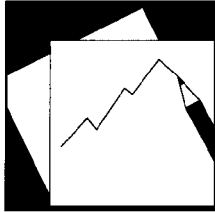


The Development of Local Capital Markets: Rationale and Challenges



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IMF Working Paper

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Abstract

Capital markets can improve risk sharing and the efficiency with which capital is allocated to the real economy, boosting economic growth and welfare. However, despite these potential benefits, not all countries have well developed capital markets. Moreover, government-led initiatives to develop local capital markets have had mixed success. This paper reviews the literature on the benefits and costs of developing local capital markets, and describes the challenges faced in the development of such markets. The paper concludes with a set of policy recommendations emerging from this literature.

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I. INTRODUCTION

The development of local capital markets has been a long-standing policy question. Over the past decades, many countries have implemented significant reforms to foster domestic capital market development. Such reforms were often preceded by or part of broader reform agendas to develop financial systems and make them more integrated with the global market, including the removal of restrictions and controls on banking and the capital account. This promotion of capital market development was actively encouraged by international organizations and standard setters such as the IMF, the World Bank, and the OECD. The view was that the development of local capital markets, by fostering financial development and financial integration, would promote economic growth through improving the efficiency of capital allocation and allowing for better risk sharing. Moreover, the development of local bond markets was seen as critical for governments to finance large fiscal deficits without having to resort to financial repression or foreign borrowing with exchange rate risk and to facilitate the sterilization of large capital inflows (Turner, 2002).

However, despite these potential benefits and good intentions, the performance of capital markets in these countries has been mixed. While some countries have been able to develop sizeable and liquid local capital markets, others have seen their markets stagnate or even collapse, despite well-intended and recurring government interventions. Moreover, many of these markets, especially in emerging market economies, have been subject to volatile international capital flows, leading some to question the benefits of financial deepening and financial globalization more generally (see, for instance, Stiglitz, 2002; and Arcand, Berkes, and Panizza, 2012). The recent global financial crises that followed a prolonged boom in financial leverage, and the reversal of capital flows to emerging market economies that ensued, has reinvigorated this debate (Milesi-Ferretti and Tille, 2011; Lane and Milesi-Ferretti, 2012).

This paper reviews the state of the literature on the benefits and cost of developing local capital markets, giving an overview of the challenges faced in the development of such markets, including preconditions needed and potential undesirable consequences of local capital market development. Our focus will be on local bond markets, which have proven to be more difficult to develop than domestic equity markets in most countries (Herring and Chatusripitak, 2001), although much of the analysis also applies to equity markets and other capital markets, such as derivatives markets.

The paper should not be read as a policy guide for the development of local capital markets as optimal policy will depend on country circumstances, including a country's stage of development and sequencing of other reforms. Moreover, the merits of local capital markets will have to be continuously reevaluated going forward against the backdrop of technological advances and an increasingly globalized world that will make it easier to access international capital markets.

The paper proceeds as follows. Section 2 will provide the rationale for local capital market development. Section 3 gives an overview of the current level of development of local markets around the world. Section 4 will offer an overview of the challenges faced in the development of local capital markets. And Section 5 concludes with a set of policy recommendations derived from the literature.

II. THE RATIONALE FOR LOCAL CAPITAL MARKETS

Local capital markets offer several benefits to borrowers and investors, including governments. They provide for better risk sharing and a more efficient allocation of capital. And they improve the implementation of fiscal, monetary, and exchange rate policy. These benefits occur through a number of complementary channels.

First, local bond markets allow governments to finance large fiscal deficits without having to resort to financial repression or foreign borrowing. Indeed, the impetus for the development of local bond markets typically came from the government to facilitate the financing of large deficits (Turner, 2002). Financing deficits through financial repression by forcing local banks to hold government paper retards the development of the domestic banking sector and foreign borrowing in hard currency exposes countries to exchange rate risk.

Second, the development of money and bond markets supports the conduct of monetary policy. Money and bond markets provide instruments needed for the implementation of monetary policy and improve the transmission mechanism of monetary policy (IMF, 2004). Long term bonds also facilitate sterilization operations by the central bank because sterilization that relies exclusively on short-term instruments tends to drive up short-term interest rates and encourage further inflows into such instruments. And long-term bond markets give valuable information for the conduct of monetary policy, including expectations about macroeconomic developments and reactions to monetary policy changes, and thus help the operation of monetary policy.

Third, the development of local capital markets can improve the availability of long term financing, allowing households and firms to better manage interest rate and maturity risk associated with long-term investments (such as investments in equipment, machinery, land and buildings) by allowing for a better match between the duration of financial assets and liabilities. This benefit applies foremost to the development of a local bond market and the derivatives markets that support it, but the development of equity markets can also improve firms' access to long-term capital.

Fourth, the development of local capital markets can improve access to local currency financing. Local currency bond markets can offer local currency investors, such as retail and institutional investors, a way to borrow or invest in local currency and better manage inflation and exchange rate risk. They also provide a safe alternative investment to local currency bank deposits. And relative to foreign currency markets they can make the country

less vulnerable to sudden stops and exchange rate shocks (see Gormley et al., 2006). Governments are also major benefactors of local currency bond markets because it allows them to finance fiscal deficits by borrowing from domestic markets without exchange rate risk.

Fifth, local capital markets allow for financial deepening alongside the development of banking markets, improving the efficiency of capital allocation in the economy. Bond finance provides healthy competition to bank loans and offers relatively cheap financing to large, reputable firms that have the scale and credentials to tap long-term capital markets. And the discipline of the market will improve the quality and disclosure of information that firms provide to markets and firm performance more generally.

Sixth, local capital markets, when opened to foreign investments, increase financial integration by attracting foreign capital, which can lower the cost of capital for local firms and household and improve risk sharing across countries. This could also improve market access and relieve credit constraints on small and medium-sized enterprises (see, for example, Eichengreen, Borensztein, and Panizza, 2006). However, the liberalization of financial markets can also result in the migration of trading to international financial sectors, hampering domestic market development. For example, high-quality firms may try to escape local markets, lowering the average quality of local issuances (see, for instance, De la Torre, Gozzi, and Schmukler, 2006). Or local listing or disclosure requirements may be relaxed to prevent trading activity from moving abroad, with negative implications for investor protection. The net effects of the internationalization of financial markets for the local development of markets in developing economies and emerging markets is therefore ambiguous.²

Finally, the development of local capital markets can enhance financial stability by enhancing the ability of financial institutions to manage risk. For example, interest rate derivatives can be used to manage interest rate risk and credit derivatives can be used to manage credit risk. Moreover, a more diverse financial system that includes capital markets alongside banking markets tends to be more stable and better able to absorb shocks. For example, bond markets can act as a “spare tire” to bank finance in case of banking crises, thus helping to absorb the shock of bank distress. For example, in the midst of the Korean financial crisis of 1998, corporate bond markets provided almost all the funds raised by firms, with firms bypassing a troubled banking system. However, it is generally only large firms (see, for example, Gormley, Johnson, and Rhee, 2006).

These benefits are not mutually exclusive and tend to reinforce each other. For example, the development of local currency markets, by providing for safe assets in local

² For a review of the literature on the benefits and costs of financial globalization more generally, see Kose, Prasad, Rogoff, and Wei (2009).

currency, can enhance economic stability both directly by improving the ability of investors to manage exchange rate shocks but also indirectly by enhancing the stability of the financial system.

III. THE CURRENT STATE OF DEVELOPMENT OF LOCAL CAPITAL MARKETS

Capital markets have expanded in many countries in recent decades, especially in emerging markets (as noted by Mihaljek, Scatigna, and Villar, 2002). For example, total debt securities outstanding grew by close to 50 percent from 47 percent of GDP in 1994 to 72 percent of GDP in 2010 globally but this was outpaced by a fourfold increase from 13 percent of GDP in 1994 to 54 percent of GDP in 2010 in upper middle income countries. Similarly, the capitalization of stock markets (relative to GDP) saw an increase of about 50 percent globally but a more than twofold increase in upper middle income countries over this period. Domestic private bond markets saw the most rapid increase over this period among bond markets in upper middle income countries, increasing almost six times from 2.4 percent of GDP in 1994 to 13.3 percent of GDP in 2010. By 2010, domestic bonds accounted for 79 percent and public sector bonds for 56 percent of bonds outstanding. Public sector bonds issued in domestic markets remain the most widespread type of bonds (in both high income and middle income countries), followed by private sector domestic bonds and public and private sector international bonds (see Table 1).

However, there is much variation in the development of the local markets by income level, especially in the development of domestic private bond markets. For example, while domestic private bonds accounted for 30 percent of bonds outstanding in high income countries and 25 percent of bonds outstanding in upper middle income countries, it only accounted for 4.5 percent of bonds outstanding in lower middle income countries.

Moreover, while local markets grew in most countries over this period, they contracted in some. For example, the capitalization of stock markets in low income countries decreased from 24 percent of GDP in 1994 to 20 percent of GDP in 2010. And among this group of developing economies, many have seen the number of listings and market liquidity decrease over the past two decades as a growing number of firms have raised capital abroad through cross-listings or international capital issuances. In many developing and emerging economies, local capital markets remain highly illiquid and segmented, with trading and capitalization concentrated on a few securities (see, for instance, De la Torre, Gozzi, and Schmukler, 2008).

And while the focus of this paper is on local capital markets it is also noteworthy to point out that international debt issues have grown more rapidly than domestic bond issues, which indicates that international listings and security issuances remain a more attractive form of capital raising for many borrowers and investors in these economies and that there are factors hampering the development of local capital markets.

Table 1. The development of international and domestic bond and equity markets

As % of GDP	Total bonds outstanding		Outstanding domestic private debt securities		Outstanding domestic public debt securities		Outstanding international private debt securities		Outstanding international public debt securities		Stock market capitalization	
	1994	2010	1994	2010	1994	2010	1994	2010	1994	2010	1994	2010
World	47.1	72.2	17.0	22.9	23.5	34.2	2.8	9.1	3.8	6.0	24.1	37.8
High income	66.8	109.6	27.5	33.3	28.1	35.0	7.3	33.5	4.0	7.7	34.1	58.2
Upper middle income	13.3	53.6	2.4	13.3	8.1	31.3	0.6	2.9	2.2	6.0	14.6	33.3
Lower middle income	42.0	35.3	0.9	1.6	35.0	29.2	2.1	2.1	3.9	2.4	18.6	20.0
Low income	...	...	...	...	...	...	...	...	...	...	24.1	19.9

Source: Bond market data from Bank for International Settlements (BIS); GDP data from International Monetary Fund (IMF); Stock market data from Global Stock Markets Factbook and Standard & Poor's.

Moreover, the upward trend in capital market development over the past two decades should be seen in historical perspective. For example, Rajan and Zingales (2003) show that many countries were more financial developed in 1913 than in 1980 and only recently have they surpasses their 1913 levels. They argue that local interest groups play an important role in driving reforms that foster or hamper local market development, with incumbents favoring more market friendly and free trade policies in the pre-1913 era and recent decades than in the interim period. This means that reversals in local market development are not uncommon and driven by factors other than legal and institutional constraints.

IV. CHALLENGES IN THE DEVELOPMENT OF LOCAL CAPITAL MARKETS

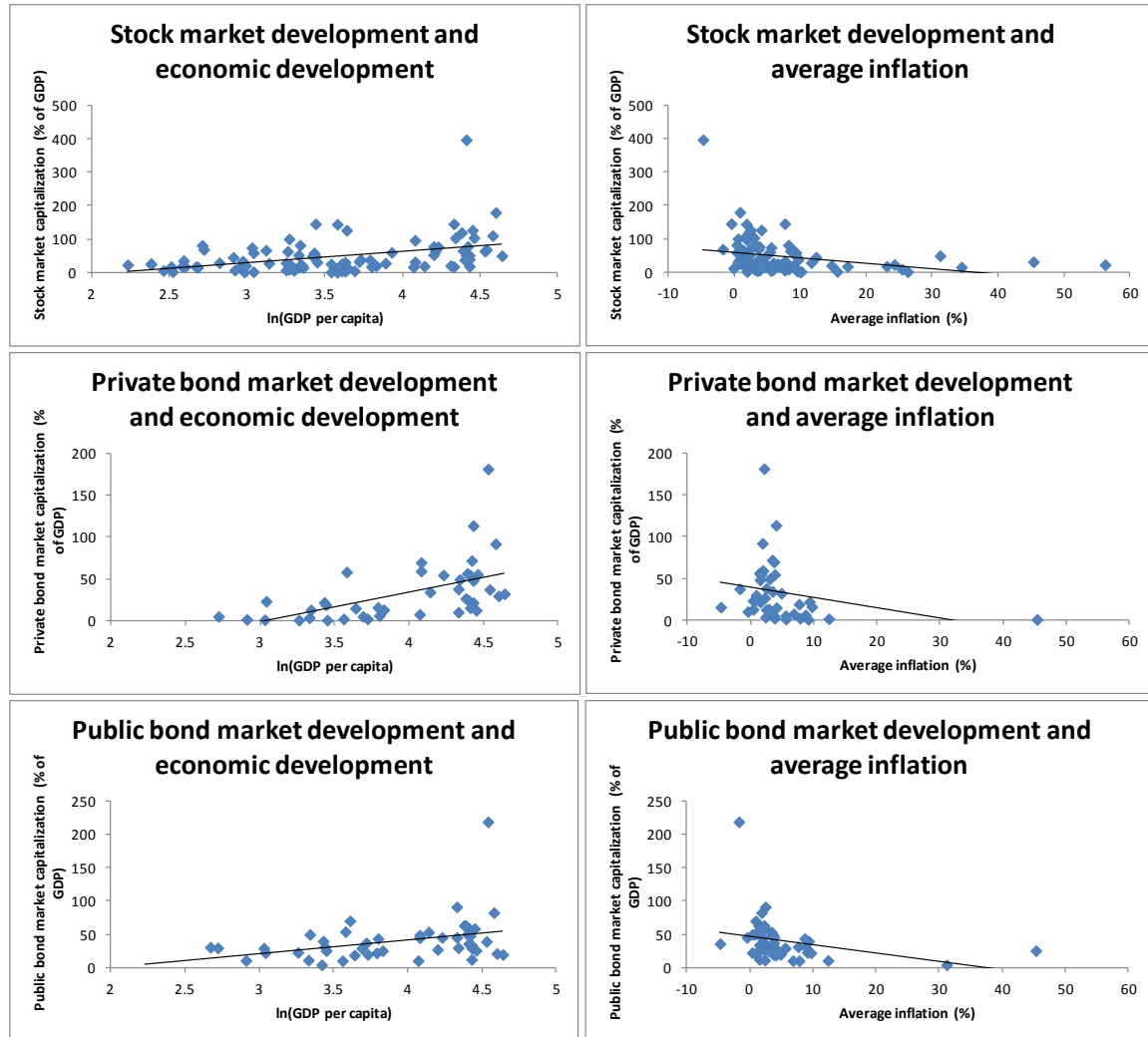
The proper functioning of local capital markets requires that several conditions are met. These preconditions can broadly be classified into three groups: sound macroeconomic policy, strong institutional and legal setting, and a well-functioning financial infrastructure. Moreover, markets cannot flourish without meeting a minimum size. Without these preconditions, government efforts to develop local capital markets are bound to fail, resulting in shallow markets and duped investors, and it is therefore generally advisable to sequence financial reforms such that these conditions are sufficiently in place before local capital markets are established.

A. Stable macroeconomic policies

A sound macroeconomic framework and stable macroeconomic policy is needed to attract foreign capital and to ensure that monetary policy actions can be taken without causing excessive interest rate volatility that would interfere with the development of bond markets. And governments must adopt a clear issuance strategy and debt management framework so that investors can anticipate a reliable supply of fixed-income securities. For example, Burger and Warnock (2006) find that countries with stable inflation rates (a proxy for creditor-friendly policies) have more developed local bond markets and rely less on

foreign currency-denominated bonds. Figure 1 confirms the findings in this research by showing that local capital markets are more developed (measured using market capitalization relative to GDP) in richer countries and in countries with lower inflation rates. This is the case both for equity markets and public and private bond markets.

Figure 1. Local market development and macroeconomic conditions, 2013



Notes: Stock market capitalization, private bond market capitalization, and public bond market capitalization are measured at end-2013. GDP per capita is measured in 2003. Inflation is average percentage change in the GDP deflator over the period 1999-2003.

Sources: World Bank Financial Structure Database, LaPorta, Lopez-de-Silanes, and Shleifer (2006), Djankov, McLiesh, and Shleifer (2007), and Djankov, LaPorta, Lopez-de-Silanes, and Shleifer (2008).

The lack of sound macroeconomic policies are not only an impediment to the development of local capital markets but also become a major source of weakness for the economy once local capital markets are developing and become more integrated with global

capital markets, making the country more vulnerable to volatile capital flows, exchange rate volatility and financial crises. It is therefore critically important that countries continue to exert sound macroeconomic policies as they open up their capital markets to foreign capital.

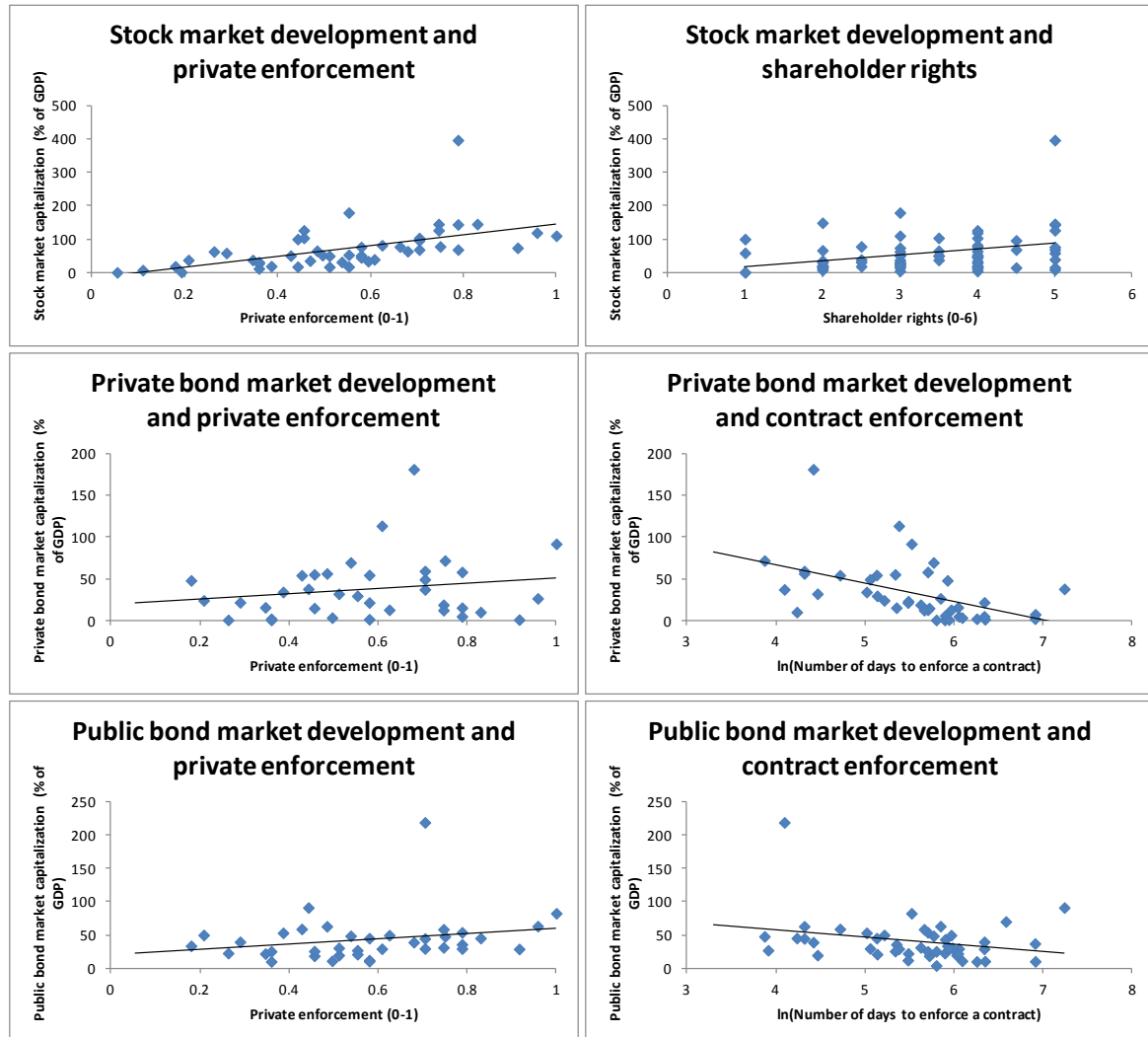
B. Strong legal and institutional environment

Strong institutions and a well-functioning legal system are also critical for the development of local markets because they provide the basis for the protection of investor rights, including minority interests, to attract widespread interest from investors and ensure that creditors are repaid in an orderly fashion. For example, Burger and Warnock (2006) and Burger, Warnock, and Warnock (2012) find that countries with creditor-friendly laws (i.e., strong creditor rights) and stable macroeconomic policies have more developed local bond markets. Similarly, Eichengreen and Luengnaruemitchai (2006) find that Asian capital markets, where creditor and investor rights tend to be stronger and contract enforcement less costly, tend to be more developed than those in Latin America. More generally, economies with investor-friendly laws tend to have deeper capital markets (see, for instance, LaPorta, Lopez-de-Silanes, Shleifer, and Vishny, 1997, 1998) and the firms in such economies tend to obtain higher stock market valuations (as shown by LaPorta, Lopez-de-Silanes, Shleifer, and Robert Vishny, 2002).

Figure 2 corroborates these findings by showing that stock markets, public bond markets, and private bond markets are all more developed (in terms of market capitalization) in countries with stronger private enforcement of securities laws and regulations, stronger investor rights, and strong contract enforcement.

Investor-friendly laws can exist across a variety of legal systems. Whereas La Porta et al. (1997, 1998) find that over the period 1980-2000, common law countries tended to offer more legal protection for investors and that these countries had larger capital markets, Rajan and Zingales (2003) show that in 1913 French civil law countries tended to have more developed capital markets than their common law counterparts. Additionally, Musacchio (2008) finds ample variation in the development of local capital markets in a single country – Brazil – with a French civil law tradition that cannot be explained by legal origin alone. This implies that while the legal protection of investors has an important bearing on local capital market development, the link between legal origin and capital market development is not obvious.

Figure 2. Local market development and institutional setting, 2013



Notes: Market capitalization is measured at end-2013. Private enforcement is an index of private enforcement of securities laws and regulations from LaPorta, Lopez-de-Silanes, and Shleifer (2006), ranges from zero to one, and is the mean of (1) the Disclosure Index and (2) the Burden of proof index. The index of disclosure equals the mean of: (1) Prospect; (2) Compensation; (3) Shareholders; (4) Inside ownership; (5) Contracts Irregular; (6) and Transactions. And the burden of proof index is the mean of: (1) Burden director; (2) Burden distributor; and (3) Burden accountant. Shareholder rights is the anti-directors index from Djankov, LaPorta, Lopez-de-Silanes, and Shleifer (2008). The index of anti-director rights is formed by adding one when: (1) the country allows shareholders to mail their proxy vote; (2) shareholders are not required to deposit their shares prior to the General Shareholders' Meeting; (3) cumulative voting or proportional representation of minorities on the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting is less than or equal to ten percent; or (6) when shareholders have preemptive rights that can only be waived by a shareholders meeting. The range for the index is from zero to six. Number of days to enforce a contract is the number of days to resolve a payment dispute through courts (i.e., to enforce a contract of unpaid debt worth 50 percent of the country's GDP per capita) from Djankov, McLiesh, and Shleifer (2007). The variable is constructed as at January 2003 and described in more detail in Djankov, LaPorta, Lopez-de-Silanes, and Shleifer (2003). Sources: World Bank Financial Structure Database, LaPorta, Lopez-de-Silanes, and Shleifer (2006), Djankov, McLiesh, and Shleifer (2007), and Djankov, LaPorta, Lopez-de-Silanes, and Shleifer (2008).

Until the 1930s, securities markets were largely left unregulated and concentrated among private exchanges. A rise in reported market abuses in the “roaring” 1920s and the US stock market crash of 1929 led to the Securities Act of 1933 and the Securities Exchange Act of 1934, which together provided the legal and regulatory foundation to restore investor confidence.

Broadly speaking, securities laws exist to reduce the “promoter’s problem” in security issuance, which is the risk that corporate issuers sell bad securities to the public (Mahoney, 1995). However, there exist different views about the need for securities market regulation. Early research on the topic argued that securities markets should be left unregulated (Grossman and Hart, 1980; Grossman, 1981), with the market mandating optimal disclosure and monitoring compliance to facilitate trading (Benston, 1973; Fischel and Grossman, 1984) and auditors and underwriters certifying the quality of securities being offered (Chammanur and Fulghieri, 1994; De Long, 1991). More recent research argues that regulation is needed to standardize the private contracting framework and prevent investors from being duped, with laws mandating the disclosure of information for issuances and specifying the liability standards facing issuers and financial intermediaries in case investors seek payment for damages when information is inaccurate or material information is withheld (see, for instance, Easterbrook and Fischel, 1984; LaPorta et al., 2006). It is now widely acknowledged that securities laws are critically important for the development of securities markets.

Yet, securities laws differ a great deal across countries. LaPorta et al. (2006) find that laws mandating public disclosure and facilitating private enforcement through liability standards benefit the development of securities markets, while public enforcement of securities laws has little impact. This suggests that securities laws that empower the market by setting mandatory disclosure and liability standards are to be preferred over laws that focus primarily on regulatory enforcement of laws.

At the same time, strong securities laws and investor rights may be insufficient for the development of local capital markets (notably equity and corporate bond markets) if corporate ownership is concentrated and corporate governance is weak. In such environments, corporate governance reforms may be needed to support investor rights. Such reforms could focus on encouraging stronger oversight of corporate boards or the removal of barriers to takeover threats.

Claessens, Klingebiel, and Lubrano (2000) show that poor corporate governance (as reflected in high ownership concentration and poor oversight of institutional investors) together with high taxation on capital issuances constituted a major impediment to the development of equity markets in Brazil in the 1990s, with the value of corporate control from ownership concentration being estimated to be much higher than in most other countries. They argue that with stronger corporate governance, the cost of capital would be

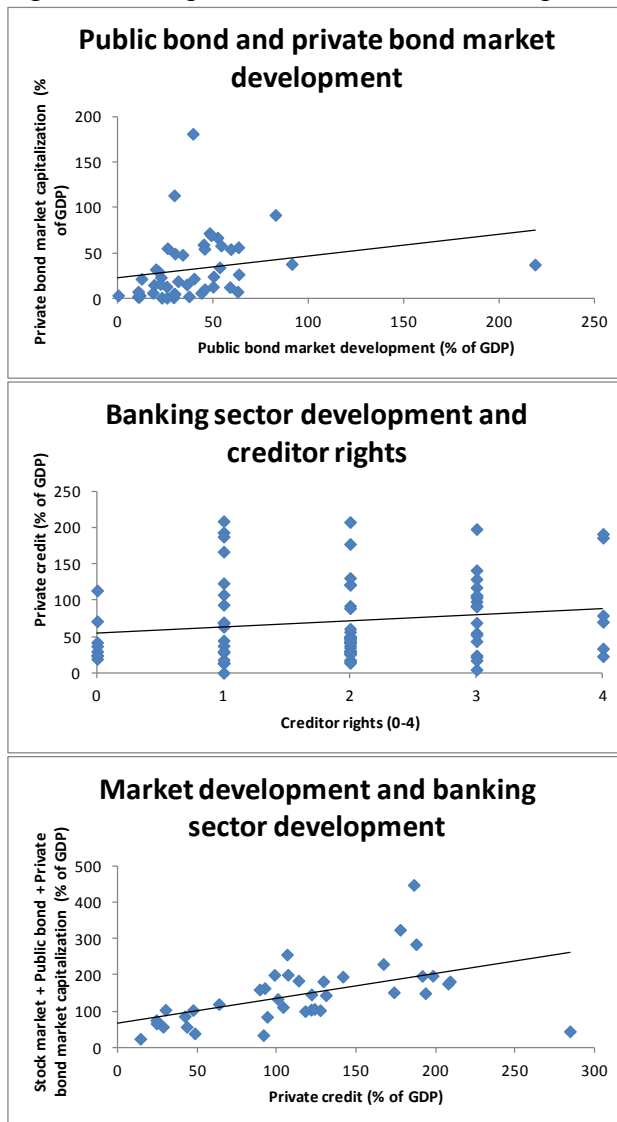
reduced. This would boost firm valuation and make it easier to attract capital, including from abroad, with positive ramifications for local market development.

One challenge is that institution building takes time and requires a sustained and broad political consensus. In reality, announced market-oriented policies are often reversed or not fully credible initially (see, for instance, Eichengreen, Borensztein, and Panizza, 2006). The sustainment of market-oriented policies such as privatization and liberalization programs represents a major test of political commitment to safer private property rights. This can have a significant effect on local market development through the resolution of policy risk and the building up of investor confidence (as shown by Laeven and Perotti, 2010).

The same creditor-friendly policies and laws that foster the development of local bond markets also foster the development of the banking system. Depositors, just like bond investors, demand a stable, safe return on their investments. Moreover, in many countries, banks are major holders of local bonds which are generally seen as safe assets or serve as collateral and are thus a captive market for government bonds (Hawkins, 2002). This implies that banking and bond market development feed each other, and policies to promote a sound banking system will support the development of local bond markets as well. Indeed, Burger and Warnock (2006) find that countries with more developed banking markets tend to have more developed local bond markets, suggesting that the two markets complement each other. Similarly, Eichengreen and Luegnaruemitchai (2004) show that economies with more competitive banking sectors tend to have more developed bond markets. Figure 3 confirms these findings that suggest a complementary between the development of banking and local bond markets. Local capital markets (i.e., stock and bond markets taken together) tend to be more developed in countries with more developed banking markets (as measured using the ratio of credit to the private sector to GDP). Moreover, countries with a more developed banking sector tend to have a stronger protection of creditor rights, just as the protection of investor rights is an important predetermining factor in the development of local capital markets.

However, the co-development of banking and local bond markets can also be a double-edged sword. Local bond markets have often been developed by governments with a view to facilitate the placement of longer dated government paper at local banks to finance large fiscal deficits. Such directed lending to government by banks as a captive domestic audience is a form of financial repression that gives rise to an excessively close connection between government and banks (Reinhart and Sbrancia, 2011). Another example of an undesirable close connection between banks and sovereign is the euro area today where large holdings of domestic government bonds create a vicious cycle between weak sovereigns and weak banks (Gennaioli, Martin, and Rossi, 2013).

Figure 3. Complementarities in the development of local markets, 2013



Notes: Stock market capitalization, private bond market capitalization, and public bond market capitalization are measured at end-2013. Private credit is credit to the private sector by banks and non-banking institutions (as a percent of GDP), measured at end-2013. Creditor rights is an index of creditor rights, following La Porta et al. (1998) and obtained from Djankov, McLiesh, and Shleifer (2007) for January 2003. A score of one is assigned when each of the following rights of secured lenders are defined in laws and regulations: 1) there are restrictions, such as creditor consent or minimum dividends, for a debtor to file for reorganization; 2) secured creditors are able to seize their collateral after the reorganization petition is approved, i.e., there is no "automatic stay" or "asset freeze"; 3) secured creditors are paid first out of the proceeds of liquidating a bankrupt firm, as opposed to other creditors such as government or workers; 4) management does not retain administration of its property pending the resolution of the reorganization. The index ranges from 0 (weak creditor rights) to 4 (strong creditor rights).

Sources: World Bank Financial Structure Database, LaPorta, Lopez-de-Silanes, and Shleifer (2006), Djankov, McLiesh, and Shleifer (2007), and Djankov, LaPorta, Lopez-de-Silanes, and Shleifer (2008).

Simple regression analysis that simultaneously consider the role of macroeconomic conditions, institutional quality and banking sector development, confirm the patterns seen in Figures 1 to 3. When using the sum of the market capitalization of equity, private bonds, and public bonds divided by GDP as proxy for a country's local market development, we find that private enforcement of securities laws, shareholder rights and the enforcement of debt contracts continue to be positively associated with local market development even after controlling for the level of economic development and average inflation rate in the country. Moreover, we find that the size of the domestic banking system continues to be positively associated with local market development after controlling for per capita income and inflation. The results are presented in Table 2. These findings suggest that the legal and institutional environment exerts an independent influence on local market development over and above the macroeconomic conditions in the country.

Table 2. Local market development, macroeconomic conditions, and institutional setting

Dependent variable:	(1)	(2)	(3)	(4)
Local market development/GDP (%)				
Private enforcement of securities laws	202.67*** (41.05)			
Shareholder rights		33.22*** (9.40)		
Debt contract enforcement			-37.27*** (12.46)	
Private credit/GDP (%)				0.89*** (0.24)
Average inflation (%)	-1.78 (1.33)	-2.77 (1.76)	-3.22* (1.87)	-2.15 (1.51)
ln(GDP per capita)	62.99*** (16.40)	63.77*** (17.63)	37.86** (18.39)	4.63 (20.40)
Observations	36	41	42	35
R-squared	0.57	0.51	0.41	0.52

Notes: Dependent variable is the local market development, defined as the sum of stock market capitalization, private bond market capitalization, and public bond market capitalization expressed as a percentage of GDP. Private enforcement of securities laws is an index of private enforcement of securities laws and regulations from LaPorta, Lopez-de-Silanes, and Shleifer (2006), ranges from zero to one, and is increasing in the degree of private enforcement. Shareholder rights is the anti-directors index from Djankov, LaPorta, Lopez-de-Silanes, and Shleifer (2008), ranges from zero to six, and is increasing in the degree of property rights protection for shareholders. Debt contract enforcement is the natural logarithm of the number of days to resolve a payment dispute through courts (i.e., to enforce a contract of unpaid debt worth 50 percent of the country's GDP per capita) from Djankov, McLiesh, and Shleifer (2007). The variable is constructed as at January 2003 and described in more detail in Djankov, LaPorta, Lopez-de-Silanes, and Shleifer (2003). Private credit is credit to the private sector by banks and non-banking institutions (as a percent of GDP), measured at end-2013, from the World Bank Financial Structure database. Average inflation is average percentage change in the GDP deflator over the period 1999-2003. ln(GDP per capita) is the natural logarithm of per capita GDP measured in 2003. Inflation and GDP per capita variables are from Djankov, McLiesh, and Shleifer (2007). Reported coefficients are obtained using OLS regressions. Huber-White standard errors are reported between brackets. ***, **, and * denotes statistical significance at the 1%, 5%, and 10% level, respectively.

C. Financial infrastructure

Sound macroeconomic policies and a strong legal framework and institutional setup alone are not sufficient for capital markets to flourish. They need to be complemented with a well developed financial infrastructure to facilitate trading and the exchange of information.

A financial infrastructure refers to the physical underpinnings for a financial market exchange, including trading platform and trading system, as well as the regulatory apparatus and industry to process, evaluate, and validate the information being produced and used by the market. The trading platform could be physical or electronic. The regulatory apparatus will consist of a securities market regulator, together with any self-regulation imposed by the market itself. The regulator's job is to issue and enforce public regulations and promote the private disclosure of information and private enforcement of rules. The rating process will be generated and supported by rating agencies and credit guarantors.

The efficiency and security with which securities issues can be listed and traded on the exchange together with the quality and flow of information to value securities will to a large extent determine the market's success. Unfortunately, for many small investors and small and medium-sized firms seeking to tap financial markets to raise additional capital, large fixed costs associated with accessing such markets are too steep to make such financing economical. Such fixed costs come in the form of listing requirements, transaction costs and taxes, and the costs associated with hiring an internationally recognized auditor.

Moreover, the quality of information disclosed to investors often leaves much to be desired. In principle, reputational concerns should provide incentives to issuers to disclose accurate information in a timely fashion and to their auditors to verify such information for accuracy. However, agency conflicts and short-term oriented profit objectives can get in the way. For example, corporate governance at issuing firms may be weak or there may be conflicts of interests between issuers, rating agencies, and auditors. This is particularly problematic for the development of bond markets which requires reliable, publicly disclosed information.

A number of papers have found that investors value information disclosure, including when mandated by the regulator. For example, Greenstone, Oyer, and Vissing-Jorgenson (2006) find that firms whose stocks are traded over the counter enjoyed positive abnormal returns following the 1964 amendments to the US Securities Act which extended the mandatory disclosure requirements that had applied to listed firms also to firms traded over the counter. And Simon (1989) finds that the dispersion of abnormal returns was significantly reduced following the introduction of the 1933 Securities Act (even though Stigler (1964) and others have found that the average return enjoyed by investors did not increase following the mandated disclosure of financial information).

The creation of a well-functioning financial infrastructure is not without hurdles. The development of local capital markets therefore typically evolves in stages, with the

development of local equity markets and government bond markets preceding those markets that require a more developed financial infrastructure and a stronger legal framework and contract resolution, such as local currency and corporate bond markets. Corporate bond markets also differ from government bond markets in that they require a more developed private sector which is often weak in developing countries and emerging market economies. Market development begins from the fiscal side, starting with a short instrument and then moving to longer dated instruments in government securities. While local government bond markets are often created by governments to finance large deficits, the development of equity and corporate bond markets typically start as private sector initiatives, with the government influencing the development through legislation, standard setting, supervision, and the provision of a financial infrastructure (Schinasi and Smith, 1998).

Unlike bond markets, equity markets can develop even in environments with weak financial infrastructures and weak investor rights because the unlimited potential upside return of an equity contract can compensate for the perceived riskiness of the claim in an environment with a weak financial infrastructure and weak property rights. Bonds, for which the upside is limited by the promised interest rate, require a much better financial infrastructure (including proper disclosure and reliable bond ratings) and a strong enforcement of creditor rights to attract potential investors (see, for instance, Herring and Chatusripitak, 2000).

D. Market size and complementarity

Even in the absence of institutional, legal, and technological barriers, local markets in many emerging economies often lack the critical mass of investors needed to provide for market depth and liquidity (see, for instance, Eichengreen, Borensztein, and Panizza, 2006). Governments in such economies can jump-start market development by opening up to foreign investors (though this has to be carefully weighed against the risks of financial integration).

The development of local pension funds can provide another impetus to local market development, especially bond markets (as shown by Giannetti and Laeven, 2009, in the case of Sweden). Pension funds need to invest in longer date instruments for asset-liability management purposes and therefore can provide a stable market base for local bond and equity markets. A good example is Chile which launched a funded pension system in 1981 which contributed to the development of local bond markets, making the Chilean bond market one of the most developed in Latin America over the next two decades (see, e.g., Cifuentes, Desormeaux, and Gonzalez, 2002).

Moreover, the creation of an institutional investor base will have positive externalities for the development of local capital markets by stimulating financial innovation and the efficient functioning of these markets. Institutional investors will exert pressures for better accounting and auditing standards as well as for a more accurate and timely disclosure of

information to investors. They will also encourage improved broking and trading arrangements and will help establish more efficient and reliable clearing and settlement facilities. Additionally, they can improve corporate sector performance by facilitating the privatization process and by promoting sound corporate governance and the dispersion of corporate ownership (Vittas, 1992). The contribution of private pension funds to the development of local capital markets in developing and emerging economies has long been limited because of investment regulations that favored investments in government bonds, but their role is increasing as these regulations are being relaxed and financial markets are being liberalized, and with it the impact on local capital market development is increasing.

Moreover, the development of some capital markets critically depends of the existence of other capital markets. For example, local currency government bond markets can be a catalyst for the development of corporate bond markets by providing a yield curve benchmark against which to price bonds, market liquidity, and price revelation. Consistent with this, Figure 3 shows that private bond markets tend to be more developed in countries with deeper public bond markets. Similarly, derivatives markets cannot flourish without well-developed markets in underlying assets and in turn spur capital market development by completing markets. Moreover, bond markets require well-developed money markets so that monetary policy actions can be taken without causing excessive interest rate volatility that would interfere with the development of bond markets.

At the same time, it should be recognized that some economies simply lack the scale to support a flourishing local capital market, even absent any economic or legal shortcomings, simply because of lack of market size. Such economies would be better served by promoting foreign listings and regional exchanges rather than investing in an illiquid, shallow market at home.

V. CONCLUSIONS

The development of local capital markets is not without challenges, especially in developing economies and emerging market economies where a small market size, weak institutions, and unstable macroeconomic policies often get in the way of providing an enabling environment for local markets to flourish. Given the political hurdles and time required to overcome these constraints, one has to be realistic about the degree of local market development that can effectively be achieved in the short term without created undue risks for investors arising from market illiquidity, securities fraud, and mispricing of securities.

A number of conclusions emerge from our analysis that can guide policymakers when making decisions about the pace and modality of local market development.

First, local markets cannot develop without sound macroeconomic policies and a legal environment that protects property rights. The mixed success of local capital market

development in developing and emerging countries can to a large extent be explained by recurring setbacks from macro imbalances and weak institutions. The government has an important role to play here. The government can provide for stable macroeconomic policies and an institutional framework that promotes investor rights. The government can also create the basic financial infrastructure needed for securities trading, including a trading platform and settlement system, and can establish the legal and regulatory framework for securities issuance, market conduct, monitoring and reporting, and clearing and settlement. Governments can also encourage the creation of rating agencies to provide the independent credit risk assessment needed for the development of local corporate bond markets.

Second, the development of local capital markets requires time and proper sequencing, as some markets require a more developed financial infrastructure and stronger legal protection to flourish. Moreover, the economic and legal environment of the country needs to be sufficiently developed before investments in market infrastructure can be expected to pay off (De la Torre, Gozzi, and Schmukler, 2008). This means there are no quick fixes: the development of markets is a gradual and interactive process, stretching over long periods of time. Additionally, many markets complement each other and this should also be taken into account when considering the optimal sequencing of capital market reforms. Finally, the sequencing of capital market reforms should be coordinated with financial liberalization, as opening up to foreign capital can invite excessive economic volatility if markets are not sufficiently developed, even when macroeconomic policies are generally sound.

Third, capital market development can be promoted by policies that increase the market size, including pension reforms, financial liberalization, and tax reforms. The creation of private pension funds can generate a large and varied investor base of institutional investors, and opening the market to foreigners through financial liberalization can further enlarge and diversify the investor base (although one needs to be careful to manage the potential increase in volatility of capital flows following financial liberalization). Moreover, corporate governance reforms that protect the interest of minority investors can enlarge the base of retail and foreign investors, and tax reforms that make the tax treatment of securities issuance and investment more attractive to issuers and investors can increase market size by increasing the supply and demand for securities.

Finally, rules that promote the disclosure of information, the standardization of securities products, and punishment of misbehavior in securities dealings will promote the development of an efficient primary market for securities issuance and cultivate an efficient secondary market.

With these conditions in place, any country can over time develop a local capital market that efficiently allocates capital to support economic growth. Such a market would consist of a primary market for equity and bond issuances in a range of standard maturities; a secondary market where price information is continuously available, transaction costs are

low, and effective custodial and safekeeping services are available; and a local currency bond market that provides for a safe asset absence exchange rate risk. However, in an increasingly globalized world, not every country needs to develop a fully fledged physical capital market at home. The optimal balance between local capital market development and integration in global capital markets will depend on country circumstances, such as economic size and stage of development.

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