, 2009; Della Croce, 2011).

Although institutional investors have grown significantly and have channeled funds to countries and firms that would otherwise receive little attention (aiding in the globalization process), the evidence suggests that the role of institutional investors in financial globalization might be more limited than originally foreseen. International institutional investors are not necessarily diversifying risks as much as expected because many of them invest in a relatively small number of countries and firms. For example, international mutual funds typically hold less than one hundred stocks and this number is even smaller for specialized funds (Didier et al., 2013). Likewise, there is also evidence that pension funds and insurance companies from developed countries invest in restricted type of assets in developing countries. Pension funds remain highly concentrated in short-term government bonds and even hold a significant fraction

of their assets in bank deposits, whereas insurance companies limit their investments to government bonds (IMF, OECD, and World Bank, 2015).

This lack of diversification could be caused by competition among managers within fund families, who manage and process information independently and, thus, have a limited capacity to follow many assets simultaneously (Didier et al, 2013). Also, foreign investors in a country typically prefer to limit their investment to those firms that are bigger, have large cash positions and low leverage, and implement good accounting standards, among other indicators of enhanced performance (Aggarwal et al., 2005; Ferreira and Matos, 2008). Institutional investors, like other investors, also seem to exhibit a preference toward familiar companies that are closer and share their same language and culture (Beugelsdijk and Frijns, 2010; Anderson et al., 2011). Principal-agent problems can explain the incentives for institutional investors to limit investments to government bonds, cash, and other short-term securities. For example, investors and regulators monitor institutional investors on a short-term basis, making managers reluctant to invest in longer-term securities that could be profitable in the long run but have low returns in the short run (Stein, 2005).

Instead of playing a stabilizing role, institutional investors can be pro-cyclical, helping to exacerbate crises in the countries where they invest. Empirical evidence shows that many international institutional investors invest using past performance: they buy past winners and sell past losers. As a result, these investors tend to withdraw from countries in bad times and increase investment in good times, which intensifies economic cycles (Grinblatt et al, 1995; Patro, 2006; Xiao, 2007; Gelos, 2011; Raddatz and Schmukler, 2012).

The investment strategy of buying winners and selling losers, known as momentum trading, can be explained by behavioral biases of institutional investors including overreaction to information, use of stop-and-loss orders, and avoidance of low capitalization securities, which drive investors to sell stocks with large negative returns (Sias, 2007). Furthermore, this trading strategy could be explained by portfolio rebalancing. When funds have below-average returns,

they tend to reduce funding to countries in which they are overexposed. Likewise, when returns are above average, funds withdraw from underexposed countries. Typically, a fund has returns below average when it is overexposed to a country with low returns, and has returns above average when it is underexposed in a country with low returns (Broner et al., 2006).

The pro-cyclicality of institutional investors can also be associated with the so-called “benchmark effect.” Mutual funds have increasingly started to follow market indexes as a benchmark to make investment decisions in different countries. As these indexes are adjusted, mutual funds that follow them reallocate their portfolio to reflect the new composition, which will affect capital flows to countries. This benchmark effect can induce pro-cyclicality in certain cases. For example, this effect will amplify shocks in countries that are larger or have a good performance because funds allocate the injections/redemptions they receive following the weight of each country in the index. That is, countries with a larger weight will have more inflows during good times because investors are pouring in funds, amplifying the cycle. The counterpart is that these countries will experience higher withdrawals during market downturns. In contrast, countries that have performed poorly in the past will have a lower relevance in the index and, thus, suffer lower withdrawals during crises (Raddatz et al., 2017).

Momentum trading can be exacerbated by a tendency toward herding behavior in which institutional investors buy and sell assets at the same time (Voronkova and Bohl, 2005; Choi and Sias, 2009; Nirei et al., 2012; Raddatz and Schmukler, 2013; Blake et al., 2015). As a result, herding amplifies the negative effect of pro-cyclicality. There are several motivations behind the decisions of institutional investors to herd. Herding can be caused by informational problems. Institutional investors tend to copy others when they lack information or instruments are more opaque (Venezia et al., 2011; Raddatz and Schmukler, 2013). Informational cascades, in which investors ignore their own information and instead infer information from the trading of others, can also be important (Sias, 2004). In addition, reputational concerns can be important because institutional investors can suffer a reputational cost when acting different than the rest. Evidence

shows that during bubble periods, mutual funds that hold fewer stocks underpinning the bubble exhibit a lower performance (Dass et al., 2008). Furthermore, herding can also arise from institutional investors using similar risk models (Kremer and Nautz, 2013).

Institutional investors can also trigger contagion effects, spreading crises across countries. Fund managers and investors can produce contagion because they are prone to selling assets in one country when prices fall in another (Kaminsky et al., 2004; Boyer et al., 2006; Chiang and Zheng, 2010; Puy 2013). Likewise, political decisions in one country, such as a decision to increase capital controls, might induce institutional investors to decrease exposure to comparable countries that might be expected to implement similar policies (Forbes et al., 2016). Furthermore, institutional investors can help transmit shocks originated in their home countries. There is evidence that, regardless of their macroeconomic stability, developing countries more exposed to international funds experience larger decreases in external funding when conditions in developed countries worsen (Cerutti et al., 2015). One possible explanation could be that a negative shock in the home country where a fund is domiciled might induce investors to withdraw their money from it. This behavior will lead to a fire sale in which funds need to liquidate their positions, including foreign investments, expanding the crisis toward other countries (Jotikasthira et al., 2012). This pro-cyclical behavior of institutional investors could be one of the reasons why financial globalization is associated with crises.

Although we have highlighted many of the negative effects of institutional investors, they do help channel financing across countries and can produce some positive effects. For example, they help complete financial markets, offering new forms of financing and managing household savings. Moreover, there is some evidence that international mutual funds might help extend the maturity structure of corporate bonds. Empirical evidence shows that these funds invest longer term in corporate bonds than the domestic funds of the countries in which they invest. This behavior can be explained by the ability of international mutual funds to take higher risk given their larger size and their possibility to hedge risk investing in different countries (World Bank,

2015). Also, as explained above, it might be the case that domestic funds might have incentives to hold short-term liabilities. Domestic institutional investors might be subject to short-run monitoring by investors, regulators, and asset-management companies. This short-run monitoring generates incentives for managers to be averse to investments that are profitable in the long term but can have poor short-term performance (Opazo et al., 2015). Thus, international institutional investors, even with their shortcomings, might sometimes be an improvement over domestic institutional investors.

## **6. Conclusions**

Following the extensive debate on the effects of globalization, this paper argues that, although financial globalization has advanced significantly in recent decades, it has not developed as originally expected. The ways in which financial globalization has manifested differ from those anticipated by academic and policy discussions in several dimensions. The paper provides some examples of these deviations.

First, the net financing channel of financial globalization is less important than expected and, instead, the large movements of capital across borders are driven mostly by domestic and foreign investors seeking to simultaneously diversify their portfolio worldwide. Whereas risk sharing has its benefits, by allowing domestic investors to invest abroad and foreign investors to invest domestically, countries become more exposed to foreign shocks. Second, only a few firms seem to be benefiting from financial globalization. In addition, financial globalization could produce negative externalities that affect firms that are not direct participants of the globalization process. Third, several institutional investors are not necessarily diversifying risk as broadly as expected. Moreover, instead of behaving in a counter-cyclical manner, they tend to act in a pro-cyclical way, which might exacerbate financial crises and help expand them across countries.

These examples illustrate that the mechanisms through which financial globalization was expected to promote growth are operating in a more limited way. Moreover, although financial

globalization entails many positive effects, its benefits do not seem to be broadly shared across countries and firms, and those exposed to globalization are subject to new adverse shocks. Thus, these results might provide some explanations to why the existing financial globalization literature has not consistently found a strong positive effect of this process across countries.

The examples shown in this paper also highlight some of the important challenges and tradeoffs that policy makers face. First, given the volatility of capital flows that can exacerbate economic cycles, countries could benefit from implementing policies that smooth their pro-cyclicality. Among the policies that reduce pro-cyclicality, an important ongoing proposal relates to the use of macroprudential policies and capital controls. The goal of macroprudential policies is to reduce risks to financial stability. Whereas macroprudential instruments were typically aimed only at the banking sector, recent proposals argue to extend their use to the non-banking financial sector, including institutional investors. Some macroprudential policies for these financial intermediaries include reducing leverage, requiring them to hold enough liquidity to cover short-term redemptions, restricting large exposures, and designing resolution plans to deal with failures (ESRB, 2016).

Likewise, some academic and international organizations (such as the International Monetary Fund) have started to recognize that capital controls might be a desirable tool to safeguard macroeconomic and financial stability (IMF, 2011, 2012). A counter-cyclical capital control policy can smooth the impact of capital flows by limiting inflows during booms and relaxing them during recessions (Forbes et al., 2015). For example, proposed measures to manage capital flows include taxes on certain inflows, minimum holding periods, and currency-specific reserve requirements, among other policies (OECD, 2015). However, their effectiveness and general equilibrium consequences are yet to be understood.

Counter-cyclical policies could be complemented with measures that help reduce and manage liquidity crises. The large volatility of capital flows exposes financial markets to sudden stops by foreign investors and capital flight by domestic agents. These events could cause a sharp

reduction of liquidity and drops in asset prices unless new funds are injected into the market. To counteract these declines, government could have mechanisms in place to provide liquidity support when market forces alone are not capable of counteracting the fall in liquidity during crisis episodes. Liquidity provision instruments can include lender of last resort facilities, deposit insurance schemes, emergency liquidity assistance, and contingent term repo facilities, among others.

Second, given the difficulties for many firms to raise capital internationally, one challenge is how to assist firms that cannot do so and channel some of the gains from globalization to those firms.<sup>7</sup> To the extent that the likelihood of firms to go abroad is related to country characteristics, it would be useful to understand which specific attributes limit access to international markets and implement reforms that promote internationalization. Likewise, it would be helpful to understand the constraints that might exist in international financial centers that could allow more cross-listings and capital raisings by smaller firms, and whether any measure could assist in lowering transaction costs. Nevertheless, in competitive markets it might prove difficult to lower those costs.

Third, another important question that policy makers debate is how to encourage institutional investors to diversify their portfolio allocations more broadly, act less pro-cyclically, and invest at longer maturities. Designing monitoring tools for institutional investors implies a tradeoff between the short-term monitoring of managers (which leads to shorter investments but lowers risks) and giving them more freedom in the short term to maximize risk-adjusted returns (which might encourage longer-term investments though with higher risks).

The analysis in this paper raises some other important questions that could be addressed in further research. Regarding firm financing and trading activity, it would be useful to understand to what extent the internationalization of firms still harms rather than enhances

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<sup>7</sup> A similar discussion has also emerged in the debate of how globalization has affected international trade and labor markets, among others.

domestic markets. This issue includes analyzing why some firms see their trading activity migrate abroad instead of having both domestic and international activity, or why the trading activity is not concentrated in domestic markets where both domestic and international investors can participate. Another question entails studying why the potential positive spillovers of internationalization, such as increased linkages between domestic and international markets or the introduction of new corporate governance practices by international firms, are not significant enough to overcome the negative effect of migration. Moreover, it would be helpful to know to what extent the financing of certain firms abroad has had positive spillovers to the financing of other firms in domestic markets. To the extent that large firms raise capital from international financiers rather than from domestic ones, the latter might be more willing to finance other firms. Also, firms raising funds abroad could provide trade credit to firms that are more financially constrained. However, these spillover effects have not been observed or documented so far, at least in a systematic way.

Another important topic for future research is to understand the incentives behind the behavior of institutional investors. Despite being sophisticated, institutional investors often follow simple investment strategies based on previous performance and tend to copy the behavior of others. Agency problems that seem to play a key role in this type of behavior do not appear trivial to eradicate. Likewise, research could also shed light on the reasons that make managers not prone to diversify risks. It seems relevant to understand better why fund managers do not share information and only concentrate their investments on a few large firms, despite the large potential benefits from diversification, and the relative contribution of the different factors behind their behavior.

To conclude, the evidence discussed in this paper shows that financial globalization has yielded bittersweet results. On the positive side, globalization has advanced significantly in recent years and, as a consequence, the world financial system is much more integrated than a few decades ago. On the negative side, not all countries and firms have been able to benefit from the

globalization process, and the volatility associated with it has impacted both participants and non-participants in global financial systems. Depending on the initial expectations and the weight assigned to the positive and negative effects, readers will conclude that financial globalization is, so far, either a story of a glass half full or of a glass half empty.

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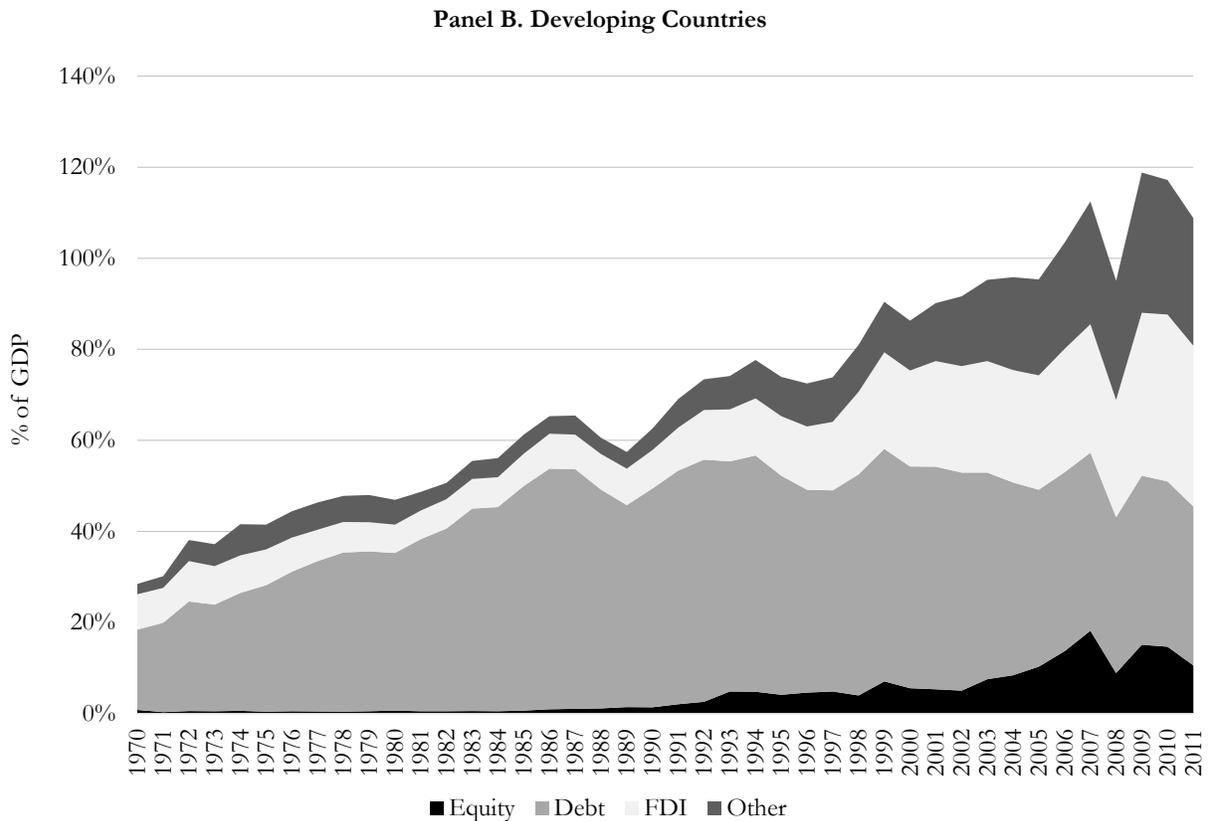
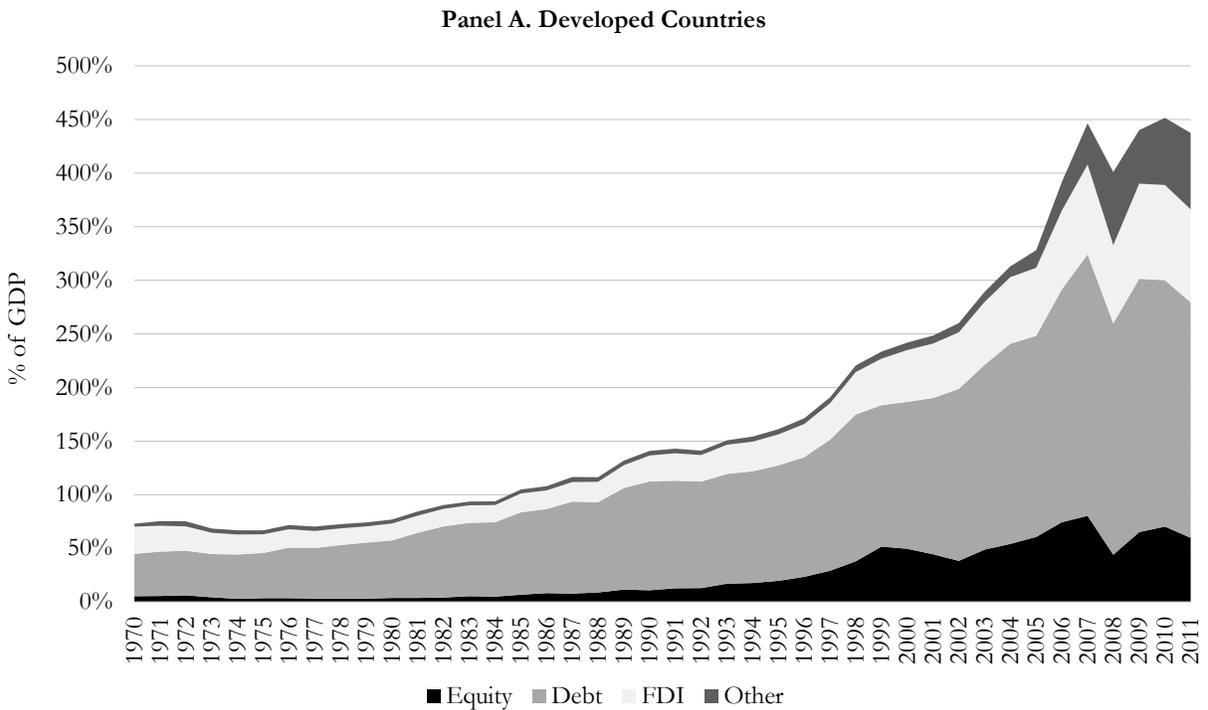
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**Figure 1. Foreign Assets and Liabilities in Developed and Developing Countries**

This figure displays the aggregate stock of foreign assets and liabilities for developed countries (Panel A) and developing countries (Panel B) as percentage of GDP during 1970-2011. Foreign assets and liabilities include debt, equity, foreign direct investment (FDI), and other investments.

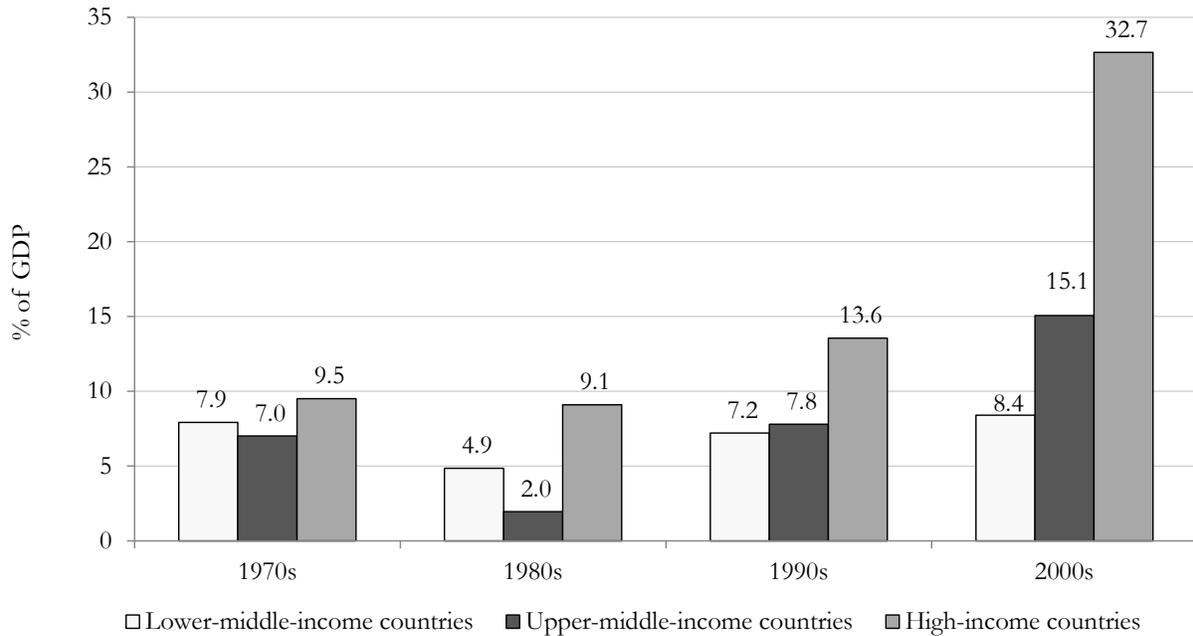


Source: Extended data from Lane and Milesi-Ferretti (2007).

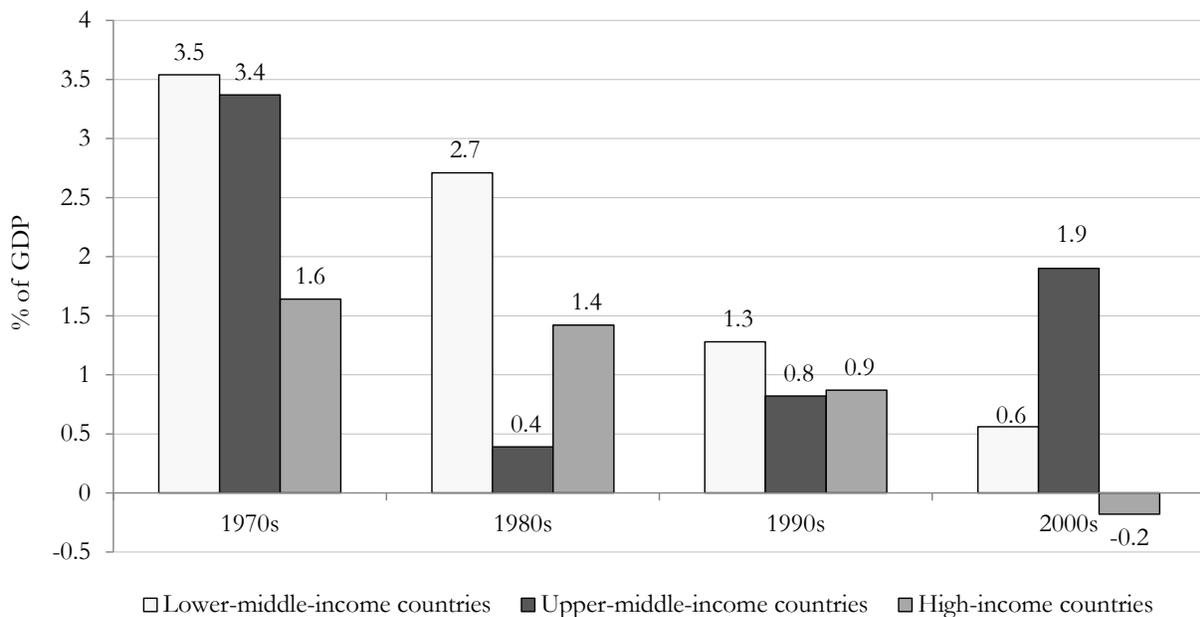
**Figure 2. Gross and Net Capital Flows across Country Groups Grouped by Income**

This figure displays the median value of average gross capital flows (Panel A) and net capital flows (Panel B) across country groups per decade. Values are reported separately for high-income, upper-middle-income, and lower-middle-income countries. Gross capital flows are the sum of capital inflows and outflows. Net capital flows are capital inflows minus capital outflows. Values are scaled by trend GDP.

**Panel A. Gross Capital Flows**



**Panel B. Net Capital Flows**

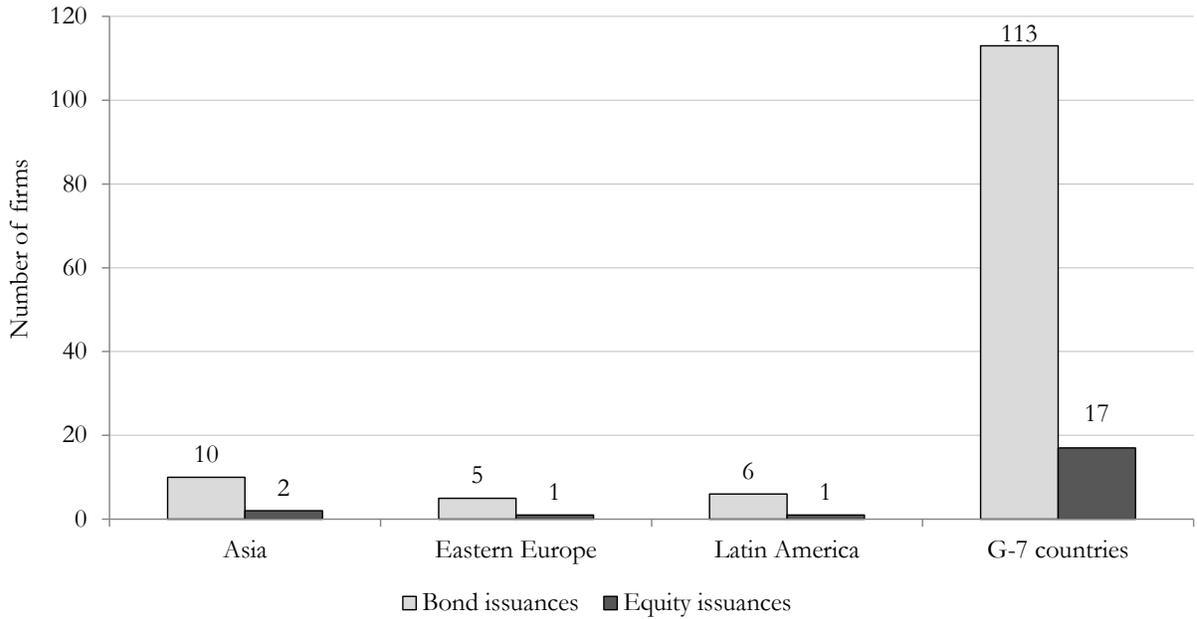


Source: Broner et al. (2013).

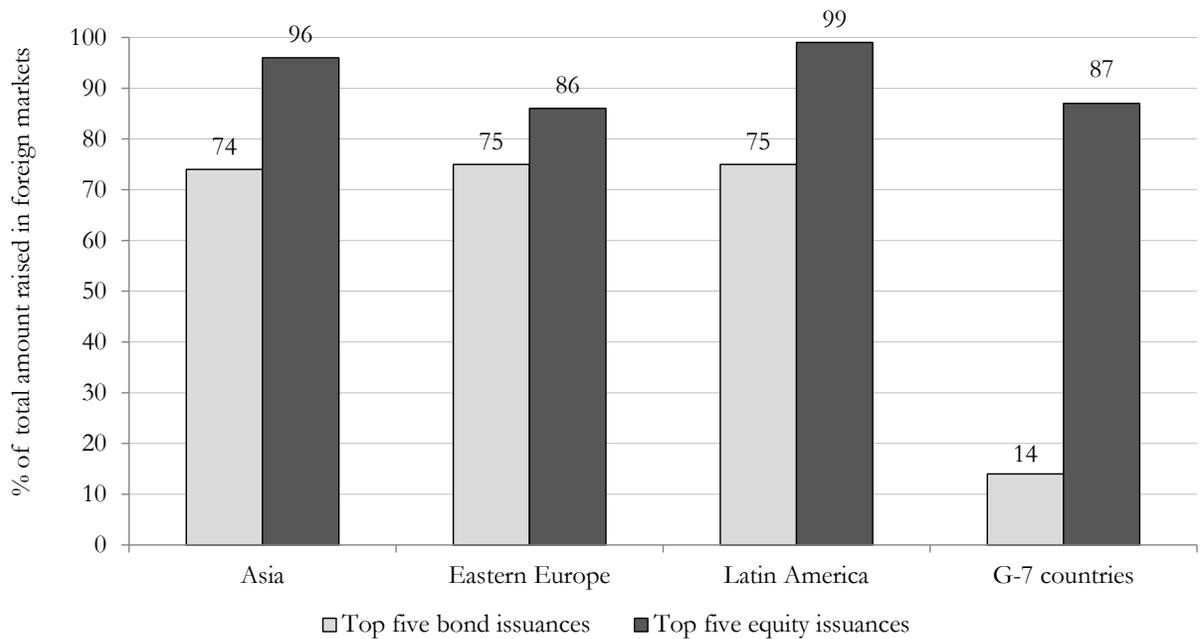
**Figure 3. Use of Foreign Bond and Equity Markets by Firms**

Panel A displays the average number of firms issuing foreign private bonds and equity per year during 2000-08. Panel B displays the average amount raised per year during 2000-08 by the top five foreign bond and equity issuances as percentage of the total amount raised in foreign bond and equity markets, respectively. Values are reported by country groups.

**Panel A. Number of Firms Using Bond and Equity Markets**



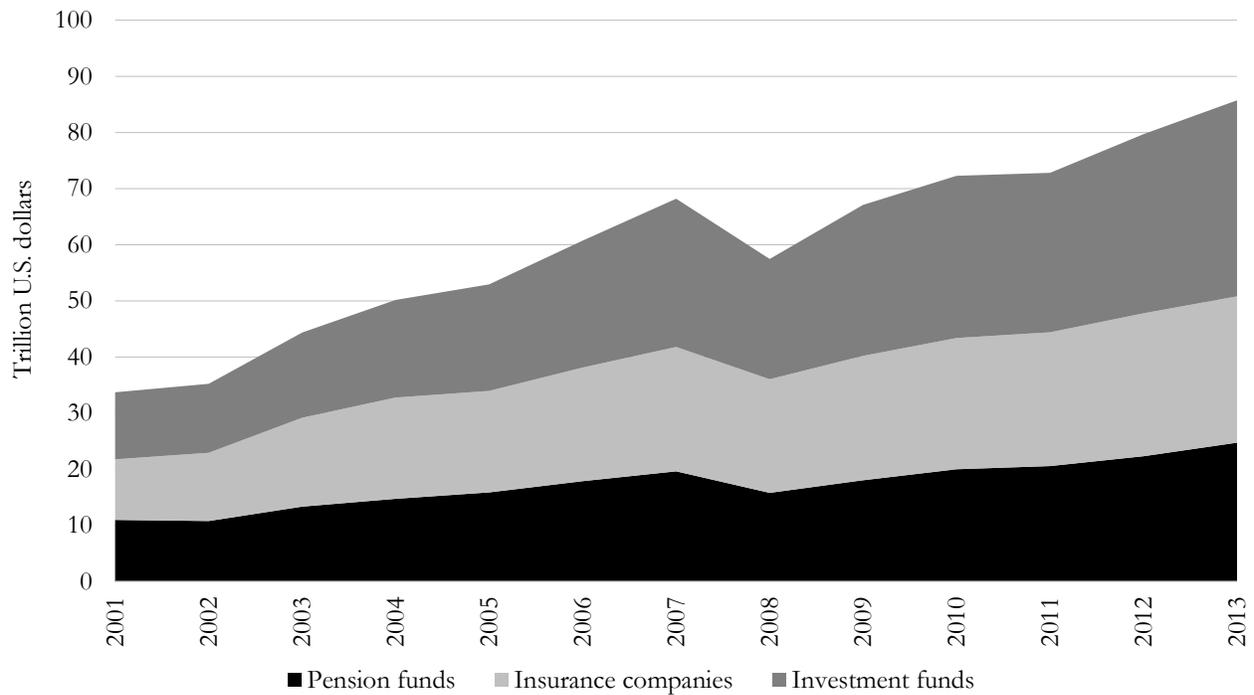
**Panel B. Share of Amount Raised by Top Five Bond and Equity Issuances in Foreign Markets**



Source: Didier et al. (2015).

**Figure 4. Assets under Management by Institutional Investors**

This figure displays the financial assets under management by pension funds, insurance companies, and investment funds. Only data for OECD countries are included. Investment funds include both open-end and closed-end funds. Pension funds and insurance companies' assets include holdings in mutual funds, which might be counted also in investment funds.



Source: OECD (2014).