Financial Development in Emerging Economies: Stylized Facts and the Road Ahead*

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Abstract

This paper presents some basic stylized facts on where emerging economies, and Latin America in particular, stand on financial development. We document about the major trends since the early 1990s comparing Asia, Eastern Europe, and Latin America among themselves and with advanced countries. We show that the financial systems of emerging economies have become more complex and more diversified. Domestic financial systems are decreasingly bank-based, with bonds and stock markets playing a more important role. Moreover, institutional investors are gaining space in channeling domestic savings, thus increasing the availability of funds for investment in capital markets. Several emerging economies have also started to reduce currency and maturity mismatches. Despite these developments, many emerging countries still lag behind the progress witnessed by advanced nations and convergence is still largely failing to happen. Furthermore, few, large companies continue to capture most of the domestic savings. In the case of Latin America, despite the many efforts on the macroeconomic and financial sectors, financial development has not taken place as fast as previously envisioned, trailing behind several emerging economies, most notably those in Asia. The expectation of a broad market-based financial system with dispersed ownership has yet to materialize.

Keywords: Banks, bond markets, stock markets, institutional investors, mutual funds, pension funds, access to finance

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1. Introduction

During the past decades, many emerging economies have undertaken large efforts to expand the scope and depth of their financial systems. In fact, access to finance broadly understood has jumped to the forefront of the policy agenda in many of these countries. The reasons for this are manifold. For example, financial development has long been linked to growth and welfare.[1] Moreover, several studies have suggested beneficial effects of financial development on reach and access to finance, particularly for historically underserved segments such as small and medium enterprises (SMEs).[2] On the other hand, a deep financial system has usually been perceived as being more resilient to shocks and less prone to volatility and financial crises.[3] This policy push involves, among other things, improving access to banks (in terms of savings, credit, and financial transactions in general) and the development of capital markets as an alternative and competition to the bank model, usually perceived to be more costly.

Since the early 1990s, many emerging countries have gone through reforms, innovation, and fine tuning in their financial systems with the objective of fostering financial development, basically following what can be described as the U.S. model. This benchmark model of dispersed ownership entails, on the one hand, the channeling of household savings directly into the capital market, either through the retail market or, more generally, through financial intermediaries that manage their savings (such as pension funds, mutual funds, and insurance companies). On the other hand, this model allows firms to raise capital directly in cheaper capital markets, and thus enables them to undertake risky, long-term investments. In order to entice households, firms protect shareholders rights while market discipline helps punish firms (and financial intermediaries) that deviate from what is optimal for shareholders. In this model, risk is disperse, idiosyncratic, and diversified. Banks play a less central role, competing with capital markets and financing projects that require more relationship lending. The role of the state under this paradigm is to provide an enabling environment for transactions by safeguarding the investors and ensuring the stability of the financial system through regulation and supervision. The model entails a fundamental faith on free markets and competition.

Over the past two decades, many emerging countries have made long strides toward this direction, accumulating a long history of pro-market reforms. Initially, in the 1990s, there were large scale privatizations of state owned companies (de la Torre and Schmukler, 2008; de la Torre, Gozzi and Schmukler, 2007a; Perotti and van Oijen, 2001). Moreover, widespread pension system reforms, among others, introduced and established institutional investors, generating a significant supply of funds for the financial system. Financial markets were liberalized and foreign banks were allowed to operate in domestic markets with the intention of channeling foreign savings into the domestic economy. Following the numerous crises episodes of the 1990s and early 2000s, prudent macroeconomic and financial policies to foster growth, stability, and resilience were implemented shortly afterward. The goal was to adopt well regarded international standards and to reduce mismatches, while at the same time withdrawing

[1] See Levine (1997, 2005), Luintel and Kahn (1999), Levine and Zervos (1996), King and Levine (1993a, 1993b), among many others.
[2] See for example de la Torre, Martínez Pería, and Schmukler (2010), Beck et al. (2008), and Beck and Demirgüç-Kunt (2006).
[3] See for example Easterly, Islam, and Stiglitz (2000), Aghion, Banerjee, and Piketty (1999), and Acemoglu and Zilibotti (1997).

the state from the markets and avoiding crowding out. Latin America for one has not been immune to this global process. In fact, the region has been at the forefront of many reforms, although lagging in others. For example, Latin America has been a pioneer in pension fund reforms, switching from a defined benefit, pay-as-you-go system to a defined contribution one, where workers save by investing in financial instruments (Kritzer, Kay and Sinha, 2011; Dayoub and Lasagabaster, 2007). The region has also been a leader, among emerging economies, in opening up their financial markets to cross-border flows and to the entry of foreign financial institutions.[4] Several countries in the region have tried to stabilize inflation by following floating exchange rate regimes and adopting inflation targeting policies.[5] Finally, many countries have actively fostered the development of long-term bond markets and a benchmark yield curve for the private sector by issuing local debt in domestic currency.

Given this significant period of reforms and continuing policy adjustments, it is high time to evaluate the returns of these efforts by taking stock on how the financial systems have developed and where do they stand. The conclusions in our previous work and in many papers in the literature were based on data up to the early 2000s, and suggested that outcomes did not match expectations and reform efforts. Back then, we were somewhat pessimistic about the prospects for financial sector improvement. We did not sympathize with simple prescriptions or radical solutions, since we acknowledged that overcoming the high systemic risk and volatility was not easy and that the low progress of financial development and the large mismatches were the result of inherent deficiencies in emerging economies.[6] Moreover, several economists in the profession were also skeptical about the prospects of developing markets, and devoted to discuss the "original sin" of emerging economies (which would not allow countries to issue long-term debt in their own currencies), outright dollarization, and "sudden stops" that would subject economies to frequent shut downs of foreign financing.[7]

New data from the mid to late 2000s and several anecdotal accounts, however, hinted that there were more reasons for hope this time around, with many new developments in financial markets. Emerging economies improved their macroeconomic performance, lowered inflation and reduced fiscal deficits (Gourinchas and Obstfeld, 2011). Moreover, conscious efforts of policymakers together with high liquidity in international markets allowed emerging economies to issue long-term bonds in domestic markets as foreign investors expected further appreciations of local currency and entered local markets in search for higher yields. In this context, the global financial crisis provided a good test for emerging economies, which were able to weather the storm well in relative terms, showing their financial systems' strength. As the 2008-09 crisis did not originate in emerging economies, the global shock did not trigger domestic financial crises in those countries (Didier, Constantino and Schmukler, 2011; Eichengreen, 2009). As a consequence, many emerging economies, notably with several countries in Latin America, have become attractive again, or for the first time, after being ignored for long.

[4] See for example Cull and Martínez Pería (2010) and Kaminsky and Schmukler (2008).
[5] See Schmidt-Hebbel and Corbo (2002) and Mishkin (2000), among many others.
[6] See de la Torre and Schmukler (2008), de la Torre, Gozzi, and Schmukler (2007b), and de la Torre and Schmukler (2004).
[7] See for example Hausmann and Panizza (2003), Calvo and Reinhart (2000), Eichengreen and Hausmann (1999), and Hausmann et.al (1999).

The stock taking exercise will not only provide information on where emerging economies stand with respect to financial development, but will also contribute to the policy debate. The latter is particularly necessary as the old model on convergence to international standards is being questioned exactly because international standards are currently being revised. After the 2008-09 global financial crisis, authorities in developed economies have started reviewing the paradigms for financial development and regulation. Examples abound. A clear one is the housing finance model fostered by public institutions like Freddie Mac and Fannie Mae in the U.S., which other countries such as Mexico have also followed. Another example is the definition of the limits of regulation when banks and shadow banks are interconnected and when banks imply too high a systemic risk to be let fail. Several emerging economies also moved in this direction, with assets excluded from banks' balance sheets through securitization and special purpose vehicles. This occurred at the same time as capital markets were developing and other financial intermediaries arose. A third example is the need to provide better services to savers and investors, while monitoring at the same time the level of risk given the prevalence of global shocks. A fourth one is the increasing role of public banks as a way to foster access to finance in good and bad times.

The main goal of this paper is to document some basic trends on how the financial systems in emerging economies (in general) and Latin America (in particular) have been developing. The primary value added of this exercise is to put in perspective the absolute and relative size and the evolution of different components of the financial system using traditional and new indicators. We analyze both the borrowers (firms, government, and households) and the savers (households) sides, but focus on the perspective of companies trying to raise capital and households trying to channel their savings. We also investigate how the nature of financial activity (currency, maturity, and scope of credit) has been developing and to what degree changes in the size of markets have implied greater availability of financing for corporations (proxied by the concentration of activity by the top firms). Our objective is to present a bird's-eye view of the financial system, though we provide many details for the interested readers, both in the main paper and in the appendixes related to the paper, posted online. Since it is very difficult to evaluate the extent of financial development given the lack of clear benchmarks, we provide comparisons over time and across regions, relative to gross domestic product (GDP) and relative to different measures of market size. In a companion paper, more analysis is presented to take into account other factors that can influence financial development. (de la Torre, Feyen, and Ize, 2011). To our knowledge, there is no other publication that has conducted this type of analysis.

Throughout the paper, while we provide some evidence on the banking sector, most of the new evidence focuses on capital markets, to which many of the recent reforms were aimed at and where most of the expectations were laid. We also document the evolution of the main financial intermediaries aside from banks: pension funds, mutual funds, and insurance companies. Since the main wave of development of capital markets started in the 1990s, after many pro-market reforms implemented early that decade, we focus on the evolution of those markets in the subsequent 20 years, namely the 1990s and the 2000s. Most of the comparisons focus on broad differences between these two decades, although relevant dynamics through the 2000s are also noted in some cases. Furthermore, some comparisons with the 1980s are also shown when a longer perspective is needed. We document basic trends in the banking sector, bond markets (both government and corporate ones), and equity markets. However, we also provide some

information on the development of other markets and instruments, like derivatives, securitization, private equity, and credit by retail chains.

We analyze in detail the following regions of the world. As main comparators we use the G7 countries: Canada, France, Germany, Italy, Japan, the U.K., and the U.S. We also include other advanced economies that are typically regarded as being similar to some extent to emerging markets: Australia, Finland, Israel, New Zealand, Norway, Spain, and Sweden. For emerging economies, we analyze three main regions and very specific countries within them. In Asia, we focus on Indonesia, Malaysia, Philippines, South Korea, and Thailand; while separately, because of their distinct nature, we also report China and India. In Eastern Europe, we focus on Croatia, Czech Republic, Hungary, Lithuania, Poland, Russia, and Turkey. In Latin America, we focus on the "LAC7" countries: Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Uruguay (we drop Venezuela because of the unique nature of its financial system, given the degree of state intervention). In addition, in some cases where patterns differ from the broad trends documented, we present evidence for specific countries within LAC7. Moreover, in the Appendix, we take a deeper look within Latin America and report comparisons between LAC7 and South America (Bolivia, Ecuador, Paraguay, and Venezuela), Central America (Belize, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua), the Caribbean (Jamaica and Trinidad and Tobago), and offshore financial centers (Aruba, Bahamas, Barbados, Bermuda, the Cayman Islands, the Netherlands Antilles, and Panama).

The main findings of the paper provide a mixed, nuanced picture of the main trends in financial development and can be summarized as follows. The financial systems of emerging economies, including those in Latin America, have effectively developed over the last two decades, becoming in many respects and by several standard measures deeper. These have become significantly more complex as well, along different dimensions. In particular, there has been a transition from a mostly bank-based model to a more complete and interconnected model. Non-bank markets, namely bonds and equities, have increased in absolute and relative sizes. New markets are also taking off, albeit somewhat timidly. Non-bank institutional investors now play a much more central role, channeling a large part of the savings, and the number and sophistication of participants are increasing (even without taking into account the additional increasing participation of cross-border investors). The nature of financing is also changing to some extent, in general towards the better, but at a slow pace. For instance, there is an increased maturity of bonds from both the private and public sectors in domestic markets. There is also a decline in the extent of dollarization of loans and bonds. However, not all regions have moved in the same direction. For example, Eastern Europe has increased its level of foreign currency debt before the global financial crisis, which was linked to the degree of transmission of the crisis to the countries in the region.

In the case of Latin America, despite these new developments, financial systems still remain under-developed when compared to other regions. Bank credit has stagnated. Consumer credit has increased, apparently at the expense of firm financing. Bond markets have expanded, but not as fast as those in the rest of the world. Private bond markets have increased in size, but remain relatively small. Equity markets remain small, illiquid, and highly concentrated in large firms. While institutional investors are sophisticated and large, most of the savings are still channeled to government bonds and deposits, which results in large amounts of private savings not being

channeled directly to firms. Furthermore, there is a large heterogeneity within the region. LAC7 countries are still substantially more developed than the rest of Latin America. Within LAC7, Brazil and Chile show some progress in particular areas (equity and bond markets, respectively), which though incomplete might look encouraging.

The rest of the paper is organized as follows. Section 2 documents and gives a broad overview on where emerging economies and Latin America stand on commonly used and simple measures of financial sector development. Section 3 analyzes whether and how the nature of financing has changed over time. Section 4 describes recent developments in alternative markets and products. Section 5 examines the main players in the financial system. Section 6 considers the structure of financial systems around the world, namely the main available instruments, type of debtors, and assets held over the past 10 years. Finally, Section 7 discusses the challenges ahead of financial sector development as a whole.

2. Financial Sector Development

We start by providing some basic stylized facts on where emerging economies, and in particular those in LAC, stand on commonly used, broad indicators of financial sector development, comparing emerging regions with developed countries over the past two decades. More specifically, we focus on the depth of the financial sector, analyzing the size of bond and equity markets as well as that of the banking sector. Overall, we observe that financial systems in emerging markets have developed significantly over the past two decades. Moreover, they have typically transitioned from an “old,” mostly bank-based model to a “new,” more complex and interconnected model where non-bank institutions play a more central role. For LAC countries, despite all these improvements, financial systems still remain under-developed when compared to other developed and emerging regions.

Regarding the banking system, one perhaps surprising fact is that, in addition to being deeper, the banking sector in developed countries has also typically expanded faster than those in many emerging markets over the past three decades. For instance, the G7 economies show an increase of more than 50% in the size of their banks, representing now more than 120% of GDP. **[Figure 1]** Mixed patterns are however observed in the banking sector in emerging countries. Strong growth is observed in emerging markets such as China, India, and Eastern Europe, with total bank assets having expanded as much as 71% in China and 84% in India. In contrast, bank growth in Asia and LAC7 countries has been stagnant over the past two decades, with very little or no expansion in total assets as a percentage of GDP. In other words, banking systems in the larger countries of the LAC region are not only lagging behind developed and developing countries in relative size, but also in growth terms.

Bond markets, on the other hand, have grown significantly in emerging markets over the past two decades, while a more limited expansion has taken place in developed countries. For example, bond market capitalization in Asia and Eastern Europe grew, respectively, 177% and 55% on average in the 2000s relative to the 1990s, whereas other advanced countries experienced only a 5% growth. **[Figure 2]** Nevertheless, in comparison to other developed economies, and the G7 in particular, the depth of bond markets in emerging markets remains relatively small. For example, bond market capitalization in Asia and Eastern Europe represents

about 56% and 43% of GDP respectively, while markets in G7 countries reach 113% of GDP on average over the last 10 years. Furthermore, bond markets in LAC7 countries are particularly small in comparison, lagging behind markets in other developing regions such as Asia and Eastern Europe. For instance, outstanding bonds from LAC7 countries were equivalent to 33% of GDP on average during the 2000s, with Colombia and Peru at the bottom of the distribution (24% and 25% of GDP, respectively).

Somewhat similar patterns are also observed in equity markets around the world—market capitalization in many emerging markets has grown faster than in developed countries during the last decade. **[Figure 3]** However, increases in equity prices can explain at least in part this trend. When adjusting market capitalization for changes in equity prices, as shown in **panel C of Figure 3**, a much more modest expansion of equity markets is observed around the world. For instance, equity markets in Eastern European and LAC7 countries expanded merely 3% per year on average between 2000 and 2009. Similarly, equity markets expanded about 1% and 3% respectively in G7 and other advanced countries over the same period. Nevertheless, as a percentage of GDP, market capitalization remains smaller in emerging markets. For instance, equity markets represented on average 41% of GDP in LAC7 countries and about 60% in Asian countries during the 2000s. At the same time, market capitalization in developed countries represented around 90% of GPD over the same period.

These differences in the relative size of market capitalization are even larger once we attempt to control for differences in the availability of shares for investors, namely the free float. Dahquist et al. (2003) provide evidence that most firms in countries with poor investor protection are controlled by large shareholders, so that only a fraction of the shares issued by firms in these countries can be freely traded and held by portfolio investors. In other words, closely held shares typically represent a larger fraction of total market capitalization in emerging countries than in advanced ones. Once the percentage of closely held shares is taken into account, equity market capitalization becomes significantly smaller in emerging countries than in developed ones, as shown in **Panel C of Figure 3**.

Although emerging markets are closing the gap in financial sector development relative to advanced economies, due to faster growing bond and equity markets as well as banking systems, they are still lagging behind, particularly so LAC countries. These markets, as a percentage of GDP, remain smaller in emerging markets than in developed ones. Yet, there is considerable heterogeneity across countries. While Asian countries are particularly ahead among emerging markets, LAC7 countries are falling behind and remain under-developed even if compared to some other emerging regions. In fact, a comparison of the size of financial systems in LAC7 countries between 2005 and 2007 with those of developed economies and Asian countries in the early 1990s sheds light on the extent of the under-development of LAC, as per capita income levels of Asian countries back then were more similar to those of LAC7 countries more recently. **[Figure 4]** In other words, these comparisons put the size of financial systems in LAC7 countries in perspective, suggesting that they might be 20 years or more behind more advanced economies. The depth of LAC7's banking system in the late 2000s stand at significantly lower levels relative to those observed on average in Asia and in developed countries in the early 1990s. Similar patterns are observed in bond markets. Nonetheless, Brazil and Chile are notable exceptions, with banking sectors similar in size as a percentage of GDP to that of developed countries like

Italy, Norway, and the United States, and bond markets comparable to those in the rest of the world back in the early 1990s. In equity markets, the patterns are more encouraging as many LAC7 countries have stock markets of a similar size relative to GDP to that of developed and developing countries alike (price effects, however, might explain these differences). This relative under-development of LAC7 countries seems surprising given the number of reforms introduced in the financial system and the improved macroeconomic stance in recent years, which was expected to yield some convergence with the more mature financial systems of developed countries and other emerging economies in Asia.

On the bright side, these trends also suggest that the structure of financial systems in emerging markets is becoming more similar to that of developed countries, with bonds and equity markets gaining space vis-à-vis the banking sector. In other words, a transition from a mostly bank-based model to a more complete and complex model has been a broad trend in developing countries as they develop.[8] **[Figure 5]** For example, bond and equity markets in LAC7 countries now account for more than 65% of financial systems on average in contrast with 57% observed in the 1990s.[9] Similarly, these markets have grown from 41% to 58% of the size of the financial system in Eastern European countries. In developed countries, these markets typically account for about 60% of the financial system.

3. Changing Structure of Domestic Financial Systems

Financial systems in emerging markets have greatly expanded over the last decades, albeit from relatively low bases. This increased depth of financial systems has come along with a changing nature of financing broadly, though slowly, towards the better. For example, there has been an expansion in local currency bond financing by the private sector, the maturity of public and private sector bonds has typically increased, and a decline in the extent of dollarization of loans and bonds has taken place.

Despite all these positive developments, there is a long road ahead for emerging markets, and particularly for LAC countries. Bank credit has stagnated in various countries and firm financing has declined in relative terms; private bond markets as well as equity markets remain typically small, illiquid, and highly concentrated in large firms, suggesting some room for further development of the scope and breadth of markets. We now review more systematically these qualitative developments in domestic financial systems in emerging markets in light of observed trends in developed countries.

3.1. Banking systems

The large expansion of banking systems in developed countries has been mostly concentrated in an increase of claims to the private sector, which went from 58% to 100% of GDP in other

[8] Notice that price effects might explain at least in part some of these trends in financial systems towards an increasing role for capital markets.

[9] However, there is large heterogeneity across countries within the LAC region. While the adoption of this new model with the expansion of bond and equity markets is far advanced in several "role model" countries and the development of domestic financial systems more broadly (most notably Brazil, Chile, Colombia, Mexico), many other countries in the region remain largely under-developed in comparison to those.

advanced economies, currently accounting for 93% of total bank lending. **[Figure 6]** In stark contrast, governments have increased their borrowing not only in absolute but also in relative terms in emerging markets over the last two decades. Moreover, the public sector represents a larger fraction of total bank lending in Eastern European and LAC7 countries, at about 32% and 21% of the total claims by the banking sector respectively, if compared to G7 and other advanced countries, at around 14% and 7%, respectively.

Although typically not growing, credit to the private sector in emerging markets has undergone significant qualitative changes in its composition, with credit shifting away from commercial lending towards household lending and mortgage credit. **[Figure 7]** An expansion of personal credit is observed in LAC countries, whereas mortgage lending has increased in Eastern European countries and China. In contrast, the composition of bank credit has remained relatively stable in developed countries. These patterns suggest that the increase in income per capita in emerging countries has been accompanied by an expansion of bank credit to the private sector, and households in particular, thus alleviating their financial constraints. Nevertheless, an unbalanced expansion seems to be taking place if developed countries are to be considered as benchmarks. The growth of credit in particular segments has been accompanied by an under-development of others. In particular, mortgages seem considerably small in LAC countries and commercial lending appears to be relatively depressed in Eastern Europe and China.

A decline in the dollarization of loans is another key qualitative change in the nature of bank lending in most emerging markets, Eastern Europe being the only exception. The percentage of foreign currency deposits has also declined in many emerging markets, although it remains particularly high in Eastern European and LAC7 countries. **[Figure 8]** Such developments likely come as a consequence of the emerging market crisis of the 1990s when currency mismatches rendered the private sector vulnerable to currency fluctuations and limited the policy options.

Banking systems in emerging markets are becoming less concentrated in the largest banks, with declining shares of loans and deposits in the top 5 banks. Surprisingly however, in LAC7 countries the opposite trend is taking place. **[Figure 9]** At the same time, foreign banks are increasing their presence in emerging markets, with LAC7 as the region with the highest penetration and a comparable level in Eastern Europe, noticeably larger than those in Asia, China and developed economies. **[Figure 10]** These patterns might raise concerns about banking competition in the LAC region. An extensive literature has shown that higher levels of bank competition are associated with lower prices for banking products, increased access to finance, and greater bank efficiency. Theoretically, fewer and larger firms (higher concentration) are more likely to engage in anticompetitive behavior, according to Berger (1995). Nevertheless, some studies have shown that, at times, concentration is not a reliable measure of competition and the link between concentration and performance is not always negative.[10] Empirically, Anzoategui, Martínez Pería, and Rocha (2010) show that banking systems are less concentrated in LAC countries than in many other emerging markets and that competition does not seem to have declined over time during the past 20 years.

[10] See for example Cetorelli (1999) and Jackson (1992).

3.2. Bonds Markets

Despite considerable expansion of bond markets in emerging countries over the past 10 years, private (corporate and financial institutions) bond markets remain relatively small in comparison to developed countries and to public bond markets. As highlighted in Section 2, bond market capitalization has increased substantially, with significant growth of both the private and public sectors. Most notably, private bond markets have grown faster than government bonds in LAC7 and other developed countries, gaining space in relative terms. **[Figure 11]** Nevertheless, although increasing in absolute size, private bond markets in emerging markets remain a very small fraction of income . While they typically represent at least 40% of GDP in developed countries, private bonds stand at 13% of GDP in China, 10% on average in LAC7 countries and less than 5% in Eastern Europe and India. Issuance data suggests similar patterns. While issuance of corporate bonds stands at around 1% of GDP per year in LAC7 countries, public sector bond issuance is around 5% of GDP on average for most of the 2000s. **[Figure 12]**

Bond market liquidity, although increasing in size over the past 10 years, remains a concern in many emerging countries. While turnover was around 60% in G7 countries and reached 80% on average across other developed nations between 2008 and 2009, it was merely 12% in LAC7 countries, 15% in India, and 23% in China over the same period. **[Figure 13]** Not only turnover is typically lower in emerging markets than in developed countries, but the differences in turnover levels have been on the rise. For instance, trading volumes in secondary markets have been increasing in developed and some emerging Asian countries, whereas they have actually been declining in all other emerging regions, and particularly so during the turbulent years of 2008-2009.

Private bond markets in emerging countries are not only small in size but have also a limited reach, remaining a restricted source of firm financing. Only a small number of firms access bond markets for new capital when compared to developed countries. In fact, a declining number of firms have been raising capital in bond markets in LAC7 countries. At the same time, markets remain largely concentrated, with top issuers representing a significant fraction of new bond financing. **[Figures 14 and 15]** In other words, a few firms (typically the larger ones) seem to capture the bulk of the market. As discussed later in Section 3, these patterns seem to be intrinsically related to the behavior of institutional investors in local markets.

On a positive note, the debt structure of emerging markets has been improving considerably over the past two decades. Similarly to developments in the composition of bank debt, and most likely as a consequence of a series of financial crises in the 1990s, emerging countries have, on average, made a conscious effort to try to reduce currency and maturity mismatches, reducing concerns about rollover difficulties. In particular, the maturity profile of both public and private sector bonds has been extended during the 2000s and the degree of domestic currency debt has increased significantly. For example, relative to the 1990s, the private sector of LAC7 countries has been able to increase the average maturity of domestic bonds from 5.9 years to 6.8 years. The increase in the average maturity of public sector bonds is more striking, extended in about 35 months between the 2008-2009 and 2000-2003 periods. **[Figure 16]** At the same time, foreign-currency denominated bonds (or foreign currency-linked bonds) in local markets have declined significantly among the private and public sectors in emerging countries. For instance, foreign

currency bonds represented less than 10% and about 25% of total outstanding private sector bonds in the 2000s in Asian and LAC7 countries, down from 25% and 33% respectively during the 1990s. **[Figure 17]**

3.3. Equity markets

As argued in Section 2, increasing equity prices may explain a great deal of the boom in equity markets around the world over the past 10 years. Consistent with this hypothesis, capital raising activity suggests a declining role of equity financing in emerging markets. While capital raised has increased between 25% and 31% on average in developed countries, issuance has actually declined in many emerging countries, including LAC7 and Asian countries. **[Figure 18]** Furthermore, trading activity is consistent with this less rosy picture of equity markets in emerging countries as a whole, and particularly in LAC. Markets are not only relatively illiquid in LAC7 countries, but liquidity has even been declining over time. At the same time, while turnover rates have essentially increased in developed countries and in many emerging markets, LAC is an exception. Turnover rates in LAC7 equity markets have declined from 25% in the 1990s to 17% in the 2000s, while in Asian and other developed countries, turnover has increased from 73% to 85% and from 62% to 102%, respectively. Turnover ratios calculated with the free float market capitalization suggest similar patterns, with LAC7 countries lagging significantly behind other emerging and advanced countries. **[Figure 19]**

Despite some improvements in depth and liquidity in equity markets for a number of emerging countries, market access remains limited and concentrated in a few firms. First, the number of listed firms in emerging markets is rather small in comparison to developed countries. Moreover, it has been declining in LAC7 and Eastern European countries over the past decade. In Eastern Europe, this trend can be due to the boom associated with market liberalization in the 1990s, when a large number of possibly non-profitable firms entered equity markets. **[Figure 20]** Second, the number of firms using equity finance on a regular basis is comparatively small in emerging markets. For instance, on average, only eight firms issue equity on any given year during the 2000s in LAC7 and Eastern European countries in comparison to over 380 in G7 countries and over 200 in other developed countries. **[Figure 21]** Third, not only few firms access equity markets on a regular basis, but the bulk of equity financing is concentrated in few issues. The share of amount raised by the top five issues has in fact increased in LAC7 and a number of other emerging countries. **[Panel A of Figure 22]** Lastly, trading in equity markets is highly concentrated in few firms as well, with the top five firms capturing more than 70% of the trading in Eastern Europe and almost 60% of the trading in LAC7 countries. **[Panel B of Figure 22]** These patterns suggest that if there was any deepening of equity markets across emerging markets, it did not imply a greater breadth of access for firms. In sum, equity markets seem to remain small, illiquid, and highly concentrated in few firms across emerging markets.

3.4. Which Firm Access Capital Markets?

It is well-known that larger firms have greater access to capital markets, due at least in part to cost and liquidity considerations. In practice, these considerations render the minimum issue size rather large for smaller firms.[11] Furthermore, firm-level data on public companies (generally the

[11] See Beck, Demirguc-Kunt, Laeven, and Maksimovic (2006).

relatively largest firms among the universe of firms in an economy) across emerging markets show that not all public firms actually raise capital in bond and equity markets on a regular basis, suggesting that an even more restricted set of firms use financing from capital markets. Typically, firms that raise capital through either bonds or equity are larger (in terms of assets), growing (as represented by sales growth), more profitable (greater return on assets), and more liquid (cash to current asset ratios) than public firms that do not issue bonds or equities over a given period. There are however some differences across emerging regions—firms raising capital in some LAC7 countries (Brazil and Chile for example) tend to be more leveraged than firms that do not use capital markets, while the opposite is true on average in a number of Asian countries (e.g. China, Indonesia, and Malaysia). **[Table 1]** The fact that only a restricted set of firms use capital markets can be at least in part driven by supply factors. For instance, the restricted investment practice of institutional investors is one possible explanation. As documented in a number of papers, institutional investors tend to invest in larger and more liquid firms, hence limiting the supply of funds to smaller and less liquid firms.[12]

3.5. Differences across LAC countries

The broad patterns documented so far reflect overall trends for many LAC countries, and particularly LAC7 countries. However, there is large heterogeneity across countries within the region, with many LAC countries largely lagging behind.[13] For instance, the expansion of private bond markets has been largely concentrated in LAC7 countries, with other South American and Central American countries actually experiencing a relative-to-GDP contraction of these markets. Equity markets are also most developed in LAC7 countries, while other countries in the LAC region have generally tiny illiquid markets—with less than 50 listed firms on average and turnover rates below 5%. Nevertheless, even within LAC7 countries, there has been some heterogeneity. Brazil and Chile in particular show important progress in particular areas that, though still incomplete, look encouraging. We analyze these two cases next.

3.5.1. Bond Markets in Chile

Private bond markets in Chile have greatly expanded over the past decade, growing from 13% of GDP during the 1990s to 21% in the 2000s. Moreover, the private sector now accounts for a greater share of total outstanding bonds than the public sector—more than 65% of total outstanding bonds in the 2000s in comparison to 33% on average during the 1990s. **[Panel A of Figure 23]** Consistent with these trends, primary markets are also highly active in Chile, with new bond issues by the private sector of 3.4% of GDP on average on annual basis over the last 10 years. In contrast, the largest primary market for bond issues by the private sector among LAC7 countries is Brazil, with annual amounts issued of 1.3% of GDP on average. **[Panel B of Figure 23]**

The use of primary bond markets by firms in Chile is also growing. While in the 1990s there were on average 15 firms issuing bonds in local markets on a given year, this number has

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[12] See for example Didier (2011), Didier, Schmukler, and Rigobon (2010), Edison and Warnock (2004), Dahlquist and Robertsson (2001), and Kang and Stulz (1997) , among many others.
[13] See Appendix Figures posted on the website of the World Bank's Office of the Chief Economist for Latin America and the Caribbean for broad patterns across LAC regions and within LAC7 countries.

increased to 63 in the 2000s, or almost 3.9 firms per million inhabitants. **[Figure 24]** Moreover, state-owned enterprises correspond to only 3% of outstanding amounts of corporate bonds according to Larrain Vial (2011). Although still small in comparison to developed countries (G7 countries boast 6.5 firms per million inhabitants) Chilean bond markets are used by a greater number of firms than in many other emerging economies. At the same time, concentration is also less of a concern than in other markets, with statistics comparable to that of G7 countries. **[Figure 25]** Nevertheless, the minimum issue size is in practice still considerably high and firms that use bond markets have on average $173 million dollars in outstanding bonds, which points to considerable restrictions in access for smaller firms.

Firms have been able to obtain long-term financing to some extent in Chilean bond markets. The maturity structure of private bonds is surprisingly long for an emerging market—15.2 years at issuance, significantly larger than the observed average of 5 years in other LAC7 countries and the 10 years typically seen in developed countries.[14] **[Figure 26]** These long maturities are generally linked to indexed, high grade bonds. In December 2005, 97.7% of issued bonds were inflation-linked bonds and 1.5% were linked to the US dollar. In December 2010, a similar composition was observed with almost 94% of bonds linked to inflation and 1.5% linked to the exchange rate.[15] Domestic bonds are also mostly rated at investment grade, with very few high-yield issues. Non-investment grade bonds correspond to 0.2% of issues and by the end of 2010 the percentage of bonds rated BBB or below was about 3%, numbers significantly lower than those observed in developed countries—high-yield bonds reach almost 40% of issues in Japan and around 10% in the United States.[16]

Although primary bond markets for the private sector seem highly developed, liquidity in secondary markets remains limited. According to Larrain Vial (2011), trading of corporate bonds in Chile corresponds to about 20% of the total value traded in domestic bond markets, a disproportional amount given its size relative to government bonds. Even though turnover ratios have been increasing consistently in the 2000s, going from about 30% in 2002 to almost 60% in 2010, they stand in stark contrast with a turnover ratio of 294% for government bonds in 2010.[17] Liquidity in corporate bond markets in Chile also seems limited if compared to other LAC countries: about 463% in Mexico, 123% in Brazil, and 75% in Colombia.

These developments in Chilean corporate bond markets need to be taken in light of their main institutional investors, namely pension funds and insurance companies, and, to a lesser extent, mutual funds. These investors, and particularly pension funds, provide a stable demand for corporate bonds given their sheer size (about 65% of GDP for pension funds and 20% for insurance companies). Pension funds for instance held about 50% of the stock of bonds in 2010 while insurance companies held another 32%. Given their status as large market players in corporate bond markets, their investment behavior will be tightly linked to developments in this market. For example, their large size implies that investments are usually made in large amounts,

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[14] Bonds is less than 1 year in maturity (commercial paper mostly) are excluded from these statistics due to data availability.

[15] Notice however that, albeit still a very small fraction of total issued corporate bonds, nominal bonds have increased significantly over the past 5 years.

[16] Statistics in this paragraph are from Larrain Vial (2011), one of the largest brokerage firms in Chile.

[17] The trading of bonds issued by banks accounts for a large fraction of total trading in secondary bond markets in Chile—60% on average during 2010.

which limits the potential demand for smaller issues. These investors typically pursue buy and hold strategies, keeping bonds in their portfolios until maturity as shown in Opazo, Raddatz, and Schmukler (2009) and Raddatz and Schmukler (2011), which can explain the low liquidity of secondary private bond markets. In addition, current restrictions to pension fund investments limit their exposure to non-investment grade issues, thus possibly explaining the low fraction of outstanding high yield corporate bonds. The long maturity of corporate bonds can also be associated with the maturity structure of the liabilities of pension funds and insurance companies, which allows them to make investments of a long-term nature. The nature of their liabilities, mostly indexed to inflation, also implies a significant demand for inflation-linked bonds.

Regulatory changes that took place in the early 2000s can also at least in part be related to the timing of these developments in local currency bond markets. For instance, capital market reforms allowed pension funds and insurance companies more flexibility in their investments. The consolidation of sound macroeconomic and financial frameworks, with price stability and credible fiscal and monetary policies along with reduced macroeconomic volatility, might have also been particularly important. Yet, significant challenges remain in order to address some the limitations of corporate bond markets in Chile. More specifically, greater access for smaller firms and more liquid secondary markets are particularly important goals.

3.5.2. Equity Markets in Brazil

Equity markets in Brazil have gone through significant changes over the past 10 years with clear improvements in corporate governance. According to Nenova (2003), by the end of the 1990s Brazil was characterized by poor investor rights, low enforcement of contract law, and weak accounting standards. However, in December 2000, the São Paulo Stock Exchange (Bovespa) created three new corporate governance listing segments through which issuers could voluntarily adopt corporate governance practices beyond those required by the Brazilian Corporate Law and capital market regulation more generally. Bovespa listing segments include the traditional Bovespa, Level 1, Level 2, and Novo Mercado. As seen in **Figure 27**, each of these market segments requires progressively stricter standards of corporate governance.[18] The main goal of the creation of these distinct segments, and in particular Novo Mercado, was to revert the weakening of the equity markets in Brazil that was taking place at the end of the 1990s by fostering good corporate governance practices such as disclosure, transparency, and accountability.[19] According to Bhojraj and Sengupta (2003) and Shleifer and Vishny (1997),

[18] The main requirement for equity listings in Novo Mercado is the issuance of common voting stocks (i.e. the so-called one-share-one-vote rule). This requirement was a response to the predominance of non-voting stocks known as “preferred stocks” among Brazilian companies, allowing holders of voting stocks to take the control of companies by owing small percentages of the total equity. In addition, Novo Mercado also required complying with a number of other good corporate governance practices such as a minimum 25 percent free float, US GAAP reporting, and 100% tag-along rights with all shareholders getting the same conditions in the event that a company is sold. The corporate governance listing segments Level 1 and Level 2 are intermediate segments between the traditional listing segment and the Novo Mercado, their main goal being to facilitate a gradual migration from traditional markets to Novo Mercado. A detailed description of the rules governing these different segments is available on the Bovespa’s web page (http://www.bmfbovespa.com.br).

[19] Glaser, Johnson, and Shleifer (2001) and La Porta et. al (1997) show that protection of minority shareholders is fundamental to the development of a country’s capital market. In addition, Kappler and Love (2004) shows that good governance practices are more important in countries with weak investor protection and inefficient enforcement.

good governance practices increase confidence among investors as they tend to reduce agency and information risks. Therefore, companies are likely to have access to capital at lower costs and better conditions, to increase the value and liquidity of their shares, and to improve their operating performance and profitability.[20] In fact, since then, equity markets have become more liquid and less concentrated and a greater number of firms have been issuing equities, hence larger amounts are being raised in Brazil. **[Figure 28]** These trends suggest that the improvements in the investor protection environment might have indeed paid off.

In spite of a timid beginning, due mostly to a number of external shocks, the Novo Mercado took off by the mid 2000s. As shown in **Figure 29**, the number of companies listed in these new corporate governance segments of Bovespa has steadily risen over time while the number of companies listed in the traditional segment of Bovespa has decreased during the 2000s. By December 2010, 168 companies were listed in the three segments: 38 companies listed in Level 1, 18 in Level 2, and 112 in Novo Mercado. These trends suggest a migration from the traditional segment to the corporate governance segments.[21] According to Gorga (2009) by 2007 the large, established, and successful corporations with alternative sources of financing tended to migrate to segments that required small changes in corporate governance (Levels 1 and 2); while that the vast majority of companies listed in the Novo Mercado were new entrant companies looking into the capital market for alternatives to raising capital.[22] Moreover, the improved corporate governance segments of Bovespa, i.e. Level 1, Level 2, and Novo Mercado, have been gaining market participation, currently representing more than 65% of market capitalization and almost 80% of value traded. **[Figure 30]**

The implementation of the Novo Mercado has been well-received by foreign investors as well. During the 2004-2006 period, on average, the foreign participation in the corporate governance segments was of 70 percent of the stocks offerings (Santana, 2008). Similar patterns are observed for the 2008-2010 period. **[Table 2]** Santana (2008) has argued that the Novo Mercado has allowed Brazilian companies, and particularly new entrant companies, to access foreign capital without having to cross-list on international stock markets. For example, among the 27 IPOs between 2004 and the first half of 2006 in Bovespa, only two companies were listed simultaneously on the New York Stock Exchange (NYSE).

4. Alternative Markets and Products

Emerging markets and LAC countries in particular have seen in recent years the development of less traditional forms of financing. For example, factoring has deepened along with derivative

[20] Ashbaugh-Skaife et al. (2006) for example find that better corporate governance practices improve corporate credit ratings and reduce bond yields. De Carvalho and Pennacchi (2009) argue, for the case of Brazil, that migration from traditional markets to the Novo Mercado brings positive abnormal returns to shareholders and an increase in the trading volume of shares. Klaper and Love (2004) find that better corporate governance is associated with higher operating performance and higher Tobin's Q. Joh (2003) concludes that firms with higher control-ownership disparity exhibit lower profitability.

[21] It is important to mention that some firms with a traditional Bovespa listing have public debt but not public equity.

[22] This argument is consistent with data on the financial reports of Bovespa's listed companies that shows that companies listed in the corporate governance segments, on average, are larger than companies in the traditional market but that companies listed in Levels 1 and 2 are larger than firms listed in the Novo Mercado (http://www.bmfbovespa.com.br).

markets and credit by retailers. Quantifying these new developments is however not an easy task as data are typically not available on a cross-country or individual-country basis. We then focus on specific country studies or particular datasets that allows us to shed some light on recent trends in some of these non-traditional markets.

4.1. Derivative Markets

With the caveat on data availability, we analyze some basic trends on derivative trading.[23] Trading of exchange rate derivatives in emerging countries has grown in dollar terms, as a percentage of GDP, though, it has actually remained relatively stable in most countries since the late 1990s. Trading of interest rate contracts, on the other hand, has more than doubled as a percentage of GDP in the 2000s in comparison to the 1990s in most emerging regions. For example, a growth of 213% has been observed among LAC7 countries. **[Figures 31 and 32]**

Nevertheless, derivatives are overall relatively illiquid in emerging markets as aggregate trading represents only a very small fraction of trading in developed countries. While the turnover in exchange rate contracts stands at about 1.1% of GDP in LAC countries, the turnover in G7 countries stands at 7.3% of GDP. Turnover figures also suggest that the trading on foreign exchange contracts is largely concentrated on USD-contracts in the developing countries in general and about 98% in LAC7.

4.2. Factoring

Factoring is a financial transaction where accounts receivables (i.e. invoices) are sold at a discount to a third part.[24] Invoices are typically short-term (less than 90 days), and hence a market for invoice trading would be the equivalent to a high-yield/commercial paper market. This is a particularly important market for small and medium enterprise (SME) financing. Smaller firms are typically more opaque (as credible information is less available and more limited), riskier (with higher mortality rates, lower growth rates, and less profitability), and they usually do not have adequate collateral. Consequently, they have a more restricted access to bank financing. Factoring, however, helps them overcome a number of these constraints, allowing them access to short-term financing, mostly for working capital. These operations allow them financing without collateral, albeit small guarantees might be charged in some cases, as the underlying credit risk of the transaction is that of the issuer of the invoice. In addition, in many emerging markets, issuers are larger firms with a lower credit risk (due at least in part to a better credit history) than the SMEs seeking financing, and thus, factoring can lower the cost of capital for SMEs.

Factoring is an expanding industry, particularly in emerging markets. According to International Factors Group (IFG), the International Association for Factoring, the worldwide industry turnover in 2008 was estimated at $1,221,557 million euros considering the total amount of

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[23] The Bank of International Settlement however publishes the "Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity", which provides comprehensive and internationally consistent information on turnover in foreign exchange and interest rate derivative markets for over 50 countries.

[24] See de la Torre, Gozzi and Schmukler (2007c) and Kappler (2006)for a detailed discussion of factoring per se as well as a few case studies around the world.

assigned receivables, and it has been growing—an increase of 3.75% in 2008 and 15% in 2007 in worldwide volumes.[25] Such an expansion in factoring volumes, although slowed down with the global financial crisis of 2007-2008, has been concentrated mostly in emerging markets, and particularly so in China, Eastern Europe, and LAC7. Nevertheless, factoring remains smaller in emerging markets if compared to developed countries, and particularly so in emerging Asian countries. In LAC7 and Eastern European countries, factoring represented 2.6% and 3.3% of GDP in 2008-2009 in comparison to about 4% for developed countries. **[Figure 33]**

Chile and Mexico are notable examples in the LAC region where factoring services have developed significantly in recent year, and most importantly, where invoices can actually be traded on organized exchanges or online markets. Factoring in Chile, for example, is one of the largest among emerging markets, with an accumulated volume of $12 billion euros in 2009 (10.7% of GDP) and about 14,000 users of factoring services in 2009 according to IFG and the Chilean Association of Factoring (ACHEF). Moreover, non-bank factoring companies represent almost 10% of this total, according to the Central Bank's Financial Stability Report (2008). Although still relatively small in comparison to bank loans or credit lines, this is a growing business. In Mexico, total industry turnover was estimated to be almost $11 billion euros in 2007 (almost 2% of GDP).

As an alternative to the factoring services offered typically by banks in Chile, Bolsa de Productos is an incipient initiative that might actually become an important source of SME financing in the near future.[26] Although still in its earlier stages, with volumes of about US$100 million per month in 2011, Bolsa de Productos has been growing fast recently—more than 150% in 2010 vis-à-vis 2009. This exchange allows some form of reverse factoring, where invoices can be discounted and the credit risk born by the investor is that from the issuers of the invoice. Moreover, no collateral is needed from SMEs posting the invoice.[27,28] Important for the success of this initiative, discounting invoices in Bolsa de Productos is a cheaper alternative than factoring through banks, while it provides investors with a higher yield than they can get in money markets.

Bolsa de Productos is a well designed initiative with clear solutions for most of the problems affecting SME financing: procedures for clearing and notification of invoices are standardized; insurance companies are active in this market and can provide insurance for the credit risk of smaller companies; securitization of invoices is also possible and thus the "bundling" of invoices would increase volumes so as to be attractive to large institutional investors (e.g. pension funds);

[25] The statistics, however, were significantly influenced by a strong euro. Most notably a large market such as that in the United Kingdom actually increased in size when expressed in GBP, while if expressed in euros it decreased by 4.84%.

[26] Currently, main investors in Bolsa de Productos are institutional investors such as mutual funds, investment banks, and portfolio managers. Pension funds are expected be added to this list soon.

[27] Issuers of invoices need to be registered with the exchange. Currently, there are about 170 qualified issuers, out of which about 90 are active, according to Bolsa de Productos. Issuers can also negotiate the extension of their own contracts, and hence Bolsa de Productos is a source of financing for both issuers and holders of invoices.

[28] There are restrictions on becoming a qualified issuer—very large firms as well as medium firms in the other end can become qualified issuers. Any firm with an invoice from a qualified issuer can use the Bolsa de Productos.

and competition can be implemented through an open trading platform.[29] Nevertheless, many of these solutions are not yet implemented due to small trading volumes.

In Mexico, there is an online market since 2001 for factoring services developed by the Mexican development bank NAFIN (Nacional Financiera), called Cadenas Productivas (*Productive Chains*).[30] This market provides reverse factoring services to SMEs through the creation of chains between large buyers and their suppliers.[31] This reverse factoring program is relatively large, having extended US$11.8 billion in financing in 2008 according to NAFIN, and nowadays it represents a significant share of the factoring market in Mexico. According to Kappler (2006), as of mid-2004, the program encompassed 190 large buyers (45% of which were private firms) and more than 150,000 suppliers (about 70,000 of which were SMEs), with a turnover of about 4,000 transactions processed daily.

All transactions are carried out on an electronic platform, which allows NAFIN to capture economies of scale, since most of the costs of the system are fixed and electronic access enables a large number of firms and financial institutions to participate. In fact, all commercial banks are able to participate in this electronic market. This electronic trading also reduces transaction costs, increases the speed of transactions, and improves security. NAFIN is responsible for the development, production, and marketing costs related to the electronic platform. It operates the system and also handles all the legal work. NAFIN does not charge a fee for the factoring services, but rather covers its costs with the interest it charges on its loans.

This program has several advantages in terms of dealing with principal-agent problems and transaction costs. First, the buyers that participate in the program, large creditworthy firms, must invite suppliers to join their chain. This reduces principal-agent problems by effectively outsourcing screening to the buyers, who have an informational advantage relative to financial intermediaries. The program is also designed to foster competition among financial institutions and increase information availability, giving transparency to the system and same access possibility to all intermediaries.

The program has been so successful in Mexico that NAFIN has also entered into agreements with development banks in several Latin American countries, including Colombia, El Salvador, and Venezuela, to implement similar programs while other development banks in the region are also considering replicating this model.

4.3. Financial Cooperatives and Credit Unions

As an alternative to bank-financing, financial cooperatives and credit unions are typically financial institutions owned and controlled by their members and operated with the purpose of

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[29] For SMEs, discounting invoices in Bolsa de Productos is a cheaper alternative than factoring through banks for instance, and for investors, it provides a higher yield than money markets.

[30] This initiative is similar in nature to Bolsa de Productos in Chile.

[31] Once a supplier delivers goods to the buyer and issues an invoice, the buyer posts an online “negotiable document” equal to the amount that will be factored on its NAFIN webpage. Participant financial institutions that are willing to factor this particular receivable post their interest rate quotes for this transaction. Finally, the supplier can access this information and choose the best quote. Once the factor is chosen, the discounted amount is transferred to the supplier’s bank account. The factor is paid directly by the buyer when the invoice is due.

providing credit and other financial services to them. Hence, they aim mostly at credit provision to households as well as micro, small, and medium enterprises, either formal or informal. Financial cooperatives and credit unions vary significantly in size around the world, ranging from small cooperatives with few members to others comparable in size to commercial banks. Notice however that not all of these financial institutions are regulated and supervised by central banks and financial regulators. Loans from financial cooperatives and credit unions represent only a small fraction of financial systems in emerging markets, and particularly so when compared to G7 countries. [32] To put this in perspective, credit by credit unions represented 8.1% of GDP in G7 countries during the 2000s, whereas they represented on average 2% in Asia, 0.7% in LAC7 countries, and 0.3% in Eastern Europe. **[Figure 34]**

4.4. Credit by Retailers: The Case of Chile

Retail stores as credit providers seem to be on the rise. Chile is a notable example of this development. Retailers and, in particular, the largest department stores in the country have become non-trivial providers of household credit in recent years, so successfully that they are exporting this experience to other countries in the LAC region.

Although banks are still the main providers of household credit in Chile, representing 68% of the total household financial debt, retailers are playing an increasingly important role. Household credit by retailers accounts for 11% of total household financial debt, 17% of total consumer debt, and 35% of non-bank debt. **[Figure 35]** In addition, the financing that retailers have extended to their customers is 3% of the GDP.

This high penetration of the retail sector in Chile has been related to the introduction of in-house credit cards.[33] These credit cards issued by department stores became popular in Chile because they offered consumer credit, especially to the middle-income segment of the population, when the bank credit market to this segment was still incipient. Ripley was the first department store incorporating a system of credit in 1976, followed by Falabella and Paris, which launched their credit cards in 1980, and La Polar in 1989. Nowadays, retailers are focusing their interest not only on the middle class, but on all segments of the population. For example, La Polar has targeted the middle- and low-income segments (C3 and D) that typically do not have access to credit by banks, and thus depend largely on retailer credit. Furthermore, these cards are used mainly by customers to pay for merchandise purchased at these stores, but can also be used to get cash advances and for payments at other outlets such as drugstores, supermarkets, and gas stations, with whom the retailers have entered into alliances.

The Chilean retailer card industry has now 16.35 million valid cards, which represents almost one card per inhabitant, and about 4 cards per household. **[Table 3]** The main providers of credit through credit cards in the retail industry are Falabella, Cencosud, Ripley, D&S and La Polar.

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[32] We consider credit unions as cooperative financial institutions that are owed and controlled by their members, providing credit and other financial services to them.

[33] In-house credit cards have been an important source of retailers' profits, and more specifically interests on credit purchases. An example of this is Falabella—operating profits from CMR (its credit card unit) was US$ 43.9 million in the first quarter of 2010, making the credit business one of the main sources of Falabella's profit and its most profitable area with an operating profit margin of 37.4%.

For example, Falabella's credit card was used for 59 percent of sales at its department stores, 28 percent of sales at its home improvements stores, and 18 percent of sales at its supermarkets during the first quarter of 2010.

Using this acquired expertise, Chilean retailers are exporting their success and presence in the financial sector, through consumer credit to households, to other countries in Latin America. Currently, Falabella operates in Argentina, Colombia, and Peru; Cencosud has already entered in the Argentinean, Brazilian, Colombian, and Peruvian markets; Ripley has stores in Peru; La Polar is expected to start operating at the end of 2010 in Colombia. One notable example of this expansion is Falabella, which by March 2010 had 775,000 active credit cards in Argentina, 522,000 in Colombia, and 937,000 in Peru. Peru has been the main market of Falabella's credit business overseas, where it started operating through Financiera CMR S.A. in 1997 (Banco Falabella since 2007). With US$ 432 million in outstanding loans, today Falabella's loans represent around 6 percent of total consumer loans in Peru. **[Table 4]**

4.5. Exchange-Traded Funds

A relatively recent and increasingly popular type of product traded in stock exchanges, exchange-traded funds (ETFs) are traded portfolios composed of not only stocks but also commodities and bonds. These provide a greater scope for portfolio diversification and at the same time possess stock-like features (such as transparency and frequent pricing as well easiness of trading), and hence associated low trading costs. ETFs have been growing considerably in developed and emerging countries alike over the last few years. **[Panel A of Figure 36]** Currently, there is a larger number of ETFs in developed countries than in emerging countries, most likely because of the greater depth and liquidity as well as sophistication of institutional investors in these markets. Nevertheless, these products have been on the rise in a few emerging countries, and particularly in some LAC countries like Mexico. Moreover, ETFs are gaining space in secondary markets with an increasing share of total trading in stock markets. **[Panel B of Figure 36]**

4.6. Securitization

Structured finance is, in its simplest form, a process where assets are pooled and transferred to a third part, commonly referred to as special purpose vehicle (SPV), which in turn issues securities backed by this asset pool. In other words, structured finance transactions can help convert illiquid assets into tradable securities. Typically, several classes of securities (called tranches) with distinct risk-return profiles are issued. The structured finance market in developed countries had experienced significant growth over the 2000s, with the US as its leading market. However, it took a hit as it was at the root of the global financial crisis in 2008, when worldwide net issuance fell from about US$2 trillion in 2007 to less than US$400 billion.[34] Since then, it has been slowly regaining space, reaching almost US$750 billion in 2010, although it remains at much lower levels than pre-crisis market activity. In the case of developing countries, although primary market activity has also increased over time, the structured finance market is still relatively small and under-developed. For example, gross issuance of securitized assets

[34] Net issuance includes issues sold into the market and excludes issues retained by issuing banks, while gross issuance includes those retained issues.

represented on average 6% of GDP per year in G7 countries and 8% in other advanced economies between 2005 and 2007. In contrast, issuance in emerging countries represented less than 1% of GDP, South Korea being the exception with 3% of GDP on annual issuance over this period. **[Figure 37]**

Across LAC countries, not only primary market activity has been on the rise over the last decade, but securitized instruments have been showing increasing signs of depth on different asset classes, and particularly in Brazil and Mexico. Gross issuance for LAC countries rose from US$2 billion in 2000 to US$24.4 billion in 2010, with Mexico and Brazil as the largest issuers. Notice that although some of these issues are cross-border —typically between US$2 and 4 billion over the last 5 years and mostly on futures—domestic markets represent the largest share of this market. For instance, issues in domestic markets represented almost 90% of total issuance in 2010 and more than 97% in 2009, when cross-border activity was at its lowest point in the 2000s. In addition, the securitization of different asset types has greatly developed—particularly so in Brazil and Mexico, where the largest variety of securitized assets are available. The first deals in the region were cross-border future transactions involving export receivables. Later deals involved financial receivables. More recently, the region has experienced the development of sophisticated asset-backed securitizations such as new and used car loans, consumer loans, credit card receivables, equipment leases, and mortgage-backed securities. In 2010, most new issues were asset-backed issues (83.1%), followed by residential and commercial mortgage-backed securities (11.5% and 5.4%, respectively).

5. Players in the Financial System (Saver's Perspective)

LAC's financial systems have also become more complex from the saver's perspective. While in the past banks directly interacted with borrowers and lenders, there is now a higher diversity of players, with a broader set of institutions, such as pension funds, mutual funds, and insurance companies, intermediating savings and providing economy-wide credit and offering a wider variety of products, as shown briefly in Section 2. In fact, in some emerging countries institutional investors have become even more important than banks. This rising of non-bank intermediaries has been an important factor in the development of local markets across financial systems of emerging markets, and particularly those of LAC, to the extent that they provide a stable demand for financial assets. Nevertheless, as argued below, LAC still has a long way to go in terms of the sophistication of its institutional investors as most of the savings are still channeled to government bonds and bank deposits, suggesting that there is much room for further improvements.

5.1. Main Financial Intermediaries

Although banks continue to play a significant and stable role, non-bank financial intermediaries, such as pension funds, mutual funds, and insurance companies, have been gaining considerable space in emerging markets around the world. In fact, institutional investors have come to represent sizeable investors. For instance, pension funds assets represent 20% of GDP in LAC7 countries and 15% in Asian countries, while mutual funds and insurance companies are usually larger on average in Asian countries than in LAC7 countries, 17% *versus* 10% and 14% *versus* 6% of GDP, respectively. Eastern European countries have smaller but also fast growing

institutional investors. Nevertheless, these intermediaries are still smaller on average in emerging markets if compared to investors in developed countries, reflecting to some extent smaller financial systems in those countries. **[Figure 38]**

There is however considerable heterogeneity across emerging countries regarding the size of each particular type of institutional investor, reflecting in large part cross-country differences in the institutional and regulatory environments. For instance, heterogeneities across LAC7 countries are typical. On average, pension funds are usually the largest institutional investors (20% of GDP), while mutual funds represent on average 10% of GDP and insurance companies 6%. In contrast, in Chile pension funds reach almost 70% of GDP, while mutual funds assets are 15% of GDP and insurance company assets represent 19% of GDP. On the other hand, mutual funds in Brazil are the largest institutional investors (42% of GDP) with significantly smaller insurance companies (8%) and pension funds (16%).

Due to data availability, we can only have a glimpse on the private equity and venture capital (PEVC) funds. These funds, through which investors acquire a percentage of an operating firm, are particularly important for the financing of smaller and medium enterprises. Unsurprisingly, however, private equity and venture capital funds are still relatively under-developed in emerging markets, and particularly so in LAC countries. Private equity funds raise on average US$4.9 billion per year in LAC and almost US$46 billion in Asia.[35] Venture capital funds are even less representative, with a total of US$12 billion per year raised on average outside the US and Europe. Moreover, between 2003 and 2009 LAC represented only 1.1% of total worldwide private equity fundraisings, compared with almost 10% of Asian countries and with the rest taking place in the United States and in Europe. Venture capital funds, albeit smaller in absolute size, have a relatively larger presence in emerging markets—fundraising outside the US and Europe represented 25% over the same period. Although significantly smaller than other institutional investors, PEVC funds have been growing, particularly LAC. In the first half of the 2000s, US$1.2 billion was raised on average in LAC countries whereas in the second half of the decade US$7.7 billion was raised on average by private equity funds. **[Figure 39]** Nevertheless, continuing growth for these funds in coming years will require adequate regulatory systems and rigorous disclosure standards. The latter is perceived as a particular issue in LAC countries, as accessing accurate and objective information for non-public firms is not straightforward. In this context, effective ex-ante due-diligence activities, valuation analysis, and ex-post business monitoring, key for this industry, can be rather difficult.

5.2 Nature of the Asset Side

Pension funds, mutual funds, and insurance companies provide a stable demand for domestic financial assets, given regulatory limits on their foreign investments, and thus have a potential role for the deepening of local capital markets in emerging countries. For instance, pension funds in Asia usually do not have any foreign assets in their portfolios, whereas LAC and Eastern European countries have less than 15% allocated abroad, Chile being the exception with almost 45% in 2009. Surprisingly however, institutional investors in emerging markets concentrate a

[35] These statistics are from Preqin, the industry leading source of information, where country-level information is not available. Therefore, regional statistics cited include all countries geographically located within each region, being thus different from the rest of this paper.

significant fraction of their asset holdings in fixed income instruments such as bonds and deposits, and particularly government bonds, limiting their role in the development of corporate bond markets and equity markets.

This restricted investment practice of institutional investors in emerging markets can be clearly seen in a comparison of pension funds portfolios between developed and emerging markets. While G7 countries had on average 16% of their portfolios in government bonds in 2009, LAC7 countries had 32%, Eastern Europe 40% and emerging Asian 37%. Moreover, the latter held also 24% in either cash or deposits with a total of 61% of their portfolio holdings in non-corporate instruments, standing in sharp contrast with the 19% observed in G7 countries.[36] **[Figure 40]** Nevertheless, for LAC countries at least, this concentration in government bonds and deposits (and other financial institution assets) on pension fund portfolios has been slowly declining over time—11.3% fall in the former and 24.3% in the later between 1999-2004 and 2005-2008 averages.[37] **[Figure 41]** Notice that there is large heterogeneity within LAC countries, as shown in **Panel B of Figure 41**, with pension funds in some countries heavily invested in government securities (e.g. Argentina, Mexico, and Uruguay), while in others pension funds have a greater share of deposits in their portfolios (e.g. Peru and Chile). Yet, declines in either type of assets have taken place over time. At the same time, the shares of equity and foreign securities have been slowly increasing over the same period. Portfolio allocations to corporate bonds have however been relatively stable.

Comparable patterns are also observed in the investment structure of mutual funds in LAC countries.[38] Funds invest on average a large fraction of their portfolios in government bonds and money market instruments. But similarly to observed trends in the pension fund industry, funds have been gradually shifting their portfolios towards equity investments. **[Figure 42]** In Brazil, for example, the share of bonds by the public sector declined from 73% to 48% between 2003-2004 and 2005-2009 on average. In Chile, this fraction declined from 14% to 6%, although deposits are a stable and substantial share of their portfolio, 63% on average over the same period.

The composition of available mutual funds in emerging markets raises the question of whether these patterns are driven by financial intermediaries or by households themselves. For instance, bond and money market funds account for 70% of existing mutual funds in LAC7 countries and around 55% for Eastern European and Asian countries. In contrast, in G7 and other developed countries, these funds correspond to about 35% of all funds. In these countries, equity funds are much more representative, accounting for between 41% and 48% of existing funds, whereas in emerging markets (excl. China) these account on average for 24% of available mutual funds. **[Figure 43]**

These trends suggest that institutional investors have not contributed to the development of local markets as much as expected. At the same time, one has to consider that relatively small and

[36] For some countries, data for 2009 was not available. In these cases, the latest available portfolio information was used, typically for 2008 or 2007.

[37] The numbers on **Figure 41** are not directly comparable to those in **Figure 42** due to differences in the classification of assets and the sample coverage in terms of countries and years.

[38] Data availability prevents us from a more broad analysis here.

illiquid domestic markets can be perceived as unattractive by these investors, and particularly by mutual funds that are subject to sudden withdrawals from clients. In other words, incentives to asset managers can explain at least in part the reasons why large institutional investors invest the bulk of their portfolios in government bonds and deposits. This current trap where investors avoid local corporate capital markets and the markets remain under-developed suggests there is a great scope for policy actions directed towards channeling available funds aimed at fostering local markets.

6. Summing up – Structure of Domestic Financial Systems

So far, we have systematically documented trends in different markets and different players of financial systems in emerging countries in light of observed developments in advanced countries. We now analyze the structure of financial systems around the world, as shown by **Figures 44 and 45**, focusing on main available instruments, debtors, and assets held over the past 10 years.[39] Financial systems are not only becoming deeper in emerging countries but their composition is also evolving, rendering them more complex and somewhat more diversified. In comparison to developed countries there is however still a long road ahead. As shown in **Figure 44** non-bank markets, more specifically equity and bonds, are gaining space and represented on average more than 60% of the size of the financial system in most countries around the world between 2004 and 2007. Although there has been a considerable expansion of financing to the private sector, governments remain a large debtor; the largest in fact in a few emerging markets. **[Figure 45]** Household indebtness is also on the rise, but it remains a limited fraction of financial systems. Consequently, available instruments are also becoming more diversified as they shift away from government bonds in emerging markets. At the same time, financial intermediaries are becoming more prominent with an increasing role for institutional investors. **[Figure 44]** However, in comparison to banks and to institutional investors in developed countries, they remain small players in emerging markets. Lastly, although beyond the scope of this paper, these figures suggest that foreign investors are an important player in financial systems across emerging markets.

7. Final Thoughts: The Road Ahead

The evidence presented in this paper portrays a systematic and detailed account on where emerging economies and Latin America stand with respect to financial development. The evidence overall suggests that these countries are in a substantially better position than in the past, even in areas that some years ago seemed insurmountable, like the recurrence of volatility, crises, and the related mismatches. In general, the domestic financial systems continued developing since the 1990s, at the same time that standard measures suggest that the international financial integration deepened and that foreign investors continued investing in emerging economies. As a result, more resources have become available in these economies relative to their size. Namely, there are more savings available for use, especially for the private sector since governments have been reducing crowding out by demanding less funds due to fiscal

[39] Household indebtness is overstated in these figures. Mortgage credit and consumer credit are assumed to be part of household debt as data availability did not allow us to break them down into corporate and household borrowing. We acknowledge though that part of mortgage lending is for commercial purposes. Moreover, consumer credit can also be used for commercial purposes, such as the borrowing by micro and small enterprises in particular.

consolidation. Furthermore, financial systems are becoming more complex, and somewhat more diversified. Financing does not depend as much as before on banks, with bonds and equity playing a larger role. Among bonds, corporate bonds are also increasing in importance. Regarding financial intermediaries, institutional investors have become much more prominent, most notably pension funds and mutual funds. Moreover, traditional markets and institutions are no longer the sole providers of financing, as other types of financing seem to be taking off such as retail chains credit. This in turn suggests that consumers might be better served now. Importantly, the nature of financing also seems to be changing. Debt is moving towards longer maturities and increasingly being issued in local currency, reducing mismatches, while domestic markets seem to be gaining some ground. Overall, all this suggests a pattern of safer financial development, which is accompanying the observed safer international integration.

Despite all the improvements, one can argue that many emerging economies are financially still relatively under-developed. In fact, the countries that have developed the most in recent years are advanced economies. Therefore, the gap between developed and developing economies regarding financial development has if anything widened even more. This disparity has increased in most parts of the financial system. As a result, one might expect that the financial sectors of emerging economies will continue to expand in the years to come.

There is a notable heterogeneity in the indicators of financial development across emerging economies. For Latin America, the verdict is mixed. While financial development has progressed, the region lags behind not only with respect to developed countries but also to other emerging economies, most notably those in Asia. The region is less financially developed in all sectors of the financial system, banks, bond markets, and equity markets. The only area that appears relatively developed is in the institutional investor side, in particular pension funds. But even there, the assets held by these institutions are concentrated to a large extent on deposits and government paper. Therefore, Latin America's financial system is unfortunately less developed than previously expected given its intensive reform efforts and improved macroeconomic performance. Moreover, it appears that the region would need many years to overcome the relative underdevelopment of its financial sector. While some of our previous findings show that Latin America does not have a very developed financial system, there is still a glimmer of hope. A couple of countries seem to be doing better, namely Brazil in its equity market and Chile in its corporate bond market. Furthermore, there are some incipient positive changes in the nature of domestic financial markets, with reduced mismatches. However, those accessing finance seem to be, to a large extent, only a few firms. Financial development through capital markets does not seem to have spread directly to all firms. Unlike many predictions, Latin America has not lived in a world where there is finance for all, at least based on the type of data we have analyzed in this paper.

What explains the lagging financial development in emerging economies and in Latin America in particular? What explains the persistent mismatch between expectations and outcomes? In this final part of the paper, we discuss and speculate (based on evidence from various pieces of other work) about some of the possible drivers. We also venture some of the possible avenues for the road ahead.

While it is difficult to answer the question of whether the problems lie in the supply or demand side of funds, the findings in this paper suggest that the insufficient financial development does not seem to be determined just by the lack of available funds. In fact, financial underdevelopment seems to co-exist with a large pool of domestic and foreign funds in the economy, not least because domestic residents are sometimes induced to save in market-based instruments, destined to domestic market. Moreover, funds are also available from foreign investors eager to invest in emerging economies.[40] This will naturally provide a continuing deepening of some markets. While one cannot rule out problem of demand, there is not enough evidence yet. Some surveys indicate that SMEs are not well served, but many owners do not want to lose control and do not wish to subject their companies to market forces. Moreover, even when firms complain, it is not clear that they have good investment projects to obtain financing.

The burden does not seem to rest either on just aggregate factors. The macroeconomic performance and institutional framework have likely hampered financial development in the past, but many developing countries have improved substantially their macroeconomic and institutional stances while financial development has not taken off as expected. In the 2000s there has been much less crowding out of the government in the financial sector, especially in bond markets and banking. Moreover, corporate governance and other institutional indicators have improved and are not likely to explain the cross regional and cross country variation in financial development.

Financial globalization could in principle be behind the poor domestic development if financial activity (of domestic assets) moved overseas. In a world of financial integration, transactions do not have to take place domestically, firms and households can transact in any market, domestic or foreign. While this could be part of the reason because of the increasing globalization indicators and because a substantial part of the activity goes on in international markets, it does not seem to be all. Some of the domestic development indicators take into account the activity that happens both domestically and abroad. Moreover, internationalization does not seem to be compensating for poor domestic development. Internationalization is positively correlated with financial development, within and across regions. Namely, it complements rather than substitute domestic markets. Furthermore, globalization is similarly important for many countries and regions and thus does not explain the cross-country or cross-regional differences. And developed countries, with more domestic financial development than emerging economies have even more globalization.

Part of the problem seems to lie in the financial intermediation process since there are many assets available for investment that are not purchased by banks and institutional investors. These institutions hold a large amount of resources that were expected to be invested long-term and in many parts of the financial sector, not just in few firms. However, institutional investors seem to shy from risk, investing short term and following herding and momentum trading strategies, among other practices. Moreover, banks have moved from financing large corporations to

[40] One could argue that international financial markets are very volatile and that foreign investors are not reliable. But this is the case across countries and it is difficult to explain the cross-country or cross-regional volatility. Furthermore, international investors seem to be favoring emerging economies in relative terms even in a period of global crisis, although it is the case that during the wake of the global crisis international investors retrenched from all countries.

financing standardized retail products and some specific lines of credit to SME that are easy to commoditize, that can be done at a large scale, and that involve relatively low risk, like leasing and collateral lending. Part of this might be due to a regulatory emphasis on stability. However, incentives to managers with respect to risk taking seem to play an important role. For example, evidence from Chile on mutual funds, pension funds, and insurance companies seem to reinforce this point. In sum, while it could be the case that more assets would help those investors take more risk, the evidence and literature suggests that the overall functioning of financial systems is not contributing to the development of the pro-market envisioned by the pro-market reforms.

To the extent that part of the problem lies in the financial intermediation process, policymakers are left with a difficult road ahead. Institutional investors are emblematic in this respect. For example, it is not clear how to generate incentives for more risk taking in a way that fosters innovation and growth while at the same time preserving the stability of the financial system. This problem is particularly acute because households are often forced to allocate a substantial portion of their savings into pension funds. To the extent that funds invest too conservatively, they will underperform relevant benchmarks. On the other hand, generating more risk taking would put households' funds at higher risk. Furthermore, more risky behavior makes monitoring of financial intermediaries more difficult. In other words, there is a strong trade-off between stability and development and it is not clear where the socially optimal outcome lies. To complicate matters more, there has been a devaluation of the international paradigms and a questioning of the international regulatory framework after the global financial crisis that leave policymakers even more alone.

Eventually, emerging economies will need to catch up, grow their financial systems, and take more risk, in their process to become more similar to developed nations. The challenge is how to do so without undermining financial stability and to what degree the rules that policymakers are adopting will help in this regard. Macro-prudential policies that limit expansions constitute a clear example. It will be difficult to distinguish spurious booms from leapfrog, for the same reasons that it has been difficult to spot bubbles in the financial systems of many developed countries throughout past and recent history.

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