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Inflation in Latin America: A New Era?

Remarks by

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The Federal Reserve is justly proud of its success in reducing and stabilizing inflation in the United States. When Paul Volcker became Fed chairman twenty-five years ago, Americans were enduring double-digit inflation rates and subpar economic performance. Under the leadership of Volcker and, subsequently, Alan Greenspan, the Federal Open Market Committee took the actions necessary to bring the nation to price stability. In my view, the conquest of inflation has been a major source of the more-rapid economic growth and the greater stability of output and employment that the United States has enjoyed since the mid-1980s (Bernanke, 2004).

Impressive as the Fed's inflation-fighting accomplishments may be, however, inflation developments to our south, in Latin America, may prove to be more impressive yet. For much of the latter half of the twentieth century, Latin America experienced recurrent bouts of high inflation together with erratic growth and periods of economic and financial crisis. Since the mid-1990s, however, inflation rates in virtually all of Latin America have come down dramatically, to the single digits in most cases.

What explains this remarkable turnaround? Will Latin American progress on inflation be sustained, or is the recent improvement only a temporary lull? These are challenging questions of monetary economics and political economy, and their answers have important implications for the economic future of the Western Hemisphere--including the United States, which stands to benefit greatly from increased trade with and investment in a more prosperous Latin America. In my remarks today I will offer some tentative answers to these questions, noting as always that the views I will express are not necessarily shared by my colleagues at the Federal Reserve.[1]

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[1] I thank Board staff members Carlos Arteta, Jane Haltmaier, and Patrice Robitaille for excellent assistance and comments.

The Roots of Latin American Inflation

For those of us here in the United States, acclimated as we have become to price stability, the severity of inflation in many Latin American countries in recent decades may be difficult to comprehend. A measure of price changes in nine of the most populous Latin American countries shows that inflation in the region averaged nearly 160 percent per year in the 1980s and 235 percent per year in the first half of the 1990s.[2] Indeed, high inflation morphed into hyperinflation--conventionally defined as inflation exceeding 50 percent *per month* (Cagan, 1956)--in a number of Latin countries during the latter part of the 1980s and in the early 1990s. Brazil's inflation rate, for example, exceeded 1,000 percent per year in four of the five years between 1989 and 1993. Other Latin American countries suffering hyperinflations at about that time included Argentina, Bolivia, Nicaragua, and Peru. A particularly striking aspect of this poor inflation performance is that it occurred while most of the rest of the world was reducing inflation to low levels.

Inflation in the region began to moderate in the mid-1990s, however. Inflation in nine major countries--which, as already noted, averaged nearly 235 percent per year in the first half of the 1990s--averaged only 13 percent per year in 1995-99 and less than 8 percent in 2000-04 despite the spike in Argentine inflation that followed that country's crisis in 2002.[3] Why was inflation a perennial problem in Latin America until about ten years ago, and what explains the recent improvement? Fundamentally, in my view,

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[2] The nine countries are Mexico, Colombia, Venezuela, Brazil, Bolivia, Uruguay, Peru, Argentina, and Chile. Inflation in each country is weighted according to relative gross domestic product, as in International Monetary Fund (2004). Median inflation rates for the nine countries, which may be more representative of typical experience, averaged 61 percent per year in the 1980s and 26 percent in the first half of the 1990s.

[3] Argentina, Brazil, and Peru, all of which had four-digit inflation rates in both 1989 and 1990, succeeded in reducing inflation to single-digit levels by 1997. Median inflation in the nine countries likewise declined, averaging 9-1/2 percent in 1995-99 and 5 percent in 2000-04.

inflation trends are driven by ideas and politics, which in turn influence economic institutions and economic policies.

In the realm of ideas, the current consensus among economists--that money growth generated by fiscal deficits is the driving force behind virtually all episodes of very high inflation--has not always held sway in the region.[4] For example, during the 1950s and 1960s, the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), under the direction of Raul Prebisch, promoted so-called structuralist theories of development. The structuralist theory drew a strong distinction between the economies making up the developed "center" and those in the less-developed "periphery" and concluded that policies appropriate for the center were unlikely to be right for the much poorer and structurally less developed nations on the periphery. Notably, this approach supported the use of so-called import-substitution policies, which call for the government to protect domestic manufacturers from foreign competition in order to promote industrialization and reduce dependence on commodity exports. In practice, the application of this approach involved extensive government intervention in the economy, including the provision of subsidies to firms and heavy protection and regulation of industry. The outsized role of the government in the economies that pursued the import substitution strategy, together with relatively narrow tax bases and inefficient tax collection, led to chronic fiscal deficits and pervasive economic inefficiency in the protected industries.

Importantly, structuralism placed little weight on monetary factors in explaining inflation. Proponents of this approach viewed price increases as being determined largely

[4] Fischer, Sahay, and Vegh (2002) present evidence of a strong correlation between fiscal deficits and money creation in high-inflation economies. They also show that high inflations are correlated with poor macroeconomic performance.

on the real side of the economy--for example, by spot shortages arising from uneven patterns of development and by the efforts of labor and other groups to increase their shares of aggregate income. From the structuralist perspective, monetary policy makers have little option other than to accommodate wage and price increases, as these increases are determined outside the monetary sphere--a conclusion that rationalized central banks' abdication of responsibility for inflation. Structuralists also promoted extensive indexation of wages and contracts as a way of minimizing unintended distributional consequences of the unavoidable inflation. Unfortunately, pervasive wage-price indexation only increased the virulence of inflationary cycles, as price increases were rapidly transmitted to wages and then back to prices.

Among the political sources of inflation, populist views exerted strong influence in many Latin American countries, supported by understandable public dissatisfaction over the degree of income inequality. Unfortunately, more often than not, populist macroeconomic policies pushed the economy into crisis (Dornbusch and Edwards, 1991). In their zeal for rapid social and economic change, governments often introduced aggressive new spending programs that could not be financed through taxes or borrowing. The programs were consequently financed--with the (willing or unwilling) cooperation of central banks--by printing new money. These over-expansionary fiscal and monetary policies were generally followed in short order by wage and price controls and new rounds of subsidies as the overheating economy stoked inflation and inflation expectations and created bottlenecks and shortages. Currency overvaluation, capital flight, declining real tax revenues, sharp increases in external debt, and accelerating inflation completed the downward spiral, which typically ended in general economic and political crisis. Ironically, the poor often were among those most hurt by extreme populist policies because they were the most vulnerable to rising unemployment and real-wage declines and the least able to protect themselves against inflation.[5]

Latin America's macroeconomic problems reached their apogee during the so-called Lost Decade of the 1980s. Governments had run up large amounts of external debt in the 1970s in an attempt to maintain growth in the face of oil price shocks and macroeconomic mismanagement at home. But in 1982, during a period of high real interest rates and slow growth around the globe, Mexico briefly defaulted on its debt, an event that marked the beginning of the debt crisis of the 1980s. The crisis effectively closed off the region's access to international credit. Currencies were sharply devalued as current accounts were forced to adjust, rising fiscal deficits were again financed by money creation, and inflation soon rose to new heights.

Several "heterodox" stabilization plans initiated in the mid-1980s, such as Argentina's Austral Plan and Brazil's Cruzado Plan, attempted to stabilize the currency and rein in inflation by using a fixed exchange rate as a nominal anchor. As a fixed exchange rate (if successfully maintained) ties down the level of import prices, policymakers hoped that this approach would stabilize inflation and inflation expectations more generally. Other features of heterodox plans included the scaling back of indexation provisions and, in some cases, the imposition of wage and price controls. However, in most cases, the underlying fiscal problems were not addressed, resulting in the collapse of the stabilization plans and further acceleration of inflation. The experience of Chile was the most important exception to this pattern, as that country

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[5] Some of the more extreme examples of this pattern include Argentina in 1973-76, Chile in 1970-73, and Peru in 1985-90.

adopted market-friendly reforms in the latter part of the 1970s and pursued a more disciplined fiscal policy. Notwithstanding a sharp banking and balance-of-payments crisis early in the decade, inflation in Chile averaged less than 20 percent in the 1980s, compared with rates of about 350 percent in Argentina and 265 percent in Brazil.

The Achievement of Price Stability in the 1990s

After so many years of failed stabilization attempts, an observer in 1990 might have been forgiven for concluding that low and stable inflation would remain elusive in Latin America. But during the subsequent decade, better economic analysis and better policies led to far-better outcomes on the inflation front, as I have already noted. What accounts for this remarkable change?

Worldviews tend to evolve slowly, and it is far too soon to claim that ideas and politics in Latin America have changed fundamentally or irrevocably. Nevertheless, during the past fifteen years or so, both the political elites and the broader public in the region have, for the most part, shown an increased willingness to abandon the failed economic models of earlier decades in favor of new approaches that emphasize improved fiscal discipline, the benefits of free trade and free markets, and the vital importance of building strong economic institutions. The visible success of more market-oriented development strategies, notably the examples of the "East Asian Tigers" and (closer to home) of Chile, was not lost on Latin American policymakers. In addition, to restructure external debts and restore access to international financial markets, countries necessarily faced outside pressure to improve their policies, both from multilateral institutions and from the discipline of market forces.

The conquest of inflation in Latin America is a particularly interesting case study of the beneficial effects of the new thinking, although, as we shall see, success came only through persistent experimentation. After the debacles of the late 1980s, the view that inflation--particularly very high inflation--carries significant economic costs became more widely accepted, supported by empirical analyses and accumulated experience (Khan and Senhadji, 2001). In the early 1990s, consequently, many Latin American countries attacked their inflation problems with a new energy.

Initially, a common tactic was to fix the exchange rate, in the hope that an exchange-rate peg might stabilize inflation expectations and help to "import" some necessary monetary discipline. The use of fixed exchange rates was reminiscent of the earlier heterodox programs, although in the more market-oriented programs of the 1990s, wage-price controls and similar restrictions were generally not employed.

This approach enjoyed some early successes. For example, Mexico maintained a pegged exchange rate from 1987 through 1991, as part of a program that included a substantial reduction in government spending. Inflation fell from 160 percent in 1987 to less than 20 percent in 1991, and growth picked up. Greater exchange-rate flexibility was introduced in late 1991 by the adoption of exchange-rate bands. However, in 1994, a speculative attack on the peso led to a sharp currency devaluation and a financial crisis.

Brazil adopted a stabilization program in 1994, the *Real* Plan, which included aggressive de-indexation of wages and prices along with other structural reforms (Bogdanski, de Freitas, Goldfajn, and Tombini, 2002). At first, the exchange rate was allowed to float. However, after the Mexican crisis in late 1994, the Brazilians adopted a crawling-band regime, under which the exchange rate was devalued at a pre-determined rate. This regime was successful in ending the country's rapid inflation of the first half of the decade: Inflation in Brazil fell to less than 2 percent in 1998. The most radical example of an exchange-rate-based stabilization plan, of course, was Argentina's adoption in 1991 of a currency board, a form of "hard peg" under which the government attempted to establish permanent one-to-one convertibility between the Argentine peso and the U.S. dollar. The currency board helped Argentina enjoy price stability for more than a decade.

With the benefit of hindsight, many economists would now agree that exchange-rate pegs, if combined with other policy measures such as fiscal consolidation, can be useful in the transition from high to low inflation.[6] However, a key lesson of the recent experience is that fixed exchange rates are generally not a *long-run* solution to problems of monetary and fiscal instability, at least not in a world of high capital mobility. Indeed, despite the early successes, virtually all the Latin American exchange-rate pegs proved unsustainable and collapsed in a disorderly way. Exchange-rate over-valuation, imperfect credibility of both monetary and fiscal policy, and short-duration external debt all contributed to a high incidence of costly speculative attacks and financial crises in Latin America during the 1990s and into the new millennium. As already noted, Mexico was compelled to devalue in 1994. Brazil was forced from its peg in 1999, and Argentina (its currency board notwithstanding) in 2002.

If not fixed exchange rates, then what? Ecuador and El Salvador have pursued strategies of official dollarization, the replacement of the local currency by the U.S. dollar as legal tender. (Panama has been dollarized for many years.) Dollarization seems unlikely to be a good option for the larger Latin American countries, however. Thus, the

[6] The rapid Israeli stabilization of the mid-1980s is an instructive, non-Latin American example.

principal Latin American nations, forced to float their currencies, needed a new nominal anchor for monetary policy. Following a growing trend in the industrialized world, a number of countries made the decision to adopt explicit, quantitative targets for inflation.[7]

As with many other reforms, Chile was the Latin American pioneer, adopting an inflation target in 1990 after the passage of a new central-banking law in 1989. Like a number of other early adopters, particularly among emerging markets, Chile eased into the new approach by combining inflation targets with a reference band for the exchange rate. The exchange rate band did not disappear entirely until 1999. The Central Bank of Chile's initial inflation target, for 1991, was the range between 15 and 20 percent; the actual outcome for that year was 18.7 percent. Over the next decade, both the target and actual inflation came down gradually. Since 2001, the target has been fixed at 2 to 4 percent.

Following the 1994 peso crisis, Mexico, while setting a goal for inflation, adopted a dual monetary regime that focused primarily on money growth. In the early years, the inflation target was almost always missed, perhaps because of the use of a framework with multiple objectives. In 1999, Mexico instituted a formal inflation-targeting regime. Since then, Mexican inflation, which had been declining from its recent peak of 52

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[7] Mishkin (2000) distinguishes the setting of inflation targets from a full-fledged inflation-targeting regime. The latter involves not only the announcement of a medium-term inflation target and an institutional commitment by the central bank and the government to meet that target but also an increased emphasis on independence, transparency, and accountability for the central bank. In Latin America, countries have usually begun only by announcing quantitative inflation targets, adopting the other important features of an inflation-targeting regime over a period of time. Bernanke, Laubach, Mishkin, and Posen (1999) discuss the rationale for and experience with inflation-targeting regimes in more detail. Mishkin (2000) and Corbo and Schmidt-Hebbel (2001) provide useful analyses of inflation targeting in emerging-market countries and in Latin America in particular.

percent in 1995, has fallen further, to around 5 percent. The central bank recently tightened policy to bring inflation down to its current target range of 2 to 4 percent.

Brazil also adopted inflation targeting in 1999, following the collapse of its crawling-peg exchange-rate regime in the months after the 1998 Russian debt crisis. After a transition period that included monetary and fiscal tightening, President Cardoso issued a decree in June 1999 announcing multiyear inflation targets. He assigned responsibility for setting the targets to the National Monetary Council and gave the central bank full responsibility for implementing monetary policy as needed to achieve the targets.[8] The Brazilian Central Bank has taken this responsibility seriously; for example, it has tightened monetary policy several times since inflation moved above the target range last year. Brazil also moved more quickly than other Latin American inflation targeters to adopt procedures to improve communication with the public, including the publication of an Inflation Report that includes the central bank's inflation forecasts (Mishkin, 2000). Although Brazilian inflation rose temporarily following a capital outflow and a sharp depreciation of the *real* in 2002, inflation in that country has otherwise remained in the 6 to 8 percent range since the adoption of inflation targets.

Other Latin American countries that have turned to inflation targets include Colombia, which began using the approach in 1999, and Peru; the Central Bank of Peru has been announcing inflation target ranges since 1994, although it did not adopt a full-fledged inflation-targeting regime until 2002. Argentina, which is still recovering from its 2002 debt crisis and the collapse of its currency board, has set unofficial target ranges for inflation.

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[8] The governor of the Brazilian Central Bank, Arminio Fraga, played an important role in establishing the new regime and achieved early successes. I had the pleasure of serving on Fraga's dissertation committee when he was a doctoral student at Princeton.

The new monetary approach is a good one for Latin America, I believe, for several reasons. First, in contrast to the structuralist past, the inflation-targeting approach recognizes the key role of the central bank's monetary policies in determining the inflation rate. No longer can the monetary authorities claim that inflation is not under their control. Second, the accountability and transparency that are part of a mature inflation-targeting regime fit well, I believe, with the increasingly democratic nature of Latin American governments and the growing economic sophistication of the public. Third, a well-designed inflation-targeting regime can help to stabilize and anchor the public's expectations of long-run inflation; well-anchored inflation expectations, in turn, promote macroeconomic stability and reduce the vulnerability of the domestic economy to exchange-rate fluctuations and other shocks. Finally, inflation targeting and flexible exchange rates together serve to reduce the conflict between domestic economic stability and the free movement of capital across borders that is inherent in some other arrangements, most obviously the fixed-exchange-rate regimes favored by these countries in the past.

How have inflation targets worked in Latin America? As you can infer from the data I have already presented, the early returns are encouraging. Among the major inflation-targeting countries, the inflation rate has recently been in the range of 1 to 3 percent in Chile, 5 to 8 percent in Colombia, 4 to 6 percent in Mexico, 1 to 4 percent in Peru, and (as already noted) 6 to 8 percent in Brazil. Central bankers in these countries are also making progress in adapting the new regime to deal with the special issues that arise in an emerging-market context. For example, inflation is typically more difficult to control in developing economies than in the industrialized economies because of the greater influence of exchange-rate fluctuations, the heavy weight of volatile food and commodity prices in the consumer basket, and the volatility of the public's inflation expectations resulting from a history of high and unstable inflation. Emerging-market central banks that adopt inflation targeting must not only develop the forecasting and monetary-policy tools needed to meet their targets, they must also choose target ranges that are not so narrow as to be unachievable but narrow enough to allow monetary policymakers to build credibility (Fraga, Goldfajn, and Minella, 2003). As the list of middle-income inflation targeters grows--outside of Latin America, it now includes, among others, the Czech Republic, Hungary, Poland, South Korea, Thailand, South Africa, and Israel--and as more experience is gained, knowledge about how to best manage this approach in the emerging-market context will grow as well.

Underlying Causes of Improved Inflation Performance

I do not mean to claim, however, that Latin America conquered inflation simply by choosing a particular framework for monetary policy. Rather, my more fundamental point is that inflation has declined in Latin America because new ideas and new political realities have fostered the development of economic institutions and policies that promote macroeconomic stability more generally. Recent changes in the policy environment have been especially important in three areas: fiscal policy, banking regulation, and central bank independence.[9]

No monetary-policy regime, including inflation targeting, will succeed in reducing inflation permanently in the face of unsustainable fiscal policies--large and growing deficits. In light of their painful experiences, Latin American citizens certainly

[9] Fraga, Goldfajn, and Minella (2003) discuss the broader policies and reforms needed to make inflation targeting successful.

understand that unchecked deficits will eventually exhaust the government's capacity to borrow, leading to excess money creation and a breakout of inflation. Fiscal policy does seem to have become more conservative in the region in the past decade, although there have been setbacks and variations across countries. Important developments include significant privatization, the reduction of marginal tax rates, the addition of new revenue sources such as value-added taxes, and the passage of laws that restrict the use of public funds for certain purposes. Throughout the region, lower inflation and greater fiscal discipline bear the promise of creating a virtuous circle, in which lower interest rates reduce the portion of government spending devoted to debt service. Domestic real interest rates have indeed moderated considerably and currently stand at 2-3 percent in Chile and Mexico and about zero in Argentina. Brazil's real interest rate remains stubbornly high, at about 11 percent, but that rate is down from nearly 30 percent less than a decade ago. Sovereign bond spreads in the region are also at historic lows for most of the region, with the exception of Argentina, which is still in the process of working out its recent default.

Modernization of the banking system and the improvement of bank regulation and supervision are likewise essential for promoting stable monetary policy and low inflation. If the banking system is considered by foreign and domestic investors to be financially unstable or not transparent, then the fear of inducing a banking crisis may constrain the central bank's willingness to change interest rates and exchange rates as needed to fight inflation. Financial-sector reforms in the region have included reducing or eliminating targeted credit programs, decontrolling interest rates, privatizing state-owned banks, and allowing foreign banks greater scope to operate in the domestic market, among other measures. Authorities in a number of countries have also made important progress in the past decade in bringing their bank supervisory and regulatory regimes in line with international best practices, as codified in the Basel Core Principles for Effective Banking Supervision. Recent enhancements in banking supervision include the expansion of supervisory powers, more frequent and thorough bank examinations, and tougher capital rules. Deposit insurance has also been introduced in most of the region. Quite a bit remains to be done on the supervision and regulation front, however: In particular, in some countries, supervisory independence from the government is not up to international standards, and the human and financial resources necessary to carry out fully supervisory responsibilities are lacking.[10]

A final institutional improvement that supports macroeconomic stability is increased independence for the central bank. A central bank that is dominated by the government may be forced to ease policy inappropriately to reduce the financing costs of government debt or to help re-elect incumbents. Inflation-targeting regimes make sense only if the central bank has independent control of the instruments of monetary policy, as holding the central bank responsible for meeting its inflation target is hardly possible otherwise. Here, once again, the trends in Latin America generally appear favorable. In the late 1980s and early 1990s, several countries took steps to enhance central bank independence, both through constitutional provisions and through changes in the central bank law.

That central bank independence promotes lower inflation in developed countries is well-established by the economic literature. Although the evidence for developing

[10] Evidence from the IMF and World Bank Financial Sector Assessment Program indicates that the average Latin American country is "compliant" or "largely compliant" with fewer than two-thirds of the Basel Core Principles.

countries is more mixed, several studies have found that central bank independence promotes low inflation in those countries as well, especially when *de facto* rather than *de jure* measures of independence are used (Cukierman, Webb, and Neypati, 1992; Cukierman, Miller, and Neypati, 2002). The distinction between *de facto* and *de jure* central-bank independence remains important in the region. For example, although a number of features of Brazilian law promote the independence of the nation's central bank, the bank's *de facto* independence may be limited by the power of the president to remove members of the Monetary Policy Committee. However, the fact that the left-of-center Lula administration in Brazil has been able to support disciplined monetary and fiscal policies without significant loss of popularity is itself testimony to the degree that such policies are becoming more widely accepted in the region.

The Outlook and Prospects for the Future

The near-term outlook for Latin America suggests that better monetary, fiscal, and structural policies are paying off. In its September *World Economic Outlook*, the International Monetary Fund projects real output growth of 3-1/2 percent for the developing Western Hemisphere (including the Caribbean) in 2005, following an estimated gain of 4-1/2 percent in 2004. Inflation in the broader region is estimated to have been about 6-1/2 percent on average in 2004 and is expected to be a bit lower than that in 2005 (annual average basis). If these projections are realized, and if the good performance of the U.S. and Canadian economies continues, then the macroeconomic environment in our hemisphere as a whole will be better than it has been in many decades.

Will improved macroeconomic policies and outcomes continue in Latin America? The track record is still too short to draw definitive conclusions. Some writers have warned that the short-term costs of reform and overly optimistic projections by reform supporters may be leading to "reform fatigue" in a number of countries (Lora, Panizza, and Quispe-Agnoli, 2003). I am inclined to be more optimistic, however. I am encouraged by the fact that governments of all ideological stripes, including left-leaning governments in Brazil, Argentina, and Chile, as well as the incoming administration in Uruguay, have actively supported reform. (Venezuela is a notable exception.) In important ways, these efforts are paying off. Notably, as I have discussed today, the inflation situation has improved markedly, and real interest rates have fallen. Current account positions in the region have also strengthened considerably. On the other hand, although near-term growth prospects appear good, many Latin American economies have grown at rates below their potential in recent years, in part as a result of the financial crises of the 1990s. Much still needs to be done to alleviate income inequality and poverty. The next few years will be an interesting test of the efficacy and sustainability of economic reform in Latin America.

References

Bernanke, Ben (2004). "The Great Moderation," speech at the meetings of the Eastern Economic Association, February 20, http://www.federalreserve.gov/boarddocs/speeches/2004/20040220/default.htm

Bernanke, Ben, Thomas Laubach, Frederic Mishkin, and Adam Posen (1999). *Inflation Targeting: Lessons from the International Experience*, Princeton, N.J.: Princeton University Press.

Bogdanski, Joel, Paulo Springer de Freitas, Ilan Goldfajn, and Alexandre Antonio Tonio Tombini (2002). "Inflation Targeting in Brazil: Shocks, Backward-Looking Prices, and IMF Conditionality," N. Loayza and R. Soto, eds., *Inflation Targeting: Design, Performance, Challenges*. Santiago: Central Bank of Chile.

Cagan, Philip (1956). "The Monetary Dynamics of Hyperinflation," in Milton Friedman, ed., *Studies in the Quantity Theory of Money*, Chicago: University of Chicago Press.

Corbo, Vittorio, and Klaus Schmidt-Hebbel (2001). "Inflation Targeting in Latin America," Central Bank of Chile working paper 105, September.

Cukierman, Alex, Steven Webb, and Bilin Neyapti (1992). "Measuring the Independence of Central Banks and Its Effect on Policy Outcomes," *World Bank Economic Review*, vol. 6 (September), pp. 353-98.

Cukierman, Alex, Geoffrey Miller, and Bilin Neyapti (2002). "Central Bank Reform, Liberalization, and Inflation in Transition Economies: An International Perspective," *Journal of Monetary Economics*, vol. 49 (March), pp. 237-64.

Dornbusch, Rudiger, and Sebastian Edwards (1991). "The Macroeconomics of Populism," in R. Dornbusch and S. Edwards, eds., *The Macroeconomics of Populism in Latin America*. Chicago: University of Chicago Press.

Fischer, Stanley, Ratna Sahay, and Carlos Vegh (2002). "Modern Hyper- and High Inflations," *Journal of Economic Literature*, vol. 40 (September), pp. 837-80.

Fraga, Arminio, Ilan Goldfajn, and André Minella (2003). "Inflation Targeting in Emerging Market Economies," in M. Gertler and K. Rogoff, eds., *NBER Macroeconomics Annual*, pp. 365-400.

International Monetary Fund (2004). *World Economic Outlook* (September). Washington, D.C.

Khan, Mohsin, and Abdelhak Senhadji (2001). "Threshold Effects in the Relationship Between Inflation and Growth," *IMF Staff Papers*, vol. 48, pp. 1-21.

Lora, Eduardo, Ugo Panizza, and Myriam Quispe-Agnoli (2003). "Reform Fatigue: Symptoms, Reasons, and Implications," paper presented at the conference, Rethinking Structural Reform in Latin America, Federal Reserve Bank of Atlanta, October 23.

Mishkin, Frederic (2000). "Inflation Targeting in Emerging-Market Countries," *American Economic Review*, vol. 90 (May), pp. 105-09.