Domestic Financial Development in Latin America

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CEDES, December 2009

1 The author is grateful to Ramiro Albrieu for research assistance and extensive discussions on the topics of this chapter.
I. Introduction

In two seminal books, McKinnon (1973) and Shaw (1973) convincingly called attention to the linkages between financial development and economic growth. According to these authors, the lack of financial deepening harms growth because it discourages savings and distorts investment allocation. They attributed the lack of financial deepening to financial “repression” originating in government intervention in the form of government-determined interest rates and credit allocation, as well as a strict control of the capital account. The policy implication of this diagnosis was clear: “liberalize” the economy from financial repression. Although deregulation would likely cause interest rates to increase, growth would accelerate hand-in-hand with higher savings and the productivity gains that better investment allocation would bring about.

Given the low financial deepening in Latin America (LA) in the seventies, these ideas were very influential and contributed to placing financial development on the post-Bretton Woods policy agenda. The implementation of the liberalization agenda, however, was far more difficult than had been expected. The first liberalization attempts in the Southern Cone of Latin America in the late seventies resulted in financial crises and the collapse of investment and output (Fanelli and Frenkel, 1993; Fanelli and Medhora, 1998). The advocates of liberalization, nonetheless, diagnosed that the failures were caused by an incorrect sequencing of policies rather than by theoretical flaws and deemed it critical that macroeconomic stability be secured before liberalizing and that deregulation of the domestic financial system precede the decontrolling of the capital account (McKinnon, 1991).

In light of the difficulties, the theoretical foundations of financial liberalization policies were put under severe scrutiny. Diaz Alejandro (1985) provocatively called a paper assessing the liberalization experiences “Good-Bye Financial Repression, Hello Financial Crash”. Using new research results about the role of information in economics and finance, other researchers pointed out that the state has an important function in financial markets (see Stiglitz, 1994).

Despite the theoretical and practical problems, domestic financial systems and the capital account continued to be deregulated into the nineties. Two major factors fostered the process: the increasing globalization of finance – the Brady Plan played a critical role in creating a liquid market for Latin American bonds – and, the intellectual and political influence of the Washington Consensus.

Although some cases were successful, such as Chile’s implementation of stricter regulations and supervision in the eighties, the results of the financial (and other structural) reforms in the nineties contributed weakly to growth and financial development (see de la Torre et al., 2006). The largest economies in the region experienced deep financial stress, most notably Mexico (1994) and Argentina (2002), or severe capital account reversals (for example, Brazil, 1998). Not even successful reformers escaped the risk of crises: in 2003 the Dominican Republic, which had been as successful as Chile after implementing structural reforms in the nineties, suffered a “classic” Latin American financial crisis. Ecuador, in turn, had to abandon its domestic currency after suffering a financial collapse.
In fact, severe financial disequilibria became so pervasive in Latin America – and other emerging economies – that the specialized researchers coined a new set of terms: “contagion”, “sudden stop”, “twin crises”, “original sin”, and “fear of floating”. In essence, these phenomena were manifestations of the old, unsolved, liberalization/sequencing/domestic financial development problems under different circumstances and regions. To be sure, knowledge about these phenomena has improved, but we lack a consistent, unified analytical framework to analyze them and identify policies that could promote domestic financial deepening or, at least, secure financial stability. In light of this, it is not surprising that at the beginning of the 2000s, some researchers perceived “reform fatigue” in Latin America (Lora et al., 2003, Fanelli, 2007).

Reform fatigue gave way to policy pragmatism in the 2000s and several countries in the region opted for a strategy of self-insurance (Ocampo, 2007, Medhora, 2007). The strategy has been instrumental in reducing the impact of the financial crises in advanced economies on the region. In contrast with the experience of the late nineties, there were no financial crises in the region. Contagion, nonetheless, was far from absent. When financial turmoil deepened in the American economy and Europe in 2008, the region showed symptoms of a sudden stop.

Pragmatism and self-insurance may be a sensible response in a world with imperfect capital markets and a flawed international financial architecture. But LA is still in need of a strategy for domestic financial development given that the factors that made it necessary in the past are still prevalent: the vast majority of the population is segregated from the formal financial system and investment and entrepreneurial capacity is still credit-constrained (see de la Torre et al., 2006).

This brief reference to the Latin American experience suggests that the following three questions are central when assessing the role of domestic financial development in the region:

1. What are the specific linkages between growth and financial development?
2. What are the determinants of domestic financial development?
3. What is the relationship between domestic financial development, crises, and international financial integration?

Research concerning these three questions has been quite dynamic, although progress has not been uniform. A good deal of the effort has targeted question (1). The linkages between growth and finance are now much clearer from the theoretical point of view than they were when McKinnon and Shaw raised the question. What has become the standard view – which we will call “functional” – places market frictions at center stage and accounts for the growth/finance relationship in terms of the functions that financial intermediation performs. The role of finance is to reduce transaction, information and enforcing costs, increasing the efficiency with which the economy fulfills a set of five fundamental financial functions: (i) the production of ex ante information about possible investments, (ii) the monitoring of investments and the implementation of corporate governance, (iii) the trading, diversification, and management of risk, (iv) mobilization and the pooling of savings, and (v) the easing of the exchange of goods and services (Levine, 2005; 2008). Concerning empirical evidence, the functional approach has mostly relied on econometric studies involving cross-country data. The studies
demonstrated that there is a positive association between growth and financial development, although they faced two obstacles. First, the operationalization of concepts is difficult. The functional view defines financial development in terms of the functions that the financial system must perform, but the available indicators used in the regressions, such as private credit/GDP, do not directly measure such functions (Levine, 2005). Second, it is difficult to identify the direction of causality (see Beck 2008). In an overall assessment of the research results Levine (2005) concluded that it has been reasonably proved that countries with better functioning banks and securities markets grow faster.

The attainments of the functional approach with regard to question (2) are less encouraging. This is not a minor problem: it might be of little help to know that financial development boosts growth if it is unclear how to promote it. Levine (2005) points to a number of conceptual and empirical difficulties. One main conceptual obstacle is that financial development involves the analysis of the institutions that affect finance and the context (political, cultural, and geographic). In fact, these elements also play a role with respect to question (3): In certain contexts, financial transactions may give rise to financial instability and crisis episodes that may have deleterious effects on domestic financial development. The research concerning the problems associated with question (3), however, was not necessarily motivated by the issue of financial development. Neither did it follow the guidelines of a unified research agenda or conceptual framework. Indeed, the findings were generated by studies that focused on specific issues, such as the design of prudential regulations or the study of financial crises and sudden stops. Although important findings exist concerning, say, the interactions between micro regulations and systemic risk, or the effects of sudden stops on domestic financial stability, a deeper analysis of the implications for financial development is still pending. Indeed, one of the main purposes of the following sections is to elaborate on such implications.

The goal of this paper is to discuss the problems of domestic financial development in Latin America. This means that we will focus on issues related with questions (2) and (3). Section II presents and analyzes a set of stylized facts concerning the Latin American financial system and its evolution during the “second globalization” period. Section III discusses the dynamics of financial development. We emphasize three issues: the role of crises and reforms as drivers of change; the links between liquidity generation and financial stability; and the coordination failures associated with low financial deepening. We conclude by analyzing the challenges associated with growth-friendly financial development, focusing on systemic factors, institution building and volatility.
II. Stylized facts about the Latin American Financial System

In this section we discuss a number of stylized facts about LA financial systems. We examine the size, structure, and the changes in the regulatory framework and focus on those aspects that are relevant to the two questions on financial development posed above.2

Size

The size (relative to GDP) of Latin American financial systems is significantly smaller in Latin America than in developed countries. This is true of all segments: the banking system and the stock and bond markets.

<table>
<thead>
<tr>
<th>High income countries</th>
<th>Credit to private sector / GDP (1)</th>
<th>Private bonds capitalization / GDP (1)</th>
<th>Public bonds capitalization / GDP (1)</th>
<th>Stock market capitalization / GDP (1)</th>
<th>Credit volatility (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD</td>
<td>66.8%</td>
<td>17.3%</td>
<td>23.8%</td>
<td>124.3%</td>
<td>15.4%</td>
</tr>
<tr>
<td>Non OECD</td>
<td>114.9%</td>
<td>50.2%</td>
<td>43.6%</td>
<td>95.7%</td>
<td>23.5%</td>
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<tr>
<td>Developing countries</td>
<td></td>
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<tr>
<td>Latin America &amp; Caribbean</td>
<td>30.9%</td>
<td>n.d.</td>
<td>n.d.</td>
<td>37.5%</td>
<td>28.7%</td>
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<tr>
<td>Largest countries (LAC-7)</td>
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<tr>
<td>Argentina</td>
<td>10.9%</td>
<td>7.6%</td>
<td>27.6%</td>
<td>33.3%</td>
<td>32.4%</td>
</tr>
<tr>
<td>Brazil</td>
<td>31.1%</td>
<td>14.9%</td>
<td>44.0%</td>
<td>56.0%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Chile</td>
<td>61.9%</td>
<td>16.5%</td>
<td>11.8%</td>
<td>107.3%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Colombia</td>
<td>30.9%</td>
<td>0.5%</td>
<td>31.2%</td>
<td>38.1%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Mexico</td>
<td>14.8%</td>
<td>16.3%</td>
<td>18.6%</td>
<td>35.3%</td>
<td>29.6%</td>
</tr>
<tr>
<td>Peru</td>
<td>17.2%</td>
<td>3.7%</td>
<td>9.5%</td>
<td>51.8%</td>
<td>20.4%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>12.8%</td>
<td>0.6%</td>
<td>77.7%</td>
<td>3.6%</td>
<td>28.7%</td>
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<tr>
<td>Other selected LA countries</td>
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<tr>
<td>Dominican Republic</td>
<td>18.6%</td>
<td>n.d.</td>
<td>n.d.</td>
<td>n.d.</td>
<td>11.7%</td>
</tr>
<tr>
<td>Uruguay</td>
<td>22.5%</td>
<td>n.d.</td>
<td>n.d.</td>
<td>0.6%</td>
<td>40.2%</td>
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<tr>
<td>Ecuador</td>
<td>22.1%</td>
<td>n.d.</td>
<td>n.d.</td>
<td>8.9%</td>
<td>11.9%</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>33.6%</td>
<td>n.d.</td>
<td>n.d.</td>
<td>7.8%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Guatemala</td>
<td>29.0%</td>
<td>n.d.</td>
<td>n.d.</td>
<td>n.d.</td>
<td>17.4%</td>
</tr>
<tr>
<td>Panama</td>
<td>76.7%</td>
<td>n.d.</td>
<td>n.d.</td>
<td>31.9%</td>
<td>11.7%</td>
</tr>
<tr>
<td>El Salvador</td>
<td>41.3%</td>
<td>n.d.</td>
<td>n.d.</td>
<td>24.6%</td>
<td>21.7%</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
<td>39.7%</td>
<td>17.4%</td>
<td>29.7%</td>
<td>49.4%</td>
<td>25.5%</td>
</tr>
<tr>
<td>Europe &amp; Central Asia</td>
<td>30.1%</td>
<td>n.d.</td>
<td>22.6%</td>
<td>26.6%</td>
<td>45.1%</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
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<tr>
<td>South Asia</td>
<td>31.1%</td>
<td>0.9%</td>
<td>29.6%</td>
<td>31.9%</td>
<td>19.5%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>16.2%</td>
<td>14.3%</td>
<td>28.8%</td>
<td>38.6%</td>
<td>21.3%</td>
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</tbody>
</table>

Notes: (1) Year 2006; (2) Average 1995-2007

Source. Beck et al. (2006) and WDI data

Private bank credit as a percentage of GDP in Latin America and the Caribbean is smaller than in OECD countries and other emerging regions, such as East Asia (see Table 1). This is true, as a rule, for the seven largest countries (LAC-7), with the exception of Chile, and other smaller countries, with the exception of Panama, which is a dollarized international financial center. Nevertheless, banks are key suppliers of

2 We do not intend to present a full description of the region’s financial system. For a thorough analysis of the Latin American banking systems, see IDB (2005), for capital markets, Schmukler and de la Torre (2007) and for bond markets, Borenztein et al. (2008), Jeanneau, and Tovar (2008a), and Jeanneau, and Tovar (2008b).
domestic financing because the markets for corporate bonds are thin and, although market capitalization is comparable to other developing regions, stock markets are not dynamic sources of investment financing. Note, however, that there are important disparities. The Chilean level of financial development stands out: market capitalization has grown substantially and is approaching the level corresponding to OECD countries. Brazil and Peru, in turn, show above-average market capitalization, although the level is well below the Chilean.

The high frequency of financial crises has unquestionably harmed financial development in LA. Argentina and Mexico are good (note the high volatility of the credit supply). The banking sectors of these two countries were severely hit by crises and banks have not yet been able to rebuild the banking system’s ability to generate an adequate supply of credit. The case of Mexico is striking for its low credit/GDP ratio because the crisis took place more than a decade ago and the Mexican government has been engaged in an active program to increase credit to business firms and households in recent years (Haber, 2009). Argentina’s post-crisis financial policies have been somewhat erratic, even though the financial position of both the private and the public sectors improved substantially. The counterpart of disintermediation in Argentina has been an increasing demand for foreign assets. The Argentine and Mexican post-crisis experiences suggest that, under certain circumstances, crises can induce path dependency.

**Regulatory changes**

The regulatory framework of the banking sector has been substantially reformed in the last two decades in line with the BIS standards and other best-practice guidelines pushed by the IFIs. The process embraced the entire region and resulted in a Copernican change in the situation of financial repression that McKinnon had described in the seventies. According to the IDB (2005), all LA countries claim to follow a Basel methodology and to have established capital requirements equal to or stricter than the 8 percent minimum. Likewise, on paper, supervisory powers are similar to those in developed and developing countries.

There are, however, a number of pending issues concerning the implementation of regulations and supervisory practices. First, differences exist between *de jure* and *de facto* supervisory powers. In practice, there still are problems of related lending, the lack of diversification, and delayed remedial actions. For example, flawed supervision was an important cause of the crisis in the Dominican Republic in the 2000s. Second, the IDB report finds that the average Latin American and Caribbean countries are compliant with only half of the 30 Basel Core Principles for Effective Banking Supervision. This impinges on the correct valuation of assets and on the appropriate treatment of non-performing loans and the banks’ provisions for loan losses. Third, despite the frequent occurrence of aggregate financial stress, prudential regulations do not take into account, as a rule, systemic features, such as the degree of overall currency and maturity mismatches in the system. In addition, the treatment of lending to the sovereign has been a source of instability. In calculating capital requirements, government loans are typically given a zero risk weight. When negative shocks hit the economy, banks tend to increase the holdings of government debt and this often results in the undercapitalization of banks, which are unable to face situations of stress, as was the case in Argentina in 2001.
The flaws in bank regulations and supervisory practices have played a central role in explaining some of the observed crises. However, as Ocampo (2003) forcefully argues, we should not overlook the fact that it was the deregulation of the capital account that played a role in the generation of crises. Capital inflows contribute to exacerbating credit booms and in most cases crises are the result of poorly managed booms. In this regard, after evaluating the empirical evidence, Aizenman (2002) concludes that there is solid evidence that financial opening increases the chance of financial crises. Reinhart and Rogoff (2009) find that the frequency of banking crises has increased after the break-up of the Bretton Woods system and after financial international capital account liberalization took root. Periods of high international capital mobility have repeatedly produced international banking crises. They also corroborate previous findings that systemic banking crises are typically preceded by asset price bubbles, large capital inflows and credit booms. The evidence shown in their paper indicates that the LA performance after the 1980s is consistent with this fact. IDB (2005) and Calvo et al. (2008) emphasize the linkage between sudden stops and banking crises. According to IDB (2005), countries facing different macro fundamental were hit at the same time in the LAC-7 by external shocks and this was accompanied by a de-leveraging of domestic debt and a real depreciation of the currency. About 56 percent of sudden stops have materialized together with banking crises and this percentage is much higher in the cases in which the country is dollarized or has a fixed exchange rate regime.

Two other important consequences of privatization and deregulation have been the increase in the participation of foreign banks and the reduction in the market share of public banks. Despite this, state-owned banks still play an important role in the region. Neither foreign nor public banks, however, have played their expected role. State-owned banks as well as foreign banks have faced difficulties in expanding credit or directing credit toward small firms or sectors, while foreign banks did not behave differently in times of crisis. Likewise, bank spreads tend to move in a pro-cyclical way. The IDB report highlights that public banks reduce borrowing costs due to lower funding costs, although they also have higher overhead costs. Another important fact is that public banks react less to macroeconomic shocks and public credit is less pro-cyclical (IDB, 2005).

Development banks have undergone important transformations but are still important, as is the case in other developing regions, notably South Asia and Sub-Saharan Africa. ALIDE, the association of LA development banks, has some 120 members. There has been an increment in the number of banks that operates as second-tier institutions and an increasing emphasis on co-financing and the involvement of private agents. The largest bank operates in Brazil (BNDES) and the most important institutions are located in this country, Mexico and Argentina. Development banks may have a critical role in market creation within a context in which deregulation has not been successful at generating a robust market for long-term credit, venture capital and supplying services to small debtors (Calderon, 2005).

Equity markets gained momentum in the nineties thanks to privatizations, which increased the supply and fostered the demand for domestic shares while attracting a large amount of foreign investment. A consolidation process followed the first wave of the divestiture of public enterprises and many firms were acquired by foreign corporations, which in some cases de-listed the firm. Indeed, corporate issuers have tended to migrate to international financial centers, the main vehicle being the ADR...
(American Depositary Receipts). Another element that negatively influenced equity markets was the 1998 crisis and the subsequent fall in equity issuance.

In the last years there has been a larger reliance on bond issuance by private firms. The size of private bond markets increased, especially in Mexico and Chile and also in Colombia and Brazil. The shift in favor of bond financing was favored by the demand for fixed-income by institutional investors, which have become more important hand-in-hand with the reform of the pension system. Derivatives markets, in turn, are thin and account for a tiny fraction of world markets. The largest markets are in Argentina, Mexico and, particularly, Brazil – where liquidity is high. OTC transactions are important but are more opaque and this harms the price revelation function of capital markets (see Schmukler and de la Torre, 2007 and Borensztein et al., 2008).

**Banks and markets**

Figures 1 and 2 illustrate a well-known fact: the supply of credit to the private sector and market capitalization as percentage of GDP are positively correlated with GDP per capita. The credit ratios corresponding to the LAC-7 economies fall below the ratio that would be predicted based on the region’s per capita GDP with the exception of Chile. The graph corresponding to stock market capitalization confirms that Chile leads the region followed by Brazil and Peru.

**Figure 1**

**Credit/GDP Ratio and Per Capita GDP**

Source. Beck et al. (2006) and UN data
The public bonds/GDP ratio is comparable to the ratios observed in other regions. Although debt markets were geared toward international markets in the nineties, in the 2000s the share of domestic public debt has risen and most domestic public debt is now in local currency or indexed to the CPI (Cowan et al., 2006). In addition, the maturity of domestic public debt has lengthened. Domestic public and corporate bond markets have developed further, notably in Brazil but also in Mexico, Colombia, and Chile. The access of SMEs to the bond market, nonetheless, remains highly restricted (See Schmukler and de la Torre (2007) and Borenztein et al., 2008).

Using a cluster analysis, García Herrero et al. (2002) show that there are important disparities within LA and distinguish four different levels of development. Chile and Panama are in the most advanced cluster. Panama is a small dollarized economy. Chile, in contrast, has a domestic currency, conducts an independent monetary policy, and has instituted an inflation targeting regime. Financial depth in Chile is well above the region’s average. With regard to the three largest LA economies, financial depth in Brazil is higher than in Mexico and Argentina, which lag behind. A good number of LA countries, in turn, are classified in the two least developed clusters (see Herrero et al., 2002).

The Latin American financial system is often said to be bank based and, in fact, banks are relatively more important than in emerging Asia. However, given the small scale of financial intermediation and markets in the region, this classification may be a source of confusion. There is no structural similarity between the LA systems and the classical German or Japanese prototypes. The bank-based and market-based prototypes represent
two alternative ways of performing the same financial functions, but in LA some of such functions are not fulfilled by intermediaries or markets and are internalized within firms, governments, and households or are simply not fulfilled. The LA structures are not scaled-down versions of the full-scale bank-based prototype and have not shown a clear tendency to develop and improve the way in which they fulfill the basic financial functions, with the exception of Chile. Figures 3 and 4 show that the observations corresponding to all segments of the LAC-7 financial systems tend to cluster within the lower left-hand rectangle below international averages; that is, both markets and the banking system are small. This is in line with the finding that it is financial development and not the bank-based vs. market-based distinction that explains the differences in growth (Levine, 2002).

Figure 3
Stock Market Capitalization/GDP Ratio and Private Credit/GDP Ratio

![Figure 3: Stock Market Capitalization/GDP Ratio and Private Credit/GDP Ratio](source: Beck et al. (2006) data)
In sum, these facts suggest that a number of the region’s financial systems are probably caught in a low financial development trap. It is important to note that though banks and markets may be substitutes at the micro level, important systemic complementarities exist between the different segments of the financial system, which cannot be exploited when both banks and markets are small. As is well known, systemic complementarities lead to externalities. Complementarities can be generated by many sources: Schmukler and de la Torre (2007) call attention to the fact that there is a bank at the end of any transaction in the capital markets and, additionally, banks frequently act as market makers; therefore, weak banks mean low tradability of securities and low market liquidity because there can be important agglomeration and networking effects. Deepthi et al. (2003) argue that mutual funds and other segments of capital markets are complementarities because they contribute to increasing transactions and, hence, induce positive transaction externalities. In the next section, we will elaborate on the role that the structural features that we have identified may have in potentially generating a low financial development trap.

Source: Beck et al. (2006) data
The stylized facts that we have discussed indicate that LA financial systems present important structural imbalances. In addition to hindering the system’s performance of the five functions identified in the literature, these imbalances may also produce dysfunctions, such as financial instability. We believe that the analysis of the dysfunctions and the process of their creation may contribute to understanding the impediments to financial development and to improving the design of financial regulations. We will now analyze five features of LA financial systems that will be useful in clarifying these points.

**Small size**

The small size of the banking system makes it difficult to exploit scale economies, which are important in the business of financial intermediation. García Herrero et al. (2002) find evidence that bank efficiency – measured by the net interest margin – broadly goes hand in hand with bank size and that the efficiency of the region does not rank well internationally.

When the size of the banking system is small, interest rate spreads (the gap between the interest rates charged on loans and the return on deposits) tend to be higher. According to the IDB (2005), spreads are effectively high in the region, as are real interest rates. Of course, high spreads and interest rates may also reflect market power but IDB (2005) and García Herrero et al. (2002) find that there is still a low level of bank concentration compared with other regions of the world, despite bank consolidation and the entry of foreign banks. The degree of market power, nonetheless, is difficult to assess and highly idiosyncratic\(^3\). The work of Haber (2009) on Mexico is a good illustration. The charge for interest margins at the largest banks is no higher than their smaller competitors; however, they earn rents from market power through subtle oligopoly pricing strategies. The banks charge fees and commissions above those that would prevail in a more competitive market to maintain accounts and process payments. To obtain a loan the borrower must have an account at the bank that is extending the loan. He argues that an efficient way to increase credit is to facilitate market entry.

Beyond the static effects on the cost of credit, a small-scale banking system has long-run effects on financial development because, as was mentioned above, strategic complementarities exist between banks and markets. More specifically, the size of the banking system has a bearing on this because banks usually act as market makers and LA is no exception. Since banks have access to cheap liquidity sources of funds, they are usually tempted to act as market makers to profit from the high spreads that are typical of illiquid markets. They will also find it profitable to invest in information to

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\(^3\) Other idiosyncratic variables that affect spreads and show a large degree of cross-country variation are the risk of defaults on loans, underlying regulations, and bank taxation. Soundness indicators, such as asset quality and risk-weighted capital, nevertheless, fare relatively well (Garcia Herrero et al., 2002).
profit from possible misalignments in security prices. Indeed, banks enjoy a competitive advantage because of the combination of better information and access to cheap liquidity. However, the smaller the size of the banking system, the weaker market making activity will be and, under these conditions, markets will be thinner and the existence of significant gaps between prices and fundamental values will be more probable. In this way, the small size of the banking sector becomes an obstacle to improving market liquidity in LA.

**Market liquidity**

We must take into account, nonetheless, that overall liquidity conditions depend not only on market liquidity but also on funding liquidity. Montes-Negret (2009) defines market liquidity as the ability to trade an asset at short notice, at low cost and with little impact on price; and, funding liquidity, as the ability of banks to meet their liabilities, or unwind or settle their positions as they come due.

The level of market liquidity in LA tends to be deficient. There are a number of structural features that impinge on this fact. One main obstacle is the small size of security markets and the reduced value traded, which makes prices volatile and may give rise to huge increases in the bid-ask spread when uncertainty increases. Although stock market capitalization and value traded have increased since the eighties and have substantially increased in the case of Brazil, value traded is still much lower than in East Asia, where value traded hovers around 100 percent of GDP. Another negative feature is that the market turnover ratio is not only low but highly unstable and pro-cyclical (see Table 2).

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<tr>
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<tbody>
<tr>
<td>Argentina</td>
<td>12,24%</td>
<td>0,91%</td>
<td>9,85%</td>
</tr>
<tr>
<td>Brasil</td>
<td>46,72%</td>
<td>30,83%</td>
<td>56,10%</td>
</tr>
<tr>
<td>Chile</td>
<td>15,51%</td>
<td>5,96%</td>
<td>22,82%</td>
</tr>
<tr>
<td>Colombia</td>
<td>7,83%</td>
<td>2,37%</td>
<td>13,04%</td>
</tr>
<tr>
<td>Mexico</td>
<td>30,92%</td>
<td>24,00%</td>
<td>30,78%</td>
</tr>
<tr>
<td>Peru</td>
<td>39,28%</td>
<td>9,21%</td>
<td>8,75%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>13,06%</td>
<td>2,07%</td>
<td>9,98%</td>
</tr>
</tbody>
</table>


Trading in bond markets is higher but is dominated by public sector debt and repo operations. In Brazil, for example, repo transactions exceed the value traded of the underlying assets and the market is more liquid (Schmukler and de la Torre, 2007). A second structural obstacle is related with the characteristics of investors, which do not help to increase the volume of transactions. Institutional investors are less important.  

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4 Note that banks have incentives to invest in information despite information externalities because high market risk acts as a barrier to entry (which reduces the external effects). In any case, it is also true that over-the-counter operations explain a good part of the transactions in LA and they are more opaque.
than in developed countries, although pension funds have helped to increase the size of the markets hand-in-hand with the privatization of social security. Chile has led this process. The effect of pension funds on liquidity, however, is lower because they privilege buy-and-hold strategies. Owing to regulations, their portfolio composition is biased in favor of the highest rated securities. Retail investors are not significant; a large proportion of the population is poor and wealthy individuals have direct access to sophisticated portfolio managers from abroad. In addition, the mutual fund industry is small and access to capital markets is difficult for small savers (Deepthi et al., 2003). Some recent developments concerning internationalization and mergers and acquisitions constitute a third obstacle to the increase in market liquidity. Larger corporations are using ADRs more and more as vehicles to participate in international markets. As part of the trading activity has moved abroad, the trading activity in domestic markets tends to fall. This process has had the collateral benefit of improving corporate governance to the extent that good governance is a prerequisite to cross-listing the shares in global markets. But it has also contributed to deepening market segmentation: Smaller firms can only access a domestic market in which value traded has weakened. The participation of domestic bond-issuers in foreign bond markets has also grown, although the largest proportion of the instruments traded corresponds to government bonds. In sum, migration to international markets might increase segmentation because well-known firms have better access (Schmukler and de la Torre, 2007).

**Funding liquidity**

Beyond their role concerning market liquidity, banks are key suppliers of funding liquidity to the rest of the system. As Tirole (2009) highlights, banks affect both types of liquidity as part of the process of liquidity and asset-liability management. One main obstacle for LA banks is that the average maturity of bank deposits tends to be short and money markets are limited – although there are exceptions concerning the latter, notably Brazil. It is no wonder, then, that banks privilege short-term lending as a way to control the degree of maturity mismatch between credit and deposits. Indeed, the low capacity to generate funding liquidity associated with the short-term maturity of deposits and credits is common within the LAC-7 group (see Garcia Herrero et al., 2002, Tovar, 2007). This harms the system’s ability to generate liquidity, giving rise to potential aggregate liquidity problems.

The banks’ decision not to generate higher funding liquidity because they believe that their own access to future funding liquidity may be difficult creates a low-funding-liquidity equilibrium in which both deposits and credits will be short term and funding liquidity will be scarce. This is why a key indicator that financial development is effectively materializing is the lengthening of the term-to-maturity of deposits and lending. The increase in bonds’ maturity is also a positive indicator. This has occurred in Chile and also in Mexico and Brazil (see Jeanneau and Tovar, 2008a). The case of Chile, where bank credit and capital markets have grown hand-in-hand, also suggests that there are strong complementarities between improved funding and market liquidity.

**Systemic risk**

A low-liquidity-equilibrium financial system, in which both market and funding liquidity are low, is prone to induce sizable expectational errors and to bear a substantial amount of systemic risk. In effect, low market liquidity is associated with higher
volatility and more frequent and significant misalignments between prices and fundamentals. Under these conditions, unmet expectations can easily push the agent from a speculative to a Ponzi situation. These risks create a demand for hedging instruments as well as for flexible access to funding liquidity to re-shape the balance sheets after the occurrence of a shock. But markets and liquidity-generating intermediaries do not develop or are very weak in a low-liquidity equilibrium and, consequently, liquidity squeezes and solvency problems are likely to be more frequent. This latter fact will probably increase systemic risk to the extent that payment failures may induce negative externalities. Tirole (2009) calls attention to the influence of cross-exposure in the financial system: if there is cross-exposure, a small shock to one institution or the economy may propagate quickly, generating contagion, panics and aggregate liquidity shortages.

The central banks are in a privileged position to deal with aggregate liquidity and systemic risk to the extent that they have the instruments to help banks manage funding liquidity. The Latin American experience, however, suggests that their room to maneuver is very limited. For example, to ensure the liquidity of banks and debtors during the financial stress episodes of the eighties, the central banks from a number of LA countries allocated rediscount loans to banks but the associated increase in the money supply fueled inflation and destabilized the nominal anchor. Argentina, for example, suffered a hyperinflationary episode in the late eighties and four other countries experienced similar episodes. This means that the close link between aggregate liquidity and the stability of the economy’s nominal anchor poses strict limits on the ability to allocate rediscount loans to illiquid or distressed banks. The central bank must preserve the value of the central bank money, which provides a generally accepted means of exchange and a means for the denomination and settlement of contracts. Deposit insurance mechanisms are alternatives for providing liquidity under stress. However, the experience in the region indicates that weak supervision can be a source of moral hazard and, therefore, of systemic risk.

Many countries in the region instituted inflation targeting regimes and have made significant progress in securing a credible anchor for nominal contracts. This is the case, for example, of Chile, Colombia, Peru, Brazil and Mexico (see Chang, 2007). If this effort is not accompanied by a framework to ensure banking stability, however, a problem of time inconsistency could arise. If the central bank does not act as a lender of last resort to control for inflation, market participants may expect banks to be directly or indirectly bailed-out by the treasury and they may fear that the treasury will be unable to repay its debts. Reinhart and Rogoff (2009) highlight that past financial crises have resulted in large increases in the public debt and, frequently, in defaults. Hence, the central bank’s low-inflation commitment may be time-inconsistent. To avoid this problem, the government must guarantee the sustainability of the public debt. This indicates that the ability of the central bank to generate aggregate liquidity during a period of financial stress, the monetary regime, and public debt sustainability are inextricably related because of the possibility of policy-dominance effects (Togo, 2007).

Dollarization also has a bearing on the central bank’s ability to deal with aggregate liquidity problems. If the country is fully dollarized, the central bank cannot act as lender of last resort. In those countries in which the banking system is dollarized and banks are exposed to exchange rate risks because they have a mismatch between foreign liabilities and domestic assets, the central bank will probably not generate excessive liquidity out of a “fear of floating”: the authorities fear that if they let the currency float
and there is a large depreciation, the banks might go bankrupt. This strategy typically results in high and volatile interest rates that may harm financial stability and the sustainability of the public debt, as Blanchard (2004) emphasized in analyzing the case of Brazil.

International markets can be a source of liquidity. However, abundant evidence shows that capital flows behave pro-cyclically. This fact has been intensively researched (see Ocampo, 2003, Ocampo and Stiglitz, 2008, Kawai and Takagi, 2008; Kose et al., 2009). For our discussion it suffices to highlight that when domestic liquidity conditions worsen and foreign investors risk losing capital or having it frozen during a bankruptcy or public debt restructuring, they withdraw capital and unwind positions.

Finally, the institutions of the international financial architecture (IFA) could act as the spare wheel concerning liquidity generation. However, the resources that international financial institutions (IFIs) provided to counterbalance capital outflows and ease the credit crunch in the past did not suffice to significantly smooth aggregate fluctuations. More often than not, the conditionality attached to the funds did not help, either. In the context of the 2008 crisis, nonetheless, we can see some progress toward a more flexible approach. The IMF has approved changes in its lending framework, the most important being the creation of the Flexible Credit Line for crisis prevention and the “modernization” of the conditionality. Also highly relevant were the liquidity swap facilities that the Fed set up with the central banks of Brazil and Mexico as part of the anti-crisis efforts in 2008.

**Crises**

The factors that feed systemic risk also have a bearing on financial crisis. This is not surprising since crises are systemic phenomena. Note that the crises that occurred in Latin America during the second globalization have been closely associated with capital flows. On the one hand, the seeds of financial collapses are typically planted during credit booms associated with surges in capital inflows. On the other, when the bust occurs, the belief that the government will monetize the debt or will fall into financial default triggers flight to quality episodes. Since quality is associated with foreign assets, episodes of financial stress usually give rise to currency runs and large currency depreciations. In analyzing the occurrence of “twin” banking and credit crises of the type that occurred in Mexico, Kaminsky and Reinhart (1999) find that problems in the banking sector typically precede a currency crisis and that the currency crisis deepens the banking crisis, activating a vicious spiral. They also find that financial liberalization often precedes banking crises.

Crisis in the region have other important characteristics that should be taken into account when analyzing dysfunctionalities and traps. First, they frequently embrace various segments of the financial system (see Tovar, 2007). Laeven and Valencia (2008) identify different types: banking, currency, and sovereign debt. In total, they counted 124 banking crises and found that several countries experienced multiple crises. In the case of the LAC-7 countries it is possible to identify 14 banking crises, 22 currency crises and 7 debt crises. The period 2003-07 is exceptionally good given that there were no crises in LAC-7 countries.
Second, financial crises have multiple causes. Laeven and Valencia’s (2008) dataset confirms previous findings. The causes may be unsustainable macroeconomic policies (current account deficits and unsustainable public debt), excessive credit booms, large capital inflows, and balance sheet fragilities, combined with policy paralysis due to a variety of political and economic constraints. Currency and maturity mismatches were a salient feature of many financial crises, while off-balance sheet operations of the banking sector were prominent in others. In various instances, the crises were triggered by depositor runs on banks. It was very frequently observed that systemically important financial institutions were in distress.

Third, financial crises affect the public sector balance sheet. Reinhart and Rogoff (2009) analyze the evidence about banking crises from a very long-run perspective and find that banking crises weaken fiscal positions, with government revenues invariably contracting, and fiscal expenditures often expanding sharply. The fiscal burden of banking crisis extends far beyond the commonly cited cost of the bailouts (see Roubini, 2008). Three years after a financial crisis central government debt increased, on average, by about 86 percent. Indeed, a high incidence of global banking crises has historically been associated with a high incidence of sovereign defaults and the restructuring of external debt, although many now-advanced economies have graduated from a history of serial default. This is not the case of Latin America.

Fourth, financial crises may involve a large-scale redefinition of property rights. Fanelli (2008a) emphasizes this point for the case of emerging countries and, particularly, Latin America. Laeven and Valencia (2008) find that policy responses reallocate wealth toward banks and debtors and away from taxpayers to help restart productive investment. Aizenman (2002) argues that, on the darker side of globalization, financial crises increase the scope for conflicts and the key issue is not only the ultimate distribution of the burden of adjustment between the debtors and creditors, but also the length of time it would take to settle the dispute. Fanelli (2008a) states that the conflicts involving property rights increases uncertainty and feed macroeconomic volatility and, under such conditions, the functioning of institutions will worsen. This may give rise to a vicious circle because crises and distributional conflicts simultaneously harm and call for better regulations and conflict-management institutions. Fanelli (2008b) and Magendzo and Titelmann (2008) analyze the way in which Argentina (a failed reform) and Chile (a successful reform) faced this problem.

In sum, although it is true that progress has been made in creating markets, instruments, and institutions, as well as in managing monetary policy, the dysfunctionalities that remain are important. It seems sensible that any attempt at accounting for financial development in Latin America will have to take into account these facts.
IV. Conclusions

Three questions stand out concerning LA financial development: first, can the financial system develop endogenously departing from the existent initial conditions, which include dysfunctional elements? Second, who/what are the drivers of change? Third, under what conditions do the changes that are necessary to release the pro-development forces lead to stable dynamics? The functional approach provides specific answers to the first two questions but the answers to the third are far less clear cut and so are, therefore, the policy and regulatory prescriptions.

The four boxes in Diagram 1 summarize the logic of the functional approach to financial development.

Diagram 1
The Functional Approach to Financial Development

The upper rectangle shows the drivers of change according to the functional view. The drivers are associated with financial innovations that seek to minimize transaction costs and promote institutional change: technology, learning, market competition, and deregulation. Rajan (2005) argues that there is circular causation: technology helps spur deregulation, which, in turn, creates a larger market in which technologies can be utilized, creating further technological advances. Within this process, products offered initially by intermediaries will ultimately move to markets because markets are more efficient than intermediaries when the products have standardized terms, can serve a large number of customers, and are well-enough understood by transactors. All these changes will improve the financial functions listed in the right-hand rectangle of the diagram. Furthermore, increased volume reduces marginal transaction costs and, in this way, the process pushes the economy toward the theoretically limiting case of zero marginal transactions costs and dynamically complete markets. Market frictions appear at the center of Diagram 1 because, according to Levine (2005, 2008), financial development occurs when financial instruments, markets, and intermediaries ameliorate – although they do not necessarily eliminate – the effects of information, enforcement, and transactions costs.
This view provides a rudimentary theory of institutional change. The basic intuition is that the particular institutions and organizational forms that arise within the financial system, at a given place and moment, represent an endogenous response to minimize the costs of transaction frictions and behavioral distortions in executing the financial functions common to every economy (Merton and Bodie, 2005).

If the functional view about the change drivers and endogenous institutional change were correct, we should see an endogenous increase in the supply of securitized instruments, higher market liquidity, and increasing risk-absorbing capacity in the system after liberalization. Although some of these developments were observed, there are important features of the Latin American experience that are difficult to account for in terms of this view.

First, with few exceptions, the size of the system and market liquidity did not increase substantially. Under these conditions, the process of financial deregulation has been prone to generate instability because of the difficulties to manage liquidity, solvency, and systemic risks. Large fluctuations in aggregate liquidity and boom-burst credit cycles associated with volatile capital flows were frequently observed. Beyond these effects on short-run stability, the long-run evolution of the overwhelming majority of the region’s financial systems did not result in the weakening of negative structural features, such as the lack of scale, short-termism, and the exclusion of a good part of the population from financial markets. Some countries, however, have shown progress concerning de-dollarization and the lengthening of maturity (Jeanneau and Tovar, 2008a).

Second, while deregulation was a driver of change in LA, the process differed substantially from the one envisaged by the functional theory. On the one hand, deregulation was not primarily pushed by private sector-led endogenous innovations and technical change but rather by conscious government efforts to promote financial development and adapt to exogenous changes in the global economy. On the other, crises have been a prime driver of changes in the LA financial structure and, more often than not, the changes have harmed rather than fostered financial development. The functional view considers that crises are part and parcel of the learning process and, hence, of development; crises are generated by incidents of faulty engineering, whose consequences will be subsequently corrected as part of the learning process (Merton and Brodie, 2005). The effects of errors, and therefore crises, are fully reversible. The cases of Argentina and Mexico indicate, however, that this is not the case in LA. Indeed, the two drivers of change, reforms and crises, have been closely intertwined: financial and capital-account liberalization often resulted in severe financial stress while regulatory reforms were often triggered by crises.

These facts suggest that the functional approach has not paid enough attention to the role of dysfunctionalities in financial development, as well as to the constraints that instability and a volatile environment pose on the government’s ability to impulse institutional change ("reforms"). This explains the difficulties to address the third question, concerning financial stability and the design of regulations. Diagram 2 will be useful in briefly analyzing the policy implications of these conclusions.
On the basis of the discussion in Section III, the diagram shows the relationships between structural features and dysfunctions. The four hexagons correspond to the structural features (thin markets, dollarization, etc.) while the dashed rectangles represent the associated dysfunctions (weak market liquidity, deficient supervision, and so on). The circles represent the rules of the game that impinge on the functioning of the financial system. They identify “nodes” for policy action. Since policy actions involve changes in laws and regulations, it is only natural to conclude that institutional change is inherent to financial development.

The “prudential regulations” node is critical for any attempt to increase financial deepening, improving liquidity (market and funding), and to control undue mismatches (term and currency). We have seen that LA countries have made important efforts to improve the regulatory framework but there is still much to be done not only because of the important remaining structural weaknesses but also because LA will have to adapt to the regulatory reforms to be implemented in the rest of the world.
The evidence reviewed indicates that, in designing the prudential framework, it is central to consider both solvency and liquidity generation and mismatches. The LA countries have adopted the guidelines of Basel I but it is now widely recognized that these regulations induce pro-cyclicality. Many practical questions, nonetheless, remain concerning what instruments would best be used to achieve regulatory counter-cyclicality (see Ocampo and Griffith-Jones, 2009). Among the instruments that can be used are counter-cyclical capital requirements, specific provisions for latent risks of new lending (in line with the system implemented in Spain), counter-cyclical leverage and limits on loan-to-collateral value ratios to reflect long-term trends rather than cyclical variations (although identifying the trend in LA can be daunting). To avoid crises, it is central to monitor currency and maturity mismatches (particularly for non-tradable sectors). In the case of LA, however, excessive complexity should be avoided. In some cases it may be preferable to use simpler instruments like limits on the growth of bank credit and liquidity requirements based on imbalances in the maturities of assets and liabilities in the banks’ balance sheets. Nonetheless, there may be a trade-off between the goal of minimizing systemic risks and the goal of accelerating financial development. To strike a balance between the two goals is no easy task.

From our analysis it follows that the “macroeconomic regime” node deserves particular attention. It is necessary to ensure the coordination between monetary, fiscal, and financial policies to avoid dominance effects. The sustainability of public debt is vital to the credibility of prudential regulations and the central bank. To be sure, we are not overlooking the progress concerning the policies that have improved the authorities’ ability to manage systemic risk. Inflation has fallen in the region, public debt sustainability has been strengthened and the LA countries have invested heavily in self-insurance via reserve accumulation.

Indeed, it may be argued that self-insurance policies may harm domestic financial development. Self-insurance, supported by current account surpluses, means that a good part of domestic savings will be allocated to finance reserve accumulation rather than to investment and this means less productivity-enhancing financial intermediation. This is why policy initiatives involving the IFA node can make a contribution. The design of better mechanisms to manage international liquidity in line with the “new” approach of the IMF as well as regional efforts –like the Chiang Mai Initiative and the FLAR– and swaps agreements between central banks can help reduce the costs of and incentives for self-insurance.

One important task for financial development policies is to design institutional mechanisms to internalize systemic effects. One key challenge is to exploit the strategic complementarities between banks and markets and create suitable conditions for intermediaries and institutions to create sufficient liquidity. In this regard the state and development banks have a natural role in promoting market-making activities and widening access to credit to those segments of the population that are currently excluded from financial markets.

Diagram 2 is useful in highlighting that financial-friendly initiatives must take into account the interactions between different segments of the legal and regulatory framework. Two facts are worth mentioning in light of the LA experience. First, there are several nodes of rules involved and these nodes have connections with other social
and economic spheres. For example, there is a consensus in the literature that the quality of the legal and judicial framework has an important bearing on financial efficiency and LA is no exception (IDB, 2005). However, the financial policy initiatives that target this node should be designed taking into account that the legal framework must be functional to a diversity of social and political goals –from political stability to the protection of consumers. If this fact is overlooked, the space for reform will be overestimated. In Paraguay, for instance, some capital market reforms faced significant difficulties because they were based on legal norms pertaining to a different legal tradition.

Second, beyond extra-financial effects, the initiatives that target one specific node is likely to affect several parts of the financial system itself and will thus call for suitable changes in the norms corresponding to other regulatory nodes. Ocampo (2003) emphasizes that macroeconomic policies, capital account, and prudential regulations must be coordinated. For example, changes in the prudential regulation node without taking into account pro-cyclical effects of capital adequacy can result in an increment in systemic risk. Likewise, isolated changes will invite regulatory arbitrage and may foster non-financial firms’ leverage. Hence, prudential regulations must be complemented with work on the node of macroeconomic policies, capital account regulations and the IFA. The newly created FSB can potentially play a key role in achieving a higher degree of consistency between the IFA and national prudential regulation frameworks. The shock-absorbing ability of the system can be substantially strengthened by giving more importance to these coordination problems.

In sum, this evidence suggests that financial development is not a matter of corner solutions. It seems that the institutional changes that are relevant to finance are neither fully endogenous nor fully exogenous. More specifically, the Chilean case –as well as the more recent developments in Brazil– indicates that it is possible to build the rules of the game “from within” the institutions that were inherited. Mexico and Argentina, on the other hand, illustrate the role of endogenous dysfunctionalities: the effects of the dysfunctionalities were stronger than the beneficial effects of reforms in terms of financial development. Furthermore, all these experiences indicate that institution building is a process rather than an act. The distributive conflicts associated with crises affect the polity’s ability to build the regulatory framework that is necessary to strengthen financial development (Fanelli, 2008). This said, we should not overlook that the theory of financial institution building is still rudimentary. Three critical points are: (a) how to build in a volatile environment; (b) how to build in the context of globalized financial markets; and (c) how to build if building capacity is low. Promoting financial deepening has much more to do with market creation than with market liberalization and market creation is an institution-building intensive task.
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