

XXII Meeting of the Latin American Network of Central Banks and Finance Ministries

Regional Economic Outlook

Ernesto Talvi, LAC 7 Countries

Ernesto Talvi surveyed the impact of capital flows from three perspectives: i) the global repercussions of capital flight from emerging markets (EMs) in the 1997-2002 period; ii) the revival of capital inflows from 2003 to 2005; and iii) the potential consequences for Latin America of an unwinding of global capital imbalances.

The 1997-2002 period of capital flight was preceded in 1992 to 1997 by a “neoclassic” period of large-scale capital outflows from industrialized countries, including the United States, to EMs. The Asian and Russian Crises of 1997 and 1998, however, represented a major inflection point, as EM debt spreads more than doubled and capital flows reversed, with a flight to safety in the United States. The capital flight period was further accompanied by an unusual combination of circumstances in the United States: a deterioration in the current account and depreciation of the dollar, accompanied by rising asset prices and falling interest rates. At the same time, current accounts went from negative to positive in emerging markets and remained positive in other industrialized countries. Following the initial financial shocks of this period, LAC-7 economies experienced a gradual appreciation of their currencies and a decline in spreads; asset prices, however, did not recover from their post-1997 collapse.

This period of gradual recovery has been followed by a dramatic return of capital to EMs, with low spreads, a recovery in asset prices, and a revival of domestic bank credit accompanied by a net outflow from the United States and other industrialized countries. Prices of commodities exported by LAC-7 countries have returned to and even exceeded pre-crisis levels, particularly in petroleum and metals. In addition, real exchange rates have depreciated in Latin America’s major economies and economic activity has increased, which has allowed for a decline in public debt. This situation largely resembles the “neoclassic” period.

These improvements, however, have taken place in what may prove an unsustainable global situation. Alan Greenspan has noted a “conundrum,” however, as emerging market bonds and U.S. 30-year Treasury bonds have displayed co-movement to lower interest rates, with relatively narrow spreads. This has occurred even as Federal Reserve target rates have increased since the middle of 2004. This development coincides with, and may reflect, mounting current account and public deficits in the United States, largely financed by Asian and European central banks. The questions that attend the unwinding of these imbalances are, first, whether major turmoil will occur in capital markets and, second, how Latin American countries might fare in this scenario.

Kelvin Dalrymple, Issues and Prospects for the Caribbean Region

Kelvin Dalrymple, Chief Country Economist of the Caribbean Development Bank (CDB), surveyed the situation of his organization's 17 borrowing countries, which consist of 12 independent states, including the members of the Organization of Eastern Caribbean States (OECS), and five overseas dependent territories of the United Kingdom. The region's economies are notably concentrated in a small number of sectors: tourism, construction, agriculture, financial services and energy, with even greater specialization in individual countries.

CDB countries are currently confronted by a variety of major development issues. The first of these issues is persistent poverty, which has increased in recent years. Though many nations in the region are nominally middle-income countries, per capita income measurement using GDP masks the true extent of poverty and other social problems in countries with small populations and high incomes. Vulnerability measures, rather than income-based indices, more nearly approach the reality of the region's social conditions.

A second issue, and one that holds the potential to stymie economic and social development, is growing uncertainty surrounding the region's fiscal and debt sustainability. This uncertainty results from a confluence of external and domestic factors. These factors include the following: i) unfavorable terms of trade at a time when trade preferences are being eliminated; ii) natural hazards such as hurricanes, particularly in OECS countries; iii) countercyclical fiscal policy, especially since the year 2000; and iv) an increase in commercial borrowing. Given this combination of factors, revenue growth has lagged behind public expenditure, resulting in rising deficits, increasingly levels of indebtedness and more onerous debt service payments. Reforms involving both revenue and expenditure are needed to address these issues. The most prominent revenue reform at present is the adoption of a value-added tax in several countries. Actual and contemplated expenditure reforms include adjusting capital expenditures, reviewing the role of the state, particularly in regard to recurrent expenditure, and additional efforts to focus and prioritize public sector investment programs.

An additional concern with long-term implications is the maintenance and diversification of the region's productive capacity, as balanced real rates of growth are necessary to protect past gains and secure future development. Countries in the region are at present highly concentrated in either tourism or agriculture, and their growth rates have declined noticeably since the 1980s as a result of vulnerability to external factors such as changing trade regimes, natural disasters, and shocks including global economic slowdowns, spikes in oil prices, and source market disturbances. Moreover, dependence on tourism in some economies accounts for as much as 60 percent of GDP, with high concentration in the United States and United Kingdom source markets. While the sector is vibrant, with the appearance of new entrants, the renewal of existing participant's products, and the growth of cruise tourism, this lack of overall diversity remains a cause for concern. At the same time, the international business sector, which has contributed to the region's high standard of living, is facing challenges from its counterparts in more developed countries, and most countries in the region lack the scale or resources to be competitive in

agriculture and manufacturing. Services remain the best hope for the region, but the services provided should broaden from the current emphasis on holiday travel to include health and education services. Current efforts to improve countries' productive capacity encompass a variety of approaches. Tourism product development is underway in countries that are considered mature destinations, and improvements in the regulatory and legislative framework may help the international business sector in the medium to long term. Additional measures involve lowering unit costs in order to realize gains in productivity and ensuring that investors and tourists receive value for their money.

A fourth area of concern involves the region's multiple sources of vulnerability. In addition to previously discussed factors such as limited diversification and an inability to take advantage of economies of scale, the region's economic vulnerabilities include small domestic markets, high degrees of openness, an inability to influence prices, a high dependence on trade taxes, and limited institutional capacity. These economic vulnerabilities are further intertwined with social vulnerabilities such as large numbers of poor and near-poor and patterns of social exclusion. Finally, the region is permanently vulnerable to natural hazards, most prominently hurricanes. The region's development depends in part on upgrading natural hazard management. This will require greater institutional preparedness, improvements in impact mitigation to protect buildings and infrastructure, and improvements in post-disaster response in order to rebuild social and economic infrastructure.

The implications of recent global and regional developments remain to be seen. In the past two years global growth, driven largely by private consumption and business investment, has accelerated and become more broad-based. Rising demand and higher oil prices have combined to increase inflationary pressures, however, and monetary stimuli are thus being gradually removed; the long-term impact of these changes on Caribbean countries' source markets is a cause for concern. Rising demand has exacerbated current account imbalances, particularly in the United States, and public deficits have risen in the United States and the Eurozone.

The region's economies have been able to take advantage of rising global demand, in spite of an estimated US\$4.5 billion in losses from the 2004 hurricane season; tourism served as the main driver of growth. Available data for 2005 indicate slowing growth, however, as a result of a moderate slowdown in the global economy, as well in declines in agricultural output due to adverse weather conditions.

The region's outlook nonetheless remains favorable in the medium term. Positive trends in tourism are expected to continue, particularly in light of Caribbean hosting of the Cricket World Cup in 2007, as well as the stabilization of the financial services sector, with further growth expected. Additional growth is anticipated from construction involving both tourism and post-disaster rebuilding, as well as from the energy sector, while only uneven growth is expected in agriculture.

Longer-term prospects in the Caribbean remain favorable but not without downside risks. Of particular note is the acceleration of regional integration through the CARICOM

Single Market and Economy, which is intended to achieve efficiency and productivity gains through more effective sourcing and utilization of inputs, as well as through increasing economies of scale. This development, along with the utilization of untapped potential in the provision of goods and services, bodes well for the region. In addition to vulnerability to natural disaster, however, several risks cannot be ignored. Among them are the state of the global economy (which can be affected by geopolitical tensions or a deterioration in economic fundamentals), rising oil prices, and rising debt levels within the region.

Ensuring the Caribbean's long-term prospects requires addressing several issues on an unfinished development agenda. The first of these is making tourism and agriculture environmentally sustainable in order to accommodate long-term growth and poverty reduction. Second, the region's economies must improve their standards in both construction and the provision of services. Third, productivity and competitiveness must be enhanced, particularly through addressing issues that affect the use of labor. Fourth, countries in the region must search for and exploit niche markets in which they hold or can obtain a comparative advantage. Finally, the region must maximize the opportunities presented by current trade negotiations involving the World Trade Organization, the European Union, and the Free Trade Area of the Americas.

Designing Safer Alternatives for Sovereign Financing

Robert Shiller framed his remarks in the context of the need for governments and economies to insure against large and long-term risks, and the corresponding need to develop markets for the appropriate debt instruments. While proposals for new instruments may at first seem exotic, the history of finance has largely been made by radical innovations that extend risk management into new areas. Life insurance, for example, was one such radical innovation when it was introduced in the seventeenth century.

In addition to benefiting macro stability, extending financial instruments into areas of large and long-term risk management holds potential benefits in terms of equity and political economy. As large risks have differential impacts across the population, making risk management accessible to a larger segment of the population can mitigate inequality. While not all the necessary institutions and instruments are presently in place, their creation is likely to be facilitated by advances in mathematical modeling, information technology and behavioral finance.

Five areas of large and long-term risk are particularly in need of management. The first is GDP volatility. Financial instruments pegged to GDP and/or the tax base, roughly analogous to common stocks, might help to hedge national and government risk. Social welfare may thus be enhanced even in volatile. Moreover, even in relatively stable countries such as the United States, GDP risk is worth managing.

A second area that calls for risk management is oil prices, where relatively little such activity presently occurs. The value of petroleum company stocks and petroleum company futures remains small compared to the value of petroleum sales, and no other instruments presently exist for stabilizing the price of consumers' long-term claims on oil. Oil producers, moreover, have not yet adequately managed risk through financial instruments, which may represent a more practical strategy than diversification of the real economy. While some countries have issued bonds linked to oil prices, these bonds have not proven popular. Investors appear to be constrained by behavioral inhibitions, which suggests that these needs have not yet been framed or marketed correctly.

Real estate represents a third major area of considerable volatility where risks are not hedged. Nonetheless, the possibility of trading in futures options for homes in certain areas has been discussed, and such options may eventually be traded at the Chicago Mercantile Exchange. The possible indexing of real estate prices in this manner provides an example of how advances in information technology may help to create new financial markets.

Inflation, a fourth area of largely unhedged risk, is psychologically difficult to manage. Although appropriate indexation is complicated, it can be undertaken. Perhaps the leading example in this area is Chile's use of the indexed Unidad de Fomento, in which bonds are issued and prices quoted.

A final area of unhedged risk is longevity. Average life expectancies are increasing around the world, and it is necessary to ensure that substantial portions of the population do not outlive their wealth; life annuities are needed to address this problem. So far some longevity bonds have issued in the United Kingdom and other countries, but the market for these bonds is so far small. Ideally, such a bond would be indexed to inflation.

The successful management of these and other risks requires several steps. First, policymakers and other actors must openly discuss large-scale future risks, even if it is politically inconvenient to do so. Second, experimentation is necessary to create and refine appropriate financial instruments. Third, robust reframing of issues is necessary to address the psychology of investors and successfully market new financial instruments.

Guillermo Calvo, Global Imbalances

Latin America and the Caribbean are in frank recovery thanks in large part to favorable external factors. Precisely because the region's improved performance is so dependent on the external environment, analysts point to a weighty U.S. foreign debt and soaring oil prices as possible spoilers for the region's economic future. But IDB Chief Economist Guillermo Calvo downplayed these potential threats. Outlining the elements of the current recovery, analyzing the likely trajectory of global imbalances and taking a historic look at oil prices, Calvo concluded that Latin America's macroeconomic outlook is cautiously optimistic.

He began with a global perspective of private capital flows and highlighted very clear trends. Mid-1997 through 2002 were crisis years for emerging markets. Capital outflows from these countries peaked in 2000 and continued to pour out until mid-2002. During this same period, private capital inflows to the United States remained high. But in the past two years, this situation has changed. The United States is no longer receiving (net) private capital while inflows to emerging markets have picked up, totaling \$99 billion in 2004. Emerging market bond spreads are also way down and are actually at below their pre-crisis levels. This is particularly noteworthy because EM spreads are usually associated with long-term Treasury bonds. The good news is that despite rising interest rates in the United States, EM spreads have done just the opposite and actually come down.

The recovery in capital flows to emerging markets in general, and to Latin America in particular, has been accompanied by a coordinated improvement on other fronts. Asset prices have boomed in Latin America as stock prices are up 174 percent in the past two years. Bank credit to the private sector has also begun to eke up, rising 5.8 percent in real terms in the region as a whole. Only in Peru and Uruguay has real credit to the private sector not increased. Commodity prices have also enjoyed a boost since 2002, led by petroleum (+234 percent), metals (+100 percent) and foods (+23 percent). As a result, the terms of trade for the seven largest economies in the region, LAC-7, are up 15.1 percent since fourth quarter 2001.

Investment in the LAC-7 has followed a similar pattern, posting an average annual growth rate of 11.9 percent since fourth quarter 2002. On a country-by-country basis, Argentina and Uruguay with very dramatic investment declines during the crisis years also showed the healthiest increases in the past two years. Colombia and Venezuela also suffered significant declines during the lean years—albeit far less than Argentina and Uruguay—and have enjoyed good, but not as outstanding, investment growth since 2002. Even countries that took much less of a hit during the crisis period, including Chile, Peru and Brazil, can boast important increments in investment in recent years.

All this has translated into a welcomed recuperation in economic activity. After more than five years of near stagnation, average annual growth for the LAC-7 has increased at a 4.9 percent clip in the past two years and is projected to register similarly positive growth rates in 2005. Uruguay recorded the highest surge in GDP growth at 12.4 percent annually for 2003 and 2004 followed by Argentina at 10.2 percent. But even in Colombia and Venezuela, which showed the least expansion, GDP grew 4.5 percent annually on average.

The same coordinated response is evident in an overall appreciation in real exchange rates by 14.4 percent since October 2002. Only the Mexican peso has remained virtually unchanged (+0.7 percent) while all other exchange rates appreciated, including the Brazilian real by an impressive 50.7 percent. Official reserves are up as well, a further reflection that things are going well. The region's fiscal performance has improved as well, with the deficit now well under 1 percent of GDP, proving that adjustments are

easier to make in good times. Finally, public debt levels have also begun to contract after ballooning to 47.6 percent of GDP in 2002.

The prevalence of the same trends throughout the region suggests that indeed external factors are at play. And if external factors fueled the recovery, could they not spell its demise? This is the fear, especially in light of the “hard landing hypothesis” put forth by Paul Krugman and others. According to this viewpoint, once China changes its currency policy and its cheap loans to the United States (by acquiring US Treasuries as it accumulates international reserves) are no longer available, the United States could enter a downward spiral that would have serious repercussions on emerging markets.

Calvo suggested that this doomsday scenario is exaggerated. Although the current account deficit of the United States is now being financed by Asian Central Banks who buy U.S. Treasury bonds, they are in turn issuing their own debt to the private sector. Thus, it is Asian private investors who indirectly are lending to the U.S. government. Should the Asian countries float their currencies and stop buying U.S. public bonds, the private sector will still have enormous savings and will buy these bonds through other channels. Asian exchange rates are not the critical variable. Far more important would be political and other factors that may generate high market volatility and induce the private sector to spend rather than save. Yet U.S. interest rates are still low, despite recent hikes, and the U.S. public debt is still small compared to other industrialized countries (37 percent of GDP in the United States, compared to 160 percent of GDP in Japan and 101 percent in Italy, for example). All told, at least in the near term (one to two years) the current imbalances are not a serious threat.

In the same vein, Calvo suggested that worries over the effect of oil prices are also overly alarmist. Looking at oil prices from a historical perspective, he showed that in real terms the current \$59 per barrel price is well below the 1980 peak of nearly \$100 per barrel. Moreover, oil futures show prices leveling off at around \$62 per barrel 12 to 14 months out rather than climbing indefinitely. Most importantly, oil dependence is way below its historic highs in both industrialized and emerging countries. In the United States, for instance, the amount of oil used per unit of GDP has fallen 40 percent since 1975, in developed Europe 30 percent and in emerging Europe 40 percent. This reduced dependence and far lower real prices means the world is in far better shape than it was for the 1970s crisis. On the other hand, oil producers in Latin America—namely Venezuela, Ecuador and Mexico—could find themselves dramatically affected by changes in the price of oil as they impact on fiscal revenues. Their dependence on oil has brought them benefits recently but is also a source of great vulnerability.

Overall, Calvo believes that the prospects for Latin American economies are good and that threats from the U.S. deficit, Asian exchange rate policy or oil prices are far less menacing than they are made out to be. Of course, if conditions change and interest rates rise, for instance, then growth would be very negatively affected. Perhaps of greater concern is that despite all the good news, Latin America and the Caribbean is still growing less than other emerging markets.

Calvo's assessment seems even more likely following the announcement of Ben Bernanke as the next U.S. Fed Chairman. Bernanke's nomination has been very well received both by the market and the pundits as it further dissipates fears of a hard landing of the U.S. economy in the near future.

Debt Session 1: Presentations by Colombia and Uruguay

Franz Hamann

Noting that Colombia has made a significant shift in public debt from external to domestic creditors in the last decade, Franz Hamann offered a model to explain the macro impact of this shift. Arriving at an appropriate model in this area is important in that it will help to integrate the Treasury's emphasis on domestic debt with the Central Bank's movement toward inflation targeting. The econometric model presented made no assumptions on optimal debt composition but rather provided a means to quantify the impacts of shocks and develop quantitative tools for inflation targeting.

The results of the model suggest that, while transitory substitution of domestic for external debt has no significant real effect, a long-term and credible shift toward domestic debt has notable macro benefits. While excess public external debt leads to capital flight, holding a greater percentage of public domestic debt leads to an increase in net foreign assets. In addition, the model suggests that an increase in domestic versus external public debt as a share of GDP increases consumption, investment and GDP growth while lowering lower debt levels, spreads, and taxes.

Daniel Dominioni, Sovereign Debt: Evolution and Strategies in Uruguay

Daniel Dominioni reviewed the recent history of sovereign debt in Uruguay, analyzing the issues of optimal currency and maturity, and assessing future prospects. The most notable—and disturbing—trend in Uruguayan debt is, after a gradual decline in the gross debt to GDP ratio in the 1990s, a steep increase in that ratio from 1998 to 2003. This development is explained by an unfortunate convergence of exogenous shocks and internal causes. The exogenous shocks include the regional capital flows reversion in the wake of the Asian and Russian Crises, Argentina's financial crisis and devaluation, Brazil's devaluation, the most recent outbreak of hoof-and-mouth disease, and a decline in terms of trade. Internal causes, which have aggravated the impact of exogenous shocks, include procyclical fiscal policy, debt, and a concentration of debt amortization.

On the basis of recent research, the optimal currency composition of Uruguay's public debt involves choices among three categories: foreign currency debt, local currency debt, and debt indexed to the consumer price index. Each type displays a different combination of strengths and weaknesses in relation to shocks such as inflation, real depreciation, endogenous primary expenditure on the part of the government, GDP growth, and interest rates. Overall, foreign currency debt is procyclical, local currency debt is costly, and indexed debt, while more costly than foreign debt, tends to stabilize real debt service.

Under current circumstances there appears to be virtually no place for non-indexed peso debt until the reputation of Uruguayan institutions improves.

The maturity structure of debt is determined by a no less important set of concerns. Issuing long-term debt is recommended when interest rates are volatile and when yield curves do not reflect time-inconsistency. Both of these conditions applied to Uruguay in the 1990s, but the development of an appropriate maturity policy was impeded by lack of planning, short-run cost considerations, and opportunistic considerations; as a result, the maturity of debt was concentrated in a crisis period. Public financing thus abruptly shifted from increasingly less credible Treasury instruments to emergency arrangements with multilateral lending institutions.

Uruguay continues to face the challenge of establishing a coherent and sustainable approach to public finance, and the new government has stated its commitment to stabilizing an office charged with debt policy. The foundations of any successful debt management policy will include fiscal consolidation, a strong commitment to low inflation, and careful attention to the composition and maturity of debt.

John Williamson

John Williamson observed that debt composition is a new research topic and one that has until recently been neglected. It should nonetheless be noted that, while debt composition can aggravate the effects of a crisis, the composition of debt is not necessarily itself a cause of crisis. In addition, factors other than debt denomination must be taken into account, particularly short maturities and the bunching of maturities.

Countries must also take responsibility for issuing domestic currency debt rather than passively issuing dollar debt as a matter of habit. This change may entail initial disadvantages such as offering higher rates at first, but domestic currency debt offers better risk characteristics overall. Making such a change, particularly with domestic lenders, is thus well worth doing; Uruguay is likely to benefit from its movement toward dedollarizing debt and increasing the proportion of debt in pesos and inflation-indexed units. The recent experiences of Brazil and Colombia have further shown that it is possible to offer local currency-denominated debt on international markets. One significant question remains to be answered: under what circumstances would it be optimal to issue non-indexed local currency debt?

Susan Collins

Susan Collins noted that a variety of factors must be taken into account in assessing sovereign debt. Besides composition and maturities, the ratio of short-term debt to international reserves is particularly important. Additional domestic sources of vulnerability include uncertainty surrounding the outcome of elections in much of the region in the near future and an array of ongoing political economy problems involving fiscal relations between central and regional governments. A notable external source of vulnerability is pass-through from developed to developing country interest rates.

Several country-specific issues arose as well. In the case of Uruguay, it remains to be seen whether the country is well positioned to address the next maturity bunch, as changing the denomination of debt is not necessarily sufficient to address that issue. The country further faces the issue of managing primary fiscal surpluses in the years ahead, and the experience of other countries suggests that it would be unwise to deleverage at the expense of growth. In the case of Colombia, the size of domestic debt is important, and debt maturities must be considered when shifting to domestic debt. Moreover, domestic-denominated debt is not a panacea, and overall debt sustainability must be considered. Finally, the perceptions of international investors must be considered, particularly in regard to institutional design issues and movement toward local currency debt.

The Level and Composition of Public Debt in Latin America and the Caribbean: Results from a New Database on Public Debt

Eduardo Levy-Yeyati observed that sovereign debt in the region faces three types of vulnerability. The first involves the size of debt, which may be analyzed in terms of debt stocks, costs of debt service, and debt ratios. The second involves volatility, which can be related to whether debt is denominated in dollars or local currency, or tied to the consumer price index. The third involves the liquidity and effective duration of debt; these factors are tied to the domestic or external location of debt and whether creditors are private or official.

Debt ratios have been increasing in the region in recent years, with domestic debt growing relative to external debt; net debt ratios remain well below total debt ratios. Most domestic debt, moreover, is denominated in local currency, and institutional investors such as private pension funds have played a significant role in the development of local debt markets. External debt remains predominantly official, but the composition of that debt has changed. Multilateral institutions are increasingly important creditors, while concessional bilateral lending has greatly diminished. Private external debt has shifted from bank lending to bonds, a trend peculiar to emerging markets. Bonded debt represents an overwhelming majority of private domestic debt as well.

Significant questions exist regarding each type of vulnerability. First, the cost of growing debt ratios remains to be seen. Second, the impact of gradual de-dollarization on volatility is uncertain. Third, domestic bias may or may not resolve liquidity concerns. It is not known whether domestic debt will prove more flexible than external debt, and the source of financing does not address the underlying issue of whether there is too much official debt exists.

Debt Session 2: Presentations by Chile, Brazil and Mexico

Rodrigo Cifuentes

Rodrigo Cifuentes surveyed Chile's experience in issuing debt, with particular emphasis on conditions before and after the Asian and Russian debt crises. Until 1997 both the private and public sectors were able to place debt denominated in domestic currency, a rarity for an emerging market. This was made possible by the credibility of Chilean institutions, particularly the government's commitment to preserving creditor value through the use of the inflation-indexed Unidades de Fomento (UF) and prudent exchange rate policy; demand for this debt thus arose among institutional investors such as pension funds and insurance companies. Under these circumstances Chile's Central Bank was able to issue public debt to finance the costs of the banking crisis of 1983, with an increase in volumes issued until 1997; a smaller market for Chilean private debt existed as well.

The Sudden Stop resulting from the Asian and Russian Crises, however, vastly altered the dynamics of Chilean debt. Sovereign risk spreads greatly increased, and Chile made the macro adjustment of moving to a freely floating exchange rate in 1999. In addition, banks are explicitly required to consider currency mismatches of borrowers in the course of credit risk assessment. This altered incentive structure in turn changed the behavior of market participants. Companies with previous access to international markets turned to local debt, particularly in the 1998-2000 period and the development of local expertise in fixed-income securities subsequently led to a lower cost of issuing debt for new companies. The debt market has also experienced notable segmentation, with five-year bonds held by pension funds and 20-year debt held by life insurance companies. The resulting decline in yields led institutional investors to search more actively for high returns. These changes, however, have not proven an unmitigated blessing to the development of domestic markets. The companies that benefit from lower interest on loans are entrants in regulated services sectors and/or large companies; this indicates that other borrowers' financing needs are going unmet. In addition, mergers in the pension fund industry in the 1990s reduced liquidity in the fixed-income market.

In recent years the Chilean government has undertaken several policies to further the development of the country's debt markets. First, Chile's Central Bank has begun to issue debt in a range of maturities comparable to those of other markets, and fewer types of bonds are being issued in order to increase the depth and liquidity of each issue. In addition, peso-dominated bonds are being issued in longer maturities, and taxes that impeded the development of commercial are being eliminated.

Several major challenges continue to face Chile's debt markets. First, the debt market must be expanded to include medium-sized companies; this may require regulation of investments by pension funds and life insurance companies. Second, peso-denominated private debt issues remain scarce, a situation that must be improved in order to avoid currency mismatches. Third, international investors must again be induced to purchase Chilean debt.

Otavio Medeiros

Otavio Medeiros began with a survey of the theoretical issues surrounding the composition and level of public debt. Of particular importance is the emerging consensus that the size and structure of public debt can place constraints on monetary policy, particularly given the less-than-ideal conditions under which governments and policymakers must work. An additional question has been whether public debt places constraints on fiscal policy. In spite of the general recognition that these areas are in fact related in practice, current international best practices nonetheless call for a separation of decision-making between these areas.

A second area of theoretical concern is determining the appropriate trade-off between cost and risk. The optimal debt structure depends on the interaction between changes in inflation and changes in government spending and revenue, and countries adopt different structures depending on the structure of the tax system, the nature of the government's spending commitments and the different types of shocks to which national economies are subject. The answer varies across countries, and Brazil has taken the approach of minimizing costs while maintaining risks at prudent levels. Brazil's calculation of costs has in one sense notably departed from traditional public debt theory: rather than considering taxpayers and bondholders as essentially the same agents, policies view the interests and preferences of these groups separately and consider distributional impacts that may differ between these groups.

Brazil's debt management policy is characterized by several other features of interest. First, in line with international best practices, the responsibility for issuing external debt as well as domestic debt was centralized in the National Treasury in 2004. The transfer of external debt responsibilities from the Central Bank to the Treasury allows the former to concentrate on its core function of ensuring price stability. Second, the Treasury has shown an institutional commitment to transparency by issuing detailed reports such as an Annual Borrowing Plan, a Public Debt Annual Report, a monthly Federal Government Domestic Debt Report, and a Domestic Debt Auctions Calendar.

The objectives of Brazil's public debt management, namely minimizing long-term financing costs while maintaining prudent levels of risk, is based primarily on an Assets and Liabilities Management approach. This approach takes into account mismatches in exchange rates and inflation rates. In addition, the approach is notably cautious and technical: though contingent liabilities are included, some potential assets are not.

In more concrete terms, Brazil's public debt management goals include increasing the average term of securities issued at public auctions, reducing the share of debt due within 12 months of any given date, and gradually replacing floating-rate and exchange-linked securities with fixed-rate and price-indexed securities. This strategy has so far sharply reduced the exchange rate risk of Brazil's public debt, and the impact of exchange and domestic rate shocks on outstanding debt has declined by more than 60 percent since 2002. Under these circumstances, Brazil has also been able to issue a local currency international bond issue. Like other Latin American countries, Brazil has deepened local

debt markets and increased local currency government debt as a percentage of total government debt.

Brazil's Treasury has additionally been engaged in developing an analytical framework to determine the optimal composition of public debt and find ways to move from the current debt structure to the desired state. This model is essentially an efficient frontier analysis of the risk and return of net debt to GDP ratios in a steady-state situation; assets and liabilities are considered, as well as the evolution of the main macroeconomic variables. Simulations based on the model have provided insights into refinancing risk, currency risk, and calculating the efficient frontier for the entire portfolio.

Marco Oviedo Cruz

Debt management policies, such as debt composition and maturity, can be econometrically assessed in relation to debt levels and risk in order to determine whether debt paths are sustainable. One of the resulting policy questions is how much foreign debt a government should issue in each period, given foreign and domestic interest rates and the depreciation of the real exchange rate.

Answering this and other questions is particularly relevant for Mexico, where public sector net debt as a percentage of GDP and public external sector net debt as a percentage of total public sector net debt have declined since the 1994-1995 financial crisis. The duration and maturity of domestic public debt have increased as well.

The evidence and models used suggest that Mexican debt management policy, particularly reducing the proportion of external debt and increasing the maturity of domestic debt, is increasingly sustainable, with lower probabilities of debt crises or insolvency. Nonetheless, the potential costs of increasing the maturity of public debt should be further analyzed so that policymakers can make more informed choices.

Jeromin Zettelmeyer

Jeromin Zettelmeyer observed that Chile, Brazil and Mexico were all making similar changes in their debt portfolio management, even though the representative from each country offered a different motivation such as financial sector development, the improvement of the public sector's debt profile, and the appropriate balance between cost and risk. This variety of motives suggests that no single explanation is in itself complete.

It is worthwhile to consider, however, whether the denomination and maturity of debt are the only factors worth considering. The indexation of bonds may also merit consideration. Given that the countries studied have improved their debt management in response to the triggers of recent crises, another crisis may lead to bond indexation.

Kristin Forbes

Kristin Forbes noted that, while the tradeoff between cost and risk should be at the core of sovereign debt management, several other issues must be addressed. Brazil's debt

portfolio, for instance, remains vulnerable to interest-rate movements. In addition, the average maturity of debt has not meaningfully increased, and the debt-to-GDP ratio remains unchanged in spite of large primary surpluses. Brazil should additionally consider how to develop the local currency debt yield curve and attempt to determine whether the holders of domestic debt are banks or other investors.

Chile faces a very different set of issues. In spite of impressive progress in lengthening maturities and reducing the ratio of public external debt to GDP, Chile remains vulnerable to exchange rate movements because much debt is still issued in dollars or other foreign currencies. A further question is whether the country's low public debt levels have hindered its ability to create local financial markets. Finally, Chile remains vulnerable to a steep decline in copper prices.

Mexico's challenges are different still. While local bond markets have been developed, and the composition and maturity of Mexican debt have been improved, the question remains of how well Mexico can withstand an external shock, particularly in a world of exotic financial instruments. An accompanying vulnerability is Mexico's extensive dependence on exports to the United States; risks involving those exports remain unhedged. While international markets presently view both Mexican and Chilean debt as similar to developed country debt issues, it is uncertain whether this perspective would survive the next major shock.

Going forward, each country must carefully consider its priorities. Brazil has been successful in reducing foreign currency debt, as well as domestic liability dollarization, but the weakening of the dollar has now rendered dollar debt a less important issue. Debt managers may now need to hedge against increases in interest rates and spreads. In addition to the vulnerabilities previously mentioned, Chile and Mexico must consider domestic political uncertainties and the impact of the unwinding of global imbalances. Managing the risks associated with these vulnerabilities requires the invention of new debt instruments. Mexico, for instance, might hedge against vulnerabilities in export markets by issuing a bond with payouts tied to U.S. growth rates. It may also be useful to hedge against commodity price fluctuations and fluctuations in domestic growth rates. Actions by institutions such as the Inter-American Development Bank and the World Bank may help to jump-start the markets for such instruments.

Local Currency Issuance: Fad or Trend?

Ana María Maiguashca

Ana María Maiguashca offered an overview of Colombia's recent emissions of peso-denominated debt, explaining the rationale of the bond issues and the risks associated with them. The reasons for issuing local currency bonds include reducing currency risk in public debt, diversifying the investor base, strengthening the financial system, and increasing the participation of institutional investors such as pension funds.

Several risks, however, are associated with domestic currency debt. First, even in the presence of strong macroeconomic fundamentals, the possibility of future financial crises exist, and international liquidity conditions and the international business cycle are important in the determination of capital flows to emerging markets; such vulnerability is worth noting given that domestic currency debt appears to have lowered net foreign reserves as a percentage of GDP. Second, reducing currency risk exposure by depending on the local market can increase other risks tied to the state of the national economy; problems involving Colombia's regulatory framework may exacerbate these vulnerabilities.

Michael Gavin

Presenting a perspective based on contact with investors, Michael Gavin noted that local currency-denominated debt is entering the financial mainstream, although it is uncertain how broad the market for that debt will become. Although the issuance of local currency debt is presently favored by the combination of high interest rates in some emerging markets and low interest rates in developed countries, this trend may not last.

Previous experiences with local currency debt in emerging Europe suggest that local currency debt issued by larger Latin American countries is likely to remain part of the financial landscape once investors are familiar with it. Mexican peso bonds, for instance, are already considered a core investment, and Brazilian debt may become equally desirable when its maturities lengthen. International investors have taken much more limited positions, however, in medium-sized Latin American markets such as Colombia and Peru. There is much less knowledge on these markets, particularly regarding entry and exit. Investor interest in these markets is additionally inhibited by scale effects, as smaller economies bring smaller rewards. Investment is further limited by exposure to local macro and monetary policy, as well concerns with information and transparency. These issues in turn increase concerns with regulatory risk and the convertibility of assets in the event of a crisis.

Countries as well as investors face risks in the growing acceptance of local currency debt on international markets. First, the integration of local and global bond markets can sever links between a country's balance of payment and government policy. Second, governments are increasingly exposed to the activities of bondholders, including vigilante bondholders. Moreover, depending on barriers to entry and exit, global issuance of local currency debt does not necessarily represent a substantial advantage over issuing such debt in local markets. Finally, local currency debt should be considered separately from GDP-indexed bonds, which have not yet found a great deal of acceptance.

Gustavo Cañonero

Emissions of Latin American debt in local currency appear to represent a significant trend rather than a short-term fad, but they are likely to face considerable challenges en route to becoming a major component of sovereign debt portfolios.

The appeal of local currency debt is readily apparent, as issuers generally try to match the structure of their liabilities with that of their revenues. This is especially true in Latin America, given the region's unfortunate experiences with currency mismatches and high concentrations of foreign currency debt in the 1990s. Many governments in the region are presently inclined to borrow in local currency, preferably in long-term and fixed-rate instruments, a development that is expected to reduce borrowing costs. The feasibility as well as the desirability of local currency has increased due to improvements in countries' macroeconomic and financial fundamentals.

It should be noted, however, that the current expansion of local currency debt is occurring at a particularly favorable time. The present economic upswing in the region is characterized by fast growth, high liquidity and an intensified search for high yields. Local currency debt may become less attractive as Latin America reaches the downside of its economic cycle, and occasional large setbacks may affect the development of local currency debt markets.

Tao Zhang, Reforms of the Exchange Rate Regime: The Chinese Experience

China's experience with exchange rate reform is taking place in a setting where globalization complicates policy choices regarding exchange rates, capital control, and monetary policy, and where controlling all three areas at once may be impossible. Of particular note is the rising cost of capital control, and its ineffectiveness.

In this environment, developing countries face two key concerns. First, a fixed exchange rate system--a standard option for many countries in the past—is not consistent with maintaining a flexible and independent monetary policy. Second, the challenge exists of how to manage the transition from a highly restrictive capital control system to one that is more appropriate to a changing economy.

Comparisons of international data provide some insight into these issues. While IMF member countries presently report exchange rate regimes ranging from free floating to pegs and the use of other countries' currency, since the 1940s countries have largely moved away from fixed regimes and toward increasingly flexible arrangements; this underscores the historical reality that exchange rate regimes are not permanently set. The durability of exchange rate regimes across country groups and regime types provides further perspectives. Exchange rate regimes are on average longest-lived in advanced economies and shortest-lived in emerging markets. Different types of exchange rate regimes, however, differ in their longevity according to region.

China's exchange rate regime has experienced several modifications in the last two decades in order to reflect the country's changing needs and increasing levels of development and globalization. Most of the 1980s were characterized by a fixed exchange rate with frequent renminbi devaluations, followed by a dual exchange rate from 1988 to 1993. Following a sharp depreciation in swap market rates in the early

1990s, however, the regime reverted to a unified rate. This was followed by a de jure managed float and a de facto dollar peg from 1995 to 2004, and an increasing commitment to managed floating since then. The policy challenges of an increasingly flexible regime include growing difficulty in maintaining external balances, constraints on domestic firms' ability to increase their competitiveness, increased uncertainty in relation to the dollar, and limited freedom for an independent monetary policy.

A series of reforms have been undertaken to address these challenges. First among these are banking sector reforms, particularly the financial restructuring of over 70 percent of financial institutions and a reform of rural credit institutions begun in 2003. A second change is a deepening of the foreign exchange market. The foreign exchange settlement system has been shifted from a compulsory to a voluntary basis, and inter-bank foreign exchange pair trading was launched in May of 2005. Foreign exchange controls have been relaxed as well. Individuals and firms face fewer constraints on current account transactions, and market entry and business operations have been made less difficult. These changes have taken place in a favorable macroeconomic environment characterized by strong growth, moderate inflation, and strong external demand. Nonetheless, risks attending these reforms include the politicization of related issues, rising trade protectionism in other countries, and inducements to currency market speculation.

The exchange rate regime announced on 21 July 2004, while seemingly incremental, in fact constitutes a more profound change. In addition to moving away from a dollar peg, the new regime took as its basis a basket of currencies, though without a peg, and a 2 percent revaluation of the renminbi reflected an attempt to restore a balance of trade and minimize shocks to domestic firms. These significant but gradual changes reflect China's gradual adoption of market-based reforms throughout the economy in recent decades; an immediate movement to a highly flexible regime was inadvisable for several reasons. Given global economic imbalances and uncertainties, as well as a high volume of cross-border capital flows, China was not prepared for a sudden change. In addition, the state has a necessary regulatory role in a large transition economy, and the Central Bank must be able to filter abnormal fluctuations.

A preliminary assessment of the new exchange rate regime is now possible. First, exchange rates have fluctuated less than expected. Second, there has so far been little impact on either exporting firms or foreign direct investment, although a survey of exporting firms has shown that further revaluation is expected.

The initial change of exchange rate regime has been followed up by additional measures including more relaxed foreign exchange management, further easing market entry by non-bank and non-financial firms, and the introduction of an inter-bank forward transaction system. Additional measures adopted on September 23 of 2005 include an expansion of the floating band in relation to non-dollar currencies, which should reduce arbitrage opportunities. This expansion of the buying and selling range follows international practice and discourages speculation.

Future exchange rate policy is expected to become less restrictive as economic fundamentals and market infrastructure improve. Eventual goals include a market-based managed float, as well as convertibility and policies that support exchange rate stability. Exchange rate policy, however, is only one policy instrument affecting China's external balance. More crucial is a change in development strategy, with an emphasis on increasing domestic consumption and undertaking structural reforms throughout the economy. In the latter regard, China continues to rely too much on export and investment, and direct financing remains weak. In order to finance consumption and improve social conditions, improvements are needed in consumer credit policy, minimum wages, social security structures, and the personal income tax. Urbanization, rural development, and financial sector reforms must continue to be addressed.