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Financial Development in Asia

Beyond Aggregate Indicators

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Abstract

This paper documents the major trends in financial development in Asia since the early 1990s and the spillovers to firms. It compares Asia with advanced and emerging countries and uses both aggregate and disaggregate indicators. Financial systems in Asia remain less developed than in advanced countries but more developed than in Eastern Europe and Latin America. Bond and stock markets play a larger role and institutional investors have gained importance. Nonetheless, capital-raising activity has not expanded. A few large companies capture most of the issuances. Many secondary markets remain illiquid. The public sector captures a significant share of bond markets. The largest advancements in Asia occurred in China and India. But still in these countries, few large companies use capital markets to expand and grow, becoming much larger than nonuser firms. In sum, Asia's financial systems remain less developed than aggregate measures suggest, with few spillovers to many firms.

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Financial Development in Asia: Beyond Aggregate Indicators

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1. Introduction

Since the 1980s and particularly since the 1990s, many emerging economies in Asia have undertaken significant efforts to liberalize and expand the scope and depth of their financial systems, though there is great heterogeneity across countries with regard to the timing of the reforms. The literature suggests several reasons for doing so. Financial development has long been linked to faster growth and greater welfare (King and Levine 1993a,b; Levine and Zervos 1996; Levine 1997, 2005; Luintel and Khan 1999; Eichengreen 2013). Increased access to financing has beneficial effects, especially for historically underserved segments, such as small and medium enterprises (SMEs) (Beck and Demirgüç-Kunt 2006; Beck et al. 2011; de la Torre et al. 2010). A deep financial system has usually been perceived as more resilient to shocks and less prone to volatility and financial crises (Acemoglu and Zilibotti 1997; Aghion et al. 1999; Easterly et al. 2000), although in some other instances it has also been linked to crises. These reform efforts have involved, among other things, improving access to banks (for savings, credit, and financial transactions in general) and developing capital markets as an alternative and competitor to the bank model, which is usually viewed as more costly.

Efforts at financial development have not been unique to Asian countries, of course, as many emerging countries have also implemented significant pro-market reforms, most notably Latin American countries (de la Torre et al. 2011; Didier and Schmukler 2014). In many countries, 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 financial crises of the 1990s and early 2000s, prudent macroeconomic and financial policies to foster growth, stability, and resilience were implemented. The goal was to adopt well-regarded international standards and to reduce mismatches, such as currency and

maturity mismatches, while at the same time withdrawing the state from the markets and avoiding crowding out.

Underpinning all these changes was also a move to improve the institutional framework in light of the large literature linking institutions and financial development (La Porta et al. 1997, 1998; Demirgüç-Kunt and Maksimovic 1998; Levine 1998; Beck et al. 1998; Claessens and Leaven 2003). Among other things, improvements in law and order, transparency, contract enforcement, regulation, and supervision are believed to foster financial contracting and channel more funds to productive households and firms. One advantage of our approach is that we study broad trends across countries during a period in which many institutional improvements were introduced. These changes took place in particular in emerging economies including those in Asia (even when the level of institutional development differs substantially across countries). To the extent that these improvements were significant and controlling for other factors, one would observe more advances in financial development especially in emerging economies.

By the early 2000s, the outcomes in financial development did not match expectations and reform efforts. And the prospects for financial sector improvement did not seem too bright given the difficulty of overcoming high systemic risk and volatility, the slow progress of financial development, and the large mismatches in currencies and maturities, all of which were the result of inherent deficiencies in emerging economies (de la Torre et al. 2007a,b; de la Torre and Schmukler 2008). Other economists shared this pessimism, focusing on the metaphor of "original sin" in emerging economies—that is, the inability to issue long-term debt in their own currencies—as well as on outright dollarization and "sudden stops" that would subject the economies to frequent shutdowns of foreign financing (Eichengreen and Hausmann 1999; Hausmann et al. 1999; Calvo and Reinhart 2000; Hausmann and Panizza 2003).

More recently, however, new data from the mid- to late-2000s and several anecdotal accounts suggest some reasons for optimism. Emerging economies have improved their macroeconomic performance, lowered inflation, and reduced fiscal deficits (Gourinchas and Obstfeld 2011). These policy achievements, together with high liquidity in international markets, have allowed emerging economies to issue long-term bonds in domestic markets, as foreign investors have expected further appreciations of local currency and entered local markets in search of higher yields. In addition, these economies weathered the storms of the recent global financial crisis relatively well, indicating the strength and resilience of their financial systems (Eichengreen 2009; Kose and Prasad 2010; Didier et al. 2012).

Even with some reasons for optimism, the path ahead will certainly be challenging, especially for policy makers. In particular, the old model of convergence to international standards is being questioned precisely because those standards are being revised in the wake of the 2008–09 global financial crisis. One example is the definition of the limits of regulation when banks and shadow banks are interconnected and when banks pose too high a systemic risk to be allowed to fail. A second example is the need to provide better services to savers and investors, while monitoring the degree of risk, given the prevalence of domestic and global shocks. A third example is the model of financial development, in terms of what role banks (domestic and foreign, private and public) and capital markets play.

The goal of this paper is to present a bird's-eye view of the major trends in Asia's financial development, compared to the trends observed in advanced and other emerging economies. The primary value 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 and disaggregate indicators of financial development. While we focus on the borrowers' (firms and government) side, we also provide some evidence on the savers' (households) side. In

addition, we investigate how the nature of financial activity (scope of credit, currency, and maturity) has developed and to what degree changes in the size of markets have implied greater availability of financing for corporations. Because 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. However, related work reaches similar conclusions using other benchmarks by controlling for typical macro and institutional variables (de la Torre et al. 2014).

We systematically analyze the evolution of the financial development across countries and regions during the 1990s and the 2000s. We provide evidence on the banking sector, but most of the new evidence focuses on capital markets, at which many of the recent reforms were aimed and where most of the expectations were laid. Furthermore, we document the evolution of the main financial intermediaries aside from banks: pension funds, mutual funds, and insurance companies. We focus on seven of the largest countries in Asia, including those in East Asia (Indonesia, the Republic of Korea, Malaysia, the Philippines, and Thailand) and separately, because of their distinct natures, China and India. We compare the patterns observed in these seven Asian countries with those in other advanced and emerging regions. Among developed countries, we consider the G-7 countries (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States) as well as other seven advanced economies that are typically regarded as being somewhat more similar to emerging markets (Australia, Finland, Israel, New Zealand, Norway, Spain, and Sweden). As comparable emerging economies, we focus on two main regions: Latin American countries (Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Uruguay) and Eastern Europe (Croatia, the Czech Republic, Hungary, Lithuania, Poland, the Russian Federation, and Turkey). Because we provide evidence on many different indicators from several sources, we do not have data for all

countries in each region in each case. We provide the most comprehensive data we have been able to gather.

The main findings in this paper provide a mixed, nuanced picture of the main trends in financial development in Asia and can be summarized as follows. The financial systems of Asian economies have effectively developed over the past two decades, becoming in many respects and by several standard measures deeper and more complex. In terms of overall depth, financial systems in Asia remain less developed than in advanced countries but more developed than in Eastern Europe and Latin America. The largest leaps in depth during the 2000s took place in China and India, while the rest of Asia did not witness as much improvement. Nonbank markets—bonds and equities—have increased in absolute and relative sizes, suggesting a mild but steady transition from a mostly bank-based model to one that is more complete and interconnected. Nonbank institutional investors have expanded, channeling a significant part of the savings (even without taking into account the additional increasing participation of cross-border investors). The nature of financing is also changing to some extent. For instance, there is a longer maturity of bonds from the private sector in domestic markets. The extent of the dollarization of loans and bonds has also declined. The latter contrasts with the experience of Eastern Europe that increased its foreign currency debt before the global financial crisis, which was linked to the higher transmission of the crisis to the countries in that region.

Despite these new developments, financial systems still remain in many aspects underdeveloped in comparison to those in developed countries, although similar patterns are typically observed in other emerging regions. In particular, capital raising activity has not expanded in most countries. A few large companies continue to capture most of the issuances. But still in China and India, which saw a rapid deepening in financial development, few large companies use the capital markets to expand and grow, becoming much larger than nonuser

firms. Moreover, except in some cases, secondary markets remain relatively illiquid. And the public sector captures a significant share of the bond market. As a result, Asia's financial systems remain less developed than aggregate measures suggest.

The rest of the paper is organized as follows. Section 2 documents and gives a broad overview of where Asia and emerging economies stand on commonly used and simple measures of financial sector development. Section 3 goes beyond financial deepening. It analyzes whether and how the nature of financing has changed over time. It also describes recent developments in alternative markets and products. Moreover, it analyzes in more detail the cases of China and India in terms of firm financing and growth during the 2000s. Section 4 examines the main players in the financial system. The final section concludes by discussing the challenges ahead for financial sector development.

2. Financial Sector Development

We start by providing some basic stylized facts showing where Asian countries stand on commonly used broad indicators of financial sector development, comparing them with other emerging and developed countries over the past three decades. More specifically, we focus on the depth of the financial sector, analyzing the size of bond and equity markets and that of the banking sector. Overall, we observe that financial systems in Asian countries have developed significantly over the past two decades, especially in China and India. They have also shown a modest transition from a bank-based model to a more complex and interconnected model in which nonbank institutions play a more central role. Despite these improvements, financial systems in Asia remain underdeveloped compared to other developed regions. Nonetheless, they are among the most developed financial systems among emerging economies.

Regarding the banking system, Asian economies stand ahead other emerging countries not only in absolute size (as measured by total banking claims as a share of GDP), but also in growth over the past thirty years. For example, while the banking systems in East Asian economies expanded 47 percent between 1980-1989 and 2000-2009, those in Eastern Europe and in Latin America increased 25 and 5 percent over the same period (Figure 1, Panel A). In stark contrast with these trends, the banking sector in developed countries is deeper to start with and has expanded faster than the banking sectors in many emerging economies, though typically not as fast as those in Asian countries. In the G-7 economies, for example, bank size increased 20 percent, growing from 96 percent to 111 percent of GDP on average between 1980–89 and 2000–2009. Within the Asian region, the banking systems in East Asian countries saw a significant expansion from the 1980s to the 1990s (growing from 56 percent to 82 percent of GDP on average between 1980–89 and 1990–1999), but they mostly stagnated in the following decade. The important exceptions are China and India, which saw a great expansion in total banking claims as a percentage of GDP, expanding 74 and 73 percent between 1980–1989 and 2000–2009.

Somewhat similar patterns of financial development are observed for bond markets. Bond markets have grown significantly in the 2000s relative to the 1990s in Asian economies—by almost 57 percent in East Asian countries, 345 percent in China (as it starts from a much lower base), and 66 percent in India—but far less in developed countries (Figure 1, Panel B). For example, bond market capitalization in the G-7 increased by 20 percent and was actually stagnated in other advanced economies over the same period. Despite the fast growth, bond markets in Asian countries remain small compared to those in the G-7, at 56 percent of GDP on average for East Asian economies, 35 percent for China, and 33 percent for India during 2000–2009, compared to about 112 percent for G-7 countries. In contrast, the expansion in

bond markets in Asia has been akin of those other emerging economies, though bond markets in Asia remain the most developed ones (in terms of overall depth) among the developing world. For example, bond markets in Eastern Europe and Latin America grew, respectively, 66 and 79 on average in the 2000s relative to the 1990s, but in the 2000-2009 period they stood at 28 and 32 percent of GDP, significantly lower than the observed 56 percent in East Asian economies.

The patterns of the development of equity markets are more heterogeneous within Asia and across regions. While equity market capitalization has typically grown faster in developing countries than in developed ones during the past decade, this is not the case for all Asian economies. For example, equity market capitalization in China, India, and Eastern Europe expanded 412, 109, and 141 percent, in the 2000s vis-à-vis the 1990s, whereas it increased only 33 and 68 percent across G-7 and other advanced countries, respectively (Figure 1, Panel C). In contrast, East Asian economies experienced on average a contraction in market capitalization of 10 percent over the same period.

Increases in equity prices can explain this trend, at least in part; that is, after adjusting market capitalization for changes in equity prices, a much more modest expansion of equity markets is observed around the world. For instance, equity markets in East Asian countries actually expanded 4 percent per year on average between 2000 and 2009, while China and India had an average real increase in equity market capitalization of 18 and 8 percent, respectively (Figure 2, Panel A). Other emerging economies had more modest expansions as well—those in Eastern Europe and Latin America expanded 3 percent over the same period. Similarly, equity markets expanded about 1 percent and 3 percent, respectively, in the G-7 and other advanced countries over the same period.

In nominal terms, equity market capitalization as a percentage of GDP remains relatively small in Asian countries when compared to those in the G-7, though they are typically larger than in most emerging regions. For instance, equity markets represented on average 66 percent of GDP in China and East Asian countries and 62 percent respectively in India, while they represented about 31 and 42 percent of GDP in Eastern European and Latin America countries and more than 85 percent in developed countries during the 2000s (Figure 1, Panel C). These differences in the relative size of equity market capitalization are starker once we attempt to control for differences in the availability of shares for investors, that is, the free float. Dahlquist 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 Asian countries and in emerging countries more broadly than in developed ones (Figure 2, Panel B).

Last but not least, there has been some convergence in the structure of financial systems as well—a mild but steady transition from a mostly bank-based model to one that is more complete and interconnected has been the broad trend in the Asian region, especially in China, as well as in many other developing countries (Figure 3). For example, bond and equity markets in China and India accounted for 45 and 62 percent of their financial systems in the 2000s, respectively, in contrast with 18 and 58 percent in the 1990s. For East Asian economies, bond and equity markets represented on average 60 percent of their financial systems in the 2000s, up from 57 percent in the 1990s. Similarly, these markets have grown from 45 to 55 percent of the size of the financial system in Eastern European countries and from 54 to 64

percent of the financial system in Latin American countries. In developed countries, these markets typically account for about 60-65 percent of the financial system.

3. Beyond Financial Deepening

The changes in depth and composition of financial systems in Asian countries are important but they provide only a partial view of the extent of financial development. These changes have come along with changes in the nature of financing. For example, the private sector has seen an expansion in local currency bond financing, the extent of dollarization of loans and bonds has declined, and the maturity of private sector bonds has increased slightly. However, plenty of room remains for future development of the scope and depth of markets. This is especially the case for bond markets for the private sector—it remains typically small, illiquid, and highly concentrated in large firms. But some of the same characteristics also apply to equity markets.

We now review more systematically these qualitative developments in domestic financial systems in Asian countries in light of the trends in developed and other developing countries. We also review in more detail the cases of China and India regarding what the deepening of their capital markets has implied for firm financing and growth.

3.1. Banking Systems

The composition of bank credit between the public and the private sector has changed significantly over the past two decades not only in Asian countries, but also in the rest of the world. The large expansion of banking systems in developed economies has been concentrated mostly in an increase of their claims on the private sector, which rose from 50 percent of GDP in the 1980s to 98 percent in the 2000s in other advanced economies, accounting for 97 percent of total bank lending (Figure 4, Panel A). In East Asian countries, lending to the private sector also expanded considerably, from 44 to 72 percent of GDP, or from 79 to 87 percent of total

bank lending. In contrast, governments increased their borrowing not only in absolute but also in relative terms in many emerging markets, particularly in Eastern Europe and India, over the same period, where the public sector represented a large fraction of total bank lending during the 2000s, at about 30 and 34 percent of the total claims by the banking sector, respectively. In the G-7 and East Asian countries that number was around 10 and 13 percent, respectively, over the same period.

Credit to the private sector in China has undergone significant qualitative changes in its composition, with credit shifting away from commercial lending and household financing toward mortgage credit (Figure 4, Panel B). Similar patterns are observed in Eastern European countries. In Latin American countries, qualitative changes in the composition of private sector credit have also occurred—although mortgage lending has decreased, consumer credit has expanded significantly. In contrast to these changes across the developing world, the composition of bank credit has remained relatively stable in developed countries.

Another key qualitative change in the nature of bank lending in Asian countries is a decline in the dollarization of loans—indeed, this has also occurred in most other emerging markets, although Eastern Europe is an exception. In China, there is also a decline in the percentage of foreign currency deposits. This trend is also observed in other emerging regions, although the dollarization of deposits remains particularly high in Eastern European and Latin American countries (Figure 5). These developments are likely a consequence of the emerging market crises of the 1990s, when currency mismatches rendered the private sector vulnerable to currency fluctuations and limited policy options.

The concentration of banking systems may raise concerns about banking competition. When fewer and larger banks (higher concentration) exist, banks might be more likely to engage in anticompetitive behavior (Berger 1995). The literature has linked bank competition

with lower prices for banking products, increased access to finance, and greater bank efficiency. Empirically, we find that banking systems in Asian countries, particularly in China and India, are also becoming less concentrated, with a decreasing share of loans and deposits in the top five banks (Figure 6). While similar trends are observed in Eastern Europe, the opposite trend is occurring Latin American countries. At the same time, foreign banks are increasing their presence in East Asian and emerging markets more broadly. However, the Latin American region and Eastern Europe have the highest penetrations, noticeably larger than those in East Asia, China, India, and other developed economies (Claessens and van Horen 2013).

3.2. Bond Markets

Despite their considerable expansion between 2000 and 2009, private (corporate and financial institutions) bond markets in Asian countries remained relatively small in comparison to those in developed countries and to public bond markets. For example, private bond market capitalization typically represented around 40 percent of GDP in developed countries during the 2000s, whereas it stood at only 23 percent of GDP in East Asian countries, a mere 13 percent in China, and less than 2 percent in India (Figure 7, Panel A). However, bond markets for the private sector are considerably deeper in Asia than in other emerging regions. In Eastern European countries, for example, private bond market capitalization was only 4 percent of GDP over the same period. Moreover, private bond markets across Asian countries have grown less as a percentage of GDP than government bonds, thus losing space in relative terms. For example, the capitalization of private bonds represented on average 42 percent of total bond market capitalization in East Asian economies during the 2000s, down from 45 percent in the 1990s. In China, the relative expansion of the public sector bond financing is more striking, rising from 51 to 64 percent of total bond market capitalization over the same period.

Bond market liquidity has expanded considerably in East Asian countries, where trading volumes in secondary markets grew from 27 percent during 2000–2003 to 45 percent in 2008–2009 (Figure 7, Panel B). In contrast, bond market liquidity is somewhat lower in China and India and may thus be a source of concerns. While turnover between 2008 and 2009 was around 60 percent in the G-7 countries and reached 146 percent on average across the other developed economies, it was only 23 and 15 percent in China and India, respectively. These patterns suggest that primary bond markets have developed substantially more than secondary markets, especially in China and India, and they are broadly consistent with the evidence that institutional investors hold bonds to maturity and do little trading (Raddatz and Schmukler 2013).

Not only are private bond markets in Asian countries, and in emerging countries in general, relatively small in size, but also they have a limited reach, remaining a restricted source of firm financing when compared to the G-7 countries. Our work extensively documented in Didier et al. (2014) shows that only a small number of firms use bond markets for new capital in comparison to the G-7 countries. For example, during the 2000s, 21 firms on average issued bonds in East Asia, compared to 19 and 31, respectively, for Latin American and other advanced economies, and 432 firms in G-7 countries (Figure 8, Panel A). At the same time, East Asian markets remain largely concentrated, with the top five issuers capturing 35 percent of new bond financing during the 2000s (Figure 8, Panel B), and more so than advanced economies (at around 23 percent). Nonetheless, concentration in East Asian countries came down from 60 percent in the 1990s. In other words, a few firms (typically the larger ones) capture the bulk of the new bond financing. These patterns seem to be intrinsically related to the behavior of institutional investors in local markets, as discussed below.

Regarding the profile of new bond issues across Asian countries, private bonds denominated in foreign currency in local markets have declined slightly as a share of total issued bonds by the private sector, from 20 to 19 percent of total outstanding private sector bonds in the 2000s in Asian countries (Figure 9). This ratio nonetheless although is smaller than in Latin American countries, it is still considerably higher than in the G-7 countries in particular. Surprisingly, the maturity profile of private sector bonds has remained largely unchanged during the 2000s vis-à-vis the 1990s, whereas those of other emerging and developed economies have expanded. For example, while the average maturity of private bonds in East Asia was 6.4 years in the 2000s (up from 5.8 in the 1990s), across Latin American countries it has increased significantly from 6.1 years to 8.1 years (Figure 10) and the maturity of private bonds in the G-7 countries was not only longer to start with (at 9 years in the 1990s) but it is also lengthened (to 10.4 years in the 2000s). As in developments in the composition of bank debt, these overall trends probably reflect a conscious effort by governments to change the profile of their debt, given the serious rollover difficulties that mismatches generated during earlier periods of global and domestic shocks (Broner et al. 2013).

3.3. Equity Markets

The evidence presented above shows a sizable increase in equity market capitalization in China and India between the 1990s and the 2000s, but market size was somewhat stagnant in East Asian economies (Figure 1, Panel C). The evidence based on capital raising activity suggests similar patterns, with the exception of China. For example, in East Asia the value of new capital raising activity in equity markets also fell over these periods, whereas India experienced a significant expansion (Figure 11, Panel A). In China, however, we observe a slight decline in the value of new equity issues when comparing the 1990s with the 2000s. The patterns for most countries in Asia contrast with those in the advanced world. For example, new capital-

raising through equity markets increased between 26 and 29 percent on average in developed countries. As suggested above, these results are not necessarily inconsistent, as the expansion of market capitalization might be partly explained by the increasing equity valuations around the world during the 2000s.

A rosier picture emerges if we focus on equity market liquidity. Turnover rates in East Asian equity markets have increased from 70 percent in the 1990s to 88 percent in the 2000s (Figure 11, Panel B). Similarly, turnover rates for India have also increased, from 75 percent in the 1990s to 139 percent in the 2000s. In contrast, in China turnover has actually decreased, from 185 percent to 122 percent, though it remains at relatively high levels. The Asian region compares relatively well to both developed and developing countries alike. Asian countries display on average turnover ratios similar to those in the advanced world and much larger liquidity than in other emerging regions such as Eastern Europe and Latin America.

Nonetheless, the use of equity markets by corporations remains somewhat limited across Asian countries, with relatively few firms capturing most of the (primary and secondary) market. These patterns are striking once we consider that there has been a remarkable increase in the number of listed firms of these markets over the past decade (Figure 12, Panel A). Notwithstanding this overall increase in the number of listed firms, a relatively small number of firms raise capital in equity markets, and thus capture an increasing amount of funds. For instance, on average, fewer than 100 firms issued equity in any given year during the 2000s across East Asia compared to more than 290 in the G-7 countries and over 110 in other developed countries (Figure 12, Panel B).

Moreover, the bulk of equity financing is concentrated in a few firms, again following Didier et al. (2014). In fact, the share raised by the top five issuers increased in East Asian countries from 61 percent to 62 percent between the 1990s and the 2000s, and from 29 (45)

percent to 47 (55) percent for China (India) (Figure 13, Panel A). And lastly, trading in equity markets is also somewhat concentrated in a few firms as well, with the top five firms capturing for example almost 40 percent of the trading in East Asian countries (Figure 13, Panel B). However, Asian countries are among the least concentrated ones in terms of secondary market activity within the developing world.

3.4. China and India during the 2000s

Given that the largest expansion in financial development during the 2000s occurred in China and India, how much have firms in these countries used and benefitted from it to obtain financing and grow? We study this question by analyzing domestic and international capital raising activity and performance of publicly listed Chinese and Indian firms. The full analysis is presented in Didier and Schmukler (2013). This complements the previous evidence (which compares the 2000s with the 1990s) by taking a closer look at the developments within the 2000s in these countries.

The expansion of financing by private-sector firms in China and India during the 2000s has also been much more subdued than the aggregate numbers of financial depth suggest. Although capital raising activity in equity and bond markets expanded substantially in 2005–2010, it remained small as a percentage of GDP. Importantly, such expansion has not been associated with a widespread use of capital markets by firms. For example, the amount of capital raisings through equity issues in domestic markets doubled in China (from 0.5 to 1 percent of GDP per year) between 2000–2004 and 2005–2010, whereas the number of firms using these markets to raise capital per year increased only 20 percent (from 87 to 105 out of 1,621 listed firms) over the same period. On a smaller scale, similar patterns apply to the use of foreign markets. Also, not only have few firms used equity and bond markets on a recurrent basis, but even fewer firms captured the bulk of the capital market financing. For instance, the

top 10 firms in China and India captured from 43 to 62 percent of the total amount raised in 2005–2010. This contrasts with the perception in the literature that equity markets, at least in India, are relatively well developed.

Moreover, firms that use equity or bond markets are very different and behave differently from those that do not use capital markets. While nonuser firms in China and India grew at about the same rate as the overall economy, issuing firms grew twice as fast in 2004–2010. Firms that raise capital are typically larger initially and become even larger than nonuser firms after raising capital through equity or bonds. Firms grow faster the year before and the year in which they raise capital. Moreover, firms that use capital markets have ex-ante a longer liability maturity structure and more capital expenditures, and the differences relative to the firms that do not use capital markets become more accentuated ex-post. Notably, all these differences between users and nonusers are associated with the probability of raising capital. Furthermore, the evidence on firm size and growth has important implications for the firm size distribution of listed firms. The distribution of issuing firms is tilted to the right and shifts more over time than the distribution of those that do not issue, suggesting no convergence in firm size; if anything, the distributions seem to diverge (Figure 14).

Even though the financial markets in China and India are arguably not fully developed yet, the firms that are able to raise capital do seem to benefit from it, particularly in terms of their overall expansion. In other words, at least part of the high growth in these countries seems to come from the firms that are able to raise new funds. Moreover, even large firms appear to be partly financially constrained. The differentiated performance between users and nonusers of capital market financing suggests that, for the group of public listed firms that issue securities, their performance is sensitive to the external capital raised. The fact that firms

perform differently and expand when they raise capital also suggests that firms might have investment opportunities ex-ante that they cannot realize without additional funds.

4. Players in the Financial System

From the saver's perspective, Asia's financial systems have also become more complex. While in the past banks interacted directly with borrowers and lenders, in the recent years there is a greater diversity of players with a broader set of institutions, such as pension funds, mutual funds, and insurance companies. These nonbank financial institutions are intermediating savings, providing economy-wide credit, and offering a broader variety of products, as shown briefly in this section. The rise of these nonbank intermediaries has been a significant factor in the development of local markets across developing countries to the extent that they provide a stable demand for financial assets. Nevertheless, as argued below, Asian countries still have a long way to go in raising the sophistication of its institutional investors as most of the savings are still channeled to government bonds and bank deposits.

4.1. Main Financial Intermediaries

Although banks continue to play a significant and stable role, nonbank financial intermediaries, such as pension funds, mutual funds, and insurance companies, have been gaining considerable space in Asia and in other emerging markets around the world (Figure 15). For instance, pension fund assets represented 15 percent of GDP in East Asian countries and 19 percent in Latin American countries in the second half of the 2000s, while insurance companies were usually larger on average. Eastern European countries have typically smaller but also fast-growing institutional investors. As with most other features of the markets examined so far, these intermediaries are still smaller on average in Asian countries than in developed countries, reflecting, to some extent the more developed state of their financial systems. There is

nonetheless considerable variation in the size of each type of institutional investor across countries, reflecting, in large part, differences in their institutional and regulatory environments. On average, insurance companies in East Asian countries are usually the largest institutional investors (26 percent of GDP), whereas mutual funds average 17 percent of GDP and pension funds 15 percent.

Due to data availability, we can get only a glimpse of the private equity and venture capital funds. These funds, through which investors acquire a percentage of an operating firm, are particularly important for the financing of SMEs. Private equity and venture capital funds are relatively well developed in Asian countries. Private equity funds raised on average US$46 billion per year in Asia, a strong contrast to the almost US$4.9 billion raised in Latin America between 2003 and 2009.[1] Moreover, over the same period Asia represented almost10 percent of total worldwide private equity fund raisings, compared with only 1.1 percent for Latin American countries, with the rest taking place in the United States and in Europe. Venture capital funds are less represented in emerging markets in general, with a total of US$12 billion per year raised on average outside the United States and Europe during this period. Albeit smaller in absolute size, these funds have a relatively larger presence in emerging markets: fund raising outside the United States and Europe represented 25 percent over the same period.

4.2. The 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 in deepening local capital markets across Asian countries. Surprisingly, institutional investors in Asia, and in emerging markets more broadly, concentrate a significant fraction of

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

their asset holdings in fixed-income instruments such as bonds and deposits and particularly in government bonds. These investment practices limit the role of institutional investors in the development of corporate bond and equity markets (Figure 16). For example, government securities alone accounted for more than 50 percent of the holdings of Thai pension funds in 2009. If fixed income securities are considered, the share of pension fund portfolios reached 86 percent in Thailand and 68 percent in the Republic of Korea, which stands in stark contrast with the 30 percent observed on average across the G-7 countries.

Comparable patterns are also observed in the investment structure of mutual funds in Asian countries, though this evidence based on the composition of existing mutual funds in the Asian region raises the question of whether financial intermediaries or households themselves are responsible for these patterns.[2] For instance, bond and money market funds account for about 50 percent of existing mutual funds in Asian countries (Figure 17). In contrast, in G-7 and other developed countries, these funds correspond to about 35 percent of all funds. In those countries, equity funds are much more prominent, accounting for between 41 percent and 48 percent of existing funds on average. There is however some heterogeneity within Asian countries. While in the Philippines bond funds are predominant, representing 72 percent of all mutual fund assets, they are much less representative in the Republic of Korea and China, where they account for 18 and 6 percent of all mutual funds, respectively.

These trends suggest that institutional investors might have not contributed to the development of local markets as much as expected in the Asian region. At the same time, one has to consider that relatively small and illiquid domestic markets can be viewed as unattractive by these investors, particularly by mutual funds that are subject to sudden withdrawals by clients. In other words, asset managers' incentives can explain, at least in part, why large

[2] Data availability prevents us from providing a broader analysis.

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 underdeveloped, suggests that there is a great scope for policy actions that channel available funds to foster local markets.

5. Conclusions

This paper presents a systematic and detailed account of where Asia stands with respect to financial development. The evidence overall suggests that these countries are in a different position than in the past. According to several broad-based indicators of financial depth, domestic financial systems have continued developing since the early 1990s, at the same time that foreign investors continued investing in Asian economies. As a result, more resources have become available in these economies relative to their size—that is, more savings are available for use, especially for the private sector. Financial systems in Asia remain less developed than in advanced countries but more than in Eastern Europe and Latin America. China and India witnessed the largest advances in financial deepening during the 2000s. The rest of Asia did not experience as much change.

Furthermore, financial systems are becoming more complex and somewhat more diversified. Financing does not depend as much as before on banks because bonds and equity play a larger role. Among bonds, the corporate sector is also increasing in importance. Institutional investors, most notably pension funds and mutual funds, have become much more prominent. Moreover, the nature of financing also seems to be changing. Debt is moving slightly toward longer maturities and is increasingly being issued in local currencies, which reduces mismatches, while domestic markets seem to be gaining some ground. Overall, these trends suggest safer financial development in Asian economies.

However, despite all the changes and according to other metrics, Asian countries (like other emerging economies) are still relatively underdeveloped financially. In particular, capital raising activity has not expanded in most countries and a few large companies capture most of this activity. This is the case even in China and India, which witnessed large expansions in their aggregate indicators of financial development during the 2000s. The few large Chinese and Indian companies that used capital markets grew much more than the other firms. Furthermore, secondary markets remain relatively illiquid, except in some markets. The public sector captures a significant share of the bond market. As a result, Asia's financial systems remain less developed than aggregate measures suggest. Moreover, because the countries that have developed the most in recent years are the advanced economies, the gap between industrial and Asian economies in financial development has remained or widened even further. Therefore, one might expect that the financial sectors in Asian countries will continue to expand in the years to come.

What explains the lack of convergence in financial development in Asia toward advanced economies? Although it is difficult to determine precisely whether the problems lie in the supply or demand side of funds, the evidence suggests that what appears to be an insufficient level of financial development does not seem to come just by the lack of available funds. In fact, financial underdevelopment seems to coexist 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 targeted to domestic markets only. Moreover, funds are also available from foreign investors eager to invest in Asia. The availability of funds will naturally provide a continuing deepening of some markets. However, for some reasons the financial system does not seem to intermediate those funds and service a broad and growing range of firms.

Furthermore, even though we do not perform systematic econometric analysis and control for the usual possible determinants of financial development, the lack of development does not seem to depend on aggregate, macroeconomic, or institutional factors alone. The macroeconomic performance and institutional framework have likely hampered financial development in the past, for example during the Asian financial crisis of 1997-98. But the Asian economies have rebounded and have substantially improved their macroeconomic and institutional stances, growing at a fast rate and attracting much interest among international investors. Asian economies were also able to embrace globalization and benefit from participating in global markets. Therefore, one might have predicted more advances in financial development in these economies. Furthermore, some of the patterns we observe hold across countries with different levels of institutional frameworks, suggesting that other factors are at play.

Part of the problem seems to lie in the financial intermediation process, because many assets available for investment are not purchased by banks and institutional investors. These institutions hold large resources that were expected to be invested long term and in many parts of the financial sector, not just in a few firms. However, consumer and mortgage lending have grown relative to corporate financing. Banks seem to have moved from financing large corporations to financing standardized retail products and some specific lines of credit to SMEs that are easy to commoditize, that can be done on a large scale, and that involve relatively low risk, like leasing and collateral lending. Part of this trend might be due to an emphasis on stability. Capital markets seem to prefer financing large firms over small ones. And institutional investors seem to shy away from risk. In sum, while it could be the case that more assets might help investors take more risk, the evidence and the literature indicate that the

overall functioning of financial systems is not contributing to the degree of financial development envisioned by many pro-market reformers.

To the extent that part of the problem comes from the intermediation process, policy makers face difficult challenges. The role of institutional investors is emblematic in this respect. For example, it is not clear how to generate incentives for more risk taking to foster innovation and growth while preserving the stability of the financial system. This problem is particularly acute because households are often forced or induced to allocate a substantial portion of their savings to pension funds and mutual funds. On the one hand, 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. And riskier 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 for policy makers, the global financial crisis led to a reassessment of the international paradigms and a questioning of the international regulatory framework. Eventually, emerging economies will need to catch up, grow their financial systems, and take more risk, as they proceed to become more like developed nations. The challenge is how to do so without undermining financial stability.

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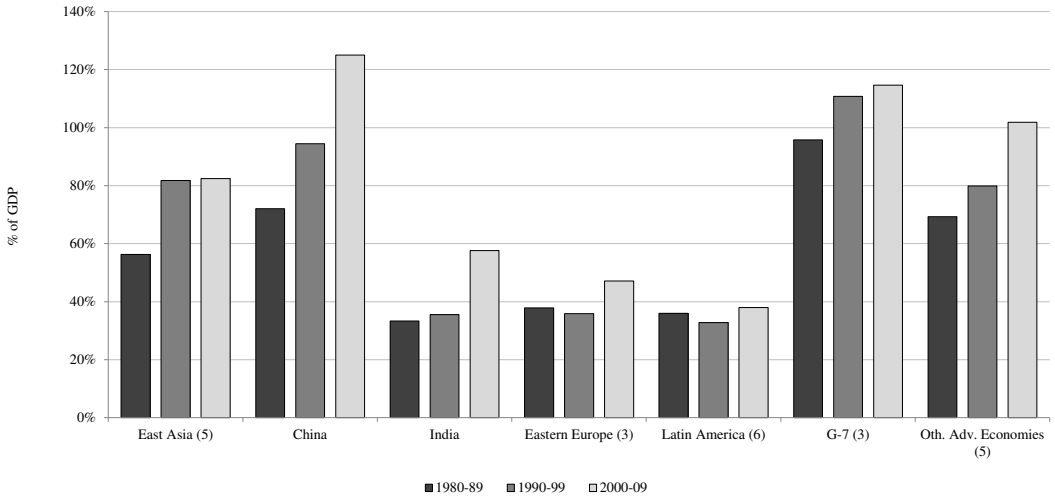
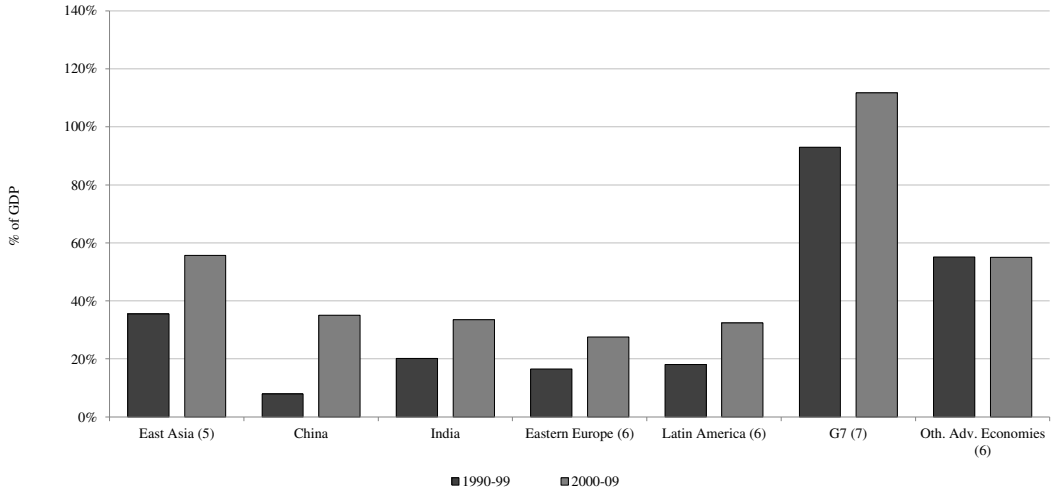
Figure 1
Market Size of Banks, Bonds, and Equities

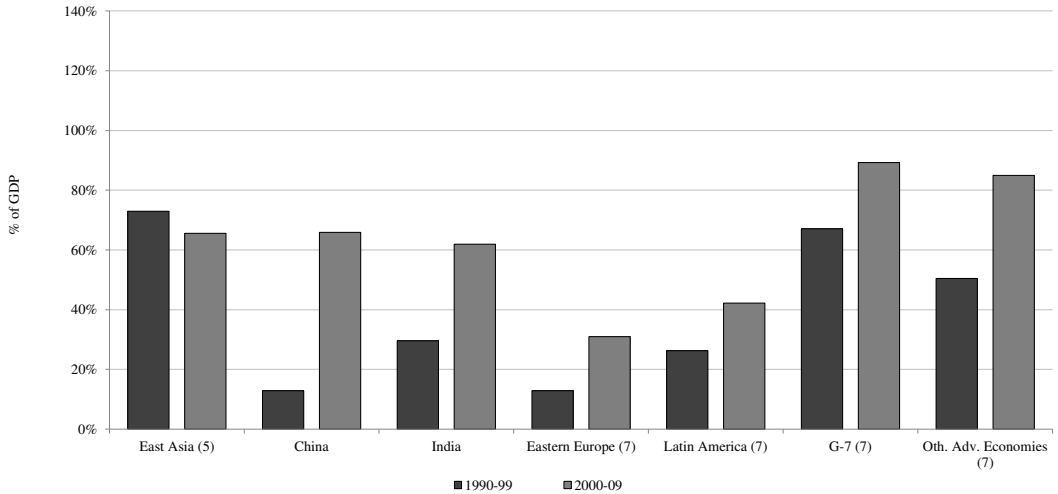
Panel A. Total Assets of Banks as % of GDP



Panel B. Market Capitalization of Bonds as % of GDP

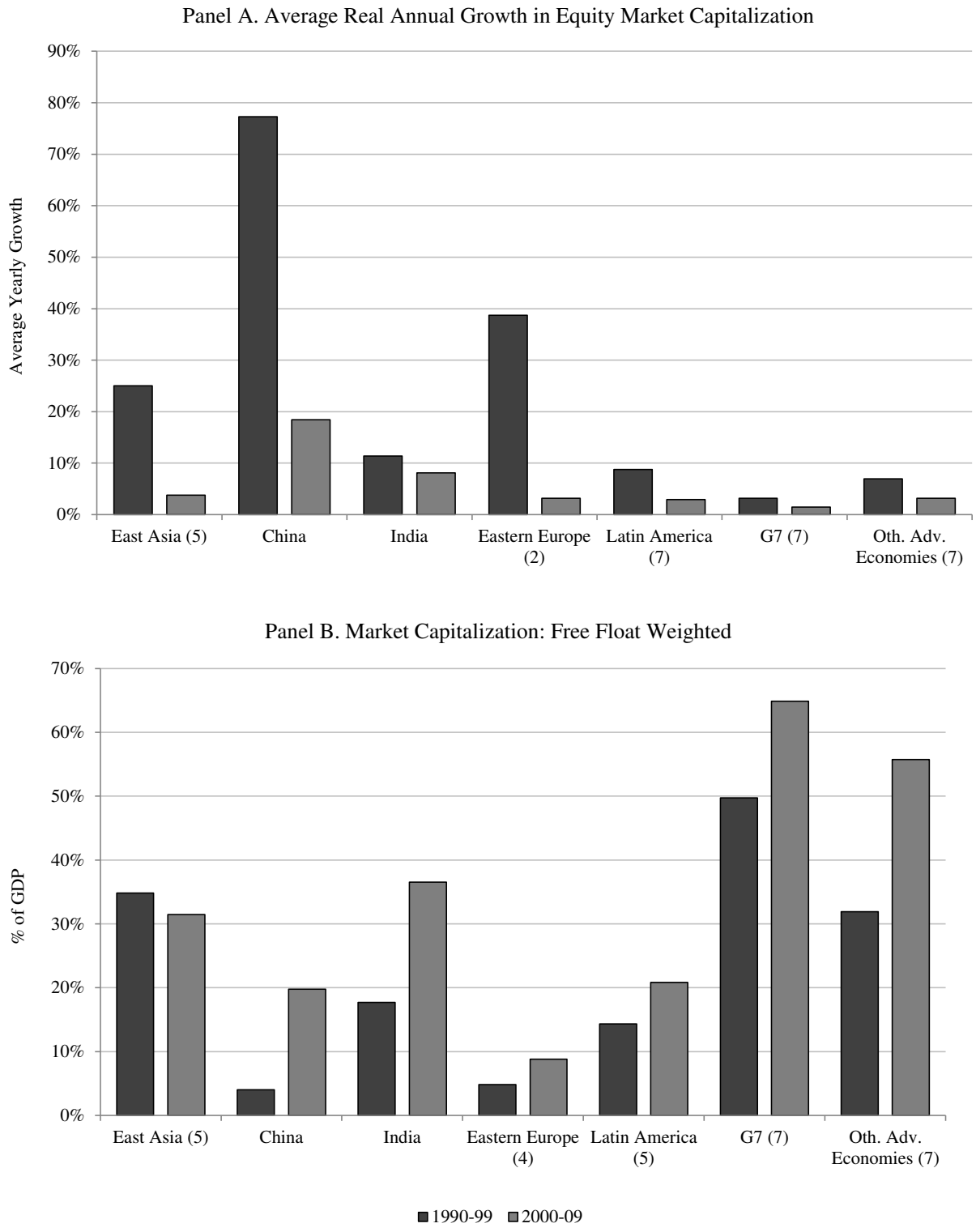


Panel C. Market Capitalization of Equities as % of GDP



This figure shows in Panel A the average total banking claims as a percentage of GDP between 1980 and 2009. The statistics for China in the 1980-1989 period include only banking claims to the private sector. Panel B shows the average market capitalization of outstanding bonds in domestic markets as a percentage of GDP between 1990 and 2009. Domestic bond securities are defined as those issued by residents in domestic currency and targeted at resident investors. Panel C shows the average market capitalization of domestic equity as a percentage of GDP between 1990 and 2009. Numbers in parentheses show the number of countries in each region. The data sources are the World Bank's World Development Indicators (WDI), Bloomberg, the IMF´s International Financial Statistics (IFS), and the Bank for International Settlements (BIS).

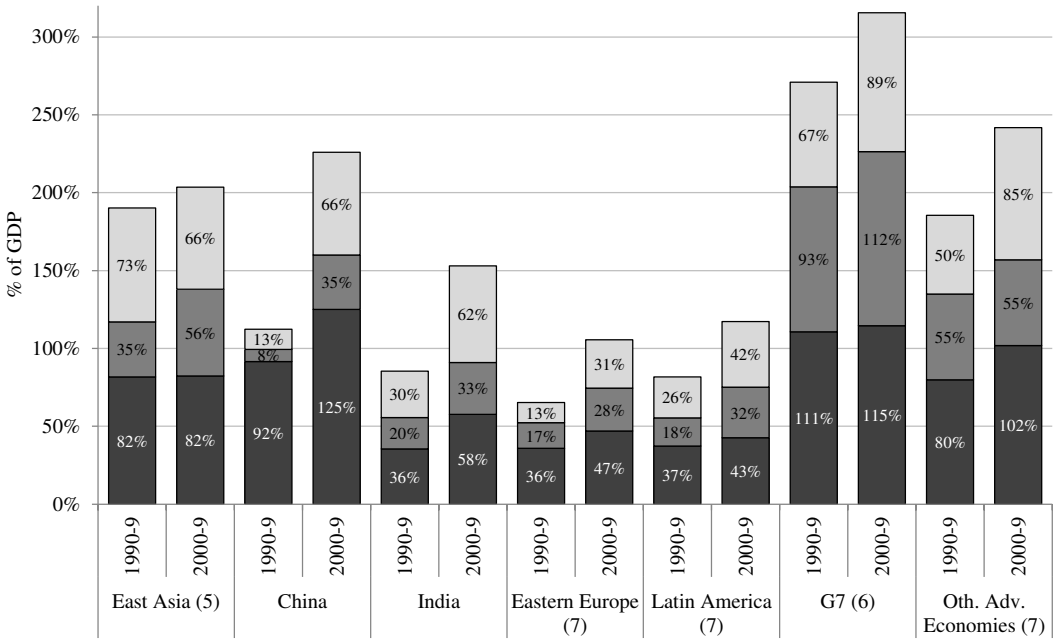
Figure 2
Alternative Measures of the Depth of Equity Markets



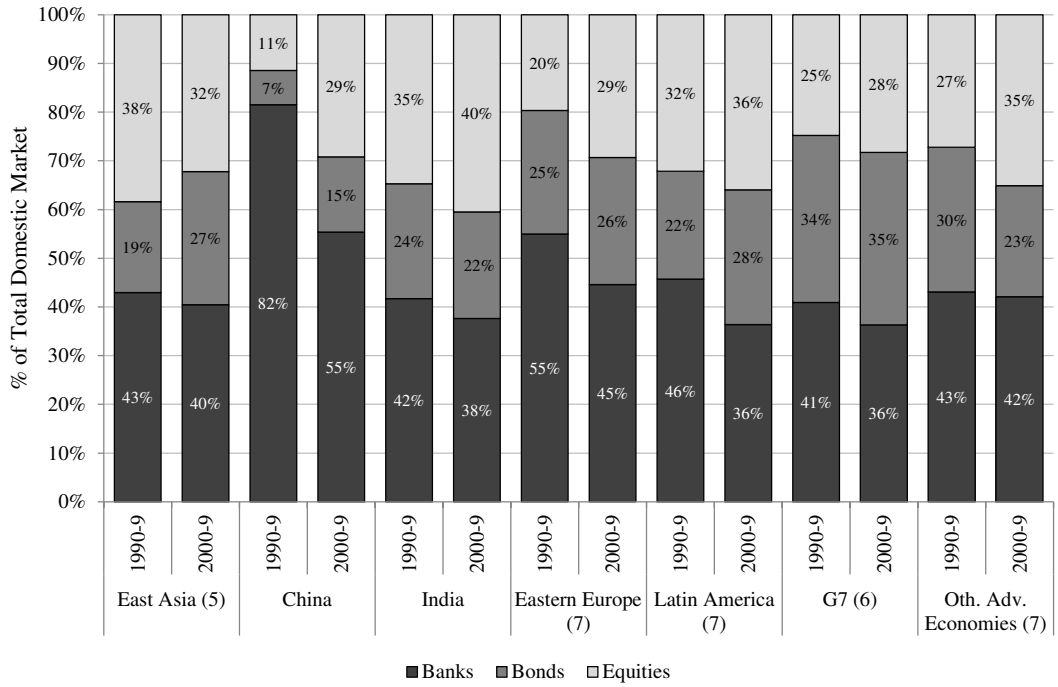
This figure shows in Panel A the average annual growth rate in market capitalization of domestic equity between 1990 and 2009. The market capitalization is measured in USD and is deflated by local stock market indexes to measure the real growth. Panel B shows the average market capitalization of domestic equity market as percentage of GDP, weighted by the free float by country as measured by Dahquist (2003) for the year 2003. The data sources are the World Bank's World Development Indicators (WDI) and Dalhquist et al. (2003).

Figure 3
Size of Different Financial Markets

Panel A. Size of Domestic Financial Systems



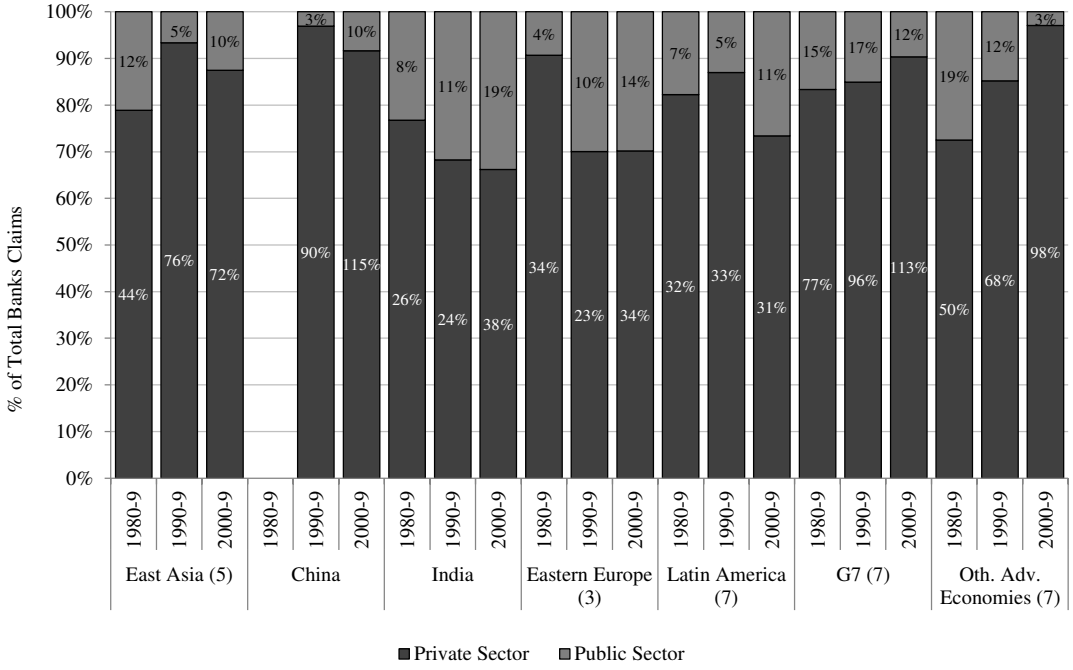
Panel B. Composition of Domestic Financial Systems



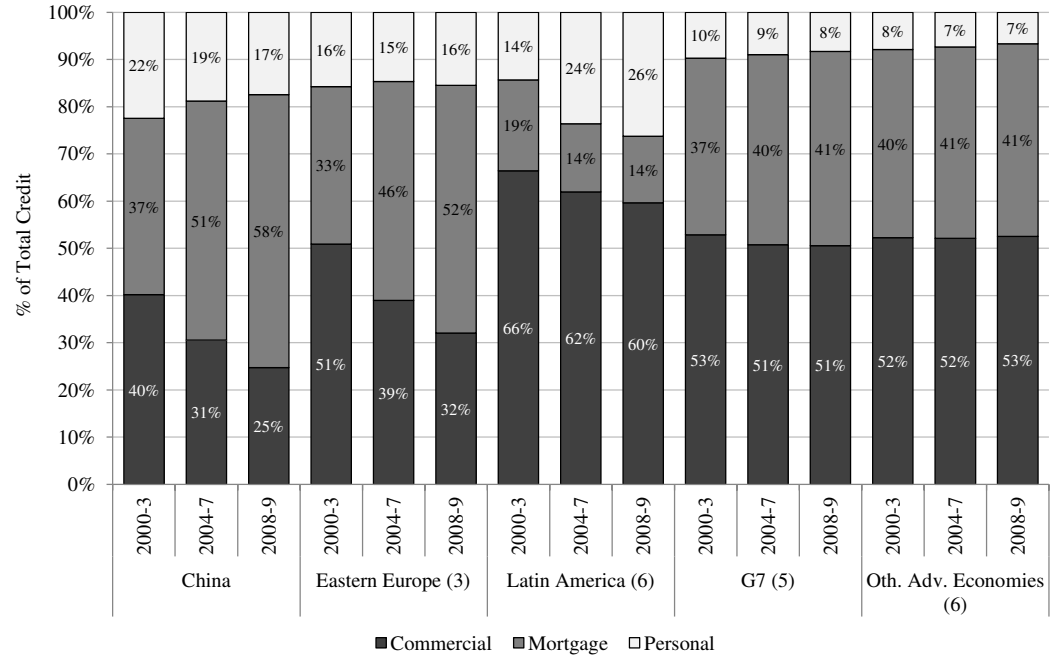
This figure shows the average size and structure of domestic financial systems between 1990 and 2009. Panel A shows total banking claims, outstanding bonds and equity market capitalization as a percentage of GDP. Panel B shows the same figures expressed as percentage of total domestic financial system. Numbers in parentheses show the number of countries in each region. The data sources are the IMF's International Financial Statistics (IFS), the Bank for International Settlements (BIS), and World Bank's World Development Indicators (WDI).

Figure 4
Nature of the Credit by Banks

Panel A. Bank Lending to the Private and Public Sectors

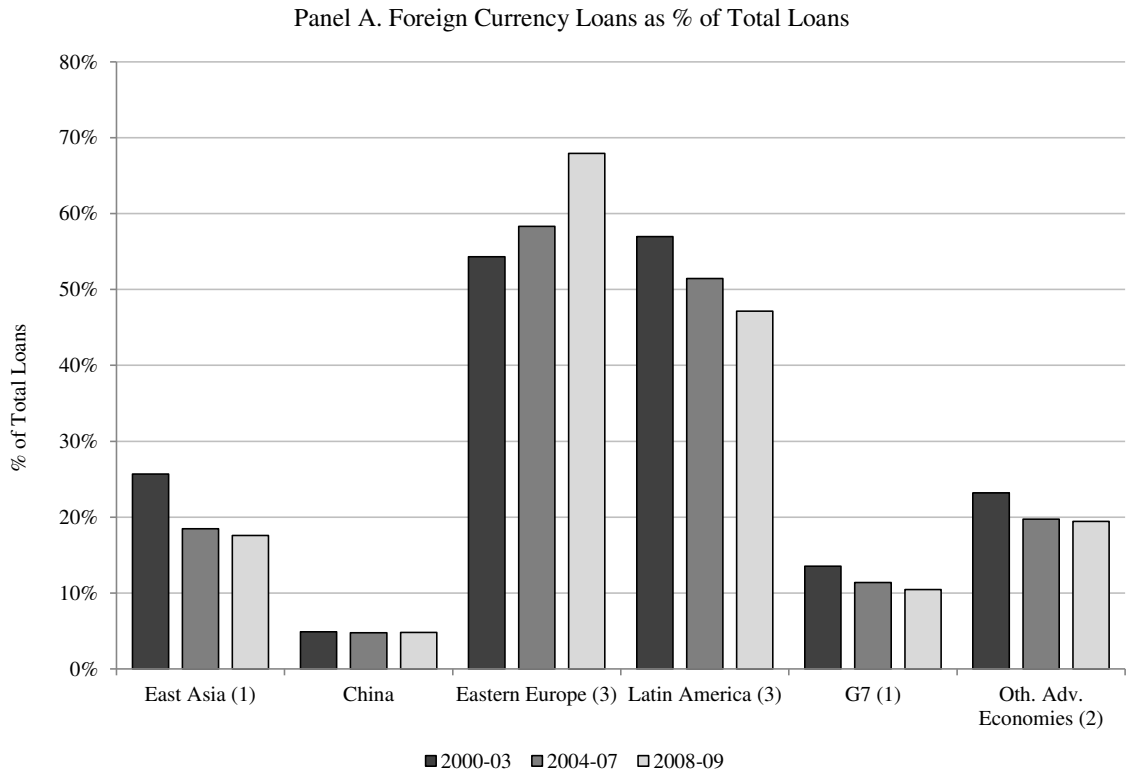


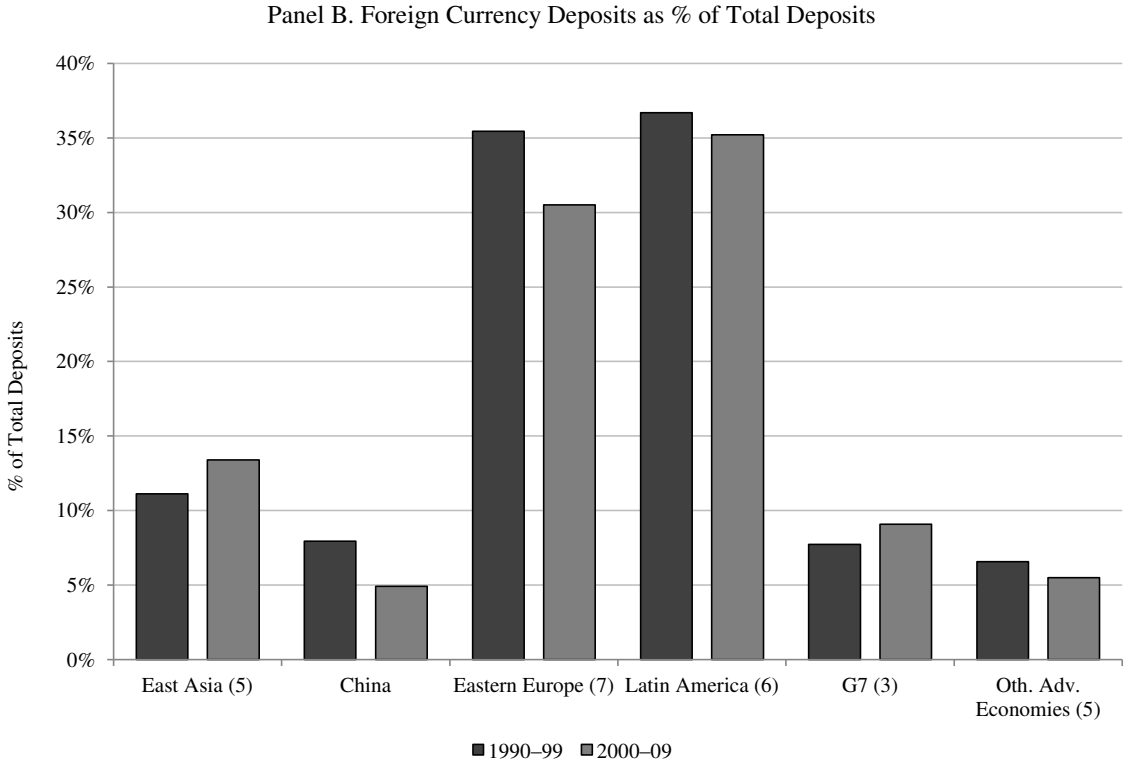
Panel B. Composition of Bank Credit



This figure shows in Panel A the average share of public sector and private sector on total banking claims between 1980 and 2009. The percentages shown within the bars represent the size of both public and private claims as a percentage of GDP. For China, the data on claims on the public sector are not available for the 1980-1989 period, hence no data is shown for this period. Panel B shows the average share of commercial, mortgage and personal credit as share of total banking credit. Numbers in parentheses show the number of countries in each region. The graphs were constructed using local sources and IMF´s International Financial Statistics (IFS).

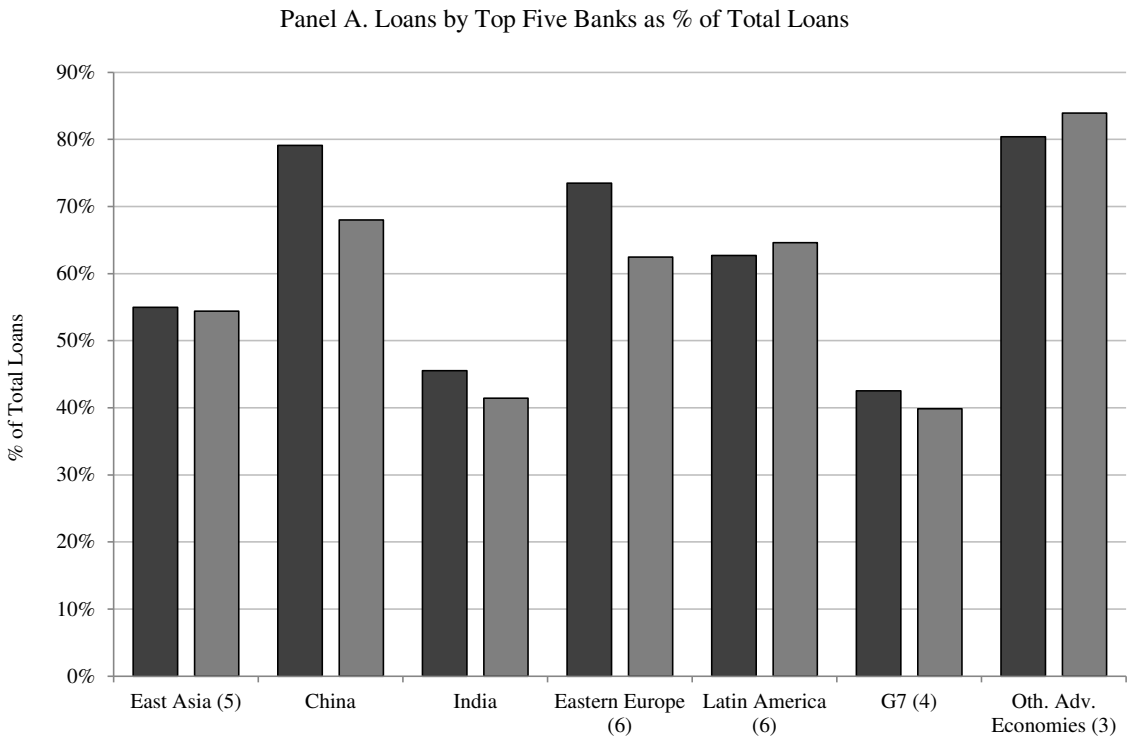
Figure 5
Dollarization of Banking Systems

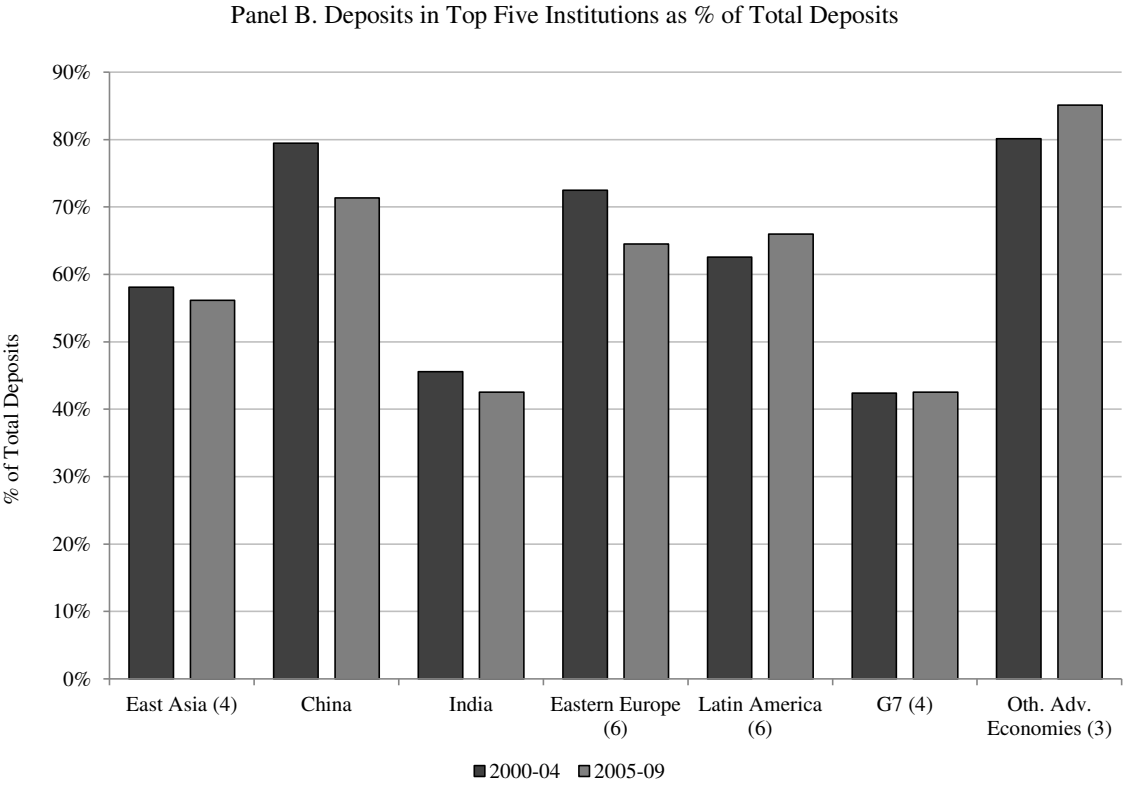




This figure shows the extent of dollarization of banking loans and deposits. Panel A shows foreign currency denominated loans as share of total loans averaged between 2000 and 2009. Panel B shows the extent of deposit dollarization as share of total deposits averaged between 1990 and 2009. Numbers in parentheses show the number of countries in each region. The data source is the IMF's International Financial Statistics (IFS).

Figure 6
Concentration of Banking Systems

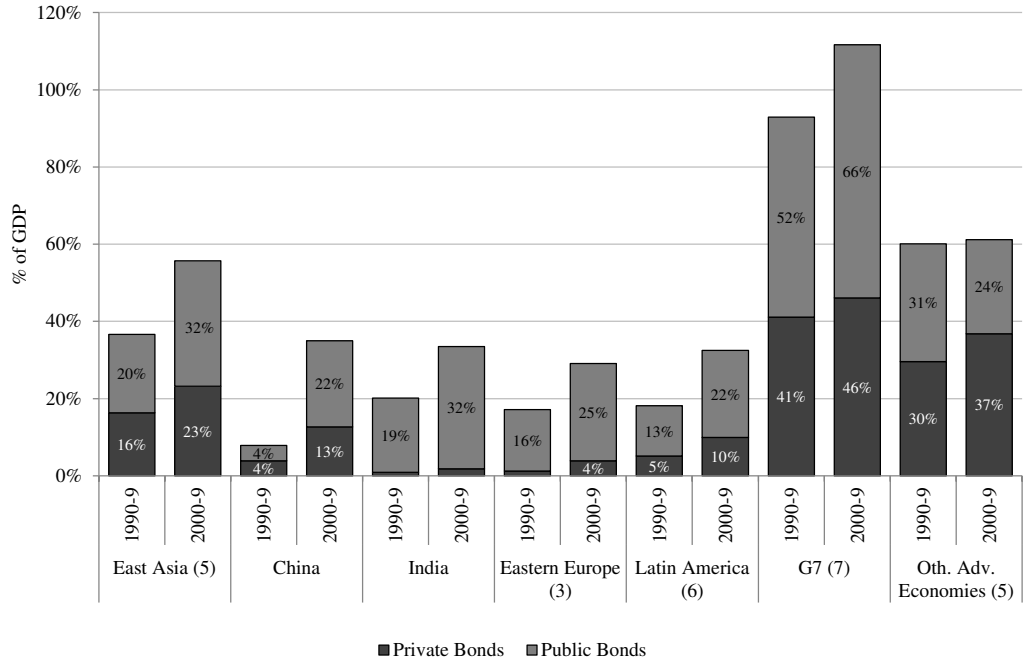




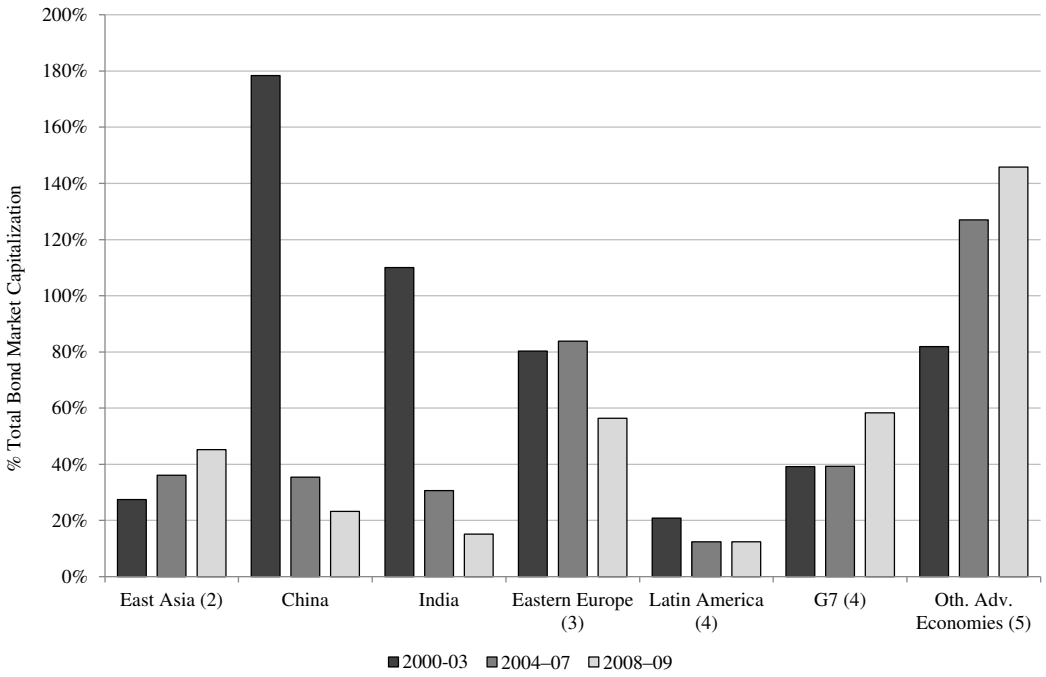
This figure shows the degree of bank concentration across regions. Panel A shows the annual average of total credit granted by the top-5 banks as share of total credit between 2000 and 2009. Panel B shows the annual average of total deposits in the top-5 banks as share of total deposits between 2000 and 2009. Numbers in parentheses show the number of countries in each region. The data source is Bankscope.

Figure 7
Activity in Bond Markets

Panel A. Composition of Bond Markets



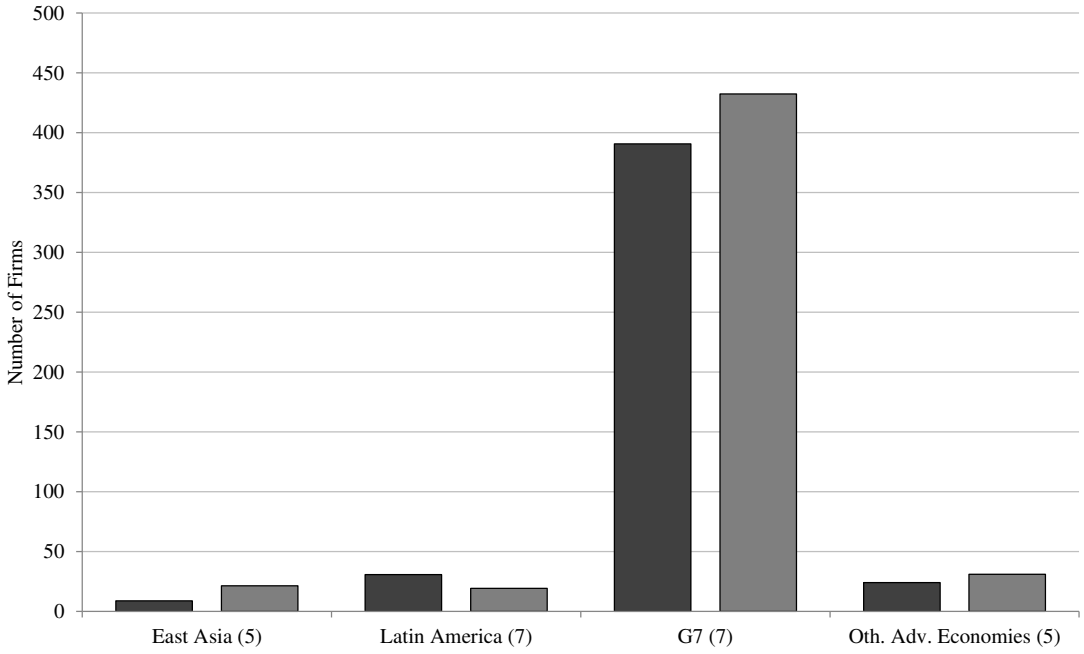
Panel B. Bond Market Turnover



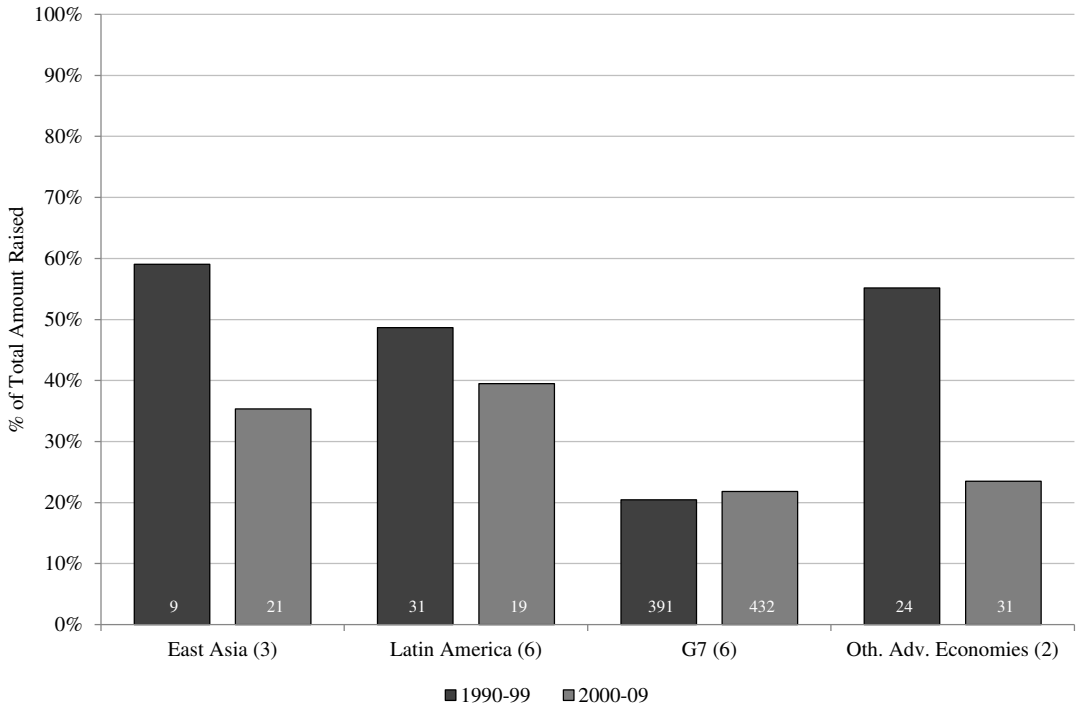
This figure shows in Panel A the average size of private and public bonds outstanding in domestic markets as a percentage of GDP between 1990 and 2009. Domestic bonds securities are defined as those issued by residents in domestic currency and targeted at resident investors. Panel B shows the average value of bond market trading as share of total bond market capitalization. Trading data includes domestic private, domestic public and foreign bonds traded in local stock exchanges. Numbers in parentheses show the number of countries in each region. The data sources are the Bank for International Settlements (BIS) and the World Federation of Exchanges (WFE).

Figure 8
Participation in Private Bond Markets

Panel A. Average Number of Firms Issuing Bonds

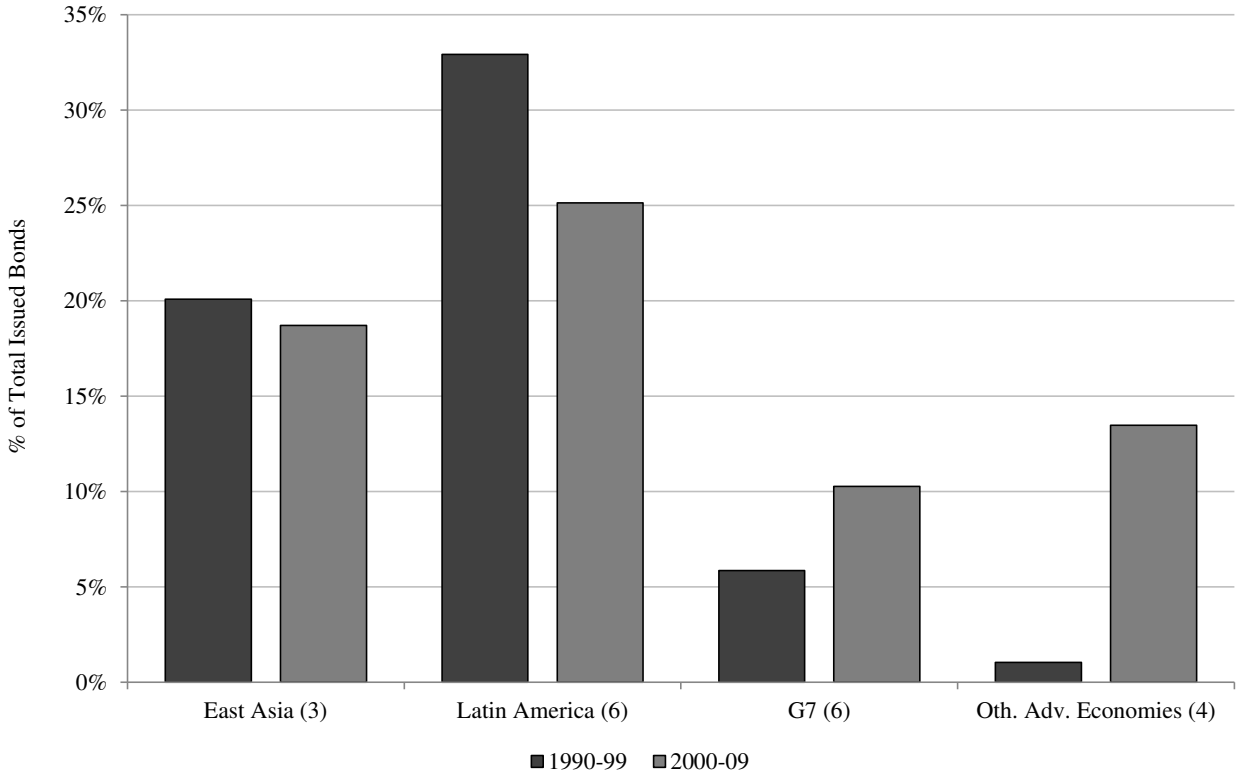


Panel B. Concentration (Amount Raised by Top Five Issuers as % Total Amount Raised)



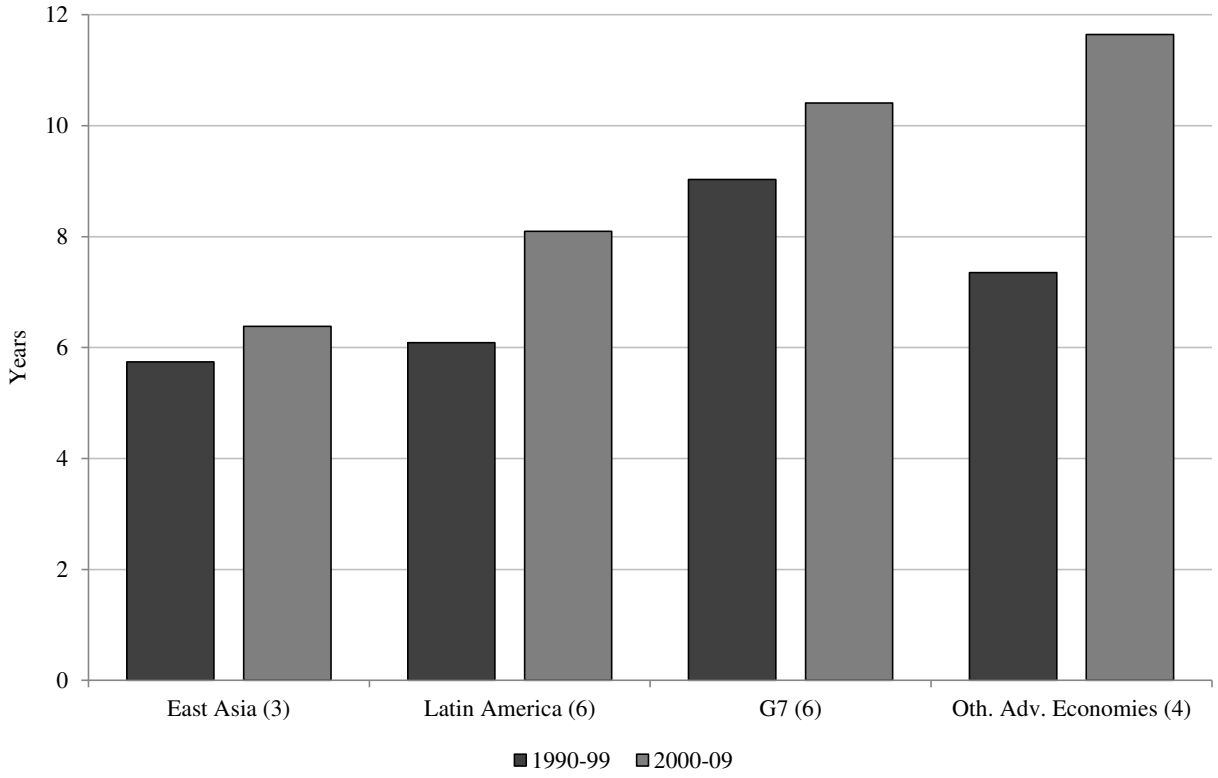
This figure shows in Panel A the average number of firms issuing bonds per year in domestic markets between 1990 and 2009. Panel B shows the average yearly amount raised by the top-5 issuers in domestic bond markets as share of the total amount raised by firms in domestic bond markets. The average number of firms issuing bonds per year in domestic markets is reported at the bottom of the bars. Numbers in parentheses show the number of countries in each region. The data source for this figure is Didier, Levine, and Schmukler (2014).

Figure 9
Foreign Currency Bonds as % of Total Issued Bonds in the Private Sector



This figure shows the currency composition of domestic private bonds at issuance. It shows the average share of foreign currency denominated bonds as a percentage of total bonds issued by the private sector in domestic markets per year between 1990 and 2009. Numbers in parentheses show the number of countries in each region. The data source is SDC Platinum.

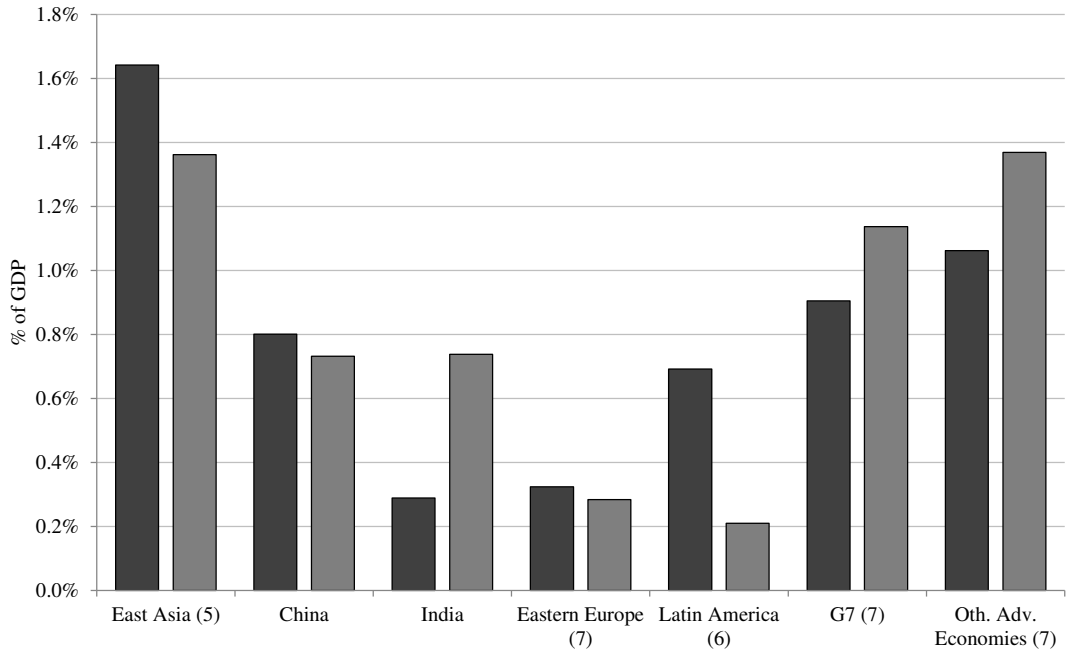
Figure 10
Average Maturity of Private Sector Bonds at Issuance



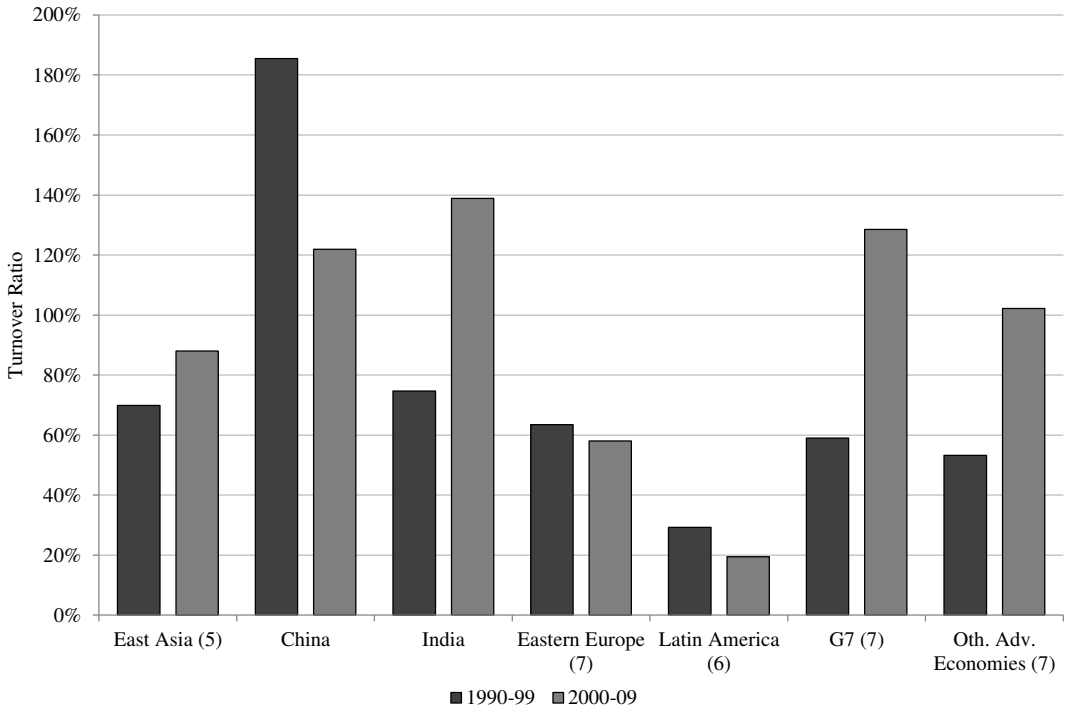
This figure shows the weighted average maturity of bond issuances per year in domestic markets, expressed in years. It shows the data for the private sector for the period 1990-2009. Numbers in parentheses show the number of countries in each region. The data source is SDC Platinum.

Figure 11
Activity in Equity Markets

Panel A. Value of New Capital-Raising Issues

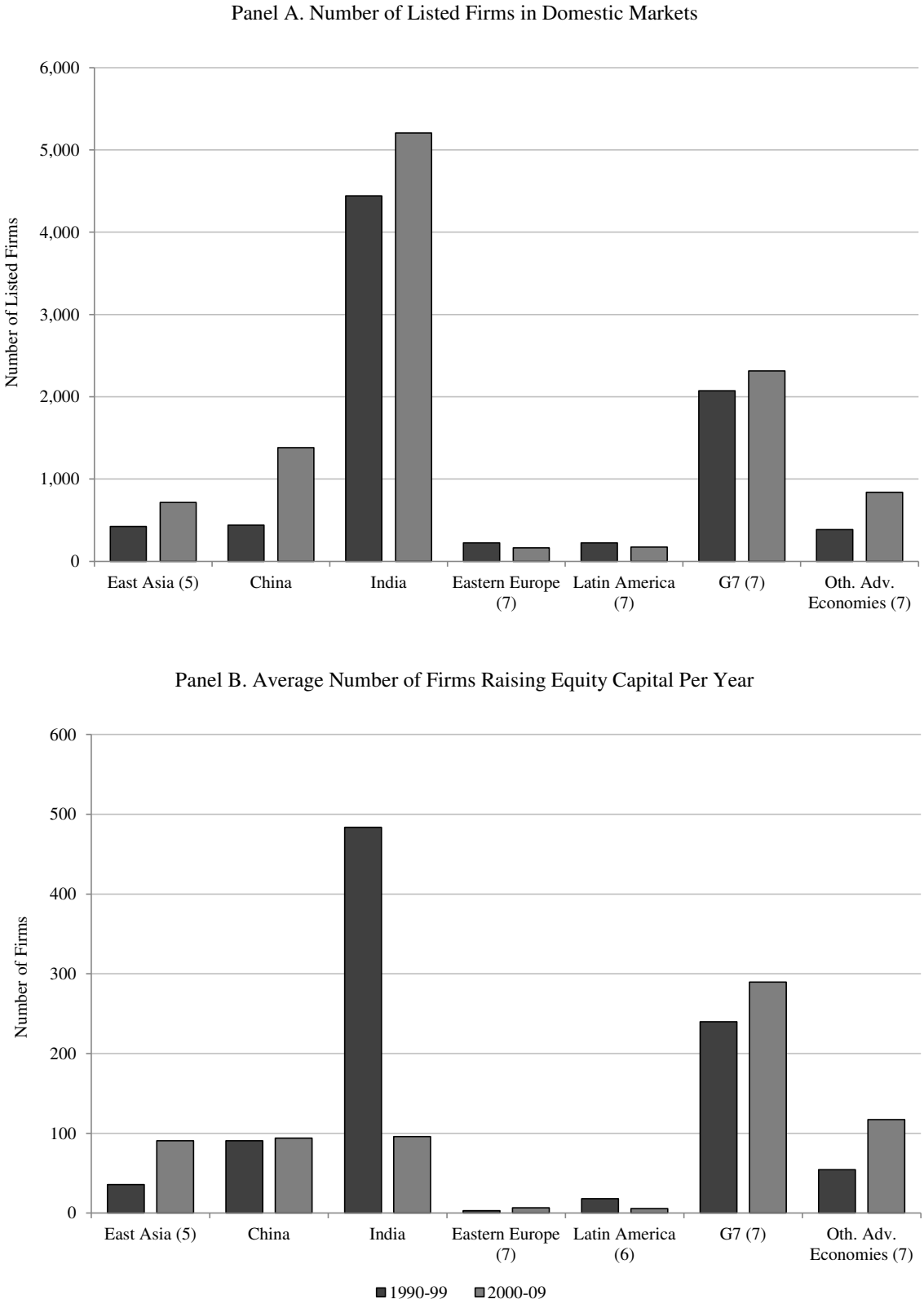


Panel B. Turnover Ratio in Domestic Equity Markets



This figure shows in Panel A the average amount of capital raising equity issues as a percentage of GDP between 1990 and 2009. Panel B shows the average turnover ratios, defined as the total value traded per year in domestic markets over total market capitalization, between 1990 and 2009. Numbers in parentheses show the number of countries in each region. The data sources are SDC Platinum and the World Bank's World Development Indicators (WDI).

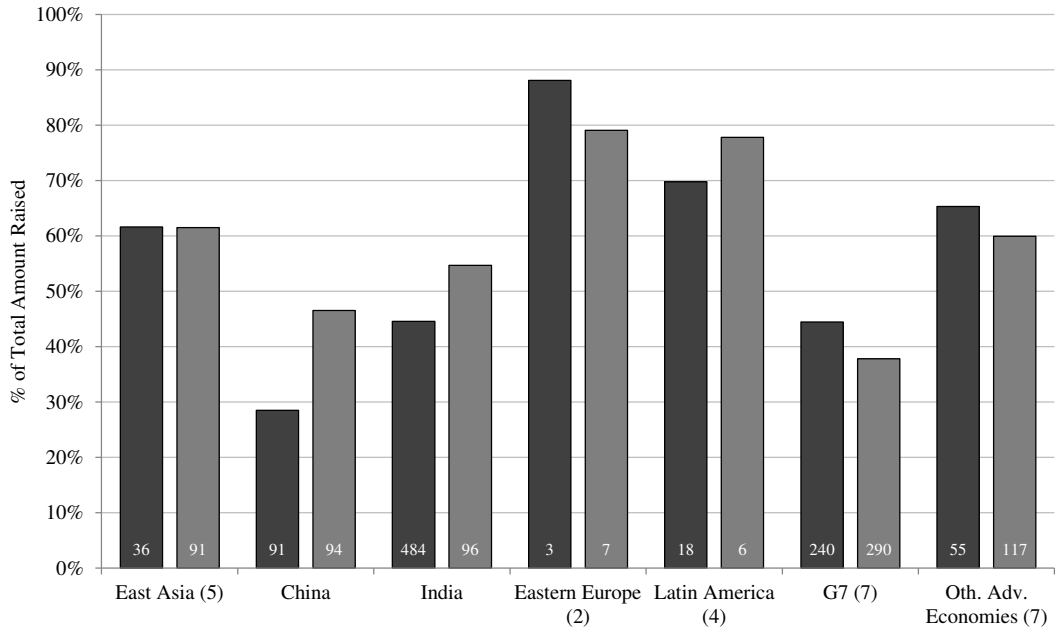
Figure 12
Firm Activity in Equity Markets



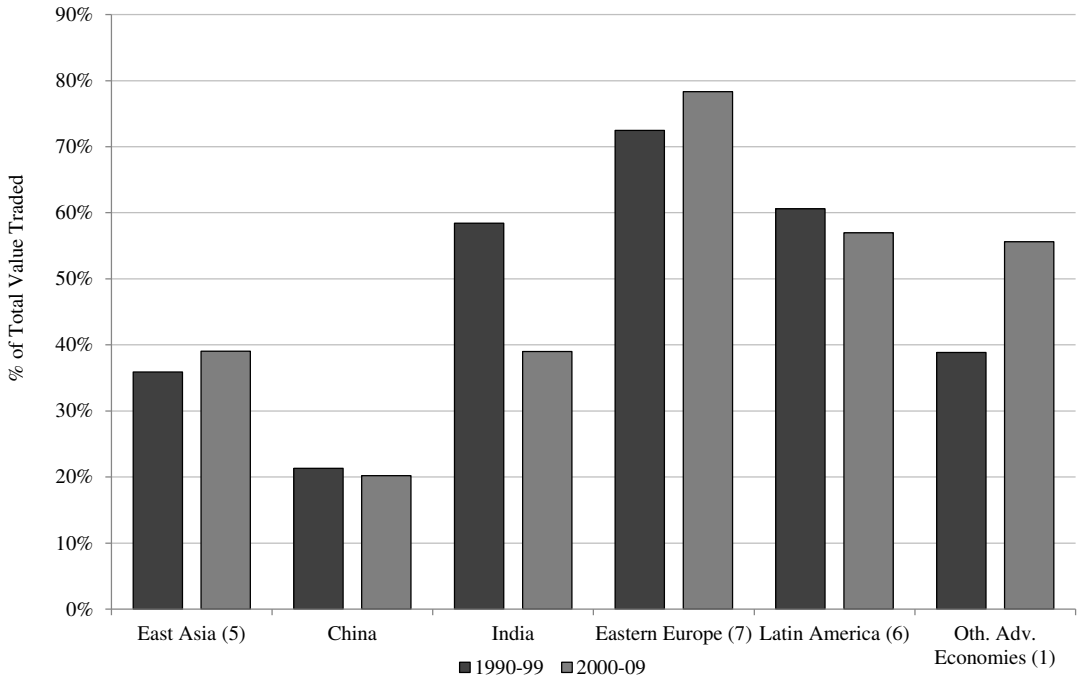
This figure shows in Panel A the average number of listed firms between 1990 and 2009. Panel B shows the total number of firms issuing equity per year between 1990 and 2009. Numbers in parentheses show the number of countries in each region. The data source for this figure is Didier, Levine, and Schmukler (2014).

Figure 13
Concentration in Equity Markets

Panel A. Share of Amount Raised by the Top Five Issuers as % of Total Amount Raised

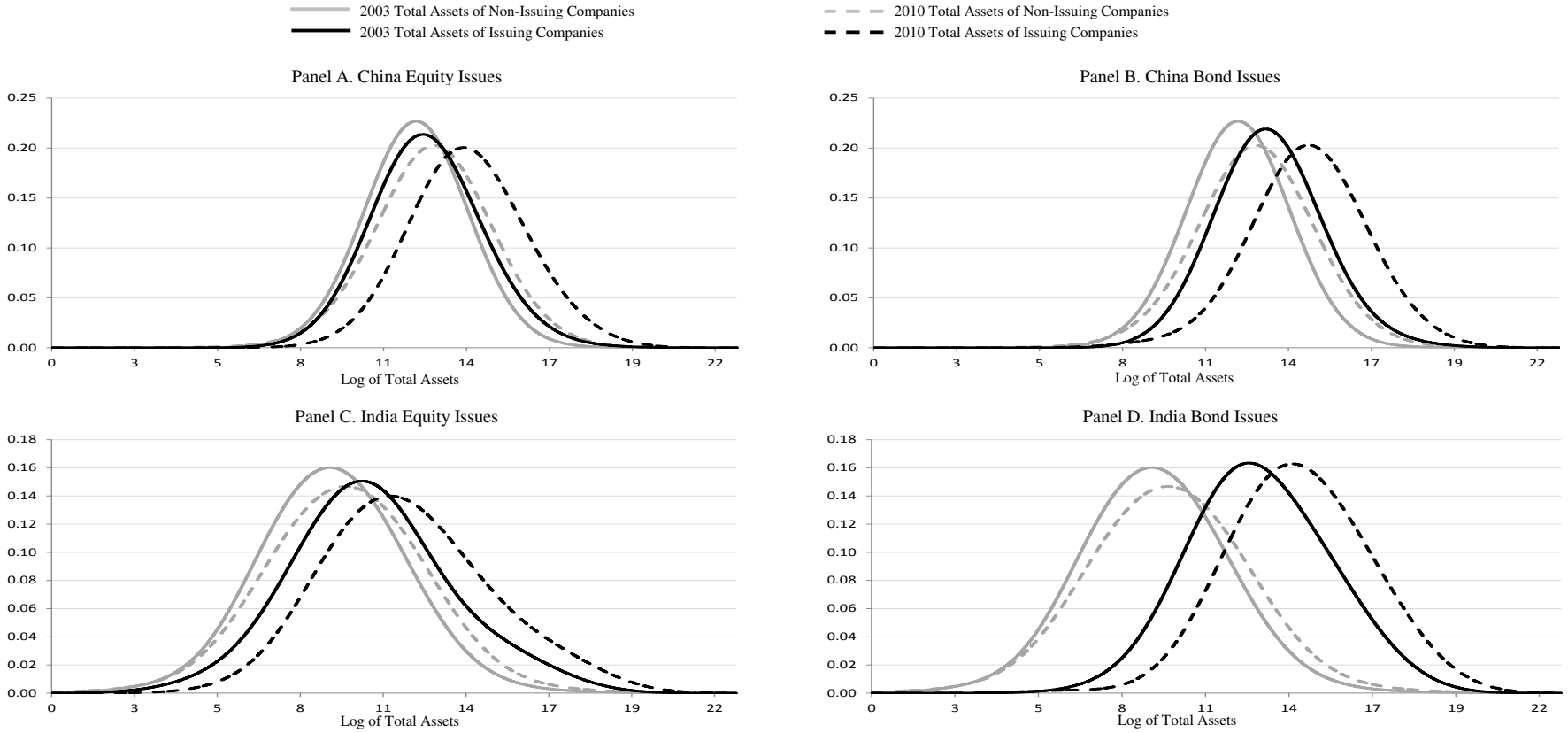


Panel B. Value Traded by the Top Five Companies as % of Total Value Traded



This figure shows the concentration in equity market activity. Panel A shows the average amount raised per year by the top-5 issues as a share of total issues between 1991 and 2008. Numbers in the base of the bars represent the average number of issues per year. Panel B shows the average share of value traded by the top-5 companies as share of the total value traded per year between 1990 and 2009. Numbers in parentheses show the number of countries in each region. The data sources are the Emerging Markets Database (EMDB) and SDC Platinum.

Figure 14. Firm Size Distribution in China and India



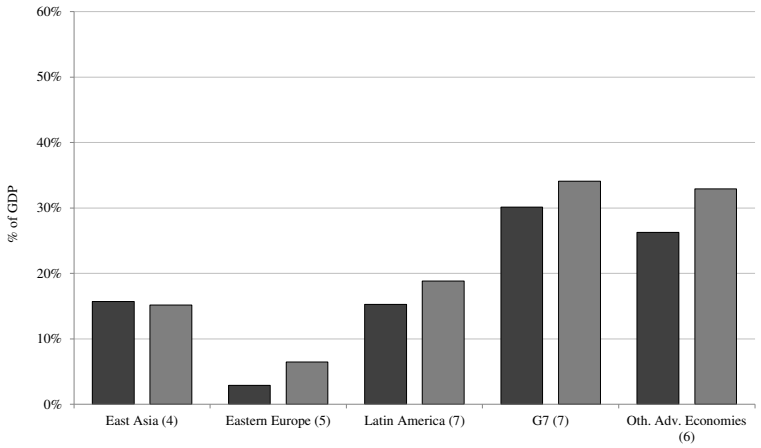
Tests of Equality of Distributions

	China		India	
	2003	2010	2003	2010
Equity Market Issuers vs. Nonissuers	0.128 ***	0.367 ***	0.250 ***	0.321 ***
Bond Market Issuers vs. Nonissuers	0.413 ***	0.591 ***	0.676 ***	0.737 ***
Equity Market Issuers vs. All Firms	0.083	0.260 ***	0.172 ***	0.231 ***
Bond Market Issuers vs. All Firms	0.363 ***	0.490 ***	0.603 ***	0.647 ***
Nonissuers vs. All Firms	0.052	0.107 ***	0.079 ***	0.096 ***

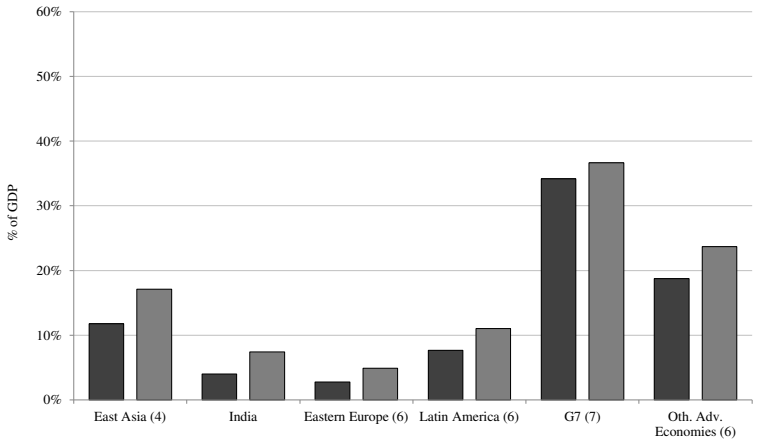
The top and middle panels of this figure show the estimated kernel distributions of the log of total assets (in 2011 U.S. dollars) for issuing and non-issuing firms in 2003 and 2010. The bottom panel of this figure shows the Kolmogorov-Smirnov tests of equality of the distributions. Issuers are those firms that raised capital through equity (Panels A and C) or bonds (Panels B and D) between 2004 and 2010, and nonissuers are the other firms in our sample. All firms with capital raising activity in 2003 are excluded from the sample in this figure. Only firms with data on total assets in both 2003 and 2010 are included in this figure. The kernel type used is a Gaussian with a band-width of 1.5. *, **, and *** denote statistical significance at the 10, 5, and 1 percent, respectively. The source of this figure is Didier and Schmukler (2013b).

Figure 15
Assets of Pension Funds, Mutual Funds, and Insurance Companies

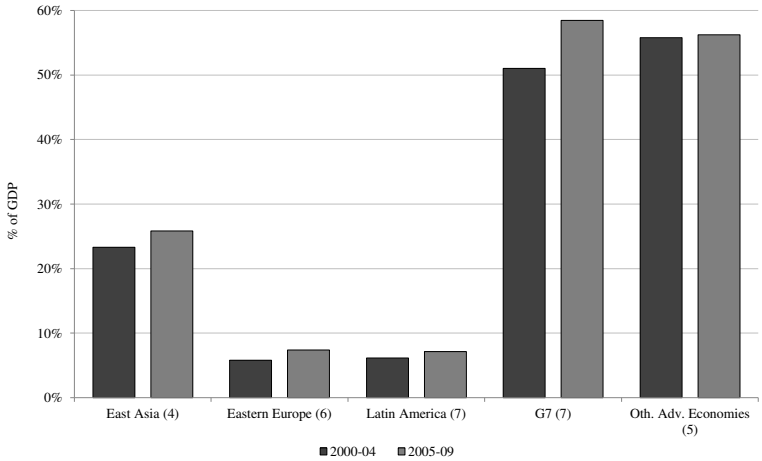
Panel A. Pension Funds



Panel B. Mutual Funds



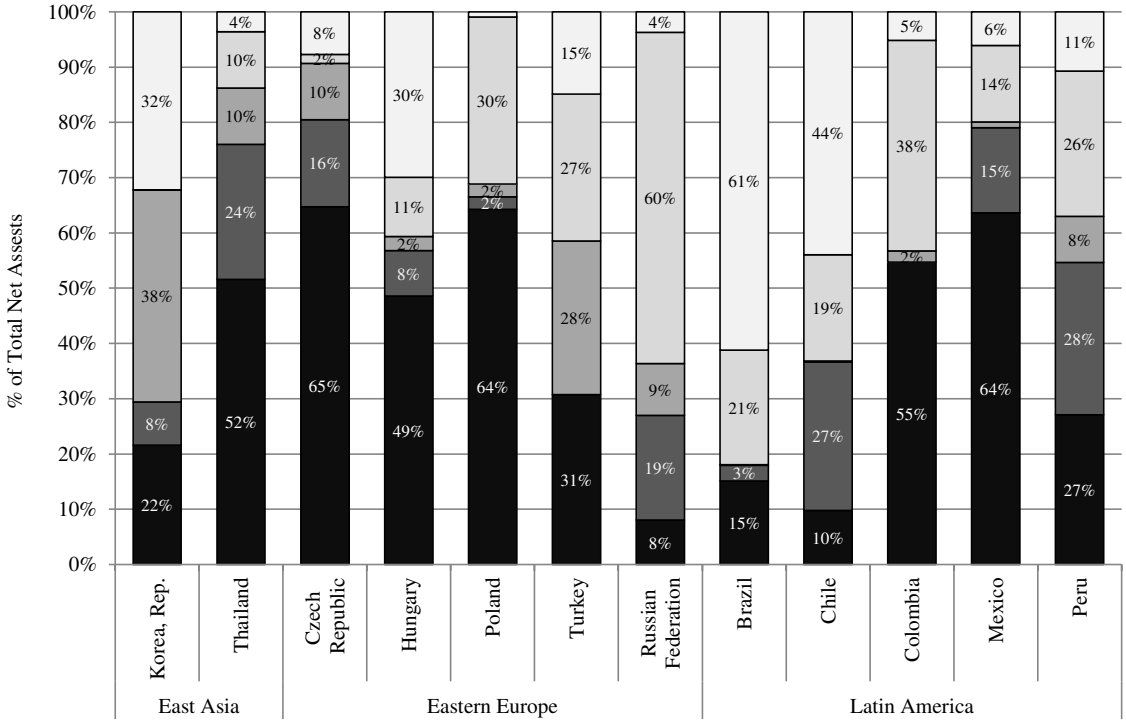
Panel C. Insurance Companies



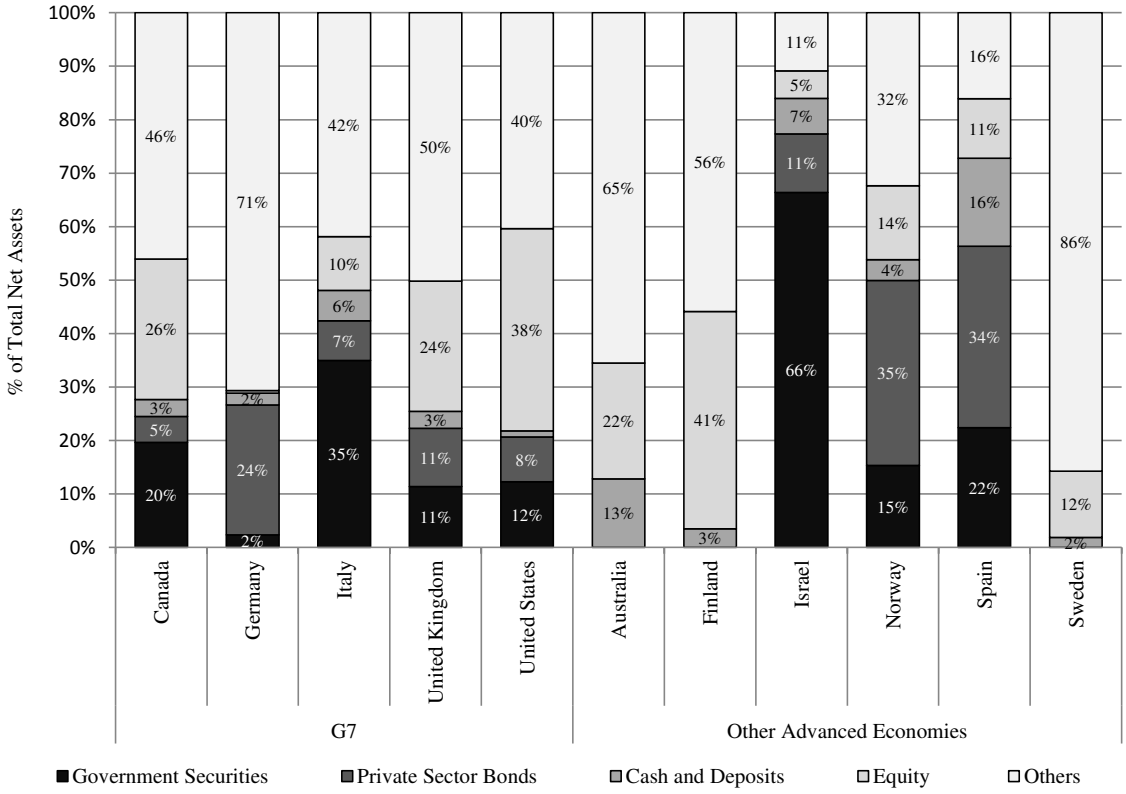
This figure shows the total assets of domestic institutional investors, namely pension funds (Panel A), mutual funds (Panel B), and insurance companies (Panel C). Panel A shows the average pension funds assets as a percentage of GDP between 2000 and 2009. Panel B shows the average mutual fund assets as a percentage of GDP between 2000 and 2009. Panel C shows the average insurance companies assets as a percentage of GDP between 2000 and 2009. Numbers in parentheses show the number of countries in each region. The data sources are the Asociación de Supervisores de Seguros de Latinoamérica (ASSAL), OECD, local sources, the Investment Company Institute (ICI), and the Asociación Internacional de Organismos de Supervisión de Fondos de Pensiones (AIOS).

Figure 16
Composition of Pension Fund Portfolios

Panel A. Asian Economies, Eastern Europe and Latin America



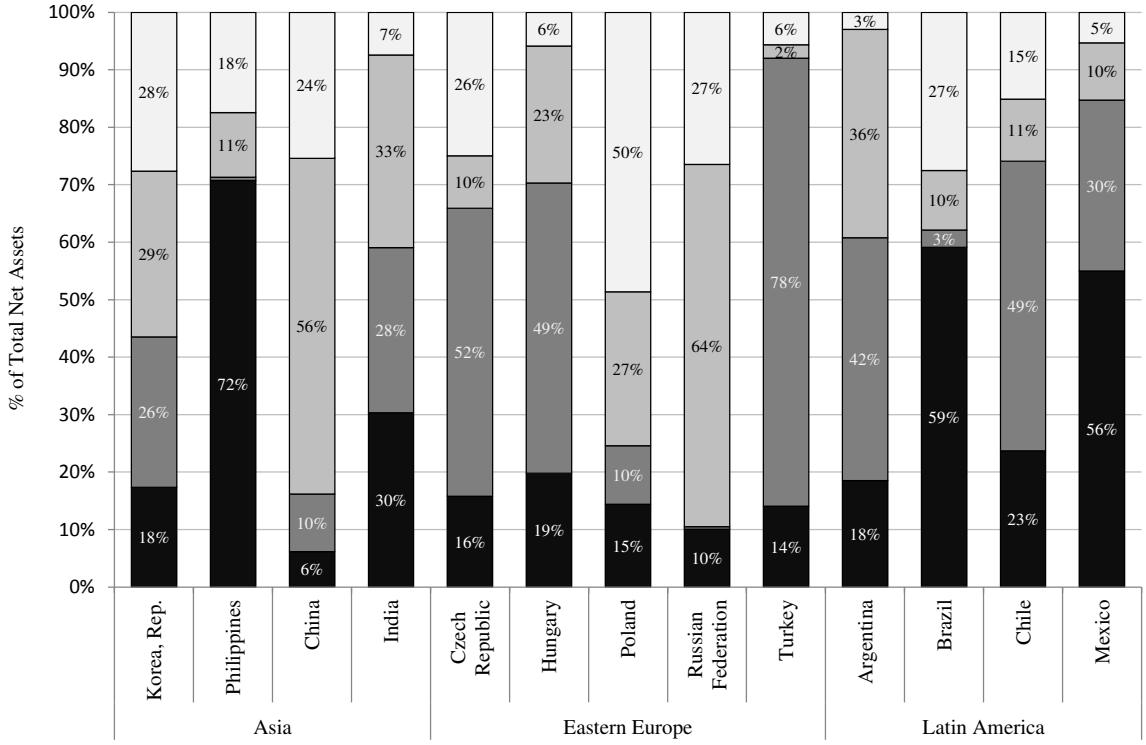
Panel B. G7 and Other Advanced Economies



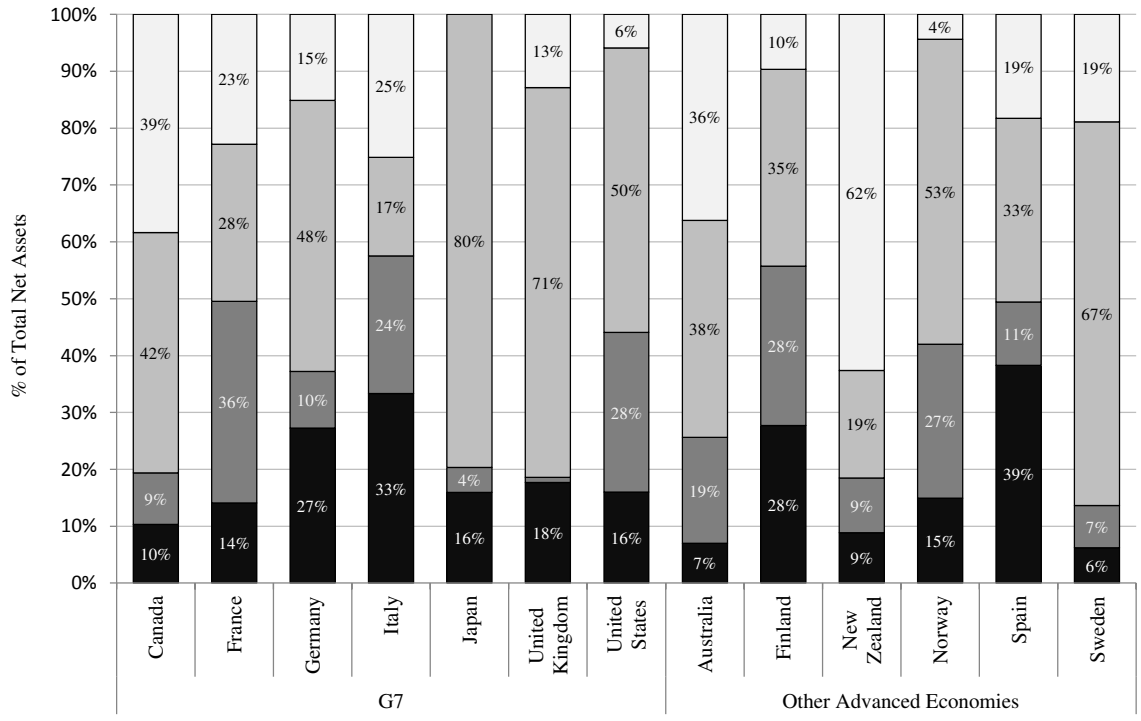
These figures show the most recent composition of pension funds portfolio holdings for the latest available information, 2009 mostly. The category "Others" includes mutual funds, loans, and others. Data is for 2009, except for Brazil (2007), Russian Federation (2006), and Peru (2008). The data source is OECD.

Figure 17
Mutual Fund Assets by Type of Fund

Panel A. Asian Economies, Eastern Europe and Latin America



Panel B. G7 and Other Advanced Economies



These figures show the average net assets of mutual funds by the type of fund as share of the total mutual fund net assets between 2005 and 2009. The data source is the Investment Company Institute (ICI).