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New Financing Trends in Latin America: An Overview of Selected Issues and Policy Challenges

Camilo E. Tovar and Myriam Quispe-Agnoli*

During the past fifteen years, financial markets in Latin America have experienced a major transformation. This process and its effects on the nature of risks and policy challenges in Latin America were the focus of a May 2007 conference in Mexico City sponsored by the Representative Office for the Americas of the Bank for International Settlements and the Americas Center of the Federal Reserve Bank of Atlanta.

This article summarizes the papers presented at the conference as well as the discussions among participants from central banks, finance ministries, multilateral institutions, academia, and the private sector.

In the first conference session, participants examined the shift from cross-border financing toward domestic financing, which has allowed domestic capital markets to expand and become deeper, more diversified, and less dependent on bank financing.

The development of domestic bond markets and the resulting policy challenges were the focus of two conference sessions. Issues discussed included the benefits for sovereigns of issuing in local currency, the pros and cons of doing so in domestic vis-à-vis international markets, the criteria for determining whether to issue domestically or cross-border, the status of private markets, the role of structured finance, and whether developing these markets remains a policy objective for de-dollarizing the region's economies.

In the final sessions, participants debated the implications that new financial markets have for monetary policy—such as markets' effect on policy transmission and the authorities' role in developing these markets—and for financial stability.

JEL classification: E44, E52, F34, G32, H63, O54
Key words: domestic capital markets, bond markets, cross-border financing, monetary transmission mechanism, debt financing, debt management

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Tovar is an economist at the Representative Office for the Americas of the Bank for International Settlements (BIS). Quispe-Agnoli is a research economist and assistant policy adviser in the Atlanta Fed's research department. *This article summarizes the presentations and discussions of a conference organized by the Representative Office for the Americas of the BIS and the Federal Reserve Bank of Atlanta in Mexico City in May 2007. The conference focused on the transformation of financing trends and the changing nature of risks and policy challenges in Latin America. Conference participants represented central banks, finance ministries, multilateral institutions, academia, and the private sector. This article also comments on the papers prepared for the conference, which are included in a volume published by the BIS.*[1] *The authors thank Philip Turner and Alejandro Jara for comments and Alejandra Gonzalez for editorial support.*

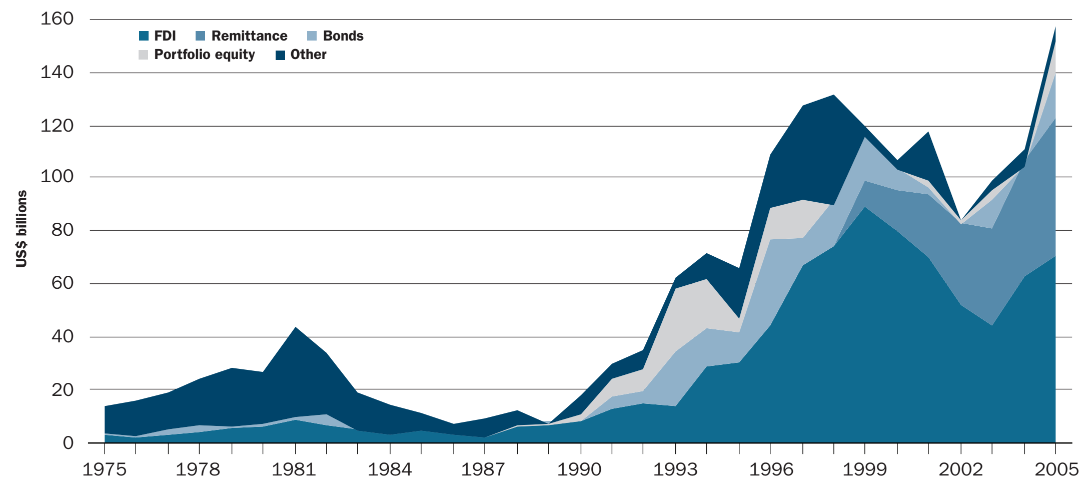
Financial markets in Latin America have experienced a major transformation during the past fifteen years. One of the most noticeable changes has been the shift from cross-border financing toward domestic financing. This shift has allowed domestic capital markets to expand and become deeper, more diversified, and less dependent on bank financing. The first session of the conference thus looked into the changes in financing and the factors driving them. The second and third sessions discussed the development of domestic bond markets, raising questions about the benefits of sovereigns issuing in local currency, the pros and cons of doing so in domestic vis-à-vis international markets, the criteria for determining whether to issue domestically or cross-border, the status of private markets, the role of structured finance, and whether developing these markets remains a policy objective for de-dollarizing the region's economies. The third session focused on policy challenges arising from developing domestic bond markets, such as the advent of new instruments, investors, or the scope for a regional market. The fourth session examined the mutual implications of new financial markets and monetary policy, such as markets' effect on policy transmission and authorities' role in developing these markets. The article concludes with a discussion on financial stability implications of the new financing trends.

What has changed in financing in recent years?

Two papers at the conference analyzed the recent transformation of financing in detail. Quispe and Vilán (2008) describe the evolution of financial markets, portfolio flows, foreign direct investment (FDI), domestic banking sectors, and workers' remittances during the 1990–2005 period. Jeanneau and Tovar (2008c) provide an overview of bond markets in local currency. These studies highlight several key points: First, domestic financing has expanded vis-à-vis external financing. Second, bond markets in local currency have become an alternative source of financing, particularly relative to external dollar-denominated and bank financing. Third, FDI and workers' remittances to the region have become the main source of external capital flows. These changes should make the structure of capital flows less volatile than in the past and make local borrowers less exposed to exchange rate risk (see the figure).

The role of foreign and domestic factors. A benign external environment characterized by low real interest rates worldwide and decreased levels of risk aversion has compressed the sovereign spreads on the region's external debt to historically low levels.[2] In addition, high commodity prices have led to very favorable terms of trade for the region and a significant expansion of exports.

Figure
The flow of funds into Latin America



Note: Countries included are Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela.

Sources: World Bank (2007), World Development Indicators; ECLAC; IDB; used with permission from Quispe and Vilán (2008)

Domestic policies have also improved, allowing a higher marginal propensity to save increased income than in the past. This trend is evident in the reduction of debt ratios, unprecedented current account surpluses, and increased levels of international reserves. Some of the relevant changes in policies include the shift toward moderately countercyclical fiscal positions (achieved by saving a large part of the increased revenues and generating significant primary surpluses); new government debt management policies aimed at improving sovereign debt profiles and reducing currency and maturity mismatches; more credible monetary and exchange rate policies; and better supervisory frameworks.

The role of external factors: A sustainable external environment? The favorable terms of trade observed in the region during the past few years will not last forever, and global imbalances will have to adjust at some point. The question is the degree to which a turnaround of these favorable conditions will affect the economies in the region and whether it will induce a reversal of capital market development. In general, it seems unlikely that an unfavorable external environment would have a significant impact in Latin American economies. In fact, the region has weathered rather well recent large shocks in financial markets (for example, May–June 2006, February–March 2007, and the shock that began in July 2007).[3] That said, four worries are often mentioned: (1) Asset prices can become overvalued. (2) An important share of flows seems speculative in nature, especially those associated with "carry trades." (3) The region's financial markets are still immature, and investors are just discovering how they work, so it is unclear how resilient the markets will be under an adverse shock. And, finally, (4) in some countries the favorable external environment may have reduced the incentives to pursue deeper reforms, in particular, at the microeconomic level (that is, legal and regulatory regimes).

The role of domestic factors: Have policies improved the resilience of the economies? There was a consensus at the conference that improved macroeconomic policies have enhanced the resilience of the region to adverse shocks. Indeed, improved fiscal positions are considered to be

1. See *New financing trends in Latin America: A bumpy road towards stability*, BIS Papers No. 36, February 2008, www.bis.org/publ/bppdf/bispap36.htm.
2. Financial innovation and the possibility of diversifying risk in financial markets were also cited as important factors behind lower risk premia and aversion.
3. The degree of underdevelopment of some markets (for example, securitization) may have prevented a crisis in the region.

key for such progress. Several countries (for example, Brazil, Chile, and Peru) have implemented fiscal responsibility laws that should reduce the procyclicality of fiscal policies. Prudent fiscal policies, together with new debt management practices aimed at improving debt profiles, have contributed toward reducing macroeconomic vulnerabilities. In addition, the new monetary frameworks adopted in most countries have led not just to lower inflation but also to lower and less volatile interest rates, helping to create a more stable environment for growth and investment. Finally, more credible exchange rate regimes appear to have played an additional supporting role.

Nevertheless, some participants considered that certain countries' macroeconomic (monetary and fiscal) policies need to be improved—for instance, by reducing their procyclicality or by avoiding the significant degree of exchange rate appreciation observed in many economies. Exchange rate appreciation is considered undesirable because it creates vulnerabilities that call for an active policy. The source of exchange rate overvaluation is seen as trade above the long-run equilibrium level or capital flows that have a large speculative component, say, as a result of "carry trade" activities associated with low interest rates in some developed economies (for example, Japan and Switzerland). However, some participants disagreed and doubted that countries should avoid large real exchange rate appreciations; they view the recent exchange rate trends as being the result of a normal equilibrium response to stronger fundamentals in line with improved policy credibility. This last element was stressed because it means that agents can expect better policy reactions to different economic developments and shocks. A similar argument was made regarding the development of domestic markets. As markets mature, they should improve economies' capacity to cope with shocks and other structural changes.

Certainly, controversies do remain regarding the region's macroeconomic policies. The article by Ocampo and Vos (2008) argues for a broader view of macroeconomic policies in developing countries. They present a more developmental and growth-friendly approach to macroeconomic policies, one that takes steps toward mitigating possible procyclical effects associated with the workings of financial markets, provides more stable aid inflows, deepens financial markets, and strengthens domestic financial governance structures. They argue that, in an environment of volatile capital flows, exchange rate fluctuations generate additional complications. Although they recognize the weaknesses associated with fixed exchange rate regimes, they consider that free-floating regimes are not desirable because they tend to induce significant overvaluations in good times, overshooting in bad times, excess volatility in financial markets, and distortions in a country's international specialization pattern.

How is the current period of expansion different from the past? What is different about the current expansionary episode? Several factors were highlighted: Countries in the region are now running current account surpluses rather than deficits; fiscal policy is generally more disciplined; the consumption boom is not so prominent; and most borrowing is being undertaken by the private rather than the public sector. In addition, capital flows are taking place against the backdrop of stronger and new financial systems, in an environment of low perceived risk, as reflected by low spreads and high liquidity, and in which investors are increasingly sophisticated.

In this context information plays a new role in which transparency has greater value. For this reason, bad policies appear to be more heavily penalized by the markets today than in previous decades. In addition, economies seem to be more disciplined, a characteristic that is required for currencies to emerge and for markets in local currency to develop.[4]

What can policymakers do to deal with capital flows? The answer is not obvious because many trade-offs continue to arise. For instance, tightening monetary policy to curb excess demand could trigger an increase of capital inflows. In contrast, lowering interest rates could have inflationary effects. Fiscal tightening could work, but too much of it might be politically difficult to implement. Higher bank liquidity and reserve requirements do not appear to be options in most countries

4. Some participants indicated that market discipline should not be overvalued because it has proved to be procyclical—that is, inexistent during booms and excessively enforced during crises.

because of the development of domestic capital markets. With the new financial market structure, financial funds are likely to flow through channels other than the banking system. For the same reason, it is unlikely that capital controls or Tobin-type regulations would work, although some countries (for example, Argentina and Colombia) in the region have resorted to such controls.

The development of domestic bond markets

The rapid development of domestic bond markets is among one of the most relevant financial changes seen in the region in recent years. Jeanneau and Tovar (2008c) offer a detailed characterization of these markets, documenting their progress. Because of these markets' relevance, a significant portion of the conference was devoted to the analysis of issues and policy implications associated with them.

Lessons from sovereign financing. Sovereign financing in domestic bond markets offers important potential benefits because these instruments can help eliminate the "original sin" problem, strengthen the domestic financial system, or allow associated markets to develop, such as markets for corporate bonds (with current limitations), securitizations, or derivatives.[5] Furthermore, by reducing portfolio risk (the liability side of the issuer), macroeconomic stability is strengthened and vulnerability to external shocks is reduced.

At the conference several lessons arising from developing government debt markets were discussed. The first lesson is the importance of having a diversified investor base to ensure the sustainability of the financing process (a point discussed further in a later section). In this respect, pension fund reform is considered a key element for boosting the development of these markets and the presence of both domestic and foreign investors essential for a resilient market. Given Mexico's experience, the presence of foreign investors in domestic markets is argued to offer diversification gains while helping extend the duration of debt in local currency. Furthermore, foreign investors' presence is said to stimulate local investors' interest in long-term papers denominated in local currency and to be a source of know-how and technology.

A second lesson highlighted is the need for a gradual process, one allowing time for the market to adjust when the yield curve expands and time for authorities to introduce corrections whenever necessary.

A final lesson on this point is that local currency bond issuance is not always necessary, particularly if the government is a small issuer, because it could fragment the investor base and delay market development. This discussion raised another issue: Should countries denominate all their debt in a single currency? In general, participants found it desirable to have a diversified currency debt structure. Nonetheless, some countries in the region have announced that they will not issue more debt in foreign currency. Obviously, in discussing these issues, participants needed to identify whether currency or maturity risk is more relevant. As shown by Jeanneau and Tovar (2008c), in Latin America long-term foreign-currency-denominated debt has been exchanged for shorter-term domestic-currency-denominated debt, thus increasing maturity risk. Although such risk can be a source of concern, there was consensus that in most recent crises episodes, currency exposures were more relevant than maturity exposures.

Global bonds denominated in local currency. Colombia, Brazil, Peru, and Uruguay have issued global bonds in local currency. This development raised two questions: What are the advantages or disadvantages of issuing them? And what lessons does this experience offer to smaller economies or economies emerging from turbulent times?

Conference participants argued that global bonds denominated in local currency offer important benefits. For issuers, they eliminate currency mismatches and help extend the yield curve. For investors, they separate currency risk from country risk. This feature attracts investors with diversified portfolios who want to avoid the idiosyncrasies of investing in local markets. Nevertheless, global bonds are potentially detrimental for the development of domestic markets if they segment the investor base.

5. The term "original sin" indicates a country's inability to borrow abroad in its own currency.

In discussing the second question, participants felt that these bonds are useful for smaller economies needing to reconstruct financial markets following a crisis. For example, the use of these bonds after the 2002 Uruguayan crisis provided lessons in three areas: fiscal sustainability, deepening private debt markets, and monetary policy.

Foreign-currency-denominated debt creates procyclical fiscal pressures: In good times, when the exchange rate appreciates, debt ratios fall. However, in bad times, when the currency depreciates, debt ratios increase (as discussed in a later section). Therefore, by reducing dollar-denominated debt, the bonds in local currency reduce the procyclicality of foreign debt and improve its sustainability.

Sovereign global bonds in local currency also improve the depth of private domestic debt markets by (1) allowing the expansion of the longer part of the yield curve in local currency (as in Brazil and Peru); (2) setting benchmarks for domestic markets, which can be relevant for domestic credit markets if longer-term credit in local currency is nonexistent; (3) creating incentives for the expansion of derivative markets; and, finally, (4) by diversifying the investor base.

Issuing global bonds in local currency both in nominal and inflation-indexed terms allows a better measurement of expected inflation. In addition, when bonds are issued, agents both in domestic and international markets track the behavior of the monetary authority more closely, thus increasing the demand for better monetary policy, creating a disciplinary effect.

Nevertheless, global bonds do create drawbacks. Although as a government debt-management strategy these bonds reduce the overall currency risk, they are foreign debt and not a substitute for a domestic bond market. Furthermore, it is unclear whether such bonds in the hands of foreign investors reduce the external vulnerabilities of economies that issue them.

Private sector issuance. The expansion of local currency bonds markets in the region has been dominated by the public sector. Corporate bond markets remain small, and their development lags the progress seen in other regions of the world (for example, Asia). Why is this market so underdeveloped?

One aspect that has been receiving increasing attention is corporate governance. Ananchotikul and Eichengreen (2008) address why the region's progress in terms of corporate governance has not been faster and how capital markets would benefit from reforms in this area. The authors argue that improvements in corporate governance have taken place in countries with stable governments prepared to pay the up-front cost of reform and where foreign investors are prepared to lobby for reform. They also argue that in Latin America corporate governance reform is incomplete. Based on their econometric analysis, the authors conclude that specific actions can contribute to its promotion, such as a stable macroeconomic environment, opening markets to foreign investment, and ensuring a stable political environment that provides the incentive for investors and governments to invest in the future.

Participants at the conference indicated that the underdevelopment of corporate bond markets in the region could also be attributed to a number of factors. The first is the segmentation of corporate markets in terms of size and creditworthiness. Large and creditworthy companies have access to a number of credit markets (for example, banking, public, or international) while medium-sized companies lack in general access to markets. Equally important, regulations on pension funds (which are replicated by mutual funds) allow investment only in domestic securities with a minimum rating, thus limiting the type of companies in which to invest. Second, the tax structure may weaken corporate bonds' attractiveness. For instance, in Mexico investing in government securities is tax free, but investing in corporate debt is not. Therefore, all else being equal, tax considerations become a key determinant for the attractiveness of a security. Third, governments in most countries have focused on increasing the liquidity for secondary domestic government debt markets rather than enhancing corporate bond issues. For instance, in most Latin American countries, repurchase agreement (repo) transactions with central banks exclude private sector bonds or structured securities as collateral. In Mexico, the central bank allows repo transactions for highly rated debt. However, even there an efficient secondary market for private sector securities is still nonexistent. Finally, the development of corporate bond markets could be hampered by the lack of foreign investors in the domestic markets.

Domestic versus cross-border issuance. Has the reduction in the issuance of sovereign bonds in international markets left room for corporate issuance abroad? And how do companies choose between international and domestic issuance? The implications for the private sector associated with decreased levels of sovereign debt issues in international markets vary significantly across the region. In Mexico, the most creditworthy private companies enjoy access to domestic financing at low spreads over the sovereign benchmark. The only private sector issuers that tap international markets are low-rated ones that cannot issue domestically or those that look for long tenors for their bonds.[6] Therefore, although in Mexico there appear to be plenty of opportunities for corporate issuance abroad, independent of creditworthiness, this situation does not apply in other countries in the region. For instance, in Brazil the complications of financing in the domestic market for private companies seem to favor cross-border financing because the government still refinances large portions of short-term foreign currency debt in the domestic market and real interest rates remains high. As a result, markets demand a premium even to the government. For companies that can issue locally, the manner in which they choose between domestic or foreign financing appears to depend on two main factors. If a window of opportunity appears in domestic markets with respect to cost, companies will normally issue domestically. However, except in Mexico and Chile, if low-cost, long-term financing is required (for example, fifteen to twenty years), then financing abroad is easier.

The asset-backed securities (ABS) market. The ABS market in Latin America has expanded rapidly during the past few years. However, its development is still in its infancy (see Scatigna and Tovar 2007). Furthermore, Mexico and Brazil account for nearly two-thirds of the regional activity in this market. Given its implications for developing corporate bond markets, conference participants discussed the prospects for increased ABS issuance; their contribution to improve local capital markets; and, finally, whether they have widened access to bank credit. Since Mexican markets have developed more rapidly than markets in other countries in the region, conference participants focused special attention on this market.

In Mexico, different assets are pooled for securitization. However, mortgage-backed securities (MBSs) are the dominant transactions. Sofoles (nonbanking institutions), which provide loans for different credit segments, including mortgage credit, dominate the market. Banks have not securitized much, partly because credit collapsed after the 1994 crisis to recover only in recent years. However, some banks are slowly issuing plain vanilla bonds and issuing structured transactions, mainly in the residential mortgage-backed securities market.

Securitization can help spread risk, but it can also create risks. For this reason, the Mexican authorities at the conference indicated that they have worked on enhancing the securitization framework in areas such as the monitoring of credit provision. These enhancements seem to indicate that mortgage and financial insurance has developed, strengthening the market and enhancing its prospects.

At the time of the conference, the prospects for ABS growth in the region appeared to be positive. However, participants indicated that this optimism was on many occasions for the wrong reasons. In particular, participants mentioned that many times these positive prospects reflect expectations of growth associated with regulatory bottlenecks that need to be removed and do not necessarily reflect fundamental changes in the underlying market. In Mexico, for example, pension fund regulators initially adopted very tight controls, thus forcing pension funds to invest only in government securities. However, with time, the supply of government paper became insufficient for pension fund needs, thus stimulating regulatory changes leading to greater investment in highly rated companies. The need for regulatory changes created large expectations of market growth. Today, a similar phenomenon is taking place as regulatory restrictions have prevented markets from moving toward investing in lower-rated companies.

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6. However, participants consider it just a matter of time before some of these companies that find long-term financing only abroad begin accessing the long-term domestic market.

Participants also said that structured transactions are helping smaller companies tap the markets, but the process is likely to evolve differently than in developed countries. In Europe or the United States, companies sell their own risk and then issue the structured transaction. In Latin America, the process appears to be operating the other way round, a possibility that could augur a lengthy and expensive process.

Does de-dollarization remain a policy objective in some countries? Today the favorable external environment has created a window of opportunity to reduce the degree of dollarization in several of the region's countries. Participants discussed the extent to which de-dollarization remains a policy objective and the role that recent financing developments, such as local currency bond markets, could play.

Highly dollarized countries in the region (such as Bolivia, Peru, and Uruguay) have issued local-currency-denominated debt, which appears to stimulate and strengthen the de-dollarization process. Conference participants indicated however, that the policy objective of issuing such debt is not de-dollarization per se, but reducing financial fragility. As a result, the strategy implies changing the regulatory frameworks to internalize the risk of dollarization. In countries like Uruguay, the strategy has aimed at inducing a shift in banks' balance sheet currency composition toward denomination in local currency.

Participants said that for local currency bond markets to support the de-dollarizing process, countries must determine, at least for the short and medium run, whether to develop a fully nominal market or to adopt an inflation-indexed framework. Although indexation may create difficulties in the longer run by limiting the central bank's capacity to lower inflation, it may at the same time offer benefits in the short run if questions regarding fiscal policies lead to concerns about the sustainability of the process.

Policy challenges in developing domestic bond markets: Instruments and the investor base

The development of local currency bond markets imposes several important policy challenges, but only three were discussed. The first had to do with the variety of instruments available in the markets. Specifically, how do debt managers decide on the instruments they issue, and how have risk management capacities kept pace with these instruments' rapid development? The second was how to induce foreign investment in local currency bonds so as to promote risk dispersal. Finally, participants were asked more generally how to go about broadening the investor base.

Variety of instruments available in domestic bond markets. A wider variety of debt instruments complete markets and provide hedges for various risks. How should sovereign debt managers, in framing issuance strategies, strike a balance between market completeness and liquidity? Developing bond markets requires careful coordination at different levels. On the demand side, conference participants highlighted the need to know who would be demanding the securities and to have an open dialogue with investors and listen to their needs. This scenario is well illustrated by the experience in Mexico, where an open dialogue with foreign investors was key for introducing new securities because foreign investors are the largest purchasers of long-term securities. Conversations with institutional investors, such as pension funds, are also necessary to ensure a solid demand for securities. Finally, conference participants said the market makers program run by the finance ministry in Mexico is an important tool for getting banks interested in securities.

On the supply side, participants highlighted the importance of having transparent and clear communication with the market—for instance, informing agents what would be supplied. For this reason issuance calendars are useful because they allow investors to learn in advance about the type of instruments to be issued, their amounts, and their maturities. Clear communication also helps avoid market segmentation among different securities. Finally, participants said that issuers could help the pricing of bonds by reopening them rather than issuing new securities.

New financial instruments and risk management capabilities. Have risk management tools and practices evolved at a sufficiently rapid pace to keep up with the development of new financial instruments? Conference participants felt that new instruments offer benefits and challenges for risk management. While they help complete markets and provide opportunities to hedge or increase exposure to specific risks, they also have implications for financial stability that are not fully understood. In general, participants said that analyzing whether tools and practices have evolved rapidly enough to follow the developments in financial instrument innovation requires an assessment of the four main pillars of risk management: identification, quantification, mitigation, and control.[7]

Risk identification and quantification. Participants indicated that large international banks are up to date in the tools available for identifying and measuring risk and that their capacity to handle these tools has improved over the past few years. In fact, as discussed in Jeanneau and Tovar (2008b), countries with more open financial systems should benefit from the transfer of know-how from such institutions. Nevertheless, the need for transparent and liquid markets to feed risk models and the establishment of an adequate financial and legal infrastructure constitute major challenges for risk management in the region.

Prudent fiscal policies, together with new debt management practices aimed at improving debt profiles, have contributed toward reducing macroeconomic vulnerabilities.

Risk mitigation. Financial instruments are just one way to manage risk, and their development is sometimes related to their ability to provide a hedge or for financial speculation. Therefore, participants indicated that lags in instruments' development have to be evaluated in the context of the needs of the domestic agents and the availability of alternative cost-effective ways to manage risks. For instance, a freely floating exchange rate creates the need for effective instruments and for prudential regulations to manage currency risk. Nonetheless, participants said it is not uncommon for instruments to appear in the market for which users are unable to assess the associated risks. In such cases, ensuring a gradual or slower development of the market appears necessary. Finally, participants noted that implementing sophisticated risk management tools in the region is sometimes costly, partly because financial crises still linger in agents' memory.

Risk control. The greatest challenge for financial agents and regulators, participants felt, is risk control—in particular, regulators' capacity to constitute effective counterparts to assess adequate risk management systems and to develop adequate and timely risk management tools and practices. For this reason, some participants stated that tools and practices may not have developed enough to keep up with the development of financial markets.

Financial instruments are being introduced very rapidly in the developed world, implying a rapid pace of introduction in emerging market economies (EMEs). This pace creates challenges for risk control. For instance, rating agencies are forced to invest heavily to keep up with new developments. However, the Latin American market does not have the size and scale necessary to generate enough business to justify the costs of keeping on the edge of financial innovation. Thus, global rating agencies gain a significant advantage over local agencies with no international affiliations, which might be unable to develop the capacity to evaluate sophisticated new instruments or transactions. Furthermore, problems (such as incorrect pricing) may arise when local banks deal with local rating agencies (with no international affiliations) and unsophisticated investors mainly because investments end up being made in instruments that local banks are copying without fully understanding their functioning. Finally, risk control weaknesses may be magnified by the lack of a critical mass of well-trained financial analysts in banks or institutional investment companies.

The role of foreign investors. The presence of foreign investors in domestic bond markets has been expanding. Available statistics on debt holdings (mainly local government securities) show that foreign investment grew from less than $15 billion at the beginning of 2003 to $200 billion by the end of 2006. This trend is likely to continue, and hedge funds are likely to gain prominence. Foreign investors' presence raises two main issues: What form does nonresident exposure to local

7. The pace at which countries introduce new financial instruments varies significantly across the region, so the risk management implications differ from country to country.

currency bonds take? And do foreign and domestic investors react differently to volatility (for example, May–June 2006 or February–March 2007)?

In general participants felt that talking about foreigners' taking positions is difficult because each country has different dynamics and regulations. Participants did agree that foreign participation in local debt markets offers important benefits (as discussed earlier): increased risk sharing, greater liquidity, and the possibility of issuing longer maturities. For instance, Brazil's banking system is the counterpart to net long foreign positions in exchange-traded derivatives, so the system is laying off a great deal of duration risk to nonresident investors. This practice to some extent eases concerns about the large amount of public debt being held by the local financial system. However, position taking through derivatives is complex and often lacks transparency. Furthermore, derivatives are double-edged—they improve risk management but at the same time allow for greater leverage. This duality creates challenges not just for financial authorities but also for those trying to assess country risk and for counterparties involved in the transactions.

Foreign investors usually take indirect or hedged exposures. However, conference participants considered that the possibilities for taking direct credit exposure to government or local securities are limited. For instance, no credit default swap market exists for local securities. Mexico has a preliminary framework, but the regulation has not allowed the market to develop fully. Although Mexico's market is very open and foreign investors can get exposures to local government debt easily and can buy and sell with plenty of liquidity, it has weaknesses on the operational side and in withholding taxes. Participants also considered that Mexico has no homogeneous group of foreign investors. Likewise, its domestic investors are heterogeneous, and the various players have different investing horizons. Such heterogeneity entails quite diverse reactions during episodes of volatility, making it difficult to determine whether domestic investors actually behave differently than foreign ones. Some participants nevertheless argued that foreign investors may have played a stabilizing role thanks mainly to their longer investment horizons, their contribution to domestic liquidity, and their capacity to help complete markets.

Broadening the institutional investor base. Institutional investors have been fundamental for developing bond markets. Considering their importance, it is natural to ask two questions: To what extent have countries succeeded in broadening the institutional investor base (mutual funds, pension funds, etc.)? And what has been the impact of regulations on investment in local currency government bonds?

Participants indicated that the benchmark for a successful experience in broadening the institutional investor base is unclear. In the region, Chile is often taken as the benchmark. There institutional investors hold assets equivalent to almost 90 percent of GDP, of which 70 percent is held by pension funds and the rest by insurance companies and mutual funds. However, concentration of the investor base weakens Chile's position as a benchmark. Nevertheless, it is true that mutual funds have increased their presence in Chile's capital markets, in particular in short-term fixed-income markets, while corporate bonds are mainly dominated by pension funds and life insurance companies.

Pension funds are a captive investor class for local currency bond markets. Their dominance in these markets has implications for market performance and the manner in which these markets operate. In Latin America, a large proportion of governments bonds are held by institutional investors. This fact raises the question of whether this concentration is the result of strict regulations or other factors. Conference participants mentioned that in some countries regulations have been relaxed, now allowing investment abroad.[8] However, pension funds have not taken advantage of this situation. So, for instance, in Chile pension funds' restrictions for cross-border investments led to increased positions in government bonds. Once regulations were eliminated, positions abroad began to increase while holdings of government bonds declined. In this case, regulatory changes have stimulated institutional investment overseas.

8. Nevertheless, tight regulations remain on the type of assets that pension funds are allowed to hold.

Is there scope for a regional bond fund? If size limits the development of domestic bond markets, then a regional bond fund may constitute an alternative option. Asian central banks, in collaboration with the Bank for International Settlements, in recent years launched a regional bond market initiative that included two funds: the Asian Bond Fund (ABF)-I and -II. ABF-II is an initiative in local currency aimed at creating a critical scale to set up a number of elements required for these markets to develop, such as the costly infrastructure (for example, trading platform clearing services, rating agencies, etc.). The question then is whether it would be worth attempting a similar effort to develop a regional bond fund in Latin America.

In this regard, participants at the conference indicated that the financial cooperation framework in Latin America has been dominated by subregional development banks, mainly serving medium and small economies. However, beyond these regional institutions, no one saw any scope for regional cooperation that would lead to something along the lines of the ABF-II.[9] Nevertheless, it was also clear that multilateral development banks, such as the Inter-American Development Bank or the World Bank, have introduced initiatives to promote domestic bond markets.

Participants considered that local markets in Latin America are so diverse—for example, in regulations, taxes, currencies, and sizes—that in practice it seems difficult to implement a regional initiative. However, some indicated that a lesson derived from the ABFs initiatives is that they forced countries to look into the peculiarities of their own national bond markets that create barriers for foreign investors. Therefore, it seemed that a regional effort could help in harmonizing bond market practices and in creating a positive externality that stimulates foreign investment. Nonetheless, not all participants shared this view, partly because many saw these relatively small initiatives to be just a drop in the bucket.

Implications for the transmission of monetary policy

Monetary policy frameworks in Latin American changed significantly during the past decade. Nowadays central banks rely less on direct means of monetary control (such as interest rate controls) and more on market-based instruments. Thus, more developed and efficient financial markets are required for monetary policy to operate effectively. The linkages between financial markets and monetary policy frameworks raise an important issue: How do incomplete and imperfect financial markets influence the transmission mechanism of monetary policy? The article by Jeanneau and Tovar (2008a) looks into this matter.

Financial markets and the transmission mechanism. The degree of financial market development influences the transmission of monetary policy. Therefore, how has the development of local markets (in the short-term and long-term ends) changed the transmission mechanism of monetary policy, and what implications can be derived for inflation-targeting countries?

The impact on the transmission mechanism. Conference participants found it difficult to disentangle the impact of developing financial markets on the transmission of monetary policy. Nevertheless, several ideas were discussed. For instance, participants said that the development of securities markets meant that monetary policy could have larger balance sheet and asset price effects than in the past and that the interest rate channel has been strengthened. Also, although more developed financial markets could, in principle, imply a less relevant role for the bank lending channel, there has been a resurgence of bank lending to new market segments such as households and medium-sized firms. In fact, tight constraints on credit (characteristic across the region in the past) have slowly been loosened, thus improving credit access.

In the region, monetary control by indirect means has been hampered historically by the absence of the medium- and long-term ends of the nominal yield curve. The development of domestic bond markets should therefore strengthen the interest rate channel. However, participants also indicated that for some of the smaller economies in the region (for example, Bolivia, Costa Rica, or Uruguay), the challenge is to strengthen or make this channel operational.

9. Possibly the only regional initiative allowing something along these lines is the Latin American Reserve Fund (FLAR), an Andean effort that has recently extended to include Costa Rica and Uruguay.

In general it appears that the exchange rate channel has lost relevance in recent years, partly because of the development of domestic financial markets. For instance, for some countries the development of bond markets has led to de-dollarization, thus mitigating the impact of the exchange rate channel. However, in more advanced economies, such as Chile or Mexico, this channel has weakened as a result of the development of derivatives markets and the adoption of flexible exchange rates. In addition, the adoption of inflation targeting, combined with more flexible exchange regimes, has reduced the information contained in the exchange rate regarding inflation expectations. Floating regimes help avoid the need for exchange rate intervention as the market is able to price the exchange rate based on fundamentals rather than on other considerations. Nevertheless, some participants indicated that shifting toward floating regimes has also made it more difficult for central banks to communicate that monetary policy has no commitment to the exchange rate.

Finally, monetary policy has been affected by the wider set of liquidity sources in the economy because the impact on market interest rates is subject to the degree of alignment of such sources with monetary policy decisions. In fact, excess liquidity has complicated the conduct of monetary policy in several economies.

Despite the uncertainties surrounding the global financial system, Latin American economies appear to be more resilient today to adverse conditions than in the past.

Implications for inflation targeting. Participants saw in the progress of domestic financial markets a positive development for inflation-targeting countries. These markets provide a transparent and inexpensive mechanism for the central bank to enforce its interest rate decisions through open market operations based on repurchase agreements of public debt securities. The expansion of the yield curve also provides a more reliable tool for extracting agents' expectations regarding policy decisions. Furthermore, participants agreed that anchoring expectations is essential for the success of inflation targeting and requires a public debt market.

However, difficulties in managing inflation targeting were also highlighted. In particular, difficulties arose when central banks incorporated financial stability considerations in a context in which the transmission mechanism is not fully operational or in which financial markets are underdeveloped. The public debt market may have to be considered in making monetary policy decisions rather than simply focusing on meeting the inflation target. Bond markets may also delay or eliminate the transmission of monetary policy by allowing banks to manage their portfolios and bypass interest rate changes. For instance, in 2006–07 in Colombia, banks were able to bypass central bank interest rate increases; after a 225 basis point increase in policy rates, credit market rates had remained virtually unchanged. Finally, policy rates may have a greater impact on sensitive markets such as the housing market (which in turn is also more sensitive to sovereign spreads).

In other countries with more developed bond markets (such as Mexico), the challenges have been different. The good liquidity along the yield curve up to twenty years has allowed the central bank to begin extracting the information contained in the yield curve and to analyze its implications. However, as in developed countries, puzzles have emerged, such as the well-known Alan Greenspan "conundrum." Indeed, it is hard to understand the low levels of interest rates in the long end of the curve in the context of rising short-term interest rates, economic strength, and inflationary pressures.[10] Are those low levels of long-term interest rates reflecting well-anchored inflation expectations or weak economic prospects, or are they the result of more technical factors?

Central banks, finance ministries, and bond markets. What role do central banks play in developing bond markets? In particular, how far can central bank actions aimed at improving liquidity and transparency of short-term money markets contribute to the development of bond

10. Former Federal Reserve Chairman Alan Greenspan introduced the expression "conundrum" to refer to a situation in which, despite a background of rising short-term rates, economic strength, and inflationary pressures, long-term rates had not risen at all. The problem was that if long-term rates remained low, economic activity would strengthen and create further inflationary pressures. If the reason was that a new force was depressing long-term interest rates, its removal could then ignite a sharp increase in interest rates.

markets? Also, given the prominent role of finance ministries in developing financial markets, how should they coordinate debt management strategies with central banks (for example, regarding maturity and liquidity)?

Central banks can play an essential role in helping develop bond markets, for instance, by aiding in the creation of markets (either in nominal or indexed terms) or building up liquidity, for example, via repo markets. However, many central banks in the region have found it difficult to develop repo markets, partly as a result of excess liquidity or because private banks have tried to avoid the "punishment effect" associated with engaging in operations with the central bank, a problem particularly severe in countries with a history of crisis. In general, it appears that developing repo markets will require a greater effort from central banks, such as actions related to the regulation of the payment system.

A good dialogue between central bank, finance ministries, and market participants—in particular, discussing public debt management plans with central banks and getting their feedback—was considered essential for developing domestic financial markets. However, participants also stressed that functions must be well defined and, ideally, separated among these institutions.[11]

Implications for financial stability

Has capital market development improved the stability of the region's economies? Acevedo, Alberola, and Broto (2008) ask how changes in the currency composition of public debt have affected the nature of financial risk in a number of selected EMEs, including Brazil, Colombia, and Uruguay. The authors find that, given the exchange rate appreciation observed in recent years, debt ratios would have been smaller had there been no changes in the composition of public debt structures. This finding illustrates how governments in the region (and, broadly speaking, in EMEs) have taken advantage of the benign international environment to transform debt structures even at the expense of such short-term costs.

The authors also perform counterfactual exercises for financial turbulence scenarios (similar to those seen in recent crisis episodes), finding reductions in the debt vulnerability of these economies, even once the short-term costs associated with the transformation of debt structures are taken into account. However, such reductions are not uniform: While gains are notable for Brazil, where debt structures were biased toward foreign-currency-denominated debt, gains are less evident for Colombia or Uruguay. Overall, the paper highlights that changing the currency composition of debt requires balancing possible short-term costs with long-term gains arising from a structure less dependent on foreign currency debt.

Participants also agreed that financial stability has improved as the mechanisms (for example, currency mismatches) amplifying the effects of exchange rate fluctuations on balance sheets have been mitigated (see Jeanneau and Tovar 2008b). However, participants raised concerns about the transitory or permanent features of the development of domestic markets. Others also warned that markets may disappear at times of stress.

Another issue of interest at the conference was that the impact of capital market integration on financial stability may depend on the efficiency with which the market allocates resources and on the availability of instruments for distributing risk. Therefore, weaknesses in these areas may increase the vulnerability to sudden shifts in capital flows.

Dual objectives of price stability and financial stability were also considered an area of tension and an obstacle for allowing a free-floating exchange rate. In this regard, participants indicated that

11. In Chile both the central bank and the treasury issue bonds, so coordination in terms of maturity, liquidity, and timing of issuance is essential. The government issues debt only for hedging and market development purposes because the fiscal surplus does not impose financing needs. Currently, new government inflation-indexed securities have been issued with ten- and twenty-year maturities, along with ten-year nominal bonds. In contrast, the central bank issues nominal bonds at two- and five-year maturities and CPI-indexed at five- and ten-year maturities. For liquidity purposes, both the central bank and the finance ministry use benchmarks. Bullet bonds are issued with very similar characteristics so that the market uses them almost as perfect substitutes. A key difference among the securities is that treasury-issued bonds are not accepted as collateral for operations with the central bank. The annual issuance program (which specifies the instruments' amount and date of issuance) is announced simultaneously by both institutions.

restricting exchange fluctuations should be seen not as a countercyclical monetary policy measure but rather an element of risk management in a context of incomplete markets that leads to excessive risk taking. In such an environment, central bank measures dealing with capital flows, such as intervening in the foreign exchange market, would be justified.

However, participants reached no consensus on how to determine the correct strategy for foreign exchange intervention. Some said the focus should be on the real rather than on the nominal exchange rate, that the expected time horizon of capital flows should be taken into account, or that the capacity to sterilize interventions without compromising the inflation target had to be assessed. Nevertheless, not all participants supported the arguments for an active intervention in foreign exchange markets mainly because of that strategy's counterproductive side effects. Those on this side of the debate indicated that foreign exchange interventions often lead to one-sided bets, thus fueling more capital inflows and exchange rate pressures. For this reason, by putting two-sided bets, freely floating regimes were said to be superior alternatives, which endogenously trigger stabilizing mechanisms to avoid snowball effects on exchange rates or capital flows. Another argument against interventions was that an implicit guarantee for stability often creates an implicit excuse for bailing out investors, thus distorting the incentives for developing adequate risk management instruments. As this article has discussed, some participants think the exchange rates play a dual role—for financial stability and for the competitiveness of the real economy—while others believe the focus of monetary policy is exclusively price stability. Nonetheless, most agreed that creating the incentives for financial markets to develop risk management instruments is fundamental.

Vulnerabilities and remaining challenges

The current favorable financing conditions for Latin America are partly the result of a combination of high commodity prices and a very benign international financial environment. The belief among most participants that the current external environment is unsustainable led to cautious views about the medium-term prospects for the region, especially since a similar scenario was last seen in the 1970s and ended in a boom-bust cycle. It is unclear to what extent one should be concerned about a bust. Certainly, global financial conditions have been changing, and thus key questions remain unanswered: How will the crisis that began in the U.S. subprime market unfold? How will EMEs, particularly in Latin America, adjust in the face of a major correction in financial markets?

Despite the uncertainties surrounding the global financial system, Latin American economies appear to be more resilient today to adverse conditions than in the past. The development of bond markets, debt management tools and practices, and regulatory policies all support such optimism. Most countries in the region are also progressing in terms of fiscal, monetary, and exchange rate policies. Nevertheless, policymakers must continue searching for possible remaining weaknesses and must avoid complacency regarding the progress made so far as financial markets need to be further developed and strengthened.

References

Acevedo, Paloma, Enrique Alberola, and Carmen Broto. 2008. Local debt expansion and vulnerability reduction: An assessment for six crisis-prone countries. In *New financing trends in Latin America: A bumpy road towards stability*. BIS Papers No. 36, February.

Ananchotikul, Sundarat, and Barry Eichengreen. 2008. Plumbing for Latin American capital markets. In *New financing trends in Latin America: A bumpy road towards stability*. BIS Papers No. 36, February.

Jeanneau, Serge, and Camilo Tovar. 2008a. Domestic securities markets and monetary policy in Latin America: Overview and implications. In *New financing trends in Latin America: A bumpy road towards stability*. BIS Papers No. 36, February.

———. 2008b. Financial stability implications of local currency bond markets: An overview of the risks. In *New financing trends in Latin America: A bumpy road towards stability*. BIS Papers No. 36, February.

———. 2008c. Latin America's local currency bond market: An overview. In *New financing trends in Latin America: A bumpy road towards stability*. BIS Papers No. 36, February.

Ocampo, José A., and Rob Vos. 2008. Policy space and the changing paradigm in conducting macroeconomic policies in developing countries. In *New financing trends in Latin America: A bumpy road towards stability*. BIS Papers No. 36, February.

Quispe, Myriam, and Diego Vilán. 2008. Financing trends in Latin America. In *New financing trends in Latin America: A bumpy road towards stability*. BIS Papers No. 36, February.

Scatigna, Michela, and Camilo Tovar. 2007. Securitisation in Latin America. *BIS Quarterly Review* (September): 71–82.