FINANCIAL DEVELOPMENT: MATURING AND EMERGING POLICY ISSUES

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Abstract

Over the past decades, financial development policies in emerging economies have been shaped by a fundamental shift towards market-based financial systems and the lessons learned from financial crises. Today there is consensus that in order to foster financial development it is necessary to achieve financial stability and converge to international standards. But while the debate on some issues has matured, policy thinking in other areas is actively changing, fueled by recent experiences. This paper discusses the evolution of policy thinking on financial development and some important issues that are gaining momentum. We focus on three areas that are key to achieving deeper financial systems: stock market development, SME financing, and defined-contribution pension systems. We illustrate the main emerging issues in these areas using mostly recent experiences in Latin America. We conclude highlighting the need to take a fresh look at the evidence, improve the diagnoses, and revisit expectations.

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1. Introduction

Imagine a safe and responsible driver going down an unknown highway in a foreign country, who suddenly realizes that she brought along the wrong set of roadmaps. The mix of frustration and disorientation that she experiences is not unlike that felt by policymakers concerned with financial development in many emerging markets these days. This paper discusses such an odd situation. Like the perplexed driver in our example, the problem described in this paper is not that we lack maps, do not know the basic traffic rules, or are driving recklessly. It is not even a problem of not understanding how we got to where we are or of not knowing where we want to go. The problem is thinking that the "roadmaps" or intellectual tenets that dominate current policy thinking on financial development are sufficient for all roads and can help us get where we want to go. Such tenets and prescriptions are of course useful and, in many respects, constitute fundamental pillars of solid financial systems. They should not be thrown away, lest we get lost even in what we consider to be familiar terrain. However, they appear to be of limited assistance for some of the highways and secondary roads that we have to travel to reach our destination and for the new roads that will have to be built along the way.

The main thesis of this paper is that there are big emerging issues in some critical areas of financial development that have not been adequately addressed in the policy debate so far. These new issues have emerged only after other important policy issues have been settled and as experience has started to show weaknesses in the prevalent policy thinking and wholes in the extent of current financial development.

We start by describing, in a stylized fashion, what we consider to be the salient features of the current state of policy thinking on financial development in emerging economies. This thinking has evolved significantly over the last two decades or so and has been shaped by a seemingly permanent shift towards market-based development and an arduous process of interpreting and reinterpreting financial crises. We argue that this evolution has resulted in policy prescriptions across countries that share some common features. In particular, policy thinking on financial development in emerging economies has generally focused on ensuring financial stability (reducing systemic risk) and improving the enabling environment for financial contracting. This has led to some specific operational prescriptions that tend to be dominated by financial stability concerns, focus intensively on the links between the monetary and financial sectors, and aim at promoting convergence towards the "best practices" codified in a multiplicity of international standards and codes. Needless to say, the current policy thinking on financial development has been sharpened by remarkable theoretical and empirical work and rich lessons from experience.

We then describe some important emerging issues on financial development, about which there has been much less debate and analysis and which warrant more attention to better inform policy. These issues are acquiring high-priority status among the concerns of policymakers in many emerging economies and are increasingly highlighting some of the limitations of current policy thinking on financial development, pointing to new directions to expand and enrich this thinking. In particular, the emerging

issues have much less to do with financial stability and the degree of convergence towards international standards and codes, and much more with difficulties in completing financial markets in the context of financial globalization. To illustrate this basic argument, we characterize—admittedly using broad brush strokes and being very selective—some emerging issues in the critical areas of equity markets, SME (small and medium enterprises) financing, and defined-contribution pension funds, using mostly recent experiences from Latin America.

Before moving forward, it is worth clarifying two points on the scope of this paper. First, although we tend to focus the discussion on the experience of Latin America, our analysis also applies to emerging economies from other regions. Some of the topics may even be relevant for developed economies. But applying our analyses and conclusions to countries in different regions requires care and taking into account the intrinsic features of the local institutional environment, as well as the specific problems and challenges faced by the financial system in each country. Our focus on Latin American countries is motivated by the fact that these countries were at the forefront of the financial reform process over the last decades. Therefore their experience can provide valuable insights into how the proposed policies have fared. For example, the Chilean pension reform in the 1980s has generated lessons for the reforms discussed in other developing countries (like those in Eastern Europe) as well as in developed countries (like the U.S.). Second, the focus of this paper is on issues related to domestic policies—i.e., those policies under the control of local authorities. It thus leaves out the interesting and important field of cooperative multilateral policies aimed at improving directly the international financial architecture for all countries.[1]

The rest of the paper is structured as follows. Section 2 describes the main features of current policy thinking on financial development in emerging economies. Section 3 discusses the main drivers behind the recent evolution of this thinking. Section 4 discusses selected emerging issues in financial development that are prompting significant debate. Section 5 concludes with some final reflections.

2. Policy Thinking on Financial Development: Where We Stand

Current policy thinking on financial development in emerging economies rests on two key tenets. The first is that financial markets, when allowed to work freely under a sound regulatory environment, provide the best mechanism for efficiently mobilizing resources from savers to consumers and investors, as well as for allocating risks to those that are best suited to bear them. This tenet highlights the critical function of relative prices under competition—to capture and signal relative scarcities and relative risks so as to adequately guide, as if through an invisible hand, myriads of decentralized self-interested decisions towards the collective good. This first tenet does not, of course, ignore the potential maladies of finance—such as asset bubbles, herd behavior, self-fulfilling prophecies, contagion, and crises. But it contends that these maladies notwithstanding, competitive financial markets are superior to all known alternatives.

[1] A cogent and fairly comprehensive discussion of reform issues concerning the international financial architecture is found in Eichengreen (1999).

In part because of these potential maladies, the current policy thinking rests on an equally important second tenet—that there is an essential and well-defined role for the government. Such role is to foster systemic stability through sound prudential regulations, appropriate accounting and disclosure practices, and supervision, so as to avert unnecessary financial crises and mitigate their cost if and when they occur, all without unduly raising moral hazard. The government is also called upon to facilitate financial market development through the establishment of an adequate institutional and informational environment for writing and enforcing financial contracts. Jointly, these two tenets highlight the irreplaceable value added of well-managed and well-regulated financial entities (like banks, insurance companies, investment banks, asset managers, and broker dealers) that act as intermediaries through financial products (typically loans, bonds, deposits, stocks, derivatives, investment funds, and insurance policies), which, in turn, channel and embody contractually the allocation of resources and risks.

The policies that have followed from these two basic tenets over the last decades in emerging economies have been innumerable and have evolved over time. Nonetheless, these policies seem to share some common features that tend to command general acceptance among academics, policymakers, and practitioners and that delineate the basic profile of the current state of policy thinking on financial development in emerging markets. Let us mention four of these general policy prescriptions in stark—and, hence, oversimplified—terms.

A first policy prescription is: *strive to converge to international standards and codes*. A battery of standards has emerged in the recent period, as part of initiatives to strengthen the international financial architecture in the wake of the financial crises of the second half of the 1990s. These standards codify the international "best practices" regarding the institutional, regulatory, and supervisory environment for financial markets and the assessment of country observance with them has become a major program, strongly endorsed by the major developed countries, and actively embraced by emerging economies.[2] The underlying conviction is that these standards help identify gaps, set the reform objectives and priorities, and give direction to the reform effort. International standards and codes that are relevant to the functioning of the financial system include, among many others, the following: Basel Core Principles for Effective Banking Supervision, IOSCO Objectives and Principles of Securities Regulation, CPSS Core Principles for Systemically Important Payment Systems, CPSS-IOSCO Recommendations for Securities Clearance and Settlement, IAIS Core Principles for Insurance Supervision, IMF Code of Good Practices and Transparency in Monetary and Financial Policy, OECD Principles of Corporate Governance, Accounting and Auditing Standards, and World Bank Principles and Guidelines for Effective Insolvency and

[2] The International Monetary Fund and World Bank have been entrusted with a leading role in assessing the degree of observance of international standards and codes. These assessments are often conducted in connection with the Financial Sector Assessment Program (FSAP), a fairly thorough diagnosis of a country's financial system also led by these two institutions, and their results are summarized in the so-called Reports on the Observance of Standards and Codes (ROSC). For details see http://www1.worldbank.org/finance/html/fsap.html and http://www.worldbank.org/ifa/rosc.html. See also IMF and World Bank (2005) for an assessment of the standards and codes initiative.

Creditor Rights Systems.[3] Given the proliferation of standards as well as the intensity of efforts to assess the degree of country observance and implement the associated recommendations, it is not an exaggeration to say that over the last decade or so the reform agenda for financial development has become largely equated with convergence toward international standards.

A second policy prescription is: *cautiously allow the international integration of domestic financial markets*. While there is still vigorous debate on the sequencing and speed of international financial integration, there is much less disagreement on the general direction, which favors increased integration, at least for a large set of countries.[4] This is as expected, given the mentioned basic tenet that markets should be allowed to work competitively under appropriate regulation. To be sure, it is recognized that financial integration has often not worked as initially predicted.[5] For many emerging economies, the benefits of financial globalization—greater opportunities for consumption smoothing, deepening and diversification of domestic financial markets, noticeable reductions in the cost of capital—have failed to fully materialize, at least to the extent expected at the beginning of the liberalization process. Moreover, financial liberalization and globalization have in many cases exposed these economies to capital flow volatility and financial crises. Faced with this evidence, the prevailing policy thinking puts the emphasis on the institutional and regulatory pre-conditions for financial liberalization and on sequencing issues to minimize the risks and maximize the benefits of financial globalization, rather than advocating closing domestic financial markets permanently. Financial isolationism is seen by the majority of analysts as undesirable and/or unfeasible in practice, especially for economies that are already partially open and given the incessant changes in information technology and financial product innovation.

A third policy prescription is: *move towards inflation targeting cum exchange rate flexibility*. This prescription reflects a sea of change in recent years.[6] It would not have been the generally accepted view less than a decade ago. As discussed in the next section, hard-pegs or dollarization, on the one hand, and full exchange rate flexibility, on the other, were seen in the late 1990s as competing, albeit equally respectable, alternatives open to emerging economies seeking a safe integration into international capital markets.[7] But the view in favor of exchange rate flexibility coupled with inflation targeting has come to dominate policy thinking with respect to emerging economies in general, excepting of course the case of the few countries that can be reasonably considered to meet "optimal currency area" (OCA) conditions.[8,9] Inflation targeting was

[3] Links to full descriptions of these standards and codes are available at http://www.fsforum.org/compendium/key_standards_for_sound_financial_system.html.
[4] See Kose et al. (2006) for a comprehensive assessment of the implications of financial globalization.
[5] For a discussion of this issue see de la Torre, Levy Yeyati, and Schmukler (2002) and references therein.
[6] Cogent assessments of the conceptual and empirical arguments behind this change can be found, for instance, in Goldstein (2002), Larraín and Velasco (2001), and Mishkin and Savastano (2001).
[7] See, for example, Calvo and Reinhart (2002), Eichengreen and Hausmann (1999), Fischer (2001), and Frankel (1999).
[8] See Mundell (1961).
[9] Frankel (2004, 2006) puts forward the idea of pegging the currency to the price of export goods. This proposal is, to some extent, similar to inflation targeting, but takes into account the terms of trade.

adopted in the early 1990s by countries such as Australia, Canada, Finland, New Zealand, Spain, Sweden, and the United Kingdom. Many emerging markets followed suit more recently, including Brazil, Chile, the Czech Republic, Indonesia, Israel, Korea, Philippines, Poland, and South Africa. The prescription to move towards inflation targeting cum exchange rate flexibility is normally underpinned by other policy prescriptions regarding macroeconomic (especially fiscal) and institutional fundamentals (ranging from central bank independence to the rule of law). Without such fundamentals in place, the benefits of actions focused solely on the monetary and exchange rate areas would not endure.

The view that a flexible exchange rate regime is the best alternative for non-OCA countries trying to capture the benefits and cope with the perils of financial globalization is consistent with salient features of the current wave of financial globalization. In effect, financial globalization in our times is unfolding in an environment where the major currencies in the "center" float freely against each other, rendering inadvisable for countries in the "periphery" to peg their currencies unilaterally. By contrast, the previous wave of financial globalization—from the mid-1800s to 1914—unfolded under a fixed exchange rate international arrangement, the gold standard, which was protected jealously and through a strong mutual commitment by the "center," thus making it safer for the periphery to adopt pegs.[10]

A fourth policy prescription is: *foster the development of local currency debt markets*. This is increasingly seen as a necessary condition to mitigate the vulnerability associated with un-hedged currency mismatches in debtor balance sheets, a vulnerability that played a significant role in the South East Asian crisis of 1997-98 and in recent financial crises in Latin America (Argentina 2001, Ecuador 1999, and Uruguay 2002). This prescription arises partly in response to what is now seen as excessive pessimism in the "original sin" literature and is linked to the previous prescription on exchange rate flexibility. The "original sin" literature focuses on the inability of emerging economy sovereigns and corporates to issue long-term domestic currency denominated debt. In its earlier stages, it tended to recommend the adoption of formal dollarization as the preferred route to overcome the "original sin" and develop domestic financial markets more safely within a financially globalized context (Calvo and Reinhart, 2002; Eichengreen and Hausmann, 1999). In light of the collapse of the Argentine "convertibility" system, however, the "original sin" literature has tended to join the ranks of the proponents of exchange rate flexibility while advocating a "road to redemption" through the development of the markets for domestic currency denominated debt, which some argue should be achieved before completely opening the capital account (Eichengreen and Hausmann, 2002; Eichengreen, Hausmann, and Panizza, 2005).[11] In all, various strands of thought have converged, so that we can safely claim that at present there is a relatively broad consensus on the policy prescription to give priority to the

[10] Bordo, Eichengreen, and Irwin (2000) present a detailed account of the characteristics of the current wave of financial globalization compared to the one before 1914.

[11] Proponents of this view point to Australia as an example of a country that got this sequence right.

development of markets for long-term government and private debt securities denominated in local currency.[12]

Note that the mentioned policy prescriptions aim at linking appropriately key macro and microeconomic dimensions of financial development. In one way or another, they seek to achieve what we have called elsewhere (de la Torre, Levy Yeyati, and Schmukler, 2002) the "blessed trinity" for safe financial globalization. That trinity consists on the mutually reinforcing coexistence of: (i) a flexible exchange rate to enable efficient shock absorption; (ii) a local currency that is intensively used as a store of value for savings (at least at home and hopefully also abroad), around which financial contracts can be reliably organized; and (iii) a sound informational, contractual, and regulatory environment where the writing and enforcement of financial contracts can flourish.

But, how did we reach the current general agreement on these policy prescriptions? What are the factors behind the evolution of policy thinking on financial development in emerging economies? Understanding how we got to where we currently stand can help us to better assess the validity of the dominant policy thinking and its potential limitations and can also guide any reformulation. We now turn to these issues.

3. Policy Thinking on Financial Development: Where We Come From

The current policy thinking on financial development in emerging markets described in Section 2 is relatively new when seen from a long historical perspective. In effect, it took form over the past twenty five years or so. It is, therefore, useful to recount the intellectual highlights of its historical evolution. We argue in this regard that there have been two key drivers shaping the recent evolution of policy thinking on financial development. The first is a paradigm shift towards market-based financial development. The second is financial crises hermeneutics—i.e., the complex process of interpreting and reinterpreting crises. Lets us briefly discuss these drivers, their interactions, and implications for the policy debate.

The *paradigm shift towards market-based financial development* was part of a broader transformation in economic development policy thinking away from the state dirigisme that had prevailed throughout the developing world during the 1960s and 1970s. In the financial sector, this shift can be interpreted in part as a reaction to what Ronald McKinnon called, in his influential 1973 book, "financial repression"—i.e., the underdevelopment and smallness of financial markets resulting from excessive public sector intervention.[13] Accordingly, the main premise of the paradigm shift was that

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[12] Following the financial crises of the 1990s, the Asian Development Bank (ADB), the Bank for International Settlements (BIS), the Inter-American Development Bank (IADB), the International Monetary Fund (IMF), the Financial Stability Forum, and the World Bank have all studied what emerging markets can do to develop their domestic bond markets, giving a high priority to this policy objective. See, for example, ADB (2001), BIS (2002), IADB (2006), IFC (2001), and IMF and World Bank (2001) for institutional reports.

[13] For discussions on the pitfalls of excessive governmental ownership and dirigisme in financial markets see, for instance, Barth, Caprio, and Levine (2001), Caprio and Honohan (2001), and La Porta, Lopez-de-Silanes, and Shleifer (2002). A number of studies have also analyzed empirically the impact of financial

government interference—through directed credit schemes, credit ceilings, public banks, administered interest rates, and other tools—is a fountainhead of distortions that repress financial contracting, cause resources to be misallocated, and lead to unsound risk management by unduly raising moral hazard. The new paradigm thus called for a move away from state interventionism and towards regulated laissez-faire in financial markets.

This paradigm shift led initially to a generic and rather simplistic policy prescription: liberalize the domestic financial system and the capital account to achieve efficiency via competition. Despite some delays and temporary reversals, the process of financial liberalization advanced through much of the developing world over the last decades, as the systems of directed lending, credit ceilings, and controlled interest rates were dismantled, and public banks were privatized.[14] The pace and timing of financial liberalization has differed across regions. In Latin America, Argentina, Chile, and Uruguay liberalized their financial systems in the 1970s, but these reforms were reversed in the aftermath of the 1982 debt crisis and financial systems throughout the region remained repressed during most of the 1980s. Liberalization swept throughout Latin America starting in the late 1980s and early 1990s and by the late 1990s, most countries in the region had reached levels of financial market liberalization comparable to those in the developed world (Figure 1).[15] In the case of East Asia, the liberalization process was more gradual. A number of countries started slowly rationalizing their directed credit programs and liberalizing their interest rates during the 1980s and the process in many cases stretched for over a decade.

The initial policy prescription to liberalize the domestic financial system and the capital account was subsequently shaken by the modest results of liberalization in terms of financial depth and, especially, by the recurrence of financial crises. Weak domestic banking systems were found, time and again, ill-prepared to prudently intermediate the surge in capital availability that followed liberalization, leading to credit bubbles (characterized by excessive risk taking and even looting) followed by credit busts.[16] As a result, policy thinking shifted towards questions regarding the speed and sequencing of

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repression on economic growth, finding evidence of a negative effect (see, for example, Easterly, 1993; Galindo, Micco, and Ordoñez, 2002; Roubini and Sala-i-Martin, 1992; and World Bank, 1989).

[14] Developed countries were the first to start the financial liberalization process and have, in general, remained to date more liberalized than lower-income economies.

[15] Figure 1 presents data from Kaminsky and Schmukler (2003), who construct measures of the extent of "de jure" financial liberalization for 28 countries. The data presented in this figure corresponds to an overall financial liberalization index, combining measures of liberalization of the capital account, domestic financial sector, and stock market. In most cases, similar patterns can be observed when using alternative "de jure" and "de facto" measures of financial liberalization. See Kose et al. (2006) for a general discussion of different ways of measuring the extent of financial liberalization.

[16] A pioneering investigation into the linkages between liberalization and financial crises is the classic paper by Carlos Diaz-Alejandro (1985), cleverly entitled "Good-Bye Financial Repression, Hello Financial Crash." A number of more recent theoretical papers show that financial liberalization may be associated with crises (see, for example, Allen and Gale, 2000; Bachetta and van Wincoop, 2000; Calvo and Mendoza, 2000; and McKinnon and Pill, 1997). Empirically, several papers have found links between domestic financial deregulation, boom-bust cycles, and banking and balance of payments crises (see, for example, Corsetti, Pesenti, and Roubini, 1999; Demirguc-Kunt and Detragiache, 1999; Kaminsky and Reinhart, 1999; and Tornell and Westermann, 2005).

financial liberalization, with the basic policy prescription emerging from the analysis being that reforms related to enhancing prudential oversight, corporate governance, and transparency should precede financial liberalization and international opening.[17] This led to a greater emphasis on improving the enabling environment for financial markets—e.g., macroeconomic stability, regulatory institutions, legal frameworks, accounting and disclosure practices, debtor information systems, market infrastructures, safety nets, creditor rights, and contract enforcement (Caprio and Hanson, 2001; Caprio and Honohan, 2001; Klapper and Zaidi, 2005; Rajan and Zingales, 2001).

The view in favor of sequencing financial liberalization, while widely shared, has not been without debate. First, some authors have questioned the expectation that sequencing, even if technically correct, is consistent with sufficient pro-reform incentives. According to this argument, in the absence of the pressures that come from domestic and foreign contestability, resistance to reform is unlikely to yield. Openness to international competition is therefore seen as a key element for fostering financial sector reform.[18] Second, there has been ample debate regarding how to adapt the sequencing policy prescriptions to specific country circumstances. Proponents of sequencing do not normally disagree on the adequate policies for those countries that are still closed—they tend to concur that these countries should not open too soon or too fast. However, disagreements arise with respect to countries that have already opened up their financial systems. Some authors emphasize the role of imperfections and anomalies in international capital markets, such as moral hazard, asymmetric information, asset bubbles, herding behavior, and contagion, arguing that these factors explain, to a large extent, the financial crises in emerging markets over the last decades.[19] The resulting policy prescription is to roll back capital market opening and manage financial integration on a permanent basis through the imposition of capital controls and other limitations to international asset trading.[20] Proponents of a softer, and perhaps more widely accepted version of the sequencing view, advocate delaying further liberalization while attention is reoriented toward strengthening the regulatory and institutional environment.

Even as policy thinking broadened from a narrow focus on financial liberalization towards a multi-dimensional emphasis on institution building, it has been all along guided by a quest towards freeing financial markets and making them work better, both at home and across borders. In particular, despite the debates surrounding financial liberalization and sequencing, emerging economies have continued to open up their capital accounts—as efforts to attract foreign financial entities and portfolio investors to the local market require allowing greater freedom for capital and financial services to exit the local market. Two prominent examples in this respect are China and India, which,

[17] See, for example, Johnston and Sundararajan (1999) and McKinnon (1993).

[18] A cogent and well-documented articulation of this view is found in Rajan and Zingales (2003). Kaminsky and Schmukler (2003) find evidence that reforms increase following financial liberalization.

[19] In contrast with the literature mentioned above showing a link between domestic financial liberalization and banking and balance of payments crises, there is little empirical evidence supporting the oft-cited claim that greater exposure to international capital flows through capital account liberalization has resulted in a higher incidence of financial crises (see Edwards, 2007 and Kose et al., 2006).

[20] See, for example, Ocampo (2003), Stiglitz (1999, 2000), and Tobin (2000).

although still partially closed, have taken steps to open up their financial systems in recent years.[21] The reform agenda geared at achieving regulated laissez-faire and international financial market integration was also boosted by the program of convergence towards international standards mentioned above.

The second driver shaping financial development policy thinking in emerging economies has been the onslaught of recurring financial crises and, in particular, the policy lessons that emerged from the *hermeneutics of financial crises*. To illustrate this, we briefly discuss three major lessons and the associated policy prescriptions that flowed from the process of interpreting and reinterpreting financial crises.

First, recurrent crises confirmed that *poor macroeconomic fundamentals are particularly dangerous in open financial systems*. This central lesson was conceptually enshrined in the so-called first generation models of financial crises.[22] Krugman's seminal 1979 article on balance of payments crises paved the way in this regard and was followed by an avalanche of theoretical work that clarified the dynamic processes whereby fundamental imbalances can set the stage for a sudden attack on the currency or the banking system. This type of attack is deterministic, in the sense that a crisis is inevitable given the policies, even if its exact timing is difficult to predict and is not necessarily associated with appreciable changes in fundamentals.[23] Subsequent empirical work (e.g., Kaminsky and Reinhart, 1999) found that a deterioration in fundamentals preceded financial crises in most countries. This led to efforts to identify early warning indicators that could signal in advance the probability of a financial crisis and could, thus, allow policymakers to take countermeasures to avert it.

In all, a first and enduring lesson of financial crises was that financial openness dramatically raises the importance of strong liquidity and solvency (fiscal and financial) positions. The associated policy prescription was thus to avoid bad macro and financial policies that generate imbalances. In particular, the policy advice was to closely monitor certain indicators that have been empirically found to precede financial crises—fiscal/external disequilibria, real exchange rate overvaluation, large amounts of short-term debt, rapid money printing and accelerating inflation, fast credit growth, and real estate price bubbles, among others. Such an early detection of problems would have to be followed by the earnest adoption of preventive actions.

A second lesson that financial crises drove home was that such phenomena as *multiple equilibria, self-fulfilling attacks, and contagion are not just theoretical*

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[21] See Lane and Schmukler (2006) for a summary of the recent developments on financial liberalization and integration in these two countries.

[22] Eichengreen, Rose, and Wyplosz (1995) introduced the terminology of "first generation" and "second generation" crisis models. See also Eichengreen (1999) and Krugman (2003) for discussions of models of financial crises.

[23] In this connection, see also Dooley (2000), who argues that, where there is fear of floating, international reserves provide a "double guarantee," for bank deposits and the currency, which heightens the country's vulnerability to runs engineered at a time where there are no perceptible changes in fundamentals by agents that, to avoid capital losses, anticipate the inevitable. See also Aghion, Bacchetta, and Banerjee (2001) and Burnside, Eichenbaum, and Rebelo (2001).

curiosities; they are real threats, especially as domestic financial markets become exposed to large flows of international capital and to investors that can diversify risk across countries. Again, these phenomena received significant theoretical attention in the so-called second generation models of financial crises.[24] A central message of these models is that the occurrence of a crisis is subject to indeterminacy, making crisis prediction an inherently elusive undertaking. To be sure, fundamentals continue to matter in these models too, as self-fulfilling attacks appear more likely in the case of countries that have already slipped into a zone of high vulnerability as a result of poor macro and financial fundamentals. But whether the crisis occurs or not will not only depend on the state and trajectory of fundamentals, but on a complex interplay between market expectations, the government's willingness and capacity to defend the currency or the banking system, and the overall degree of macro and financial fragility. For instance, where the banking system and public finances are weak, the balance between the potential benefits of mounting a defense (reaffirmed credibility, price stability) and the potential costs (high interest rates, rising public debt, increased moral hazard, economic contraction) is difficult to ascertain, with expectations hard to pin down. Such circumstances create a fertile ground for multiple equilibria, as different constellations of interest and exchange rates become compatible with the same fundamentals. The actual outcome depends on expectations regarding the resolve of the government (and its multilateral supporters) to put up and prevail in a defensive fight. As a result, speculative attacks can become self-fulfilling. This implies that, in contrast with first generation models, crises are not necessarily the result of irresponsible policies (although these may make a self-fulfilling attack more likely) and may occur suddenly in situations where they are not inevitable.

In the face of the threats posed by multiple equilibria, self-fulfilling prophecies, and contagion, policy prescriptions naturally aimed at counteracting financial market imperfections and avoiding the slide into high-vulnerability zones. The latter objective further boosted the importance of sound macroeconomic and prudential policies. The former added a new set of policy implications that emphasized increasing transparency (to reduce information asymmetries) as well as establishing or strengthening fiscal and financial sector buffers (so as to compensate for revenue shortfalls in bad times, and to dim bubbles and cushion bursts in the financial sector). The threat of multiple equilibria also gave sustenance to prescriptions favoring the undertaking of credible pre-commitments—i.e., policy actions whereby governments tie their hands in order to minimize time inconsistent behaviors—which in turn led to the temporary popularity of hard pegs.[25]

A third lesson from financial crises has been that *major mismatches (maturity, duration, and currency) in debtor balance sheets are "ticking bombs."* Mismatches were

[24] The inspiration for second generation financial crises models was the series of speculative attacks on the European Exchange Rate Mechanism (ERM) in 1992-93. The seminal work in this area is Obstfeld (1994). See also Obstfeld (1996), Ozkan and Sutherland (1998), and Wyplosz (1998).

[25] The existence of multiple equilibria and the possibility of self-fulfilling crises also reduced the emphasis on early warning indicators mentioned above, since these phenomena imply that crises may occur without any significant prior change in fundamentals.

driving factors in many crises, including the South East Asian crises in the second half of the 1990s and the crises in Ecuador (1999) and Argentina (2001). Subsequent work (e.g., Calvo, Izquierdo, and Mejia, 2004) has found empirical evidence suggesting that liability dollarization increases the probability of a sudden stop in capital inflows. The case of Argentina, furthermore, illustrated the deep drawbacks of a rigid currency pre-commitment, including the troublesome feature that such pre-commitments exacerbate currency mismatches.[26]

The lessons that emerged from financial crises led to important revisions in policy prescriptions. A salient one relates to the optimal exchange rate regime for emerging economies. Following the financial crises of the mid-1990s, the view that emerging countries should move to corner solutions—adopting either full exchange rate flexibility or rigid institutional commitments to fixed exchange rates, and abandoning intermediate regimes, such as basket pegs, crawling pegs, bands, and adjustable pegs—became generally accepted.[27] This view was based on the perception that most of the emerging economies that faced significant volatility and financial turmoil during the 1990s had followed intermediate exchange rate regimes. Indeed, Brazil, Indonesia, Korea, Mexico, Russia, Thailand, and Turkey, among other emerging economies, were all forced to abandon some type of basket peg or band by speculative attacks. In contrast, countries like Argentina and Hong Kong, which at the time had currency boards, seemed to have gone through the wave of financial crises during the 1990s relatively unscathed.[28] However, the Argentine crisis of 2001 and the experience of Ecuador with dollarization subsequently undermined the conventional wisdom that countries with firm commitments to fixed exchange rates could import credibility, avoid financial crises, and achieve convergence in interest rates. As a result, as noted above, policy thinking has swung in favor of exchange rate flexibility as a way to avoid one-sided bets (Goldstein, 2002; Mishkin, 2003) and discourage liability dollarization (Ize and Levy Yeyati, 2003).

Another policy recommendation prompted by recent crises is the need to develop markets for long-term government and private debt securities denominated in local currency. The rationale behind this policy prescription is that these markets can help avoid currency and maturity mismatches. Following the East Asian financial crisis, many advanced the thesis that the vulnerability of emerging economies was to a large extent linked to the lack of diversification in their financial systems, which relied excessively on

[26] See, for instance, de la Torre, Levy Yeyati, and Schmukler (2003), who argue that Argentina did not adopt policies to mitigate currency mismatches because that would have undermined the credibility of the commitment to the one peso-one dollar peg. Moreover, fixed exchange rate regimes might induce agents to underestimate the possibility of future currency changes, leading to excessive foreign exchange borrowing (Eichengreen, 1994), and might also generate moral hazard in the presence of implicit or explicit bailout guarantees (Burnside, Eichenbaum, and Rebelo, 2001; McKinnon and Pill, 1998; Schneider and Tornell, 2004).

[27] See, for example, Council on Foreign Relations (1999), Eichengreen (1999), Meltzer (2000), Minton-Beddoes (1999), and Summers (1999). Frankel (2004) presents a critical assessment of this view.

[28] Frankel et al. (2001) offer another rational for the view that countries should opt either for full flexibility or rigid institutional commitments to fixed exchange rates, arguing that simple exchange rate regimes make it easier for the public to judge from observable data whether the government is following the announced policy.

bank-based intermediation.[29] In particular, it was argued that local currency bond markets, which were mostly missing in the region prior to 1997, would have made East Asian economies less vulnerable to financial crises. This led to significant efforts oriented to fostering domestic bond market development in emerging economies.[30] The subsequent crises in Argentina, Ecuador, and Uruguay have further stressed the role of mismatches in financial crises and the need to develop markets for long-term local currency denominated debt securities. Other policy prescriptions arising from the significant role of balance sheet mismatches in recent financial crises have included calls for reducing those systemic risks that breed mismatches (de la Torre and Schmukler, 2004) and developing prudential regulations specifically designed to ensure that banks internalize appropriately the risks of lending in foreign currency to local currency earners (Ize and Powell, 2005).

The shift in paradigm towards market-based financial development and the hermeneutics of crises have interacted in complex ways over the last decades. This interaction has resulted in heated debates and contrasting opinions but, beyond their differences, warring parties have usually been united by a strong pro-market orientation. The love affair with free financial markets has gone through ups and downs, but has not resulted in divorce. Views on exchange rate policy have been wide ranging and, as noted, subject to large oscillations, yet focused on reducing risks and maximizing the benefits of integrating into international financial markets. Vigorous efforts have been made to upgrade the regulatory and supervisory frameworks, often trying to enhance the complementarities between prudential regulation and market discipline. Intense debates have surrounded the discussion of policies related to capital market imperfections. Some emphasize that the main problem to be corrected is moral hazard created by government interventions, with investors expecting to be bailed out by local governments or multilateral agencies. Others argue that capital markets themselves are the main source of instability, with large exogenous shifts in the returns required by investors to hold emerging market assets.[31] Similarly, as noted above, debates have raged concerning sequencing issues in financial market liberalization, with some advocating throwing "sands in the wheels" of international integration and postponing it until local markets and institutions are strong, while others doubting the effectiveness of efforts to block financial integration and rather emphasizing that liberalization is needed to dislodge resistance to reform. But again, those taking sides in these debates have generally shared a common desire to ensure that financial markets work properly.

The shift towards market-based financial development has endured in large part because it has constructively internalized the hard lessons from financial crises. This process, however, has understandably tilted the emphasis of policy thinking in favor of

[29] This view was propelled to higher visibility by Greenspan (1999), who argued that securities markets, and in particular bond markets, can act as the "spare tire" of the financial system, sustaining finance when the "main tire" (banks) is flattened by a crisis. Hausler, Mathieson, and Roldos (2004) argue that domestic bond markets provide a form of self-insurance against costly capital flow reversals. See also Batten and Kim (2001) and Herring and Chatusripitak (2001).

[30] See Borensztein, Eichengreen, and Panizza (2006a) for a comparison of the policies implemented in East Asia and Latin America to develop domestic bond markets.

[31] See Broner, Lorenzoni, and Schmukler (2004); Calvo (2002); Eichengreen (1999); and Obstfeld (1998).

systemic risk management and consequently priority has been given to the achievement of financial stability. To be sure, other dimensions of financial development—efficiency, depth, diversity, and breadth of access—have not been ignored but they have not occupied the center stage either.[32]

The dominant policy thinking has grown richer to the extent that it has strived to take into account the crucial role of uncertainty and incentives in markets characterized by asymmetric information and incomplete contracts. This has balanced the confidence in the power of market competition with a growing emphasis on the institutional environment. However, the strengthening of institutions has been largely (and increasingly) seen through the dominant lenses of convergence towards international standards. The mentioned emergence of numerous international standards and codes, while initially motivated by financial stability concerns, has in effect provided a basic framework for policymakers to combine stability and developmental issues in policy formulation. The centrality of stability concerns and the institutional benchmarks set out by international standards have driven policy thinking on financial development over the last decades.

4. Policy Thinking on Financial Development: Emerging Issues

It should be clear from the foregoing discussion that the growth in knowledge that has underpinned the evolution of policy thinking on financial development in emerging economies has been impressive. For all its richness, however, there are some issues that are acquiring a high-priority status among the concerns of policymakers in many emerging economies, which have not been adequately addressed in the policy debate and deserve further attention. In the remainder of this paper, we attempt to illustrate just a few of the emerging issues that, in our opinion, meet this criterion. We discuss emerging issues in three critical areas of financial development: local equity markets, SME financing, and defined-contribution pension systems. We characterize these emerging issues using broad brush strokes and being very selective, as our objective is to point out to limitations in the current policy thinking and suggest new directions for it. We are conscious that much more research is needed before consensus could be reached on suitable policy packages to address these issues.

4.1. The Future of Domestic Stock Markets in a Globalized Context

A key issue for financial sector reformers in emerging markets, especially in the smaller economies, is the need to revise their vision for the development of local stock markets. This was not perceived as challenge until recently because of the implicit view—shared between local policymakers and advisors from multilateral institutions (among many others)—that domestic financial market development in emerging economies should be measured against the benchmark of financial markets in industrialized countries and that the reform agenda, though difficult, is clear. Growing

[32] Some important areas in financial development, such as access to finance, have only started to receive more attention in recent years. See, for example, Beck and de la Torre (2006) and de la Torre, Gozzi, and Schmukler (2006a) for recent discussions on access to finance.

evidence suggests, however, that things are not as clear as initially believed and that the implicit vision of building a "mini Wall Street" at home may need to be revised.[33]

In effect, the conventional wisdom among reformers has been that local equity markets would grow through reforms focused on strengthening the enabling environment, particularly accounting and disclosure standards, minority shareholder protection (and property rights, more generally), corporate governance practices, tax enforcement, trading and securities clearing and settlement infrastructures, and stock market regulations and their enforcement. No sensible policymaker thought that the reform path would be easy, but most tended to think that the technical aspects of the reforms were well understood. Again, several relevant standards and codes emerged (e.g., on securities markets regulation, corporate governance, accounting and auditing), giving policymakers clear points of reference for convergence-oriented reform efforts. The associated expectation was that, as reforms succeeded and convergence to international standards progressed, domestic capital markets in emerging economies would increasingly resemble those in developed countries.

Like the main character in the popular film *Field of Dreams*, who heard a voice ("if you build it, they will come") that inspired him to build a baseball field on his land in the hope of bringing back legendary baseball players, reformers in most emerging economies worked hard at building the enabling environment for their local stock markets in the hope that "they"—that is, corporate equity issuers and local and foreign investors—"would come." What has actually happened, at least in the case of Latin American and Eastern European countries, has rather been the opposite. "They" actually left, as the number of stocks listed in local exchanges shrunk over the past decade or so (Figure 2).

In the case of Latin America, this reduction in the number of listed firms has been associated with the increasing migration of Latin firms to international financial centers, such as New York and London.[34] An important element of the globalization trend over the last decades has been the internationalization of financial services, which has meant the use of international financial intermediaries by issuers and investors from emerging economies. Latin firms have actively participated in this process by listing in foreign

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[33] See de la Torre, Gozzi, and Schmukler (2006b) and de la Torre and Schmukler (2006) for more discussion on this issue. See also Bossone, Honohan, and Long (2002) for a general discussion of policy issues for small financial systems and how to address them in a globalized context.

[34] Merger and acquisition activity as well as majority shareholders trying to increase their controlling stakes have also been brought forward as possible explanations for stock market delistings in Latin America. In the case of Eastern European countries, delistings have also been associated with the very nature of how privatization schemes were implemented (Claessens, Djankov, and Klingebiel, 2000). A regional comparison of stock listings data over the last decade shows that, in contrast with the delistings in Latin American and Eastern European markets, stock markets in East Asia have been recording a strong listings increase. Different explanations have been put forward to explain these diverging trends. On explanation is that, unlike the American and European stock markets, which performed well over the 1990s, stock markets in Hong Kong and Tokyo, the natural candidates for migration in Asia, have not done well in recent years (World Bank, 2004).

exchanges and issuing depositary receipts.[35] In fact, the internationalization of equity issuance and trading in Latin America is significantly higher than in other regions (Figure 3). In many Latin countries, activity abroad now exceeds activity in local exchanges. Even domestic investors have started trading stocks from their own countries in the more liquid and less costly international markets, bypassing local exchanges. This is easy to achieve in a world where trading can be done electronically from anywhere.

In addition to the growing migration and delistings, domestic equity markets in the region are highly concentrated, with only a few stocks dominating market capitalization and trading. Moreover, these markets remain illiquid, in part as a result of very low "float" ratios (a low proportion of listed shares available for trading). Stock markets in Latin America have clearly fallen behind the trends in East Asian and G-7 countries over the last decades, both in terms of capitalization and trading (Figure 4). This divergence in stock market activity is even more concerning in light of the virtual stagnation of credit to the private sector in the region and the lack of development of corporate bond markets, at least until recently (Figure 5).

These outcomes stand in sharp contrast to the extent of macroeconomic, institutional, and capital market-related reforms implemented by Latin American countries over the last decades. These outcomes, however, do not imply that reforms have been ineffective or should not be undertaken. They do mean, however, that the expectations associated with reforms should be revised and that a fresh look at the capital market reform agenda is needed.[36] In effect, recent empirical work shows that improvements in macroeconomic and institutional fundaments, as well capital market-related reforms, have had a pro-internationalization bias. While these factors indeed appear to have fostered local stock market development, they have spurred even more the internationalization of stock issuance and trading (Claessens, Klingebiel, and Schmukler, 2006; de la Torre, Gozzi, and Schmukler, 2006c).[37] There is, in addition, empirical

[35] There are different ways to "list" domestic stocks in international financial markets. A traditional way is to cross-list the share in another exchange. European companies tend to use this method of internationalization most often. A popular way to internationalize among emerging market firms has been through depositary receipts (DRs), called American Depositary Receipts (ADRs) or Global Depositary Receipts (GDRs). These are foreign currency denominated derivative instruments, issued by international banks, representing home securities held with a local custodian. ADR trading in U.S. exchanges has expanded from 75 billion U.S. dollars in 1990 to one trillion in 2005, and there are currently more than 1,900 sponsored ADR programs issued by firms from 73 countries. DR programs grow or shrink depending on demand, since the issuance of DRs and the conversion back to the underlying shares only involves a small transaction cost. See Levy Yeyati, Schmukler, and van Horen (2006).

[36] There is in fact a gap between the intensity of financial sector reforms undertaken in Latin America over the last decades (and the expectations they generated) and the low level of observed financial development in the region. Securities markets, especially those for private sector securities, score poorly by international comparison and are below of what can be expected (in terms of commonly used measures of size and liquidity) after controlling for per capita income, economic size, macroeconomic policies, indices of legal and institutional development, and reforms. See Borensztein, Eichengreen, and Panizza (2006b), de la Torre, Gozzi, and Schmukler (2006b), and de la Torre and Schmukler (2006).

[37] This evidence is consistent with the findings in Aggarwal, Klapper, and Wysocki (2005), who analyze portfolio holdings of emerging market equities by U.S. mutual funds and find that funds are more likely to invest in countries with stronger accounting standards, shareholder rights, and legal frameworks. Similarly, Ladekarl and Zervos (2004) find that macroeconomic policies, corporate governance, and the legal and

research that suggests that the below-expectations development of local stock markets is not independent of their internationalization—as the migration of stock issuance and trading abroad has been found to have had an adverse effect on the trading and liquidity of local markets (Levine and Schmukler, 2006a,b).[38]

To be sure, the reformers of the 1990s were not dismissive of the globalization process; they rather supported it. But they tended to expect that the effect of reforms would be to attract foreign investors and global liquidity to their domestic markets. They did not anticipate that the fruit of their efforts would be an increased tendency for the best equity issuers and issues to move to international markets and, in the process, adversely affect the liquidity of the domestic stock market.

The mentioned evidence (low stock market development in Latin America despite intense reforms, pro-internationalization bias of reforms, and so forth) raises significant questions that have not been adequately addressed in the policy debate. While much more research is still needed, we have argued elsewhere (de la Torre and Schmukler, 2006) that a better understanding of the interaction between globalization, local market size, and key features of equity contracts is a good place to start in trying to make sense of the evidence. The presence of international financial centers that attract international liquidity is arguably a key factor behind the illiquidity of many local stock markets. Scale economies and network and agglomeration effects help explain why global liquidity is increasingly clustering around few international financial centers. Arguably, this constitutes sobering news for many local equity markets, especially those in smaller economies, which are trying to escape from what appears to be chronic illiquidity. Unfortunately, illiquidity begets illiquidity (by limiting the capacity of investors to unwind their positions without affecting prices, illiquidity discourages the entry of new players which, in turn, further limits liquidity) and this fundamentally hinders "price revelation" (one of the most distinctive functions of stock markets vis-à-vis, say, banking markets).[39]

Another factor that could further foster the internationalization of stock issuance and trading is that this internationalization does not engender balance sheet mismatches.[40]

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regulatory framework are important determinants of whether countries are considered "investable" or not by portfolio investors in emerging markets. Wojcik, Clark, and Bauer (2004) find that firms with better corporate governance practices are more likely to cross-list in the U.S.

[38] See also Karolyi (2004) and Moel (2001) for evidence on the relation between stock market development and the use of American Depositary Receipts in emerging economies.

[39] In the absence of reasonably secondary market liquidity, concerns regarding price integrity cannot be fully dispelled. Illiquidy means that stock valuation needs to be done via methods that, even where well designed and uniformly applied, are imperfect substitutes for the real thing—an observable and reliable market price. Those methods are blunt in their capacity to capture in real time the changes in the actual and perceived risks and prospects of the issuer. By undermining price revelation—even where disclosure standards are high—secondary market illiquidity causes "marking to market" to lose much of its meaning and turns fair value accounting into an inherently tentative task.

[40] In this respect, equity contracts sharply differ from debt contracts. In the case of debt, internationalization can magnify the problems associated with weak currencies. This is because in countries where the equilibrium real exchange rate is subject to significant fluctuations, borrowing in foreign currency exposes debtors in the non-tradable sector to real exchange rate risk and, as a result,

Hence, by itself, it carries no systemic vulnerability implications, even if the integrating country has a weak currency. Arguably, this increases the incentives for equity issuers to migrate towards the larger, deeper, and immensely more liquid international markets, so long as they can break the size and cost barriers to issuing stocks abroad.[41] This reasoning suggests that, given globalization, the reforms and institutional improvements at home may actually make it easier and more affordable for large local issuers to go abroad by making them more attractive to international investors, which is consistent with the evidence mentioned above.

A number of difficult questions increasingly haunt policymakers regarding the future of local stock markets. Is there a suitable "light" version of domestic securities markets that is complementary to international financial market integration? Should such "light version" be characterized by lower accounting and disclosure standards, lower listing and transaction costs, and more private equity placements and over-the-counter activity? What could be expected from such a market, given that it would be structurally illiquid and, hence, would play a very limited "price revelation" role? What should be done with the costly and underutilized infrastructures of centralized stock exchanges? Should many countries simply "throw the towel," forget about developing deep local stock markets, and let their investors and large resident corporations obtain equity market services in international financial centers? Is there any advantage in pursuing regional stock market integration compared to simply promoting global integration?

While our ability to answer these difficult questions is only at an early stage, one thing is certain: the answers are not likely to be found by simply relying on the conventional wisdom of the prevailing stability-oriented and international standards-laden policy thinking.

4.2. Financing for Small and Medium Enterprises

A typical concern among policymakers and entrepreneurs is that the loanable funds available in the local markets for the private sector (i.e., those funds left after the government has satisfied its, often large, financing needs) are not flowing in significant amounts to SMEs. The claim is that formal financial systems seem to be failing in terms of "irrigating" resources broadly and bridging the gaps in access to finance. SMEs are becoming a focal case in point, which is increasing attention from policymakers and practitioners across countries.

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exposes their creditors to the real exchange rate-induced default risk. In contrast, equity contracts are not subject to default risk because they do not commit the issuer to paying a flow that is independent of her performance. As a result, the issuer of an equity security does not take any exposure to exchange rate risk, even if her income is derived from the emerging economy's non-tradable sector. To be sure, her performance might be affected by real exchange rate fluctuations in various ways, but such effects are passed on to equity investors via changes in dividend payments.

[41] Based on over 30 structured interviews with market participants, Ladekarl and Zervos (2004) conclude that securities issued in amounts under 150-200 million U.S. dollars "remain unattractive to many large emerging market investors." Claessens and Schmukler (2006), using a large sample of firms, show that firm size is an important determinant of the probability of accessing international financial markets.

SMEs are a segment that, at least until very recently, appeared to be squeezed out of the mainstream circuit of financing to the private sector. At one extreme of the corporate lending market are the large, reputable corporations. They have access to a broad a range of products to raise debt or equity capital, from banks or securities markets, in local or international markets. At the other extreme are micro-enterprises. Although these firms have traditionally lacked access to formal financing, in recent years there has been a vigorous expansion of commercial microfinance. This growth has been driven by the development of innovative lending techniques and significant technological advances (scoring methods, e-banking, etc.), whose effects have been boosted by the growing presence of credit bureaus, thereby enabling microfinance institutions to reach the needed scale and bring costs down substantially.[42] In the middle between these extremes of the corporate credit market are SMEs, for which there is a broad perception that financing has tended to stagnate. Accompanying these trends in business lending, there has been a strong growth in consumer credit in emerging economies (see, for example, BIS, 2005 and The Economist, 2006). Financial institutions initially focused on providing consumer finance—ranging from loans for durable goods to flexible credit card lending—to well-off households. In recent years, with the growing commercialization of microfinance, financial institutions have also started to grant consumer loans to lower-income households. In sum, at least until very recently, the unfolding story seemed to be that, as competition in the lending market for large corporations increased—reflecting financial globalization and the expansion of local bond markets—banks switched to commodity-like, mass credit products like consumer lending. In the process, the SME segment appears to have been bypassed.

In recent years, the picture appears to have changed, as banks in some emerging markets have increasingly turned to SME financing in search of new business opportunities. However, it still remains to be seen whether this constitutes a permanent shift or just a temporary phenomenon, whether banks can find a successful business model to serve SMEs, and how important their financing to this segment becomes.

Financing SMEs presents several difficulties relative to financing other segments and requires the development of lending technologies that have not been widely available in many emerging economies yet. A few reasons—which we put forward mainly as hypothesis, given the dearth of empirical research—can be submitted to make the point that the problems in SME finance constitute a tough policy nut to crack. These hypotheses require further analysis and testing. Recent anecdotal evidence suggests that some financial institutions have started to use practices to try to cope with some of the problems described below.

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[42] See, for example, Hardy, Holden, and Prokopenko (2002) for a description of how the availability of debtor information systems combined with scoring technologies has allowed Banco del Trabajo in Peru to become a commercially-viable microfinance institution. CGAP (2003) presents an overview of how scoring works and its application to microfinance. It is worth noting that, despite the recent surge in microfinance, access to financial services in most developing countries is still very limited (see, for example, CGAP, 2004 and Daley-Harris, 2003).

The first issue is that individual SMEs are arguably too small to access capital markets directly and individually. In effect, they are not able to issue debt or equity securities in the minimum amounts (say, 30-50 million U.S. dollars) required by institutional investors. Institutional investors do not normally want to be the only or main holder of an issue and, at the same time, want an issue with a minimum degree of secondary market liquidity that would facilitate "exit" when needed.

Second, local and foreign pension funds and other institutional investors are not likely to seek individual SME assets as part of their portfolio diversification strategies. It simply does not pay. Or, to put it more formally, the marginal risk reduction achieved by including one more issuer in the portfolio appears to be offset by the marginal cost of issuer screening and monitoring at a much earlier point than commonly believed. The risk-return frontier is thus reached with relatively few assets, which adds yet another reason to explain why participation in capital markets is segmented in favor of large issuers and issues, even in countries like Chile and Mexico, where corporate bond markets have been growing fast.[43] As Figure 6 shows for the case of Chile, only the largest firms have been able to issue bonds in the local market. Similarly, for the case of Mexico, only a handful of large, well-known firms account for most of the amount outstanding in the local corporate bond market.

A third reason that may explain why the SME segment has been bypassed is that bank loans to SMEs are not easily "commodity-izable" (Mu, 2003). Because of the opacity and heterogeneity of risks of different SMEs, the corresponding SME lending technology cannot rely heavily—as microfinance and consumer lending technologies do—on scoring methods.[44] These methods work by analyzing large samples of borrowers to identify the characteristics that predict the likelihood of default and the loss given default. Hence, they are more applicable to homogeneous borrowers and lending products that can be mass produced. The risks of a micro loan can be "scored" with information on personal characteristics of the micro-enterprise owner, given that the financial viability of the business is closely tied to that of its owner. This information is relatively easy to gather, including though electronic means. The risks of an SME loan, by contrast, are less amenable to scoring techniques and therefore, SME lending cannot be converted into a commodity-like mass-credit product as easily, especially as we move up the enterprise size from small to medium. In effect, an SME is likely to be a limited liability company with various owners, which makes the individual characteristics of the

[43] This hypothesis is consistent with available evidence, although more research is needed to determine whether it passes more rigorous empirical and theoretical tests. Consider, by way of illustration, the case of Chile, where efforts have been underway for some time to enhance risk diversification at home via the relaxation of regulatory limits on domestic investment by mandatory pension funds and the more recent introduction of a system of multiple funds with different risk-return profiles. The results of these efforts have been disappointing. In particular, the range of corporate issuers represented in the aggregate portfolio of pension funds has remained narrow (Rocha, 2004). This suggests that, even under a more liberal investment regime, there seem to be structural factors limiting the extent of diversification of institutional investor portfolios.

[44] Credit scoring is an automated statistical technique used to assess the credit risk of loan applicants. It involves analyzing a large sample of past borrowers to identify the characteristics that predict the likelihood of default and the loss given default. Scoring systems usually generate a single quantitative measure (the credit score) to evaluate the credit application.

owners less relevant for assessing creditworthiness. Such assessment requires an understanding of the nature of the business, its cash flow projections and operations, and the specifics that underpin the quality of management. These features, however, are not only difficult to observe but also different for different SMEs, requiring more individualized lending techniques to sort out and monitor SME debtors.

Fourth, except for the very short-term loans, the SME loan technology makes more intensive use the local institutional infrastructure for credit contract writing and enforcement than, say, the micro-consumer loan or credit card loan technologies, which make little use of such infrastructure. The latter technologies do not normally require collateral and their post default procedures consist mainly on writing off the claim and registering the default with the credit bureau. In credit card and micro-loan technologies, in effect, the pursuit of post-default recovery through the judicial system is typically not worthwhile and creditors anticipate this and price it ex-ante into the interest rate. This helps explain why micro credit as well as mass consumer credit have experienced significant growth even in countries with weak contractual environments. By contrast, SME lending technologies cannot avoid a heavy reliance on the contract enforcement institutions. For instance, SME lending tends to resort to collateral requirements to adequately mitigate principal-agent problems and recovery efforts via the courts are the norm in the event of default. As a result, the quality of collateral laws, the clarity of creditor rights in the event of bankruptcy, and the reliability of the judicial processes are all highly relevant for SME lending. Consistent with this argument, Beck, Demirguc-Kunt, and Maksimovic (2005) find that the extent to which financial, legal, and corruption problems affect firm growth depends on firm size, with smaller firms being most affected by these factors (Figure 7). Similarly, Chong, Galindo, and Micco (2004) find that SMEs not only finance a significantly lower share of their investments with bank credit relative to large firms, but also that the difference in bank financing between SMEs and large firms is higher in countries with worse creditor protection and less efficient judicial systems. Given that SMEs lack access to securities markets, this lower level of bank financing implies that a higher share of their investment has to be financed with retained earnings or supplier credit.

The fifth potential obstacle to expanding SME finance is that Basle-type and Anti-Money Laundering (AML)-type regulations may be, inadvertently, discouraging loans to this segment. These regulations may reduce the value for banks of relationship lending based on individualized knowledge of borrowers. For example, regulations that require banks to use the information from the credit bureau in the process of loan origination and to supply relevant loan information to such bureau reduce banks' ability to appropriate the benefits from their efforts at building individualized SME knowledge. Thus, these regulations, contrary to common expectation, may actually deter banks from entering the SME lending business, especially in the absence of a compensatory improvement in the contractual environment. Similarly, banks' capacity to deal with informal, opaque SMEs through relationship lending may be undercut by regulations that require loan origination dossiers to include formal financial statements, sophisticated cash flow analysis, and transparency in tax compliance. Likewise, AML regulations that require substantial documentation to satisfy the know-your-client requirements may be excluding from the

lending circuit informal SMEs that would have otherwise been included. All of these are, of course, hypotheses that require more rigorous exploration, but anecdotal evidence throughout emerging economies suggests that more analysis could have significant payoffs.

In sum, SME finance (or the lack thereof) is a big emerging issue in the minds of policymakers concerned with financial development. As noted, the topic is quite complex and short- or even medium-term solutions are not easy to identify, raising tough questions on what governments could do, other than patiently wait for the eventual materialization of substantial improvements in the contractual environment as a result of reforms. While the search for policy answers must continue, the discussion above should make it clear that the current policy thinking seems to provide little guidance for this task.

4.3. Defined-Contribution Pension Funds

Chile's pioneering example in pension reform had a major demonstration effect throughout Latin America, as similar reforms were adopted by many countries subsequently, during the 1990s—including in Argentina, Bolivia, Colombia, Costa Rica, El Salvador, Mexico, Peru, and Uruguay. Many transition economies, including Hungary, Kazakhstan, Poland, Slovakia, and Lithuania, also adopted Chile-style pension reforms.[45] These reforms consisted, basically, in a shift away from government-administered, pay-as-you-go (PAYG), defined-benefit (DB) pension systems towards systems that rely mainly on the so-called "second pillar," that is, on mandatory, privately-administered, defined-contribution (DC) pension funds. This type of pension reforms constituted a salient manifestation of the paradigm shift in favor of pro-market financial development discussed above. They reflected a strategic, almost philosophical decision: to give markets the predominant role in administering retirement-related savings and providing old-age income security.

As the Chile-style reformed pension systems continue to mature, new and complex issues are emerging that were not well anticipated at the reform inception. The ability of policymakers to adequately address these issues is central to enhancing the performance of the reformed systems and ensuring their socio-political sustainability. A better understanding of these issues will also provide valuable insights to countries contemplating similar pension system reforms and to countries pondering the benefits and pitfalls of private retirement savings. While the big emerging issues in this area can be identified and characterized, the development of suitable policy answers is still at an early stage.

Arguably, the biggest challenge for pension systems in Latin America, and other emerging economies with a large informal sector, is posed by their low coverage (Gill, Packard, and Yermo, 2005). Reformers had originally expected that involving financial markets in the management of individual retirement savings would lead to increases in

[45] See Rutkowski (1998, 2002) for a description of pension reforms in transition economies. De Ferranti, Leipziger, and Srinivas (2002), Gill, Packard, and Yermo (2005), and Queisser (1998), among many others, review the experience of Latin American countries.

coverage. From hindsight, it is clear that this expectation was exaggerated and that the impact of pension reform on coverage has been rather small.

The critical issue of coverage, however, falls outside the scope of financial development policy and mainly concerns social protection policy. Here we discuss instead some of the emerging issues in DC pension systems that concern of financial development policy. To this end, we focus on two key issues in achieving the objectives of second-pillar based pension system: (i) raising expected replacement rates[46] and (ii) building a sound market for annuities.[47]

Let us first consider the *challenge of raising expected replacement rates without unduly raising risk* It is increasingly evident that there is no easy answer to the fundamental question of whether the system of mandatory, DC pension funds will be able to consistently generate, for those covered by the system, adequate replacement rates in the future, given current rates of contribution. By adequate replacement rates we mean an expected stream of income during retirement that is consistent with life-cycle consumption smoothing and that minimizes the risk of poverty in old age. One important threat in this regard comes from low accumulated balances in pension funds at the moment of retirement due to low contribution density ratios—that is, the problem originated in individuals not contributing continuously to their pension funds over their working lives due to, say, long unemployment spells or prolonged dips into the informal sector while working. But even where contribution density is high, the maximization of expected replacement rates for a given risk is more difficult to achieve through financial markets than originally believed. In particular, the high real returns achieved by the mandatory pension funds in Latin America during the 1990s—which were of the order of ten percent per year in several countries—are unlikely to be repeated in the future, and this would lead automatically to lower expected replacement rates for a given risk.

The reasonable assumption that lower average real returns (compared to those in the 1990s) are in store for the future puts a premium on policy efforts aimed at increasing *net* real returns in DC pension funds without unduly raising risk. This necessarily points to policies aimed at facilitating the achievement of higher gross returns *and/or* at reducing the fees charged by "PFAs" (pension fund administrators).[48,49] At first glance, the general direction of the appropriate policies actions appears obvious: make PFAs operate in a contestable market while giving them freedom to diversify the portfolios they administer, subject to ensuring that they continuously fulfill their fiduciary responsibilities as managers of workers' savings. Freedom and competition, the

[46] The replacement rate is formally defined as the ratio of retirement pension to pre-retirement income.
[47] Another important issue for the reformed pension systems is how to limit the volatility of replacement rates over time, so as to reduce horizontal inequity across generational cohorts. See the working paper version of this paper, de la Torre, Gozzi, and Schmukler (2006d) for further discussion on this issue.
[48] The effects of higher returns or lower fees on replacement rates build over time to nontrivial magnitudes. Rocha (2004) reckons that a permanent decrease in fees by 30-40 basis points of assets would lead to a seven to nine percent increase in replacement ratios in the case of Chile.
[49] For simplicity, in the remaining discussion we refer to the mandatory private second-pillar pension fund managers as PFAs (AFPs in Spanish), which is the name they have received in most Latin American countries.

argument goes, will result in lower fees and higher returns for a given risk. We have learned, however, that things are not that simple, as policy tensions and technical issues complicate matters much more than initially believed, as discussed below.

We first turn to the tensions arising in connection with the policy objective of enabling higher returns by allowing greater local and international diversification of mandatory pension fund portfolios. In reality, policymakers in Latin America and other emerging economies that implemented similar reforms have not been free to pursue this objective; they have rather felt compelled to balance it against three competing policy objectives. The first competing policy objective has been fiscal: to facilitate the government's cash flow management given the need to finance the pension reform transition. Absent a compensatory fiscal adjustment (Chile was the only reforming country in Latin America able to engineer it, mainly through a major increase in tax revenue), debt financing has been relied upon by governments to meet payments to retirees under the old PAYG system while no longer receiving contributions from workers that join the new system. The resources in second-pillar pension funds have been tapped for this purpose (as well as for general government deficit financing needs), and this has typically been aided through regulations mandating that a high share of pension fund portfolios be allocated to government paper. It is thus not surprising that the portfolios of most mandatory second-pillar pension funds in Latin America are rather undiversified and dominated by government debt securities.[50]

The second competing policy objective has been to harness pension funds' investment power to stimulate the development of local financial markets and the local economy, especially by supplying long-term finance to the private sector, without sacrificing their primary fiduciary duty.[51] This objective has led to reluctance among policymakers to give PFAs ample latitude to diversify pension fund portfolios through investment in foreign assets. This reluctance has been often reinforced by a nationalistic discourse and concerns that allowing PFAs to invest in international markets smacks of an official blessing to capital flight. As discussed in Section 4.2, expectations that pension funds would diversify into a very wide range of local assets, including SME finance, have proven to be misplaced so far. In any case, as the growth of pension funds has been clearly outstripping the availability of suitable assets at home, policymakers have been prompted to raise the ceiling on pension fund investments abroad, albeit ever so gradually and reluctantly. Chile is again well ahead of the pack in this regard, currently allowing up to 30 percent of pension fund portfolios to be invested in external assets.

Finally, the room to relax pension fund investment regulations has been constrained by the competing (often implicit) policy objective of limiting the volatility of pension fund returns and replacement rates. This risk aversion in policy is particularly

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[50] Chile and Peru are exceptions where government debt does not absorb the lion share of pension fund portfolios. Data on pension fund portfolio composition is presented, for instance, in Gill, Packard and Yermo (2005) and de la Torre and Schmukler (2006).

[51] In effect, fostering financial development at home can be in fact consistent with pension funds' fiduciary duties to the extent that domestic financial deepening promotes growth.

strong, and understandably so, in countries where the second pillar constitutes the core of the national social security scheme. Allowing pension funds to take on more risk in order to raise returns implies also that losses would be made now and then. But such losses would raise greater political sensitivities in countries with a second-pillar dominated national pension systems, where workers bear all the market risk, compared to countries where the second pillar is a complement to a core PAYG system and where, as a result, workers bear less market risk overall (Rocha, 2004). Hence, in the case of the former countries, a full liberalization of pension fund investment regulations cannot be reasonably expected. Rather, it should not be surprising to find, as in fact we do, that regulators in such cases tend to be more risk averse and regulations more biased in favor of conservative portfolio allocations.

In all, the policy objective of raising expected replacement rates via the liberalization of pension fund regulations is caught up in a nontrivial tension with other policy objectives that pull in a different direction. While reasonable people can differ on the relative weight that should be given to each of the competing policy objectives, there is no question that the policy path towards higher replacement rates via a freer pension portfolio allocations is fraught with complications that were not fully foreseen at the time of the reform.

We now turn to the policy issues involved in trying to raise expected replacement rates by fostering competition among PFAs on the fees they charge for asset management. This too has proven to be a much more challenging task for the reformed systems than initially envisioned, mainly because of complications related to industrial organization features of the pensions industry. These features make it difficult to simultaneously promote competition and ensure the achievement of economies of scale. Let us explain. Competition seems crucial to bring down fees. However, increased competition through lower entry barriers and greater freedom for affiliates to move across PFAs can backfire, as the Chilean experience in the mid-1990s demonstrated. It can lead to marketing wars between numerous PFAs, which blunt the ability of the industry to capture scale economies, resulting in high administrative and selling costs and, thus, high fees. The opposite can also backfire. That is, if the regulatory authorities were to raise entry barriers, promote cartel-like understandings among PFAs, and restrict the ability of affiliates to move from one PFA to another—all in order to facilitate the exploitation of economies of scale—the resulting lack of market contestability will increase the scope for the few incumbent PFAs not to pass the administrative cost reductions to affiliates and, rather, enjoy abnormally high profits. The appropriate policy to break away from this dilemma is neither obvious nor easy to design and implement. Several approaches have been tried to bring down costs and fees, with mixed results.[52]

[52] One promising approach in this regard, illustrated by the Swedish model (James, Smalhout, and Vittas, 2001; Palmer, 2000), is to "un-bundle" the basic pension-related services that are subject to economies of scale (contributions collection, accounts management, payouts to retirees, and so forth) and provide them in a centralized manner (through a government institution or a regulated private sector monopoly). By contrast, services such as asset management, where economies of scale are not significant, are left to thrive in highly contestable markets. Further, to avoid excessive marketing costs, a "blind quotation" system can be established, whereby PFAs only know the total investment of pension contributions, but not the individual identity of investors.

We finally discuss the *challenge of building a well-regulated, deep, and efficient local market for annuities.* This market is the key complement to DC pension funds and is crucial to enable pensioners to deal with the so-called "longevity risk"—i.e., the risk of outliving in their retirement the savings they accumulated during their working life. A well-functioning annuities market allows workers to transfer this risk to life insurance companies, which manage it for a price, through pooling and complex asset-liability modeling, passing on to insured individuals the benefits of risk diversification through pooling. The annuities market is, however, a highly sophisticated market where risks are very complex, demanding high quality risk managers, appropriate institutional and market infrastructures, access to suitable assets, risk-oriented regulation and supervision, etc. The evidence shows that, despite the potential welfare gains from annuitization, annuity markets remain relatively underdeveloped, even in high-income economies.[53] Whether all countries across income levels will be able to develop such a market remains therefore an open, yet crucial question.[54] This, of course, raises the question of whether, to what extent, and under what conditions would a global pension fund and annuities industry be a substitute, or even a superior alternative, to having a local industry.

The discussion above has hopefully been enough for the reader to get a flavor of the big emerging issues with respect to the markets for DC pensions and annuity products. This discussion also highlights some critical issues that should be taken into account by countries contemplating pension reforms that include a mandatory, privately-administered, defined-contribution component and, more generally, by emerging economies trying to develop markets for retirement savings. An important message from this discussion is that the associated policy issues fall largely outside the radar screen of the dominant policy thinking on financial development.

5. Final Thoughts

This paper has argued that some issues that are acquiring a high-priority status among the concerns of policymakers in many emerging economies have not been adequately addressed by the current policy thinking on financial development. These

[53] Yaari (1965) demonstrates that, under restrictive assumptions, full annuitization is the optimal asset allocation for retirement savings—it allows individuals to consume more than they would if they had to self-insure against longevity risk. Davidoff, Brown, and Diamond (2005) show that Yaari's results hold true under significantly less restrictive assumptions. Babbel and Merrill (2006) shows that high levels of annuitization are optimal under a wide range of risk aversion levels, even in the context of higher-than-commonly-assumed stock market returns and annuity prices. Despite the theoretical advantages of annuitization, voluntary demand for annuities worldwide is far below what is considered optimal by most economists. Factors that can potentially help explain this outcome include, importantly, adverse selection (which decreases incentives to supply annuities), bequest motives (which decrease incentives to buy annuities), and annuity provider default risk. Empirical work by James and Vittas (2000) suggests that adverse selection cannot account for the lack of annuities market development. Brown and Poterba (2000) find that the bequest motive is not a significant factor in the decision to forgo annuitization. Babbel and Merrill (2006) shows (theoretically) that annuity purchase decisions can be highly sensitive to the perception of default risk of annuity providers. See Cardinale, Findlater, and Orszag (2002) for an overview of annuities markets in developed countries.

[54] See Palacios and Rofmann (2001) for an overview of annuity markets in Latin America.

emerging issues for the policy agenda have less to do with financial stability and the principles codified in international standards and codes, and much more with completing markets in the context of increasing globalization. These issues, which to a large extent have grown out of the interaction between the reforms adopted in the emerging markets over the past 25 years and developments in global financial markets, pose technical challenges and political economy dynamics whose nature and complexity were difficult to anticipate at the time of the reforms. The dominant financial development policy thinking seems to offer limited answers on how to confront these issues. In effect, an underlying and significant tension for the current policy thinking comes from growing questions among policymakers in many emerging economies of whether the more stable, internationalized, and better regulated financial systems of today are actually contributing to social and economic development as much as expected.

The most common financial sector policies, which are focused on financial system stability and convergence to international standards, do not seem, by themselves, to be leading to broad financial sector development, in terms of breadth, depth, and diversity in key financial services that households and firms require. For example, the markets for SME and small-farmer finance appear only to be recently taking off in some emerging economies. Affordable housing finance remains underdeveloped in most cases. Only the largest firms in the larger emerging economies seem to have access to long-duration local currency finance. Much of the population in developing countries does not have access even to basic banking services, let alone to pension or insurance products to hedge risks. Moreover, the segmentation of access to financial services seems to be deepening as local financial systems grow and get better integrated into international markets. The financial globalization process is arguably producing major benefits, but these seem to be concentrated in favor of large corporations and higher-income households.

The associated policy questions point to new areas for research to enrich and expand the current policy thinking on financial development. What reforms could redirect financial systems to more rapidly and effectively bridge the access gaps? How could countries overcome short-termism in financial contracting? Which financial services should be provided at home and which abroad? Is there a suitable version of domestic stock markets for most countries? Should governments take a more proactive policy role to foster financial development, going beyond the current focus on stability and improving the enabling legal and regulatory environment? For example, should government try to complete markets where there are apparent market failures? If so, what type of activities should governments undertake? Should governments provide financing, guarantees, infrastructure, or simply coordinate different stakeholders?

These types of questions highlight the limitations of the current policy thinking on financial development. This does not mean, however, that the current policy prescriptions should be abandoned or ignored. By and large, such prescriptions are enduring, especially with regard to financial stability, as they are based on strong theory and well-digested lessons from experience. The question going forward is how this thinking will be modified to provide fresh answers to the new emerging issues and which

form future financial sector reforms should take. Much more research is clearly needed. The evidence needs to be carefully reconsidered to develop better diagnoses. And a degree of intellectual modesty will be required to suitably revise the dominant policy thinking and amend expectations.

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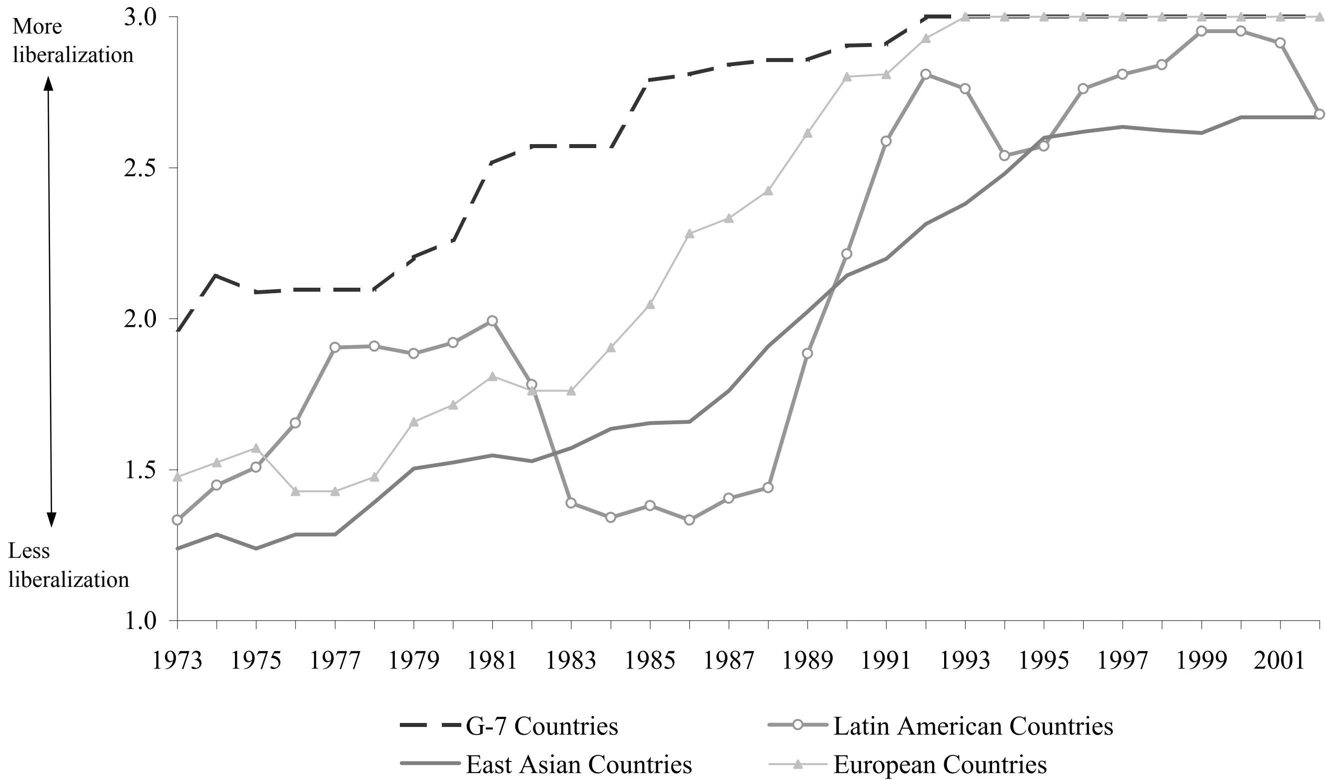
Figure 1
Financial Liberalization

This figure shows the extent of financial liberalization across regions. The financial liberalization index is calculated as the simple average of three indexes (liberalization of the capital account, domestic financial sector, and stock market), which range between 1 and 3; 1 means no liberalization and 3 means full liberalization. The series are averages across countries in each region. The data for G-7 countries are averages for Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. The data for Latin American countries are averages for Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela. The data for East Asian economies are averages for Hong Kong, Indonesia, Korea, Malaysia, Philippines, Taiwan, and Thailand. The data for European countries are averages for Denmark, Finland, Ireland, Norway, Portugal, Spain, and Sweden. Data are annual averages calculated from monthly figures.

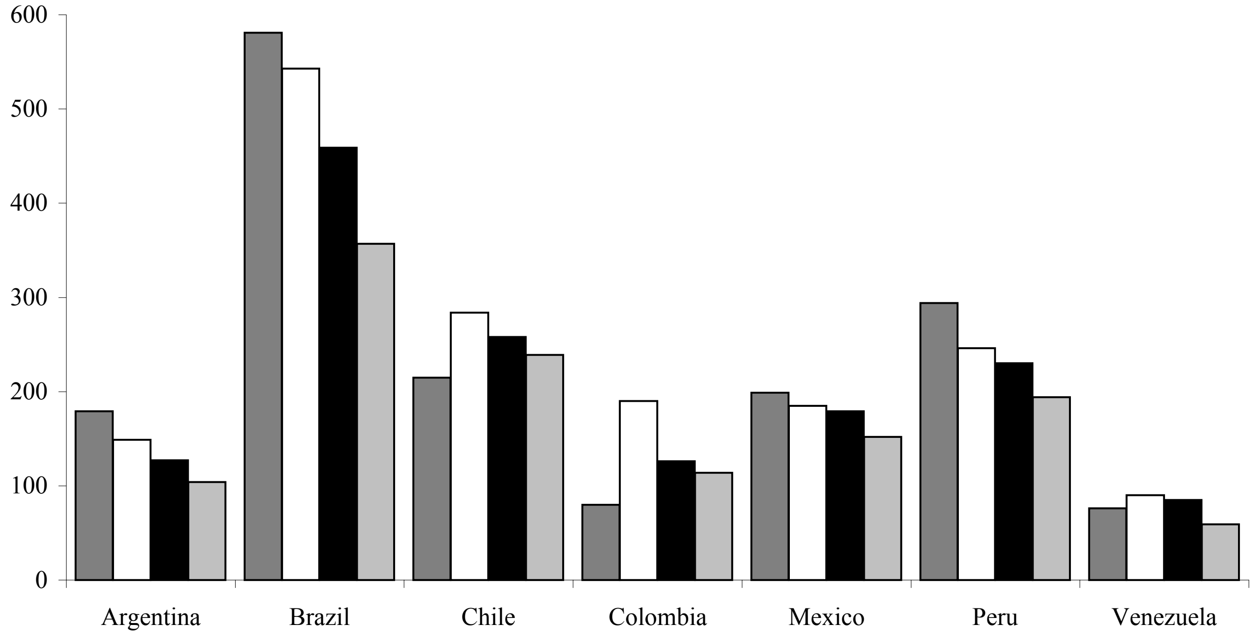


Source: Kaminsky and Schmukler (2003)

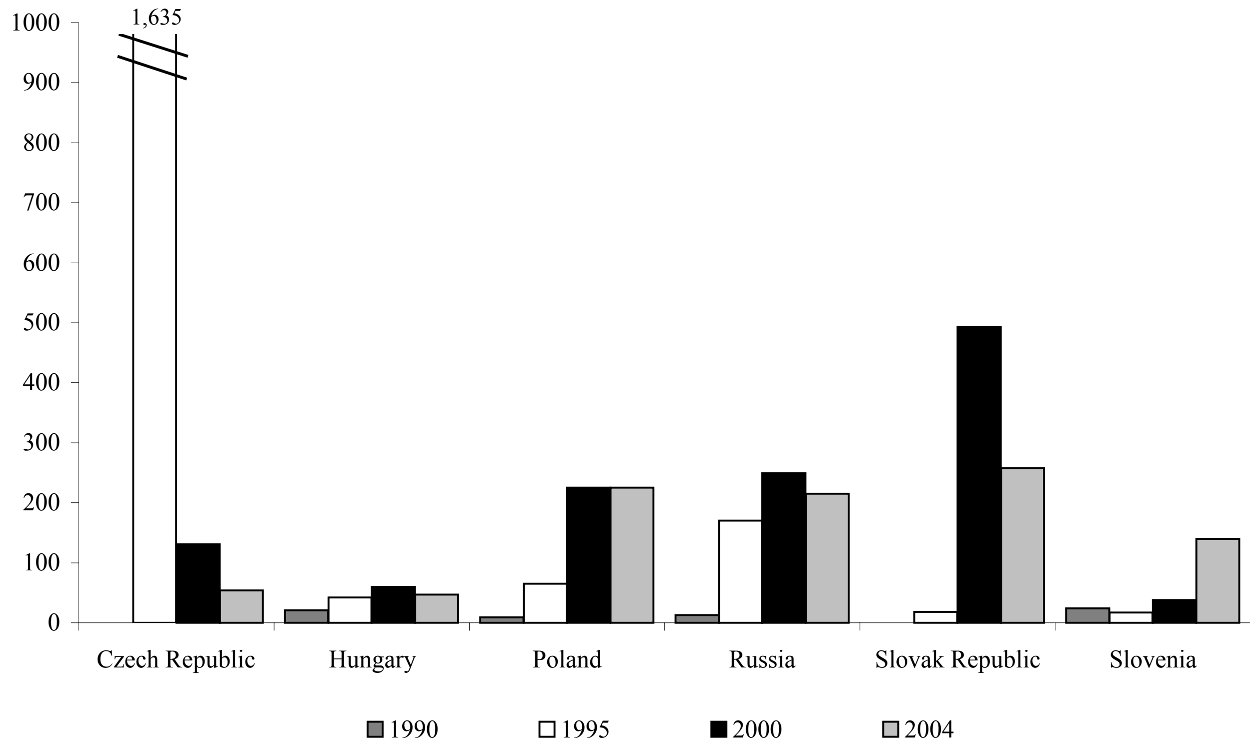
Figure 2
Stock Market Delistings

This figure shows the number of listed firms in domestic stock markets for selected Latin American and Eastern European countries. The figures are year-end values. The data for Hungary, Poland, Russia, and Slovenia correspond to 1991 instead of 1990.

Number of Listed Firms in Domestic Stock Markets in Latin America



Number of Listed Firms in Domestic Stock Markets in Eastern Europe

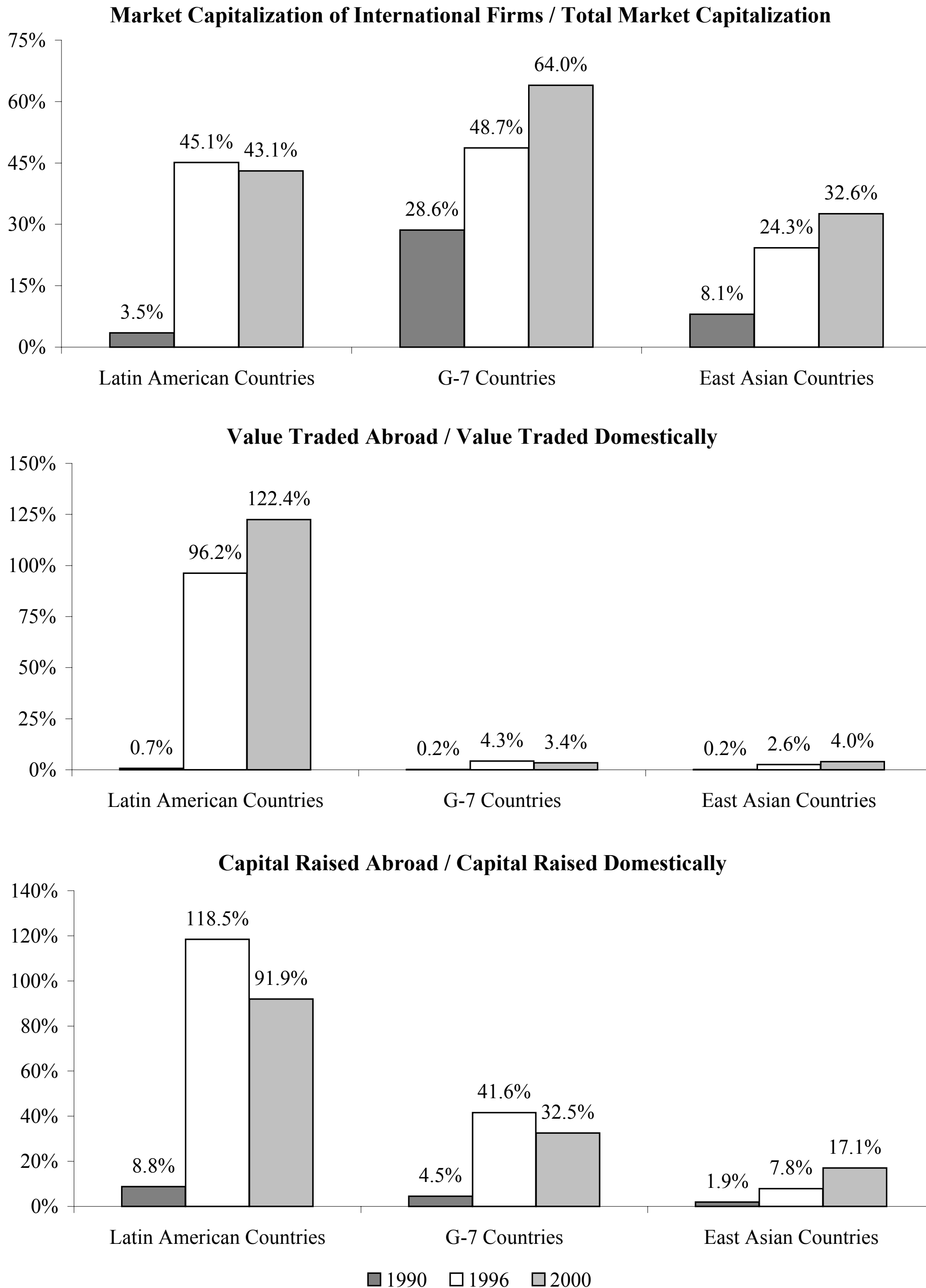


Source: S&P Stock Markets Factbook

Figure 3

Internationalization of Stock Markets Relative to Domestic Activity

This figure shows the market capitalization of international firms over total market capitalization, value traded abroad over value traded domestically, and capital raised abroad over capital raised domestically. The series are averages across countries. The data for G-7 countries are averages for Canada, France, Germany, Italy, and Japan. The United Kingdom and the United States are not included because they are considered international financial centers. The data for East Asian economies are averages for Hong Kong, Indonesia, Korea, Malaysia, Philippines, Taiwan, and Thailand. The data for Latin American countries are averages for Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela. International firms are those identified as having at least one active depositary receipt program at any time in the year, having raised capital in international markets in the current or previous years, or trading in the London Stock Exchange (LSE), New York Stock Exchange (NYSE), or NASDAQ.

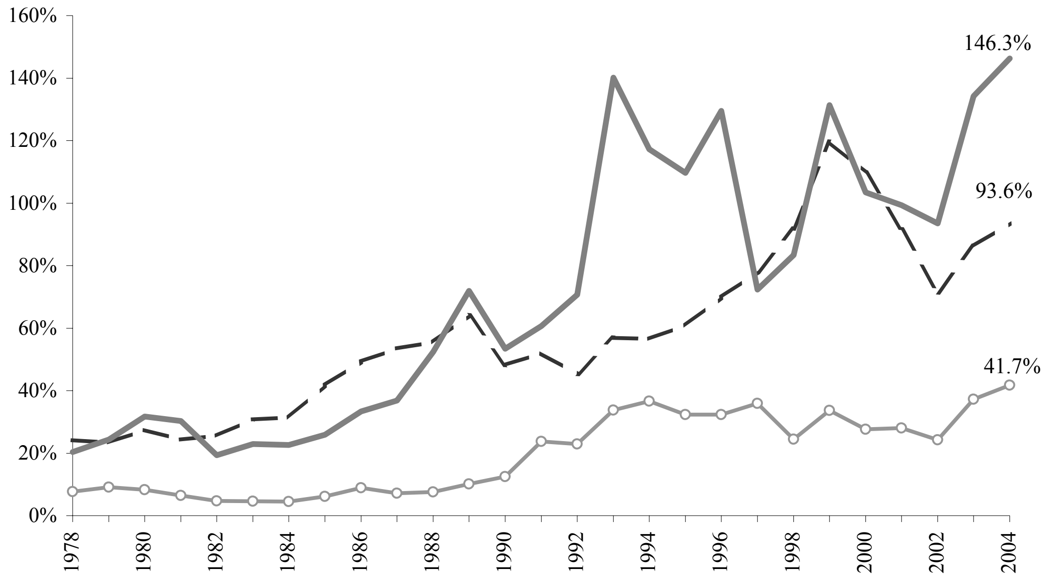


Source: de la Torre and Schmukler (2006)

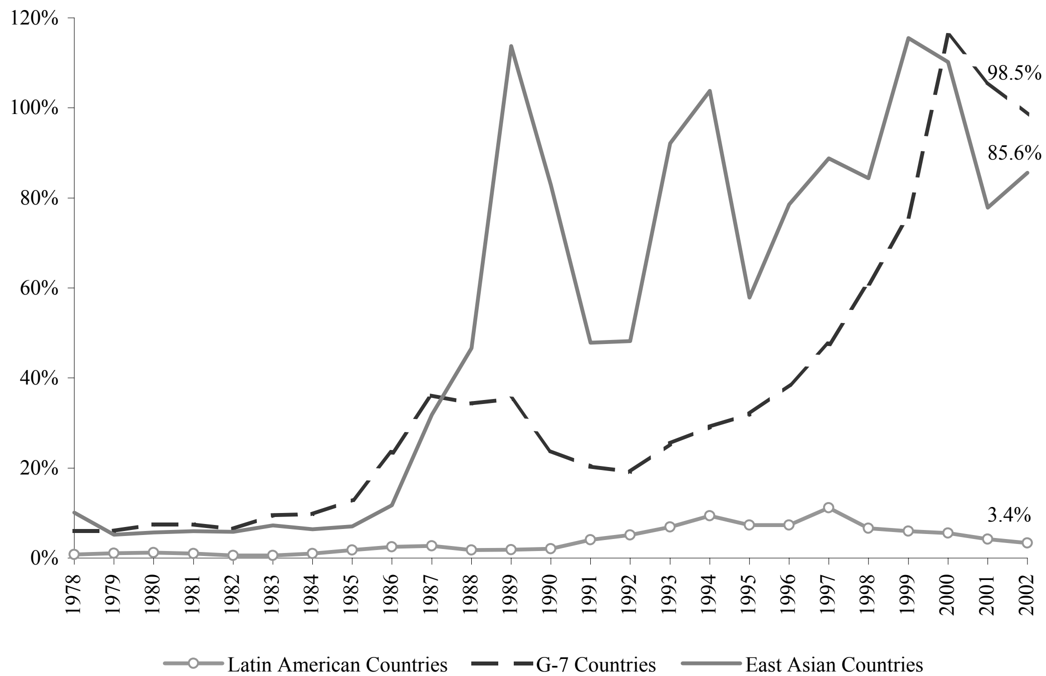
Figure 4
Domestic Stock Market Development

This figure shows the evolution of domestic stock market capitalization over GDP and value traded domestically over GDP. The series are averages across countries. The data for G-7 countries are averages for Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. The data for East Asian economies are averages for Hong Kong, Indonesia, Korea, Malaysia, Philippines, Taiwan, and Thailand. The data for Latin American countries are averages for Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela.

Market Capitalization / GDP



Value Traded Domestically / GDP

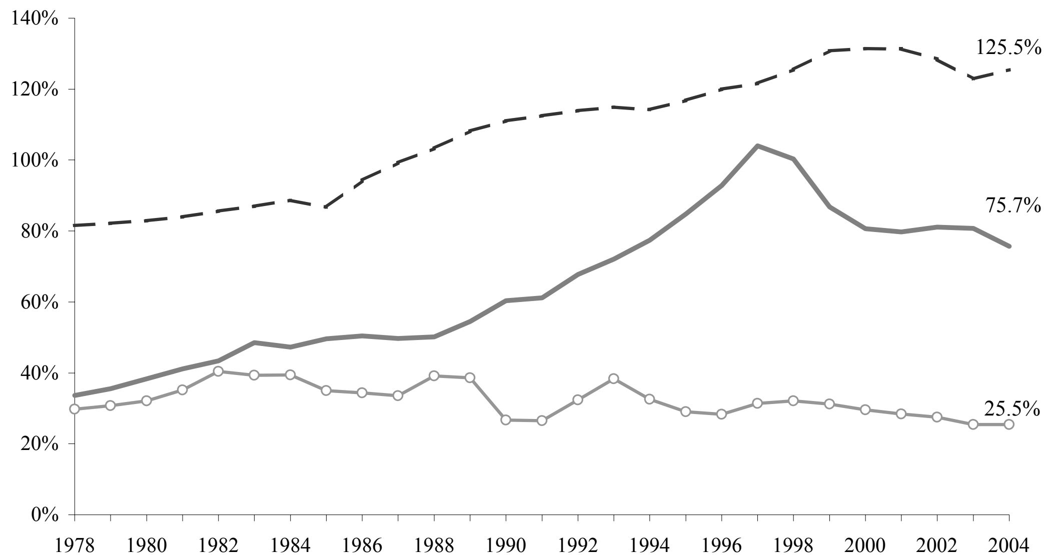


Source: S&P Stock Markets Factbook, World Bank

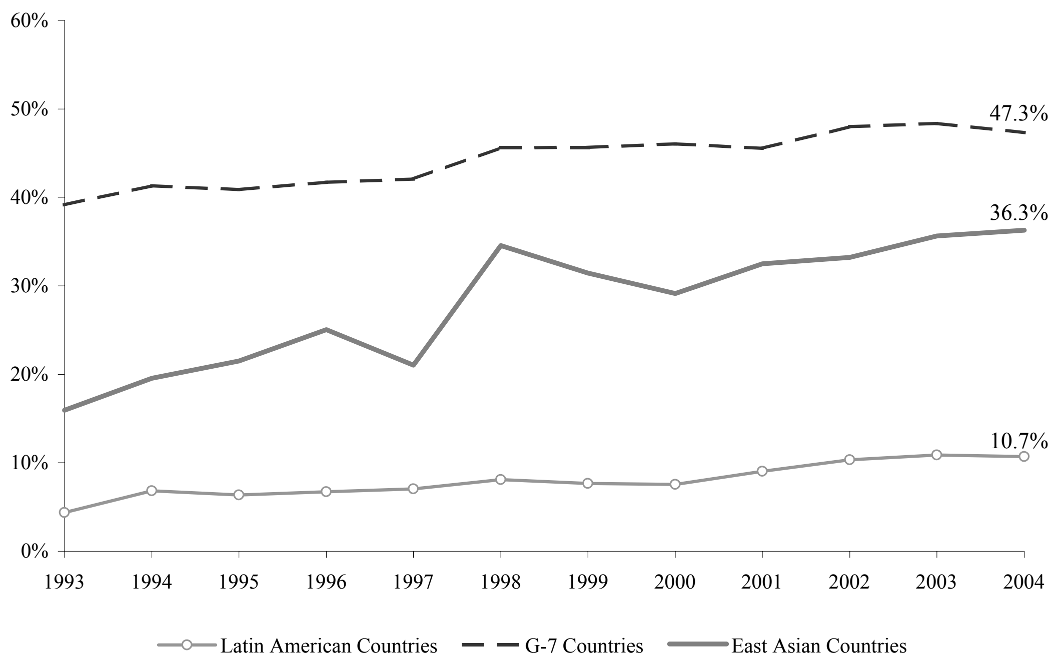
Figure 5
Domestic Financial Sector Development

The top figure shows the evolution of credit to the private sector by deposit money banks and other financial institutions over GDP. The series are averages across countries. The data for G-7 countries are averages for Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. The data for East Asian countries are averages for Indonesia, Korea, Malaysia, Philippines, and Thailand. The data for Latin American countries are averages for Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela. The bottom figure the evolution of the amount outstanding of private sector bonds in domestic markets over GDP. The series are averages across countries. The data for G-7 countries are averages for Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. The data for East Asian countries are averages for Hong Kong, Korea, Malaysia, Taiwan, and Thailand. The data for Latin American countries are averages for Argentina, Brazil, Chile, Mexico, and Peru. Country coverage differs across figures due to data availability.

Credit to the Private Sector by Financial Institutions/GDP



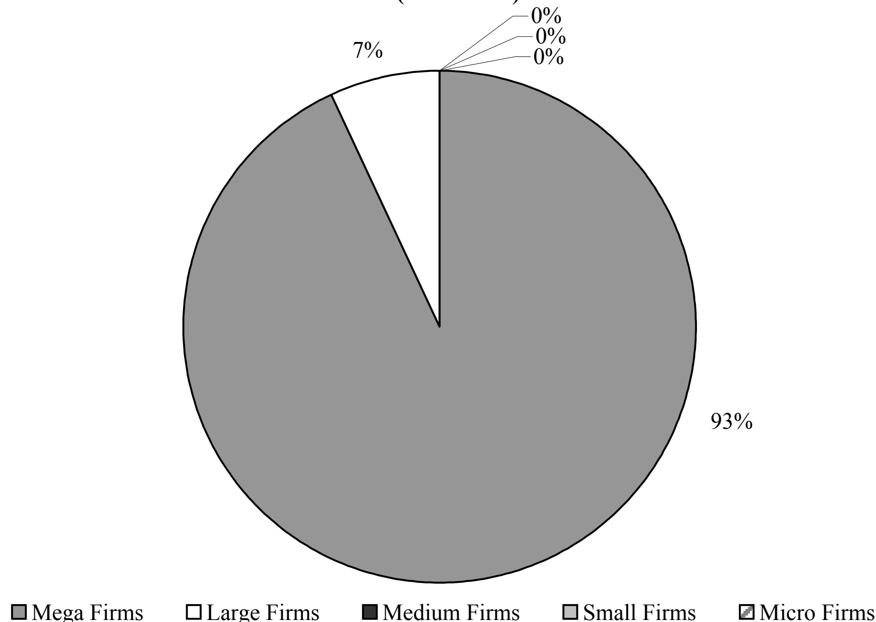
Amount Outstanding of Private Sector Domestic Bonds/GDP

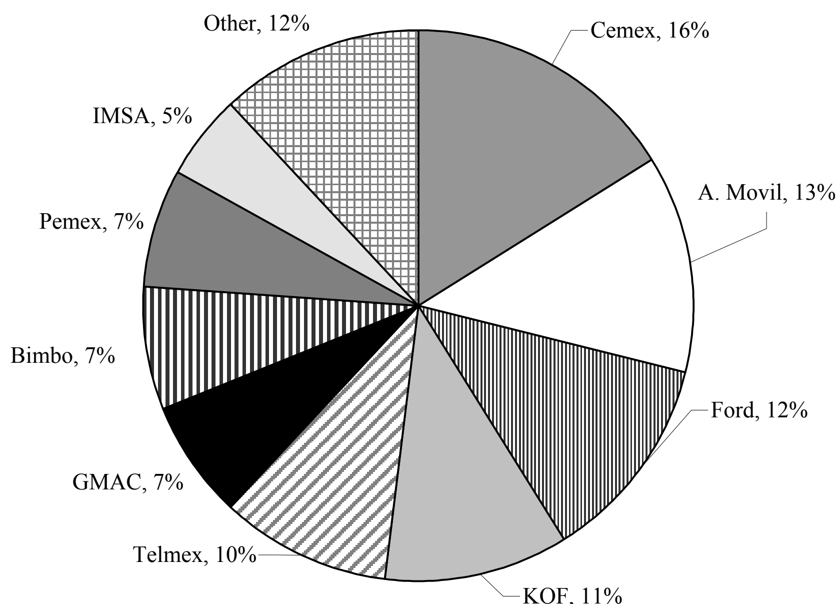


Source: BIS, World Bank

Figure 6
Segmentation in Access to Domestic Bond Markets - Latin America

The top figure shows the distribution of the cumulative amount of corporate bonds issued in the Chilean market over the 2000-2003 period by firm size. The bottom figure shows the distribution of the amount outstanding of corporate bonds in the Mexican market on October 2003 by issuer. In Chile, mega firms are defined as those with annual sales net of VAT above UF 600,000 (17.2 million U.S dollars); large firms have sales between UF 100,000 (2.8 million U.S dollars) and UF 600,000; medium firms have sales between UF 25,000 (US$0.7 million) and UF 100,000; small firms have sales between UF 2,400 (68,688 U.S dollars) and UF25,000; and micro firms have sales below UF2,400. Micro firms represent around 82 percent of all firms in the economy, while small firms are 15 percent and medium firms two percent. Large and mega firms combined account for one percent of all firms.

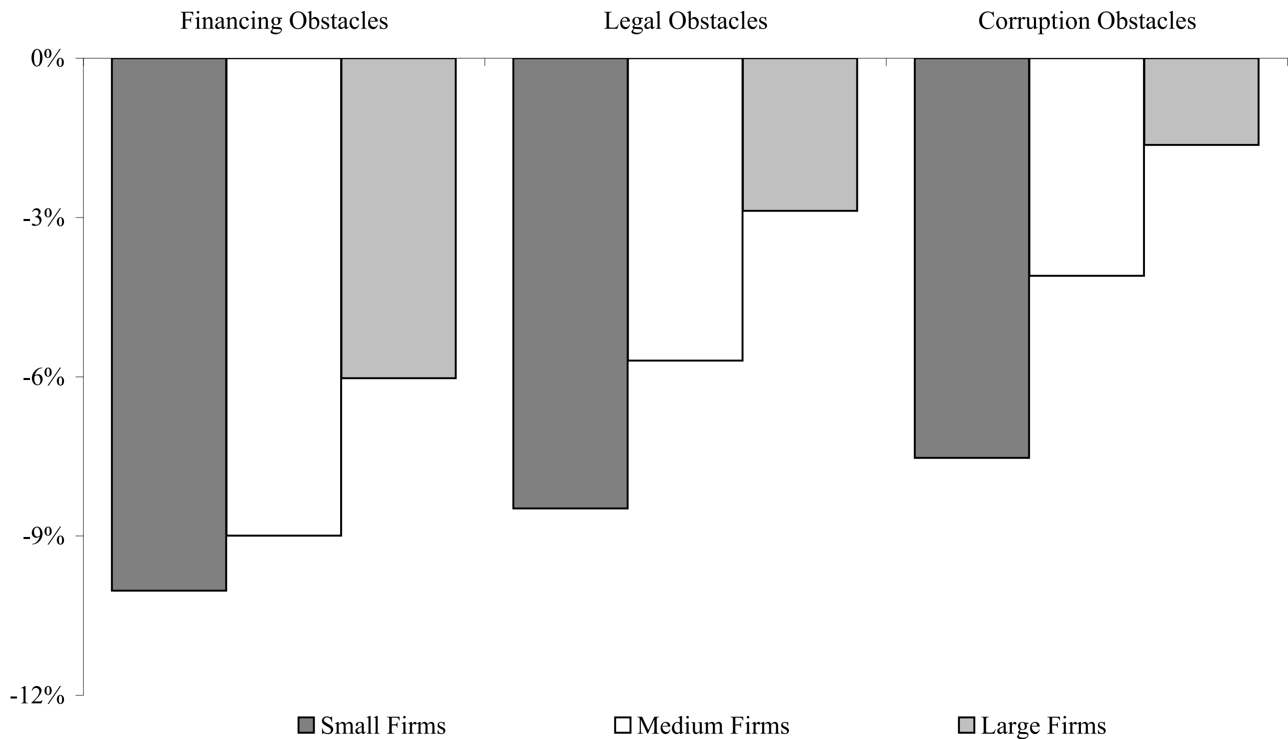




Source: Bolsa Mexicana de Valores, JPMorgan. Sirtaine (2006)

Figure 7
Institutional Environment and SME Growth

This figure shows the impact of different constraints on firm growth by firm size. The reported values are calculated as the mean value of each obstacle for the different firm groupings multiplied by the coefficients for the different firm groupings estimated from a regression of firm growth over the previous three years (measured by firm sales) on measures of ownership, industry characteristics, firm size, country-level variables, and interaction terms between dummies for the different firm groupings and the reported obstacles to firm growth. Firms are classified as small if they have between 5 and 50 employees, medium if they have between 51 and 500 employees, and large if they have more than 500 employees. Data on the relevance of obstacles are based on survey responses to questions requiring firms to rate the extent to which financing, legal, and corruption problems present obstacles to the operation and growth of their businesses. Data are based on the World Business Environment Survey (WBES) and cover over 4,200 firms from 54 countries.



Source: Beck, Demirguc-Kunt, and Maksimovic (2005)