INTERNATIONAL MONETARY FUND

ENHANCING FINANCIAL SECTOR SURVEILLANCE IN LOW-INCOME COUNTRIES: FINANCIAL DEEPENING AND MACRO-STABILITY

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Motivation. Shallow and undiversified financial systems in low-income countries (LICs) limit macroeconomic policy choices, hamper policy transmission and implementation, and impede opportunities for risk transfer. This is of particular concern given LICs' more pronounced vulnerability to external shocks (e.g., sharp swings in commodity prices and fluctuations in external financing). Where the policy space and instruments to mitigate the ensuing macroeconomic volatility are constrained, growth and welfare costs can be large. Consideration of the macroeconomic policy-financial deepening nexus in LICs is thus crucial for the efficacy of Fund policy advice provided in bilateral surveillance.

Objective and coverage. This paper aims to widen the lens through which surveillance is conducted in LICs, to better account for the interplay between financial deepening and macro-financial stability as called for in the 2011 Triennial Surveillance Review. Reflecting the inherent risk-return tradeoffs associated with financial deepening, the paper seeks to shed light on the policy and institutional impediments in LICs that have a bearing on the effectiveness of macroeconomic policies, macro-financial stability, and growth. The paper focuses attention on the role of enabling policies in facilitating sustainable financial deepening. In framing the discussion, the paper draws on a range of conceptual and analytical tools, empirical analyses, and case studies.

The role of policies. While considerable heterogeneity across LIC financial systems argues for different areas for deepening, the analyses point to a balance between market-friendly actions to facilitate deepening, appropriate macro-prudential oversight to avoid creating new sources of instability, and carefully calibrated public policy interventions. Lessons from cross-country experiences with financial deepening suggest that targeted and balanced initiatives to encourage competition, develop information and market infrastructure, address collateral issues, and limit excessively intrusive public sector interventions and dominance, can help overcome specific impediments to increasing depth, breadth, and reach of financial systems.

The way forward. An approach to financial surveillance in LICs that goes beyond a focus on institutional solvency and the presumption of effective market infrastructure to consider dimensions of financial deepening could provide a broader context for understanding limits on macroeconomic policy effectiveness and managing volatility in LICs. This paper is a first step in this direction, highlighting aspects of financial systems that need to be taken into account in formulating macroeconomic policy advice. Efforts in this regard are intended to complement and draw upon the vast body of work undertaken by the World Bank. Going ahead, pilot studies could be used as a vehicle to sharpen the value added of this approach in surveillance, and efforts made to close information gaps.

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I. INTRODUCTION

1. Context. The global financial crisis and recent spikes in commodity prices brought to the fore low-income countries' (LICs) vulnerability to volatile external financing flows and sharp swings in the terms-of-trade. The effectiveness of macroeconomic policy responses in these countries is conditioned importantly by features of their financial systems. Shallow and undiversified financial systems in LICs limit options for shock absorption against such events and can amplify macro-financial vulnerabilities, with adverse implications for sustained growth. In particular, they render risk diversification difficult, undermine policy flexibility, constrain the capacity for countervailing policy responses, and engender adverse macro-financial loops. With pervasive fragility and limited coping mechanisms, the potential macroeconomic, growth, and poverty repercussions can be high in these economies. These issues are no less important at the current juncture, with risks to the global economy elevated and aid envelopes constrained.

2. Deepening. Financial deepening is a multidimensional process whereby financial institutions and markets provide a range of services and instruments that allow for (i) efficient exchange of goods and services (e.g., payments services); (ii) effective savings and investment decisions, including at long maturities; and (iii) the financial sector can create a broad menu of assets for risk sharing purposes (hedging or diversification). In other words, it can be understood as a process of increasing the efficiency, depth (e.g., credit intermediation and market turnover), breadth (e.g., range of markets and instruments); and reach (e.g., access) of financial systems (Goyal et al., 2011). As such, deepening can confer important benefits for macro-stability and sustained growth. At the same time, the process of deepening can itself create new risks (e.g., from growing financial interconnectedness, challenges arising from unregulated financial innovation) that must be effectively managed.

3. Stability and development. The recognition that macro-financial stability is closely linked to financial development has led to interest by the international community in addressing these issues. A recent paper by the FSB/IMF/World Bank (2011) prepared for the G20 called for promoting financial deepening to support stability in developing economies, including LICs, alongside a concomitant strengthening of regulatory and supervisory frameworks. The 2011 Triennial Surveillance Review (IMF, 2011a) and the MD Statement on Strengthening Surveillance (2011b) identified as a priority better integration in bilateral surveillance of macro-financial stability considerations. The interplay between financial deepening, macroeconomic policies, and stability in LICs deserves particular attention.

4. Surveillance gaps. While there is broad recognition of the importance of financial deepening for supporting strong, durable growth in LICs, coverage of financial sector issues in bilateral surveillance is often narrowly focused on banking system soundness and solvency. The relationships between financial deepening, the effectiveness of macroeconomic policies, macro-stability, and growth have tended to receive cursory attention. Moreover, comprehensive data on multiple dimensions of financial systems in LICs are often missing, rendering policy analysis and surveillance challenging. Financial surveillance done in the context of IMF-Bank Financial Sector Assessment Program (FSAP) provides granularity on financial structures and country-specific developmental gaps, but the low frequency of FSAPs and the evolving structure of LIC financial systems constrain its benefits. At the same time, the extensive work done by the World Bank on financial development has been insufficiently leveraged in developing macroeconomic policy options. Careful consideration of financial deepening in formulating macroeconomic policy advice in bilateral surveillance is therefore highly desirable.

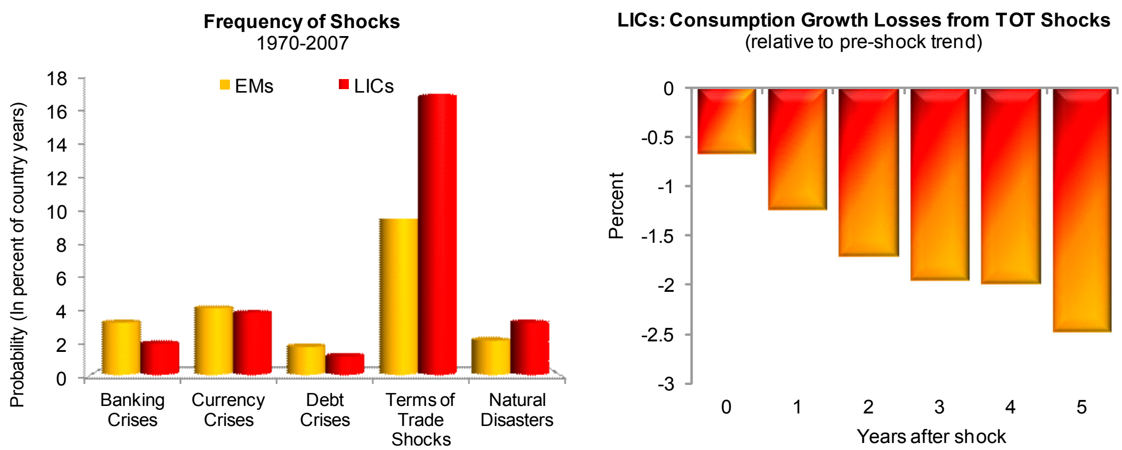
5. This paper. This paper aims to widen the lens through which financial sector surveillance is conducted in LICs, seeking to fill a critical gap in the work of the Fund in LICs. It strives to deepen understanding of the limits to effective policy implementation posed by shallow and undiversified financial systems. The paper also sheds light on the challenges to financial deepening in LICs, drawing implications for a range of analytical and operational issues. While financial stability considerations will remain central, focusing attention on policy actions to facilitate deepening, while managing attendant risks, can engender greater resilience and capacity to cope with shocks, enhance policy effectiveness, and support growth. To this end, the paper distills policy lessons from select country experiences with sustainably increasing depth (e.g., credit intermediation), breadth (e.g., range of markets and instruments), and reach (e.g., inclusion) of financial systems. The paper also addresses information bottlenecks in surveillance by providing a new IMF-World Bank macro-financial data portal for LICs, which encapsulates available information on multiple dimensions of LIC financial systems. The findings and analyses are based on a variety of official Fund documents, original research, case studies across a broad spectrum of countries, IMF-World Bank FSAP reports, and available data sources within the two institutions.

6. Structure. The rest of the paper is organized as follows. Section II highlights the challenges posed by underdeveloped financial systems for macro-stability. Section IIII documents stylized facts on financial sector deepening across LICs and emerging market countries (EMs). Section IV considers the challenges to deepening in LICs, drawing on a variety of conceptual and analytical tools. Section V examines the role of policy actions in facilitating sustainable financial deepening, drawing on an anatomy of financial intermediation across countries and time, and select case studies. Finally, Section VI sketches out implications for financial sector surveillance in LICs. Two background studies report the supporting policy notes and case studies.

II. MOTIVATION: CHALLENGES POSED BY SHALLOW MARKETS

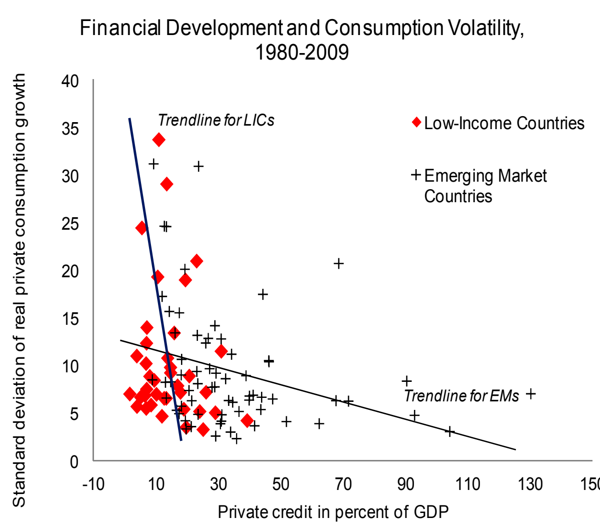
7. The issue. Underdeveloped financial systems in LICs provide inadequate shock absorption and can amplify the macro-financial vulnerabilities arising from external shocks, thereby hampering efforts to achieve strong and durable growth and poverty reduction. While mature financial systems may not prevent mispricing of risk and can prove destabilizing, as evidenced by the recent crisis, underdeveloped financial systems also impose considerable costs. These costs are higher in LICs, which are particularly vulnerable to sharp swings in commodity prices, fluctuations in external financing (e.g., aid, FDI, and remittances), and natural disasters. Underdeveloped financial systems constrain the range and efficacy of available policy instruments, impede risk transfer, and can engender adverse macro-financial feedback loops (Supplement I, Chapter I). The ensuing output, price, and fiscal volatility impose large growth and welfare losses (IMF, 2011c; Figure 1). At the same time, by channeling a larger pool of savings toward productive investment, financial deepening can foster sustained growth, the absence of which could itself be a source of instability.

Figure 1. Shock Frequency and Welfare Impacts in LICs



Source: Managing Volatility: A Vulnerability Exercise for Low-Income Countries (IMF, 2011a).

8. **Managing volatility.** Shallow financial systems imply a lack of instruments for households, enterprises, and governments to diversify risk, manage the volatility of their income streams, and insure against unexpected events. Deep financial systems, on the other hand, can alleviate liquidity constraints on firms and industries, thus reducing the volatility of investment and output. Similarly, access to insurance arrangements and savings opportunities allows households to better smooth consumption intertemporally. Empirical evidence offers a somewhat ambiguous account at the macro-level since financial deepening can also propagate the transmission of financial shocks, as evidenced by the global financial crisis. New empirical analysis, however, supports the view that deeper financial systems can moderate the amplitude of output and sectoral (consumption and investment) volatility in developing countries (Supplement I, Chapter II, text figure). Moreover, the analysis points to a U-shaped effect of financial depth on macroeconomic volatility, with financial depth amplifying volatility at very high levels, beyond



Source: WEO; Fund staff calculations.

those observed in most LICs. This suggests considerable scope for further deepening LIC financial systems to better manage volatility.

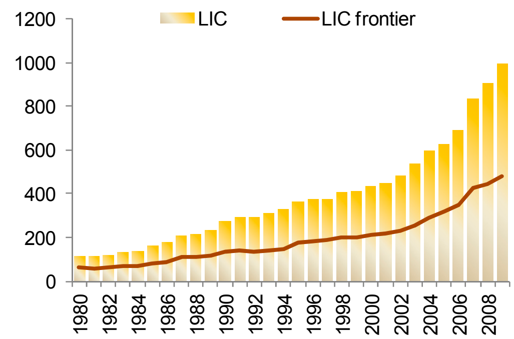
9. Policy frameworks and effectiveness. Shallow financial systems can constrain a country's choice of macroeconomic policy regimes (e.g., exchange-rate and monetary regimes), and the effectiveness of fiscal policy (Supplement I, Chapter I). Further, there may be feedback loops, as policy stances can themselves affect financial deepening (e.g., exchange rate flexibility can foster creation of new products and expertise in foreign exchange markets). Importantly, the scope for maintaining macroeconomic stability and implementing countervailing policies in the event of external shocks is constrained by underdeveloped financial systems.

- *Exchange rate regime*. While a country's choice of exchange rate regimes reflects a variety of considerations, financial underdevelopment can constrain the available options. Countries with underdeveloped financial systems exhibit a higher likelihood of adopting fixed exchange rate regimes. Notwithstanding the stated move to greater exchange rate flexibility in the past two decades, de facto regimes in LICs remain less flexible compared to emerging markets (EMs). Limited exchange rate flexibility can hamper adjustment by restricting the economy's ability to reallocate resources in response to external shocks. However, exchange rate flexibility can also pose challenges in the absence of deep financial markets, fueling exchange rate and output volatility, with attendant costs for stability and growth. These effects can be particularly pronounced for natural-resource based economies subject to high terms of trade and real exchange rate volatility.
- *Monetary policy*. Both the choice of instruments for monetary policy implementation and the efficacy of the transmission mechanism in combating inflation are related to a country's level of financial development. For instance, although indirect instruments are increasingly prevalent, LICs are more likely to use direct instruments (e.g., interest rate and credit controls) than advanced economies or EMs. LICs are also more likely to rely on reserve requirements and statutory liquidity ratios as opposed to market-based instruments (e.g., secondary market operations). Pervasive excess liquidity in the banking system, which puts all banks on the sell side of money markets, and thin credit and government securities markets limit the influence of policy rates, undermining policy transmission. Indeed, changes in the money market rate appear to be significantly less correlated with changes in policy rates in LICs than in other countries. Moreover, while shallow markets may not preclude the adoption of monetary frameworks such as inflation targeting, they render their operation more challenging.
- *Fiscal policy.* Deep and diversified financial markets ensure more stable sources of government financing and can create an enabling environment for fiscal consolidation. In instances where thin domestic debt markets and variable foreign financing and donor flows leave little room for maneuver, fiscal policy itself can amplify the impact of shocks, fueling volatility. The ensuing stop-and-go public investment and uncertain provision of basic public services can impose large immediate and long-term costs in poor countries. Further, fiscal policy tends to be more pro-cyclical in countries with underdeveloped financial systems. The lack of financial market depth can also constrain fiscal policy in a way that hinders the implementation of counter-cyclical fiscal

policy prescriptions. For instance, budget deficits and higher government borrowing can amplify private sector crowding out effects when financial markets are shallow.

10. Absorbing capital flows. LICs have become substantially more financially integrated internationally over the past two decades. Average de facto financial globalization (measured by gross external assets and liabilities) has increased six-fold since the mid-1980s, led by the "frontier markets" (text figure).[1] While such integration can confer significant benefits in terms of economic growth and risk sharing, and even help develop the financial sector and deepen capital markets, the volatility of capital inflows can create challenges for macroeconomic and prudential policy. Lack of depth of local banking and financial markets has been found to increase the risks associated with large capital flows. Shallower markets allocate capital less efficiently, potentially contributing to boom-bust cycles in credit, investment, and the broader economy (IMF, 2011d). They also, by definition, have lower capacity to absorb inflows without large changes in asset prices and real exchange rates (FSB/IMF/World Bank, 2011).

Financial Globalization, 1980-2009
(In billions of U.S. dollars)



Source: Lane and Milesi-Ferretti (2010)
Note: Financial globalization is sum of gross external assets and liabilities

11. Financial stability. Financial systems in LICs are less interconnected than systems in more mature economies, which explain, in part, their resilience to the recent global financial crisis. But the absence or illiquidity of markets can still expose them to potentially large shocks and instability, and complicate risk management (Supplement I, Chapter I).

- *Foreign currency risk*. Realized risks to market participants are higher in underdeveloped financial systems. While some LICs have markets for currency forwards, they remain relatively rare. In the absence of currency forwards, other derivatives or natural hedges, direct (through net open positions) and indirect (resulting from credit in foreign currency to domestic borrowers) exposure of financial institutions increases vulnerability to currency risk, particularly in dollarized economies. Credit risk is also increased, as borrowers who experience currency mismatches on their balance sheets (e.g., due to insufficient offsetting foreign exchange revenues) are more vulnerable to unexpected exchange rate fluctuations and have higher risks of default on their debt.
- *Liquidity management*. Shallowness of financial markets can complicate liquidity management in financial institutions. For instance, thin domestic money markets increase the costs to banks of adjusting their liquidity positions and managing their portfolios. This helps explain LIC banks'

[1] The term is commonly used to describe a subset of countries that are in early stages of financial development but demonstrate a relative openness to and accessibility for foreign investors. For the purposes of this paper, this includes countries defined as such by Standard and Poor's, and in the Sub-Saharan REO (Mozambique, Senegal, Uganda, Tanzania, Bangladesh, Cote d'Ivoire. Ghana, Kenya, Nigeria, Vietnam, and Zambia).

maintenance of relatively high proportions of liquid assets to meet sudden and/or unexpected obligations, another contributor to higher costs. Further, short and uncertain liabilities constrain asset maturities, reducing banks' ability to withstand shocks and more easily transmitting financial shocks into the wider economy.

- *Concentration risks and resource allocation*. The narrow range of formal actors and economic activity typical of LICs, coupled with low scope for diversification in shallow markets, leads to a concentration of banks' exposures to a limited number of counterparties. This amplifies attendant credit and interest rate risks and can exert pressure on bank profitability and solvency if external factors deteriorate (e.g., during an economic downturn or default of a large customer). Historically, concentration of credit risks in bank loan portfolios has been one of the major sources of bank distress in LICs.

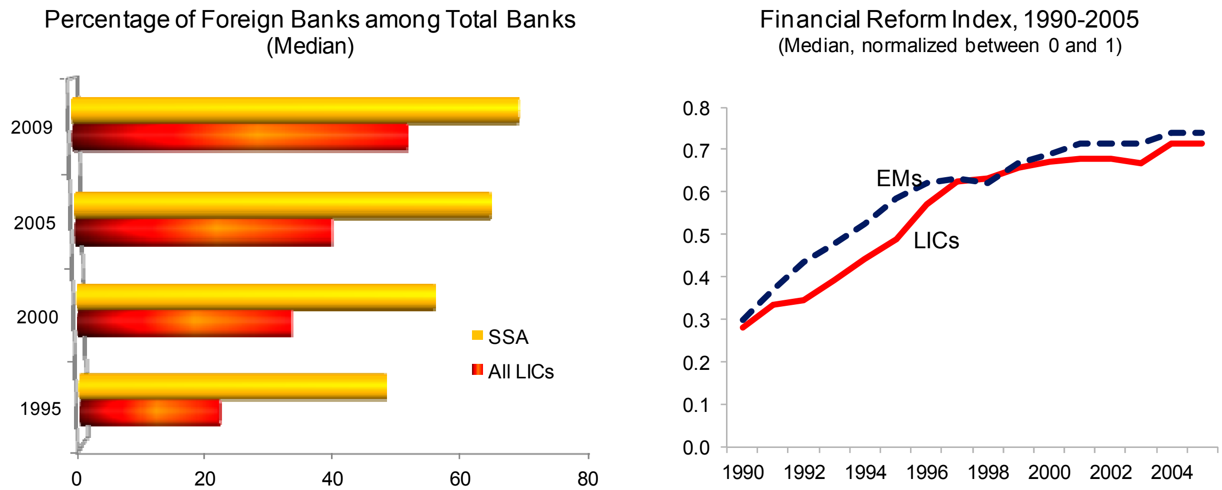
12. Implications. In sum, financial underdevelopment can pose significant challenges for macro-stability and sustained growth in LICs. With pervasive fragility and limited coping mechanisms, the potential economic and poverty repercussions can be high in these economies. This argues for broadening the scope of financial sector surveillance in LICs to encompass the interaction between financial deepening and macro-financial stability.

III. STYLIZED FACTS: RECENT PATTERNS IN FINANCIAL DEEPENING

How have financial systems in LICs evolved, and where do they stand relative to EMs and to each other? This section documents patterns of deepening across LICs and EMs, and within LICs, since the mid-1990s. Looking at markets as well as financial institutions, it sheds light on how funds are intermediated, the efficiency of their allocation, and how broadly they can be accessed.

13. Backdrop. The environment in which LIC financial systems operate has changed radically over the past two decades. Better policy and economic management, implementation of wide-ranging financial sector reforms, coupled with a favorable external environment in the run-up to the global crisis, and ample global liquidity have fostered financial sector development. Many LIC banking systems experienced significant changes in ownership structure, heralding the shift away from pervasive state interventionism towards privately-owned systems, often controlled by foreign banks. Foreign bank penetration has more than doubled for the median LIC since 1995, and is particularly high in Sub Saharan Africa (SSA) (Figure 2, left panel). This pattern has also mirrored their growing regional integration (e.g., increasing importance of South African and Nigerian banks in SSA; Malaysian and Singaporean banks in Vietnam and Cambodia). Beyond privatization, many LICs have undertaken broader financial sector reforms since the 1990s, eliminating interest ceilings and other restrictions, at a pace similar to EMs (Figure 2, right panel). Stronger regulatory and supervisory frameworks, in turn, have contributed to lower incidences of banking crises in the 2000s, although pockets of fragility persist.

Figure 2. Foreign Bank Ownership and Financial Sector Reforms in LICs



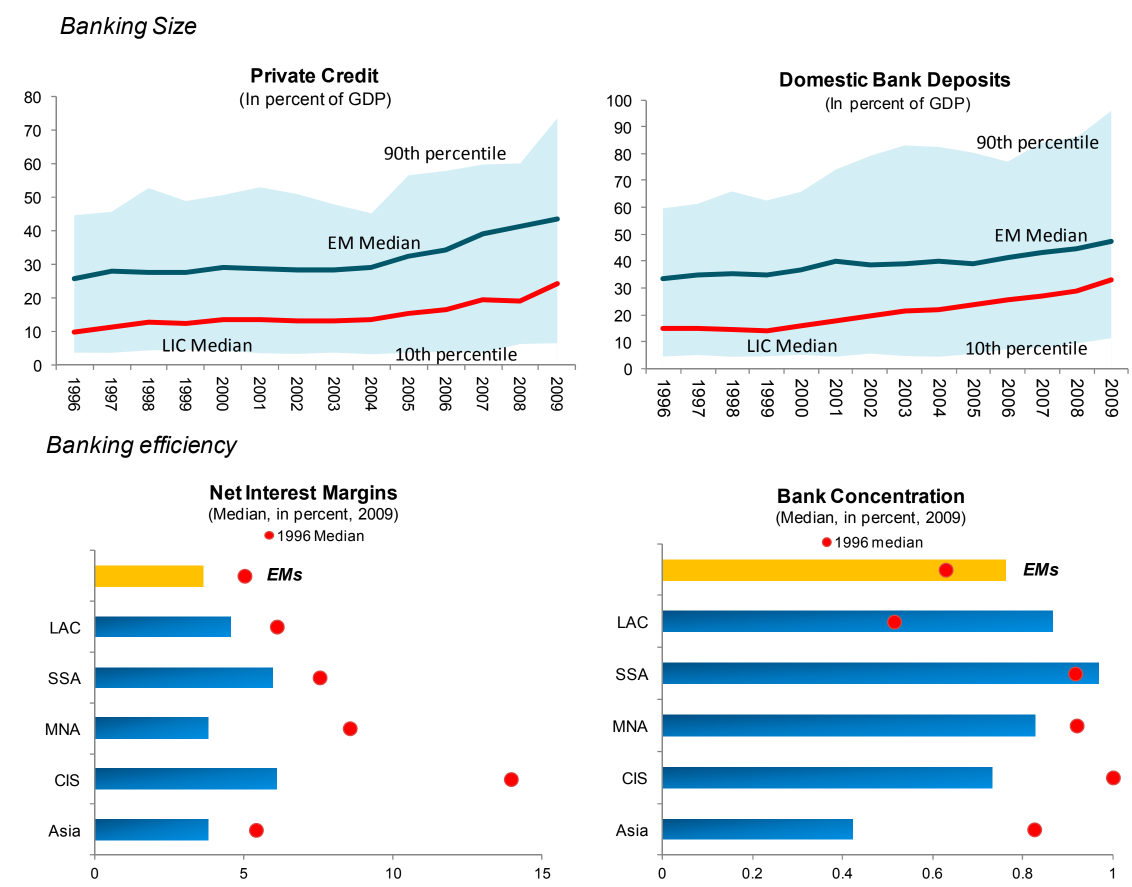
Source: Claessens et al. (2011); Abiad et al. (2008)
Note: Financial Reform Index ranges from 0 (fully repressed) to 1 (fully liberalized).

14. Financial structure. LIC financial systems remain largely bank-based. As in many EMs, banks act as the main players in the chain of payments, money and foreign exchange markets, and dominate government securities markets.[2] Further, stock market capitalization in LICs represents a fraction of private credit extended by the banking system, illustrating the prominence of banks relative to markets (Supplement I, Chapter III). The nonbank financial intermediary and microfinance sectors (MFIs) are growing, but the banking system continues to account for over 80 percent of financial system assets in the median LIC.

15. Banking system trends. Standard indicators of size and efficiency show that LIC banking systems have deepened over the past two decades, albeit from a low base (Supplement I, Chapter III; Figure 3). Indicators of depth display a clear upward trend, even though LIC banking systems remain small compared to EMs, and even in relation to the size of their own economies. For instance, median growth of credit to the private sector in LICs has doubled since the mid-1990s, but deposit mobilization, has grown at an even more rapid pace, resulting in declining loan-to-deposit ratios. Similarly, interest margins and spreads in LICs have also declined since the mid-1990s, but remain wide as compared to EMs. LIC banking systems, particularly in SSA, Latin American and the Caribbean (LAC) and Middle East and North Africa (MNA), tend to be concentrated compared to EMs, reflecting their smaller size, and less diversified economies. Moreover, banks tend to offer more basic payment and credit services, with the maturity distribution of deposits and loans biased toward the short end.

[2] Much of the discussion and the empirical results reported in the paper are framed in terms of banking sector indicators, reflecting both the current state of LIC financial systems, and the available comparable data. While the empirical evidence on the role of bank- vs. market-based financial systems in spurring growth is inconclusive, new evidence suggests that different financial structures may be better at promoting economic activity at different stages of a country's economic development (Demirguc-Kunt et al., 2011)

Figure 3. Banking System Deepening in LICs and EMs, 1996-2009

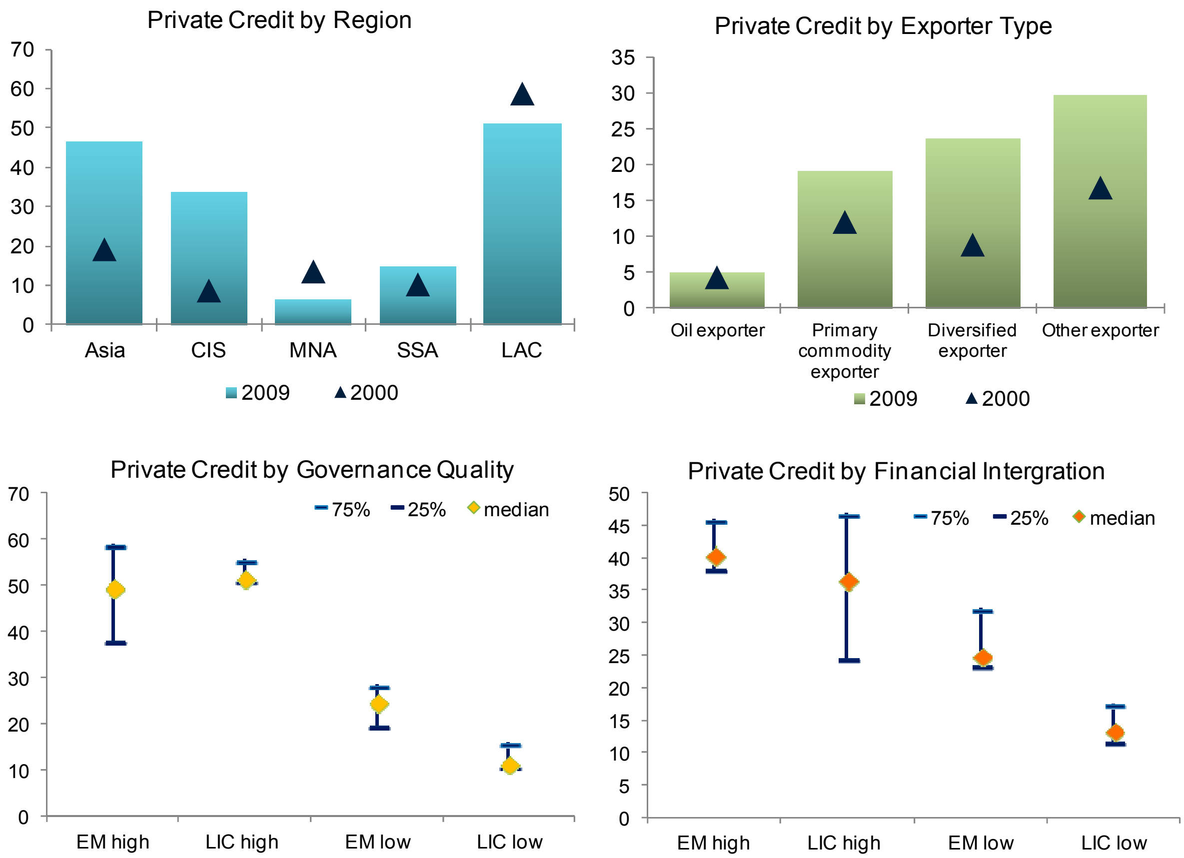


Source: Updated Beck, Demirguc-Kunt, and Levine (2010) dataset.
Note: Concentration is measured as the market share of the three largest banks.

16. Heterogeneity. There is a large variation in observed patters of deepening in LICs, with depth and efficiency in some countries exceeding the EM median (Figure 3-4). Some other LICs, on the other hand, have experienced virtually no deepening. Further, there is significant regional variation, with the median LIC in SSA and the Middle East and North Africa (MNA) lagging other regions. Structural features of LIC economies (e.g., commodity exporter, size), the degree of financial integration, and differences in legal and institutional frameworks have an important bearing on banking system deepening (Figure 4). Indeed, median values for the ratio of private credit to GDP are comparable for the more financially integrated LICs and EMs, and those with better quality of governance.

Figure 4. Private Credit, Institutional Quality, and Financial Integration, 2000-2009

(median, in percent of GDP)



Source: Fin Stats (2011), Kaufman et al. (2010); Lane and Milessi-Ferreti (2010)
Note: High (low) represents the top 33rd percentile (bottom 66th percentile) of the relevant policy variable using data from 2002-09.

17. Financial markets and other institutions. Consistent with their bank-based character, financial markets and other players, while growing, remain smaller/fewer, less liquid, and provide a narrower range of services compared with those in EMs. Figure 5 provides a synoptic view of the size and liquidity of these markets.

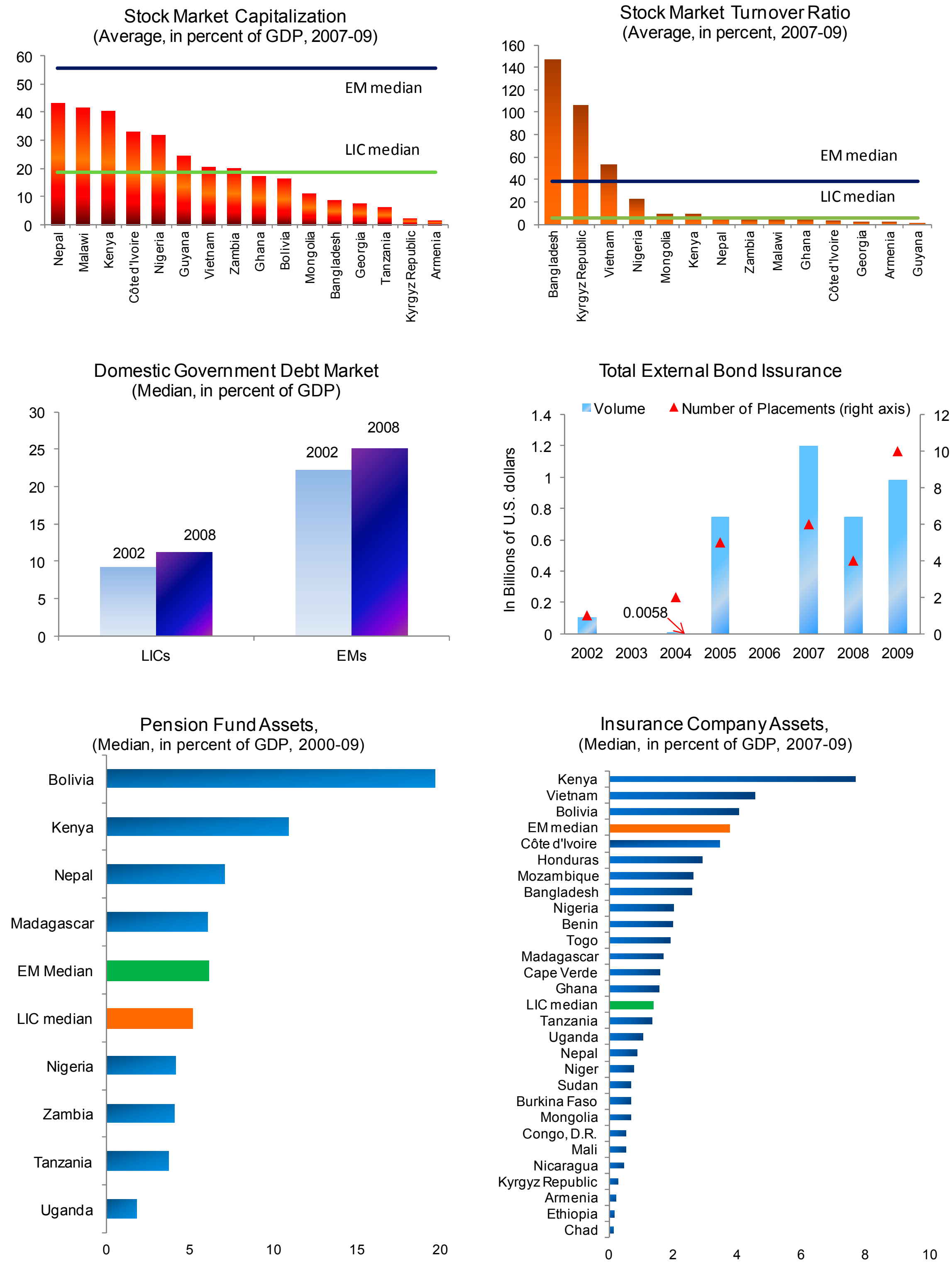
- *Money (and interbank) markets.* Money markets in LICs are shallow, short of instruments, and poorly structured (e.g., in terms of operations and a small number of participants other than banks). Although quantitative indicators are scarce, available evidence suggests that structural excess liquidity encourages buy-and-hold strategies by banks, with some banks excluded because of counterparty risk. Further, there are constraints on market-determined rates with few available instruments other than government paper, although repurchase arrangements are becoming increasingly common.
- *Equity markets.* For the 16 LICs for which data are available, the median ratio of stock market capitalization to GDP has more than doubled since the mid-1990s, led by the frontier markets, and reflecting high valuations. Liquidity, however, remains low and access to equity markets

concentrated in a few enterprises, with banks and nonbank financial institutions constituting a large share of listings. By comparison, median EM capitalization was around three times that of LICs, with significantly higher turnover. The shallowness of LIC equity markets renders them susceptible to sudden price movements and greater disruption that can undermine confidence in their integrity.

- *Bond markets*. The small size and liquidity of equity markets is mirrored on the bond side of capital markets. Bond markets have increased in size, but are mostly centered on primary markets, and almost exclusively concentrated in short-term government securities, although increasingly LIC governments are issuing long-dated bonds in domestic currencies. International sovereign bond issuances have also increased during the last decade, but private external bond issuance is limited to only a few countries (e.g., Vietnam, Mongolia, and Bangladesh). Only a handful of LICs have developed secondary government security markets, thus, limiting their role in mobilizing domestic savings, and broadening the range of available financing options for fiscal policy.
- *Institutional investors* (insurance, pension and mutual funds). As providers of financial services for long-term savings and risk sharing (e.g., health, life, property, and employment shocks), insurance and pension funds can facilitate the growth of capital markets. Based on available data for the period 2007-2009, most LICs exhibit insurance asset ratios of below 2 percent of GDP. While, insurance assets in a small number of LICs (e.g., Kenya, Vietnam, and Bolivia) exceed the median value for EMs, insurance premiums as a share of GDP in the median LIC are about a third of the values in EMs. Similar to the insurance sector, the pension industry in most LICs is small, dominated by state-owned pension schemes (Kenya is a notable exception), with portfolios concentrated in short-term fixed-income instruments (e.g., government bonds and bank deposits), constraining their role in provision of long-term finance.
- *Foreign exchange markets*. Foreign exchange markets support exchange rate flexibility and can enhance monetary policy transmission. While comparable indicators of size and liquidity are not available for all LICs, case study evidence suggests that they remain shallow and illiquid (Ferhani *et al.*, 2009). For instance, foreign exchange markets in LICs have much lower turnover compared with EMs, and fewer than 50 percent conduct forward transactions for hedging.

18. Outreach and access. The shallow nature of LIC financial systems is also reflected in a more limited access to financial services by households and enterprises. Formal financial services, while expanding, are typically limited to small segments of the population (Supplement I, Chapter III), with associated adverse implications for economic agents to manage and mitigate economic volatility. Below, access is examined using indicators of the use of financial services and demand-side data from household and firm-level surveys.

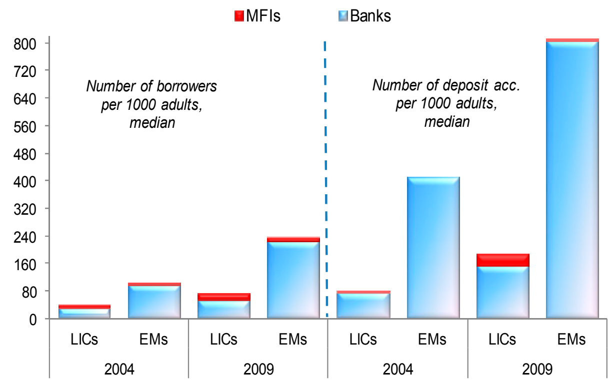
Figure 5. Financial Markets and Institutional Investors in LICs



Source: Updated Beck, Demirguc-Kunt, and Levine (2010) dataset, World Bank, Deologic database
Note: Stock market turnover is the ratio of the value of total shares traded to average real market capitalization.

- *Household access to financial services*. Use of banking services by households in LICs has improved, as proxied by the number of deposit and loan accounts per thousand adults, but continues to lag EMs (text figure). Moreover, microfinance institutions (MFIs), while growing rapidly, are far from filling observed gaps in the use of banking services. Even after combining the rates of deposit ownership in banks and MFIs, LICs have less than a quarter of the number of deposit accounts and a third of loan accounts of EMs per 1000 people. This general characterization of lower access to banking and MFI services in LICs masks significant variation across regions and countries, with LICs in MNA and SSA trailing other regions, particularly in the use of credit services.

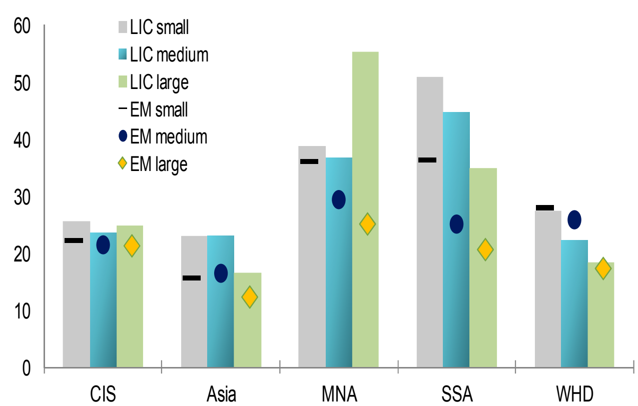
Loan and Deposit Accounts Penetration by Type of Institution



Source: Financial Access Survey (FAS) database.

- *Firm access to financial services.* Firms' access to external finance, gauged using the World Bank's Enterprise Surveys, is more limited in LICs than in EMs. Relative to LICs, surveyed firms in EMs are about 1/3 as likely to report being credit-constrained, and twice as many report having either a bank loan or a line of credit. Large firms report lower credit constraints as a major obstacle to their growth and operations than small and medium enterprises (SMEs) in most countries. In general, firms in MNA and SSA LICs tend to be most credit-constrained, be it by firm size (text figure) or sector of activity. Moreover, in contrast to EMs, bank credit is largely used to finance working capital rather than fixed assets, suggesting widespread obstacles for firm expansion in LICs. Further, the gap in use of credit between firms of different sizes is larger in LICs than elsewhere, hampering their contribution to growth (Supplement I, Chapter III).

LICs and EMs: Share of Firms that Report Access to Credit as a Constraint
(By firms' size, average, in percent, 2002–10)



Source: World Bank, World Enterprise Survey.
Note: Small, medium, large refer to the firm size.

19. Summary and implications. Financial systems in LICs have grown and inclusion has broadened, but they remain small and relatively undiversified, suggesting considerable scope for further deepening to reap macro-stability and growth benefits. The sizeable cross-country heterogeneity within LICs points to differing areas and approaches for deepening. For some LICs (e.g., the frontier markets), the main challenge is to enhance macroeconomic policy effectiveness by sustainably deepening capital markets and encouraging long-term investing, while strengthening financial oversight. Some other LICs, on the other hand, have gained little in depth or diversity, with financial systems remaining rudimentary, pointing to a large reform agenda to address ensuing macro-financial vulnerabilities. In yet other LICs, broadening financial inclusion to allow greater intertemporal consumption smoothing (as in the case of access to savings and credit services), or even simple payment services, and financing for SMEs remains a critical policy challenge.

IV. IMPEDIMENTS TO DEEPENING

Given the macro-financial vulnerabilities created by shallow financial systems, impediments to financial deepening in LICs warrant better understanding. This section examines the plausible scope for deepening LIC financial systems, drawing on the concept of a financial possibility frontier, and pointing to broad policy areas that can help close gaps in financial deepening.

20. Scope for deepening. The potential scope for financial deepening in LICs reflects the ease with which market frictions are ameliorated, policy choices, as well as inherent synergies in the development of the various segments of financial systems.[3] This can be captured in the concept of a financial possibility frontier, which can be defined as the upper limit of *sustainable* financial system depth, reach, or breadth that can be achieved at a given point in time (see Box 1, Supplement I, Chapter IV). Underlying this concept is the notion that financial systems are constrained by a number of factors that influence market frictions: structural (e.g., income per capita, size, population density, economic concentration); policy and institutional variables (e.g., macroeconomic fundamentals, effectiveness of contractual frameworks) which provide an enabling environment for deepening; and other exogenous influences (e.g., technology, conflict).

21. Challenges for LICs. The concept of a possibility frontier allows us to distinguish between several challenges to deepening and diversifying LIC financial systems. What follows is a taxonomy of key challenges depending on a country's standing relative to its frontier (see Box 1), drawing on FSAP reports, country technical assistance notes, and background studies.

- *Low possibility frontiers.* Several structural and institutional characteristics render LIC financial systems inherently shallow, many of which are largely invariant to country-specific policies in the short-to medium-term. Fixed costs in financial service provision explain why larger LIC economies (e.g., Vietnam, Bangladesh, Nigeria, and Kenya) can sustain more diversified financial systems than their peers, and why, for instance, many small island economies have shallow financial systems. Scale effects in payments and settlement infrastructure and regulation (and network effects) tend to be even higher in the case of capital markets suggesting that not all LICs will find it possible to develop local capital markets. Similarly, low income levels, high levels of informality, and low population density increase the costs and risks for financial institutions,

[3] The literature points to a natural sequencing with which various segments of the financial system develop, with capital markets typically following banking. de la Torre *et al. (*2011) find that financial activities that are the least prone to frictions emerge and develop first (e.g.,,, deposit collection in banking). Activities that are subject to strong frictions require more time. Some activities (e.g.,,, debt and equity securities markets) are strongly boosted by scale and network effects.

excluding large segments of the population from formal financial services. For example, in Rwanda and Tanzania, only 10-15 percent of the population has access to formal banking services, while in Burundi access is even more restricted (less than 2 percent of population). LICs' economic concentration also constrains the scope for domestic diversification, limiting domestic market development. Further, weak legal and judicial frameworks increase risks of financial contracting across a range of countries.

- *Financial systems can lie below the frontier* (i.e. below the constrained maximum), reflecting a confluence of demand and supply-side constraints. For example, demand-side constraints to financial intermediation can result in low deposit mobilization (e.g., arising from a legacy of low public confidence in banks in Tajikistan and the Kyrgyz Republic) or in a limited number of loan applicants due to self-exclusion (e.g., due to financial illiteracy and high fees and documentation requirements in many SSA LICs).[4] Supply-constraints (e.g., macroeconomic environment, regulation) can also serve to hold the financial system below the frontier. The lack of reliable creditor information and weak collateral regimes (e.g., scope, registration, enforcement) are commonly cited impediments to secured lending across a range of LICs. Similarly, opacity of financial information and weak corporate disclosure practices can create obstacles for the functioning of securities markets. Supply-side constraints stemming from limited competition or regulatory restrictions can also prevent financial institutions and players from reaching out to new clientele or introducing new products and services. In Nigeria, for example, regulatory barriers favoring equity issuance over debt securities and tax distortions have hampered the development of corporate bond markets.
- *Financial systems can move beyond the possibility frontier*, reflecting incentives for financial institutions and market participants to take on excessive risks. Left unchecked, this may result in an unsustainable expansion of the financial system beyond its oversight capacity, compromising macro-financial stability. For instance, rapid deepening can fuel credit and asset price booms (e.g., in Nepal and Vietnam in recent years). Experience from past banking crises suggests that credit booms and subsequent busts typically occur in environments characterized by poorly defined regulatory and supervisory frameworks, weak accounting and disclosure practices, and deficient early warning and resolution systems. Access to international markets and financial innovation can foster rapid deepening, but also increases exposure to risks. Further, fragility is often linked to governance problems, which can be acute in LICs, so that an overshooting of the financial depth frontier can be associated with limited supervisory capacity and market discipline (e.g., lack of proper monitoring mechanisms).

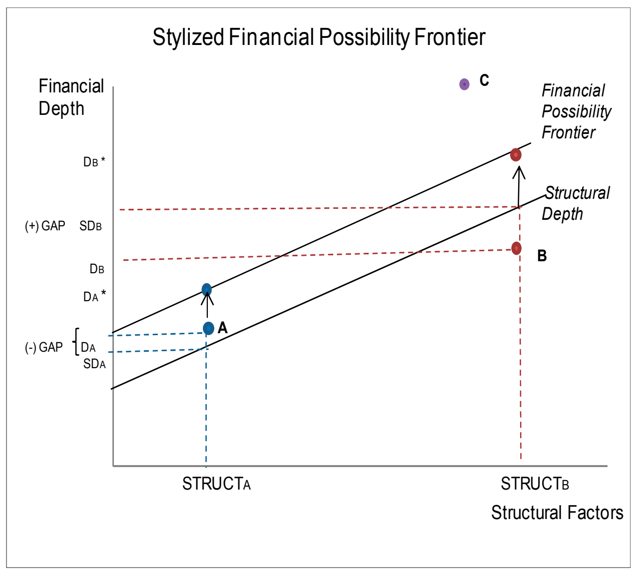
22. Policy and institutional gaps. A country's standing relative to its structural depth frontier on a particular financial indicator, and in relation to other countries with similar structural characteristics, can point to different policy and institutional gaps (Box 1). Because financial systems across the world fulfill similar functions and face similar market frictions, the financial deepening

[4] Barriers to doing business, tax distortions that discourage firm growth, and directed subsidies to industries and sectors are examples of distortions complementary to credit market frictions that can hamper deepening.

Box 1. Financial Possibility Frontier[1]

The financial possibility frontier defines the maximum *sustainable* level of financial system depth, breadth, or reach achievable at a given point in time (Supplement I, Chapter IV). Underlying this concept is the notion that financial deepening is limited by the interplay between two types of market frictions: transactions costs (e.g., fixed costs creating economies of scale) and risks, both systemic (affecting financial activity across the board) and idiosyncratic (e.g., agency frictions). Financial systems in countries are, thus, constrained by a number of "state" variables that influence these frictions. These include structural characteristics (e.g., level of income, population size and density, age, dependency ratios) that increase the costs of establishing intermediation and market activities and of managing risks, thus, limiting the potential for deepening. A second group includes policy factors, which determine the environment under which deepening may flourish or stagnate (e.g., macroeconomic stability, institutional and contractual frameworks underpinning financial activity). A final set of state variables includes exogenous factors, such as available technology and socio-political conditions (e.g., conflict).

A stylized example can serve to illustrate these concepts (see figure). Consider a LIC (country A) with a small and dispersed population ($STRUCT_A$). Financial depth (as proxied by the ratio of bank deposits to GDP) in this country will necessarily be low. In fact, historical analysis shows that, on average, countries matching A's structural characteristics tend to have a level of depth equal to SD_A. On the other hand, country B, richer and with a larger, more urban population ($STRUCT_B$), will be expected to have a higher level of depth, given by SD_B. The structural depth line therefore represents the expected level of depth given a country's structural characteristics. Can countries outperform their expected structural levels of depth? By improving their macroeconomic and financial policies, thereby, providing an environment more conducive to financial deepening, they can indeed outperform their expected structural levels. For instance, country A, by achieving greater macro-stability and enhancing competition in the banking sector, arrives at an actual financial depth D_A, above its expected level (SD_A). Similarly, although country B has a noticeably higher absolute level of depth (D_B) than does A, it is actually underperforming relative to its peers with similar structural characteristics ($D_B < SD_B$), suggesting room for improvement on the policy front.



How far can (and should) countries go in enabling financial deepening? That is, if both countries continue to improve their policies, they will eventually reach the possibility frontier, with levels of depth of D_A^* and D_B^*, respectively. However, some policy mixes may lead to levels of apparent depth that surpass the frontier (e.g., credit boom-bust cycles). Therefore, the financial possibility frontier defines the maximum *sustainable* depth for a country at a given point in time. For example, country C may temporarily outperform its possibility frontier, but this expansion will be unsustainable in the long-run.

The financial possibilities frontier can shift over time. For example, technological advances (e.g., mobile banking) can make it possible for countries to support higher levels of financial activity. Similarly, institution building, upgrading legal and contractual frameworks (e.g., defining property rights over land), and improvements in information frameworks (e.g., credit registries) can be used to push out the frontier, although such benefits are typically reaped over the longer-term.

[1] Prepared by Thorsten Beck and Adolfo Barajas.

process should be broadly comparable empirically across countries and stages of development once appropriate controls are introduced. Statistical benchmarking exercises that control for policy-invariant structural factors (at least in the short-term), such as those developed by the World Bank, can provide a rough approximation to the structural depth frontier concept described in Box 1 (Supplement I, Chapter IV).[5] Deviations of the actual from the estimated benchmark levels can then allow for a systematic identification of gaps. For instance, a financial indicator lying below the structural benchmark could shed light on possible policy and institutional gaps in the country and help focus attention on the impediments that underlie them.

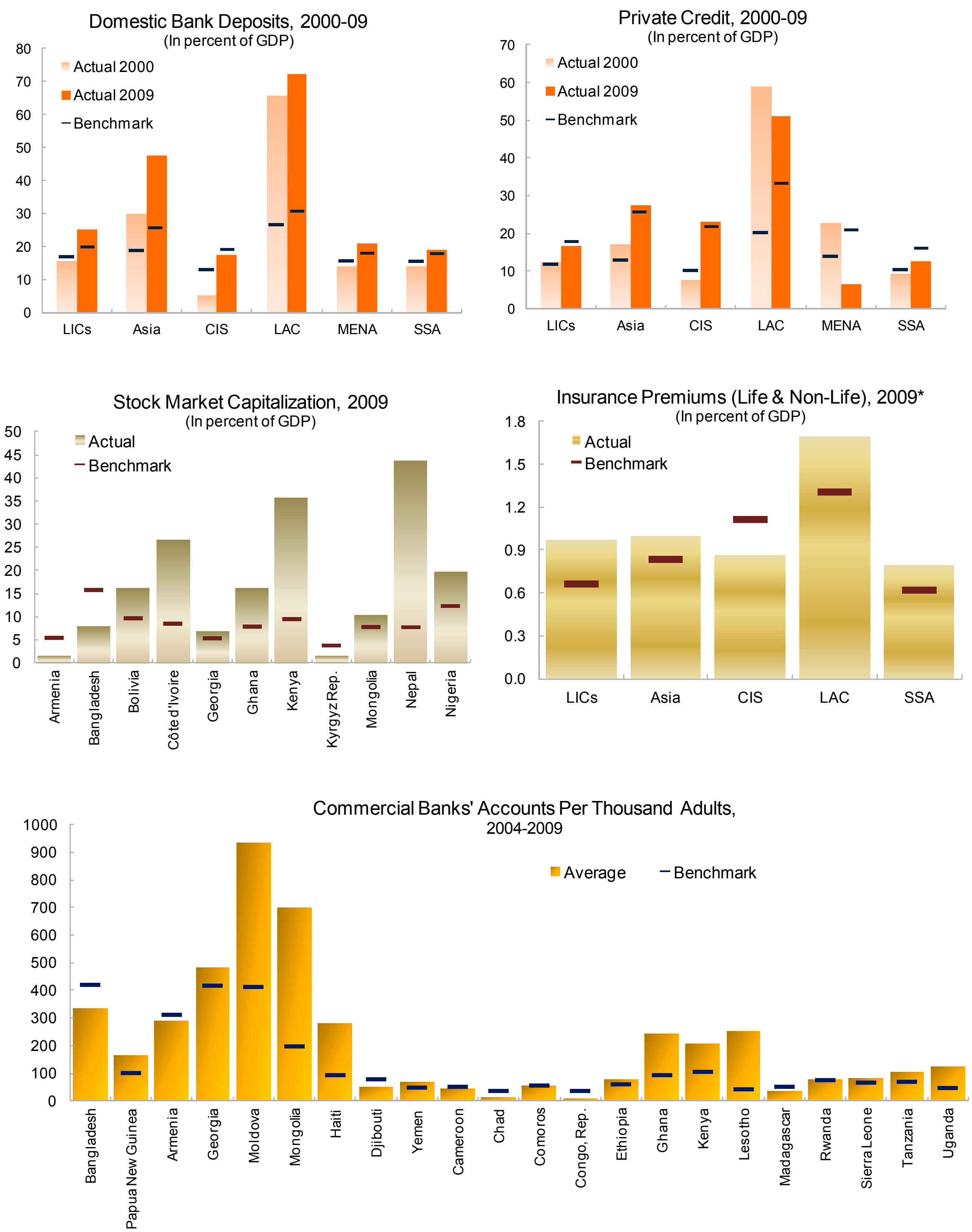
23. Evidence. An application of the benchmarking exercise to LICs confirms their low structural frontiers (and, hence, financial possibility frontiers) across a range of financial indicators (Supplement I, Chapter V). Nonetheless, the median LIC has deepened by more than would be expected from its basic structural characteristics over the past decade (Figure 6), although performance has varied widely across regions, countries, and financial indicators (Supplement I, Chapter V). For instance, the median LIC in Asia and LAC exceeded its benchmarks for deposits and private credit to GDP. On the other hand, on both scores, the median LIC in the SSA and CIS regions lagged behind the benchmark levels one would expect to find in countries with similar structural characteristics. These differences are also evident for gaps in other financial system indicators of size, liquidity, and outreach.

24. Explaining gaps. What factors explain why some LICs underperform relative to their structural benchmarks, while others have been successful in closing gaps over time? New empirical analysis explores the possible reasons for and potential policy implications of banking (size and efficiency) and equity market gaps across countries (Supplement I, Chapter V).

- A stable macroeconomic environment (as proxied by lower inflation) is associated with lower gaps in private bank credit and tighter interest rate margins as well as greater success in closing gaps over time.
- Sound financial reform—loosening onerous controls on credit and interest rates, facilitating entry of new domestic and foreign institutions, permitting international capital flows, while strengthening prudential regulation and undertaking policies conducive to securities market development—is associated with lower credit gaps. Further, financial crises, by worsening of both banks' and borrowers' balance sheets, can have persistent negative effects on banking system depth, highlighting the importance of sound macroeconomic policies and prudential oversight.
- Poor governance and weaknesses in the multiple facets (institutional, informational, and

[5] These benchmarks are the predicted values from a quintile regression analysis by the World Bank that accounts for economic development, demographic variables, and other country-specific characteristics that have a bearing on financial deepening (FinStats, 2011). The regression model does not account for factors that directly capture financial policy (see Supplement I, Chapter IV).

Figure 6. Benchmarking Financial Development in LICs



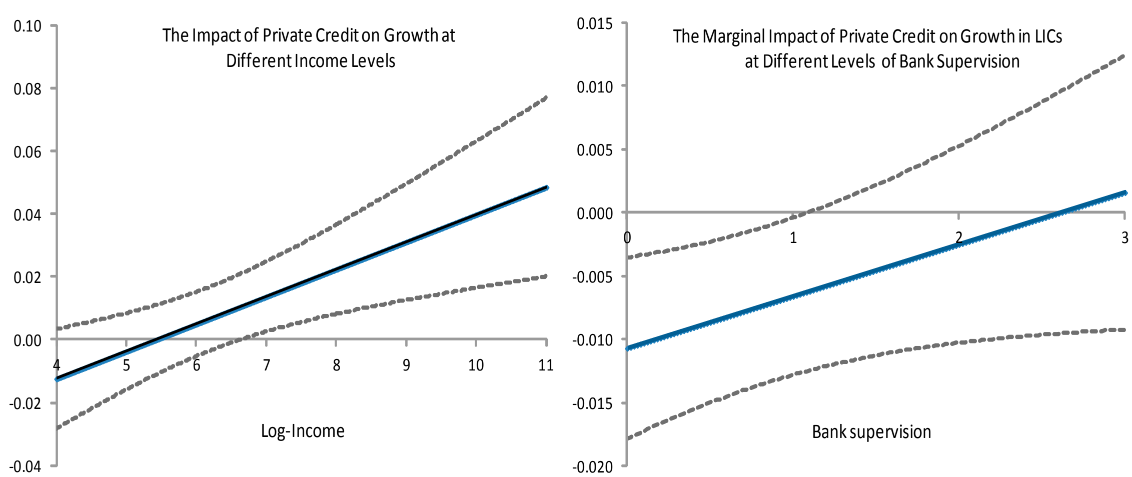
Source: World Bank FinStats (2011) dataset.

contractual) of the enabling environment are responsible for at least part of the aggregate banking and equity market gaps across countries. The empirical analysis suggests that the strength of the regulatory and supervisory apparatus, by encouraging sound decision-making by banks and other market participants, and forestalling crises, can play a pivotal role in closing banking gaps. This is confirmed by empirical findings using bank-level data for LICs and EMs (Box 2, Supplement I, Chapters 5-6 The importance of the enabling environment in spurring intermediation is also

- The analysis also sheds light on the role of ownership and market structure in determining intermediation (bank credit and spreads) gaps, indicating that greater banking competition, limited and arms-length state bank presence, and ease of entry of new institutions are associated with lower gaps, and larger reductions in gaps over time. This is also consistent with bank-level analysis, which indicates that the lack of competition remains a key impediment preventing intermediation costs from declining in LICs (Box 2; Supplement I, Chapters 5-6).

25. Impediments and sustained growth. The impediments to financial deepening in LICs not only have a direct bearing on macro-financial stability, but also serve to lower the growth dividends from deepening. Empirical analysis points to the existence of threshold effects (non-linearities) in the finance-growth nexus (Supplement I, Chapter VIII). In particular, the relationship between financial system depth and growth strengthens as the income level rises, indicating that LICs (particularly commodity exporters) tend to obtain less of a growth dividend from their existing levels of depth than their higher income counterparts (Figure 7, left panel). The analysis further indicates that the lower growth dividends in LICs can be mitigated by improving financial sector policies (e.g., strengthening bank regulation and supervision; see Figure 7, right panel); including by addressing factors that have held back financial deepening. This suggests that while financial deepening should continue to be a critical component of a pro-growth strategy, the spotlight should be on the *quality* of financial intermediation and the efficiency with which funds are put to productive uses.

Figure 7. Partial Influence Functions of Banking Depth and Growth
(95 percent confidence intervals)



Source: World Bank, Abiad et al (2008), and Staff calculations.

Box 2. Explaining Banking Efficiency and Lending Gaps: Bank-Level Evidence

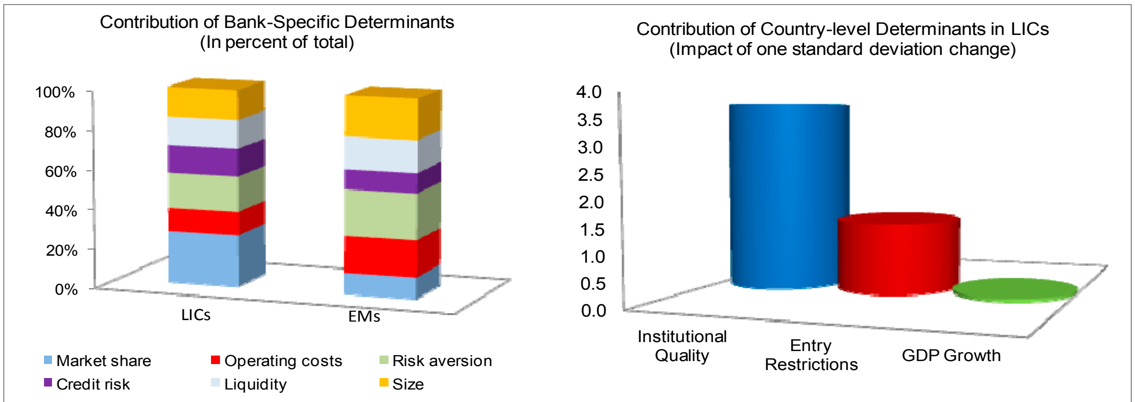
Despite considerable privatization and liberalization efforts, and pervasive excess liquidity, banks in many LICs lend less than in other economies, and in relation to expected benchmarks, preferring to hold a larger share of assets in government securities and foreign claims. Not only do they lend less, but they also charge more.

Ownership and market microstructure can bear importantly on banking system performance. It is widely believed that foreign bank entry, by transferring technology and sound management practices, can help lower costs and lead to operational efficiency gains, thereby improving the functioning of national banking systems. However, greater foreign bank penetration in LICs has not universally resulted in lower interest margins or enhanced provision of banking services. Evidence suggests that foreign banks in LICs, on average, enjoy a higher deposit market share, but deploy a lower proportion of their assets into lending as compared to domestic banks, pointing to informational and locational disadvantages, and preference for non-lending, high-return activities (e.g., investment in securities and trading activities).The presence of dominant government-owned banks in some LICs, and the small size of nonbank intermediaries, also serves to reduce competitive pressures, allowing both domestic and foreign-owned banks to earn rents. The lack of competition prevents financial intermediation costs from declining, ultimately, leading to lower levels of bank lending.

Balance-sheet and performance indicators of LIC and EM banks suggest different drivers of intermediation costs and lending across the two country groups (Supplement I, Chapters 6-7).

- A decomposition of interest margins into components using bank-level data suggests that median operating costs in LIC banks are only slightly higher than in EMs (Supplement I, Chapter VI), although some studies for SSA countries have found that high operating costs are an important determinant. The higher share of loan-loss reserves in LIC banks relative to EMs is indicative of the more risky environments in which LIC banks operate. Most striking is that higher profits account for the bulk of the explained difference in margins between LIC and EM banks, reflecting their significant market power.

- Regression analysis of the bank- and country-level determinants of bank-level variation in net interest margins point to large market share and risk (credit risk and lower bank capitalization) as two of the dominant factors in LIC banks compared with EMs (figure, left panel, Supplement I, Chapter VI). The efficiency of the contractual framework—measured by an aggregate indicator of institutional quality—accounts for a large share of the bank-level variation in interest margins in LICs (figure, right panel), underscoring the importance of an enabling environment in reducing intermediation costs.



Source: Bankscope and author's calculations.

- Empirical analysis also suggests that the smaller allocation of banks' total assets to lending activities in LICs can be explained by problems of insufficient scale (size) and low credit portfolio quality, highlighting the severity of moral hazard and adverse selection problems for banks, which is mitigated by stronger institutional quality in a country (Supplement I, Chapter VII).

V. POLICY INITIATIVES TO FOSTER SUSTAINABLE DEEPENING

What lessons can be drawn from the wealth of cross-country experience, successes and failures, in spurring financial deepening? What policy initiatives were adopted to complete markets and enable financial deepening while managing attendant risks? In what follows, two approaches are used to draw policy lessons. The first relates to an anatomy of financial intermediation across countries and time to examine its determinants. The second approach draws upon a large number of country case studies to drill down policy lessons from specific instances of reforms.

A. Anatomy of Financial Deepening: Analysis of Broad Intermediation Trends

26. Anatomy. An examination of long-term trends in financial deepening can shed light on the broad patterns and determinants across countries, and how they vary across income levels. Monitoring credit intermediation is of interest because of the adverse economic effects that often follow episodes in which credit to the private sector rises unsustainably (i.e., credit booms). While the triggers and characteristics of credit-boom-bust cycles are well documented in the literature, distinguishing between such episodes and beneficial banking system deepening is important, given the current low levels of intermediation in many LICs and the macro-financial stability benefits that can accrue from further deepening. These issues are analyzed based on an in-depth analysis of developments in the credit-to-GDP ratio for a sample of 105 high- middle- and low-income countries over 1960-2009 (Supplement I, Chapter IV). The analysis reveals three distinct patterns:

- Stagnation episodes, which are characterized by little movement in deepening over long periods of time.
- Sustained accelerations, where growth in private credit first picks up in a specific year and is maintained for a decade or more.
- Rapid, but short-lived accelerations, where the growth in private credit comes to a halt in a number of years (typically less than 10). This halt can either take the form of a 'soft landing' (growth rates decelerate to pre-growth levels) or a 'hard landing' (a financial crisis).

27. Frequency. Using the criteria described in Supplement I (Chapter IV), and expressed in percentage of years of observations, stagnations represent about a third of the entire sample; short accelerations about 20 percent, and long periods (sustained accelerations) about 17 percent of total episodes. To examine the frequency of the various episodes across income groups, countries were classified by their income status at the start of an episode, allowing for changes in income groups over time. Both high- and middle-income countries (HICs and MICs) exhibit similar distributions for the three types of episodes. LICs, on the other hand, are characterized by more stagnation and short episodes, and significantly fewer long episodes. By region, countries in MNA and SSA have undergone the smallest number of sustained growth episodes.

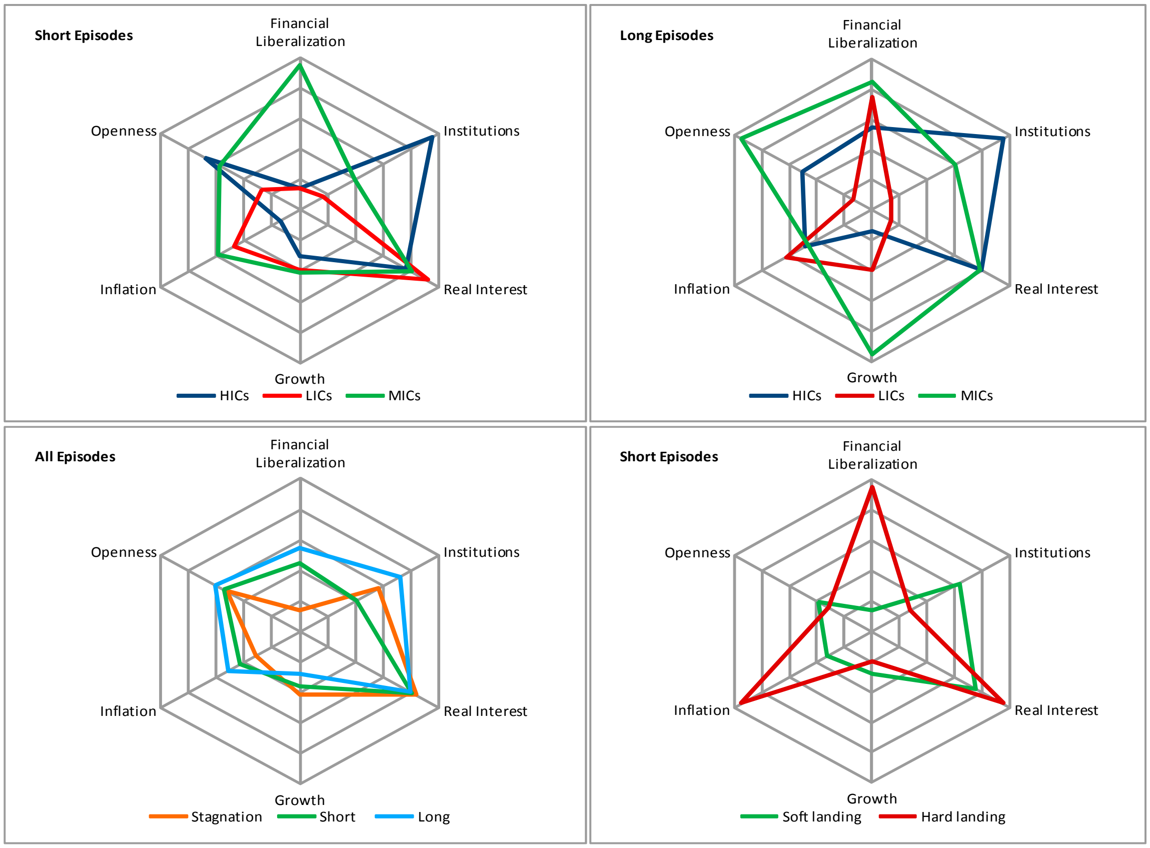
28. Stylized facts. Countries with relatively more developed financial systems today underwent one or more periods of sustained financial deepening before arriving at their current situation. Examining the underlying domestic factors and vulnerabilities in each of these episodes can, thus, shed light on the pertinent constellations (Figure 8).

- *Initial conditions* (Figure 8, bottom left panel).[6] Macroeconomic stability, characterized by low inflation, and high economic growth foster financial take-offs. This is particularly evident from the experience of countries that attained MIC status. Further, both short and long episodes of deepening respond to financial liberalization efforts, but not in all instances. Across income levels, improvements in banking supervision were a driving force for sustained deepening (not shown in figure). The analysis, however, suggests that natural resource wealth does not spur sustained financial deepening.
- *Duration.* Short financial accelerations seem to take off in a variety of environments, while long accelerations are more likely to occur in environments with stronger institutions. Moreover, stagnation episodes, are common across countries, and seem to occur for a variety of reasons, including the absence of auspicious initial take-off conditions, and the fact that they are at times preceded by sustained acceleration episodes (i.e., financial systems cannot grow endlessly).
- *Terminal conditions.* Short accelerations frequently result in crises, echoing findings from the credit boom literature. The odds of a sustained growth episode ending in a banking, currency, or debt crisis are half of those of short episodes, with the likelihood of a hard landing twice as high in MICs compared to other countries (Figure 8, left panel). Accelerations ending in a financial crisis are more likely in countries with macroeconomic instability—where, in the five years preceding the acceleration, inflation and real interest rates are high relative to their peers. Importantly, rapid and far reaching financial liberalization is associated with a greater likelihood that an episode will end in a crisis. Gains from financial deepening episodes can also be reversed. A number of countries that experienced sustained deepening episodes later went through a period of regression, most frequently on account of war, political conflict, or financial crises.

29. Policy considerations. A number of general policy lessons can be drawn from this analysis. First, macroeconomic stability is an important ingredient for sustained deepening, echoing the findings from the gap analysis in the previous section. Second, while there is a strong link between financial liberalization and financial accelerations, liberalization is more likely to lead to sustained periods of deepening in the presence of strong institutions. Finally, deepening is related to crisis incidence, with rapid, insufficiently supervised liberalization associated with higher crisis risks. While excessive credit growth could precipitate crises even if the financial sector is deep, as the global crisis indicates, the higher incidence of short accelerations resulting in crises in MICs reflected excessive risk-taking and lagging regulatory and supervisory capacities. Indeed, the likelihood of a long acceleration increases in the wake of financial liberalization if accompanied by improvements in supervision. This underscores the importance of a commensurate strengthening of regulatory and supervisory frameworks to minimize risks arising in the deepening process.

[6] Initial conditions are determined 4-5 years preceding the start of an episode.

Figure 8. Likelihood of Financial Deepening Episodes, Given Initial Conditions[1/]
(Initial conditions are determined 4-5 years preceding the start of an episode)



1/ The variables along the axes are all rescaled in order to get consistent scales and interpretation across the variables. To arrive at this, the lowest and the highest observed value for each of the variables serves at the lower and upper bound of the scaled representation which is between 0.24 and 0.95.
Source: World Development Indicators (WDI), Polity IV dataset (Marshall and openness, 2008), Abiad et al. (2008), and staff calculations.

B. Role of Public Policy in Facilitating Deepening: Lessons from Case Studies

30. Coverage and context. Policy has an important role to play in facilitating financial deepening. Many of the impediments to financial deepening in LICs today (see Section III), prevailed, or continue to be present, in other economies to varying degrees. This section draws on a large set of case studies across a broad spectrum of countries to document the role of public policy in facilitating deepening. The selected cases distill policy lessons from country experiences with increasing depth (e.g., credit intermediation), breadth (e.g., range of markets and instruments), and reach of financial systems (e.g., inclusion), while highlighting measures taken to manage attendant risks. In many of the instances discussed below, public policies played a complementary role, rather than substituting for, private actions/markets. These actions can be organized around: (i) policies to ensure stable macroeconomic environments, (ii) institutional and infrastructural reforms creating enabling framework for markets and private initiatives, and (iii) regulatory and oversight policies to address inefficiencies and risks generated by markets and market players.

31. Caveats. Several caveats should be borne in mind. First, given the uniqueness of macroeconomic, institutional and structural conditions, leapfrogging, and financial crises, financial deepening paths may not necessarily be replicable across countries. The focus here is on identifying policies that played a role in pushing financial systems towards the financial possibility frontier or shifting the frontier outwards. Second, the considerable heterogeneity within LICs implies that while the reforms discussed are relevant across a broad range of LICs, their relative importance and cost-benefit tradeoffs can differ widely across countries and even the same country over time, pointing to the need to account for country-specific circumstances and institutions.

Fostering macroeconomic stability

32. Preconditions. Macroeconomic stability is a necessary condition for unlocking the financial deepening process, as demonstrated by the experiences with developing banking systems and capital markets in transition economies and other EMs (e.g., Mexico and Turkey). In transition economies, deposit mobilization and credit expansion only took off when disinflation became entrenched. In Mexico and Turkey, persistent fiscal deficits, inflation, and dependence on central bank (CB) financing are some of the challenges that had to be overcome to develop vibrant domestic debt markets. Consolidation of fiscal positions through reforms, greater CB autonomy, and the ensuing disinflation, enhanced policy credibility and reduced uncertainty over investment returns, thus, encouraging demand for financial assets.

Public policy for institutional reform and infrastructure

33. Overcoming scale barriers. Interventions that support technological innovation, promote competition (e.g., reducing onerous licensing/branching restrictions, easing discriminatory regulatory constraints for banks/non-bank entities),[7] and create infrastructures to promote participation (e.g., regional bond market initiatives, cooperation in payments and settlements networks among financial institutions) can help achieve economies of scale and reduce costs in financial services provision.

- M-Pesa in Kenya (2007) and Smart Money (2000) in the Philippines are examples of cases where financial innovation (e.g., mobile technology), supported by flexible regulation, helped lower costs and promoted the broadening of access to payments services to under-served segments of the population (e.g., in rural areas). Formal institutions, which had found it prohibitively costly to provide services at a small scale due to high set-up and transactions costs, were now able to offer new integrated mobile-based payments services and banking products. In Kenya, for example, the M-Pesa money transfer initiative facilitated the introduction of the M-Kesho, which linked banks with mobile operators to launch financial services, contributing to increased use of formal banking services.

[7] A balance may need to be struck between the need to support innovation and competition and the need to avoid market dominance by new players who rapidly gain market share in new products, or too rapid a proliferation of new entities that compromise stability.

- In Uganda, enabling legislation for microfinance and savings and credit cooperatives (SACCOs), which traditionally serve lower-scale operations, supported by central government funding and credit subsidies played a role in spurring access to financial services. The benefits of greater microcredit penetration, however, have to be balanced with concerns over rapid proliferation of these often unregulated entities, potential distortions created by extensive government support (e.g., discouraging private incentives to mobilize savings) and directed lending.
- The use of international exchanges (e.g., for equity) and other cooperative solutions can be an effective approach to capital market development in small economies. The desire to develop non-bank finance in the ASEAN and WAEMU regions led to lowering of barriers to cross-border trade and the creation of harmonized market infrastructure and institutions (e.g., clearing and settlement, credit rating, trading arrangement, and risk mitigation arrangements). In the ASEAN, initial central bank financing for diversified funds helped facilitate regional bond market development.

34. Operational reforms. Reforms to ameliorate deficiencies in the market micro-structure can facilitate price discovery and market development.

- Developing money and interbank markets requires market-friendly intervention instruments and a sound repurchase agreement framework. In Nepal, for instance, the strategy to improve liquidity management included organizational arrangements for better public debt management and auctions of government securities. Similarly, the Kyrgyz Republic overcame the shortage of securities and conventional collateral in money markets by using foreign exchange swaps—an arrangement analogous to a repurchase agreement with foreign currency as the underlying collateral instead of treasury securities that are typically used—while developing marketable government securities for open market operations (e.g., by securitizing government debt in the CB's portfolio).
- The experiences of EMs demonstrate that well functioning interbank and money markets and improvements in the underlying market infrastructure (e.g., trading platforms, custody, clearing and settlement systems) were prerequisites for the development of debt markets. In Turkey, for example, primary dealers in government securities acted as market-makers in the early 2000s, helping increase liquidity in the secondary market.

35. Addressing information gaps. Policy interventions to strengthen informational and contractual frameworks (e.g., building or upgrading of credit registries, collateral, risk insurance) and provide supporting market infrastructure can foster deepening. Country experiences also suggest that well-targeted partial credit guarantee schemes can address market failures and promote access in environments with weak credit information and creditor rights.

- Effective collateral regimes for secured lending require well-established property rights (e.g., titling, registration and security of land tenure), which are often a challenge in LICs with traditional communal land ownership. An example from the U.S. illustrates one way of overcoming this constraint. Communal land, previously held in trust by the U.S. government, was released through enabling legislation, allowing the land to be used as mortgage collateral in Native American communities.

- Uganda and Tanzania introduced credit reference bureaus, which collect and distribute information about existing borrowers, limit over-borrowing and facilitate competition (although access by MFIs remains limited) to facilitate credit expansion. In Uganda, credit guarantee mechanisms allowed for risk sharing between banks and guarantors in agricultural loans, leasing and innovative collateral (e.g., dated checks, equipment), helping expand agricultural credit.
- In Botswana, although very expensive, credit life insurance (life insurance which repays the creditor in case of death of the insured) was required by banks for all loans to individuals. Given widespread HIV/AIDs, this allowed access to credit to those who may otherwise have been excluded from the market.
- Short-term interventions to address information bottlenecks can lower market segmentation. In interbank markets, South Korea in the 1980s promoted the establishment of brokers and dealers for call transactions to reduce segmentation between bank and nonbank financial institutions arising from the lack of credit information. Similarly, the Turkish CB acted as a blind broker counterpart for all transactions, borrowing only when it could on-lend the proceeds at the same interest rate.

36. Removing distortions. Removal of inefficient regulations and compulsory lending policies can have a positive impact on market development.

- The development of the government bond market in Mexico was spurred by the elimination of compulsory lending to the government by banks. Similarly, in Turkey, tax reform (e.g.,, the elimination of withholding tax on income from bonds with maturities of over five years and reducing the tax rate on those with maturities of less than five years) and greater transparency served to increase appetite for corporate bonds.
- In the insurance sector, the removal of entry restrictions in India, accompanied by supporting regulation, encouraged greater deepening (although state-owned firms remain dominant). Similarly, limited restrictions on the asset composition of insurance companies in Barbados allowed the industry to fill an important role as a major supplier of mortgage finance until banks became more active in the market.

Public policy for risk oversight and management

37. Managing risks. Proactive policies to oversee market activity, support continuous risk monitoring and mitigation of systemic risks are essential to reap financial deepening benefits. In particular, the case studies underscore the importance of ensuring that regulatory and supervisory frameworks not only support but also keep up with market deepening to avoid creating new sources of risk and instability.

- Policies to broaden financial access require a concomitant widening of the regulatory and supervisory perimeter to minimize regulatory arbitrage and financial system risks.[8] Managing

[8] For example, in Central and Eastern Europe, attempts by regulators to slow down rapid credit growth in the run up to global crisis were thwarted as new lending was increasingly channeled through non-bank financial institutions, which had effectively circumvented banking sector regulations.

operational risk is a concern in Uganda, Kenya and the Philippines, as the entry of new operators that facilitate branchless banking has blurred the distinction between banks and non-bank institutions. More generally, the rapid expansion of the non-bank intermediary sector, which traditionally has been outside the regulatory remit, and has become increasingly complex and interconnected with the banking sector, can pose challenges for financial stability.

- Experience from EMs suggests that the pace of financial liberalization and associated deepening need to be carefully calibrated to the prudential oversight capacity. In the build up to the Tequila crisis in Mexico, liberalization in the context of poor oversight resulted in asset-liability mismatches, concentrated market risk and excessive related-party lending in banks. The Uruguayan experience in the wake of the Argentine crisis demonstrates that financial deepening, fueled by wide-ranging financial and capital account liberalization, can result in concentrated cross-border exposures, triggering bank runs and illiquidity, in the absence of adequate prudential and supervisory infrastructure.

- With greater foreign bank penetration, promoting cross-border supervisory cooperation and information sharing is increasingly important for managing risks. While developing effective frameworks for consolidated supervision and cross-border resolution is challenging (FSB/IMF/World Bank, 2011), some countries have adapted supervision to address this issue. In Uruguay, for instance, cross-border banking regulation was strengthened in the wake of the financial crises in 2002-03, with subsidiaries and branches of foreign banks and offshore offices subject to the same prudential, inspection, and regulatory reporting requirements as domestic banks.

- Policies that seek too aggressively to broaden financial access can have ramifications for consumer indebtedness, requiring a commensurate strengthening of consumer protection. For instance, aggressive expansion of consumer credit by small-scale lenders in Uganda, driven by increased competition, poses challenges for rural indebtedness. In South Africa, credit life insurance provided low-income customers access to retail credit, but borrowers were charged excessively high premiums, resulting in the introduction of consumer credit regulation in 2006.

38. Macro-stability benefits. Financial sector policies to foster sustainable financial deepening can enhance the price discovery process, facilitate macroeconomic policy responsiveness and enhance shock absorption capacity. The break-up of mono providers (public/private) of financial services can also allow for more effective credit allocation and intermediation, reduce costs of financial service provision, facilitate greater inclusion, and promote better payments services.

- *Enhancing monetary transmission.* Monetary operations in many countries have benefited from deeper interbank, money, and debt markets. For instance, the participation of primary dealers in government securities auctions in Turkey helped provide two-way price quotes by market makers, leading to better price discovery and transmission. In Georgia, greater market depth allowed for benchmarking and better debt management, consequent on the development of a yield curve across a wide range of maturities.

- *Reducing financing risks.* Deep and diversified financial systems can reduce financing risks and ensure stable sources of government financing. Mexico and Uruguay are examples of cases where improved macroeconomic fundamentals, stringent prudential measures, and increased reliance on domestic currency financing with longer maturities (supplied by domestic investors) helped to mitigate roll over and exchange rate risks. The growing presence of domestic institutional investors also helped secure a longer term and stable financing base in Mexico, Turkey, India, Barbados, Brazil and Korea. Similarly, regional bond market development in Asia helped to diversify and stabilize the financing base. Regional integration, however, is not a panacea and can generate systemic risk, as demonstrated by the ongoing Euro area crisis and the 2010 crisis in Côte d'Ivoire, which had implications for WAEMU countries.

- *Fostering policy flexibility by reducing balance sheet risks.* Measures to enhance market stability and limit dollarization have helped countries reduce balance sheet risks, paving the way for greater scope of exchange rate regime choice. In Turkey (post 2000 crisis), for example, fiscal stabilization allowed for the development of domestic debt markets, helping the Treasury reduce its share of foreign currency denominated debt.

39. Conclusion. Many of the impediments to financial deepening in LICs are not distinct from the underlying structural features of these economies (e.g., size, scale, economic concentration). In this respect, the policy reforms elaborated in the case studies are neither exhaustive nor necessarily replicable across all LICs. Nonetheless, the case studies demonstrate that targeted and balanced initiatives to encourage competition, develop information infrastructure, address collateral issues, and limit excessively intrusive public sector interventions and public dominance, can help overcome specific impediments to deepening. Moreover, reforms can create positive externalities, where particular actions catalyze the emergence of other market segments. Maintaining sound macroeconomic conditions and remaining vigilant to emerging risks are necessary conditions for reaping the benefits from the deepening process, echoing the findings from the previous section. In particular, a balance is needed whereby regulation can foster prudent market conduct without hindering deepening: too rapid a deregulation risks engendering instability, but highly restrictive rules may hinder financial deepening. With sufficient progress in deepening selected market segments, there are unquestioned positive implications for policy effectiveness and the capacity to respond to shocks.

VI. ENHANCING FINANCIAL SECTOR SURVEILLANCE IN LICS: THE WAY FORWARD

40. Surveillance. The critical relevance of financial sector deepening for macro-financial stability and sustained growth in LICs calls for broadening the coverage of these issues in the Fund's financial sector surveillance. This requires going beyond a narrow focus on banking systems soundness and solvency to better account for the broader role of the financial system in engendering strong, durable growth, including through greater resilience and capacity to withstand shocks. Bilateral surveillance in LICs needs to be augmented with consideration of how a given country's financial system limits macroeconomic policy space and effective policy transmission and implementation. Simultaneously, keeping abreast of risks arising from financial deepening would allow policy makers to tackle attendant vulnerabilities and better harness the benefits of deepening.

Given the considerable diversity within LIC financial systems, a tailored, country-specific approach is essential. This section elaborates on the steps that can be taken to enhance financial sector surveillance in LICs.

- *Providing context.* To chart LIC's progress with financial deepening requires a careful stocktaking of where a country's financial system stands on different dimensions (e.g., depth, diversity, access, degree of interconnectedness, operational effectiveness, and oversight). Benchmarking could be used to discern where a country's financial system stands in relation to peers; diagnostics could be undertaken to understand which financial services may be underprovided, and which financial sub-segments or instruments appear underdeveloped.
- *Informing policy advice.* A better understanding of how a country's financial system serves as a conduit for macroeconomic policy making can help assess policy effectiveness and identify the binding constraints. Importantly, an enhanced focus on the financial sector policies needed to address these constraints can make for more effective policy advice.
- *Addressing information gaps.* The lack of reliable and comprehensive data on multiple dimensions of financial systems in many LICs renders policy analysis and financial sector surveillance challenging. Better integrating existing data sources, encouraging the collection of more data and qualitative information, and making them more accessible for bilateral surveillance are important steps.

Providing context

41. Indicators. Greater attention needs to be paid in surveillance to the macro-stability impact of shallow and undiversified financial systems. This calls for going beyond financial soundness indicators to consider and understand: (i) the range of providers, markets and products available to diversify the financing base (ii) the depth and liquidity of different segments of the financial system to absorb shocks, (iii) the efficiency with which institutions and markets work; (iv) reach of the financial system and use of financial services by households and enterprises; and (v) the degree of financial interconnectedness and scope for macro-prudential policy. While not all financial indicators may be available or germane for all countries, attention should be focused on the constraints holding back the development of specific institutional or market segments that assist in policy effectiveness and engender resilience to shocks (Supplement I, Chapter I0). At a minimum, this requires monitoring the depth, liquidity, and functioning of key markets—foreign exchange, money, interbank, and government securities markets—that play a critical role in shock absorption and policy transmission, and the institutions that make up those markets.

42. Assessment tools. Knowledge of where a country stands on multiple dimensions of financial deepening can help focus attention on the gaps where policy initiatives would be helpful. The most straightforward approach for assessing a country's progress in financial deepening is to benchmark its financial system against peers or regional averages. Such comparisons, while useful, do not allow for a systematic unbundling of structural and policy factors that have a bearing on financial deepening. In this regard, the framework provided by the financial possibility frontier and the structural benchmarking exercise in Section IV could provide a useful tool to inform judgment on potential areas to facilitate sustainable financial deepening. Policy recommendations would in general vary depending on a country's position relative to its structural benchmark. For instance, a financial measure lying below its expected value could help in identifying gaps in the enabling environment. Similarly, over-performance relative to the structural benchmark could reflect sound macroeconomic and financial sector policies in the past but could also flag emerging vulnerabilities (e.g., a credit boom).

A Broader View on Policies

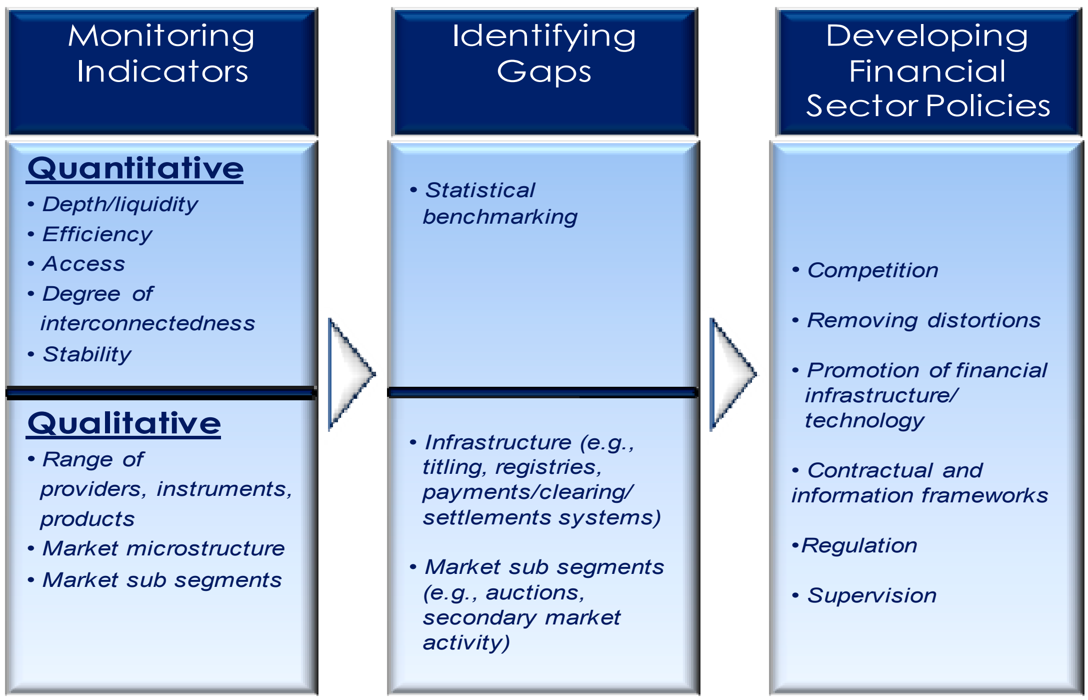
43. Financial sector policies. Understanding how the absence or limitations of financial intermediaries and markets, and enabling financial sector policies affects effective policy implementation and macro stability in LICs should inform the Fund's advice. In mature markets, the financial infrastructure underpinning macro policies is taken as a given. This presumption is not well founded for most LICs. For instance, Fund advice on monetary and fiscal policy in LICs cannot be treated in isolation from consideration of the existence and effectiveness of the institutional and market infrastructure supporting the monetary transmission mechanism, debt management, and fiscal financing (see diagnostic approach detailed in Supplement I, Chapter V). Evidence from case studies suggests that policy actions can mitigate constraints to deepening, thereby paving the way for enhanced policy space. Clearly identifying underlying bottlenecks and the policies required to address them is essential as their relative importance can vary across financial services/markets.

44. Monitoring financial systems. A careful evaluation of required developments in regulatory and supervisory frameworks and financial sector policies is warranted to support and keep pace with financial deepening. As highlighted by the case studies, unbridled financial sector expansion in the absence of a commensurate strengthening of the regulatory and supervisory infrastructure can pose risks to stability. Supervisory arrangements appropriate to the peculiarities of LICs (e.g., economic concentration) may also need to be considered in conjunction with standard-setters. Growing regional and global linkages will also require continuing attention to cross-border information sharing and supervision. Surveillance should consider the repercussions of inadequate supervisory resources—one of the most frequent FSAP findings, as well as how to address such capacity constraints. Figure 9 provides an illustrative schematic of the proposed framework for surveillance.

Addressing information gaps

45. Data efforts underway. Limitations in financial sector data availability constrain the scope and quality of financial sector surveillance in LICs. The establishment of a new joint IMF-Bank macro-financial data portal for LICs (for internal use only) is an important first step in compensating for these data deficiencies. This portal, established by the Fund-Bank LIC Financial Group, under the auspices of the Financial Sector Liaison Committee (FSLC), will improve coverage and dissemination of financial indicators by better integrating existing data sources. It combines a comprehensive list of financial indicators that provide granularity for assessing financial deepening in LICs combined with country-specific benchmarks, synthesizing information collected by both institutions. In addition to disseminating quantitative indicators, the portal provides a platform for sharing qualitative information on country policies, regulations, institutions, and arrangements for fostering an enabling environment. Existing data to which the Fund has access can take us some distance towards implementing the approach to financial sector surveillance described above. But further efforts are needed to augment and widen access to information that supports effective financial sector surveillance in LICs.

Figure 9. Illustrative Framework for Financial Sector Surveillance in LICs



46. Further efforts. The analysis presented in this paper in only a first step. Additional efforts will be needed in a number of areas:

- *Pilot cases/toolkit.* The approach outlined above could be piloted in a few cases to discern how sustainable financial deepening could enhance macroeconomic policy effectiveness and implementation. In parallel, a toolkit could be developed that supplements benchmarking with institutional and policy assessments, taking due regard of country circumstances (e.g., state of market infrastructure, degree of interconnectedness).

- *Analytics.* While the concept of a financial possibility frontier provides a useful heuristic for assessing the potential scope for deepening, further research is warranted to examine the causes and implications of financial system gaps, including in the case of private equity and institutional investors, and to understand when financial deepening is sustainable or indicates potential risks. In this context, the nexus between dollarization, deepening, and macroeconomic policy effectiveness and the role of economic diversification could be further explored. The relationships between financial sector policies, deepening, and growth also merit further attention.

- *Collaboration with World Bank*. The approach outlined above is intended to complement, rather than duplicate, the vast body of work undertaken by the World Bank to draw firm inferences on the causes of financial system gaps. This could better inform the Fund's policy advice for securing macro-financial stability and growth in LICs. Going ahead, continued collaboration with the Bank is warranted, including exploring possibilities for leveraging expertise, as needed.
- *Information gaps*. Information gaps relating to the functioning of money, foreign exchange, securities markets, and secondary market activity need to be addressed. Gaps in these areas correspond to the lack of documented descriptions of how markets and institutions function, as well as the unavailability of data on a comprehensive and consistent basis. For more financially integrated LICs, with financial systems similar to EMs, efforts are needed to systematically collect and report data on the extent of their evolving financial interconnectedness.
    - *Integrating TA*. An important potential source of information about the operations of financial systems that could be enhanced and better exploited in the surveillance context is technical assistance (TA). Going forward, better integrating TA policy advice with the macro-stability needs of LICs could help countries address impediments to deepening in specific areas.

47. Resources. The scale and nature of the work to be done to mainstream this work in surveillance will likely have resource and organizational implications. Staff will return to the Board with concrete proposals on these aspects in due course, informed by experience under the pilots, and with due consideration for the scope for appropriate division of labor/burden sharing with the World Bank.

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