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A Favorable International Environment and Effective Monetary and Fiscal Policies

Leading into the global financial crisis of 2008–09, Latin America faced an extremely positive international economic environment, in particular favorable terms of trade (the price of exports over imports), which are a key determinant of exchange rates and business cycle fluctuations in Latin America. The surge of commodity prices in the second half of the 2000s was a very positive development for Latin American commodity exporters—the "good luck" component of Latin America's resilience to the global financial crisis. Moreover, the region's trading partners were experiencing high growth before the crisis, and access to international finance was fluid and relatively low cost. These countries also had the policy space and better policy frameworks to conduct expansionary policies once the crisis began. The combination of enough policy space and efficient policy frameworks were key to mitigating the effects of crisis (Kose and Prasad 2010).

Latin American policymakers' ability to conduct expansionary macroeconomic policies rested upon sound initial macroeconomic positions. Fiscal accounts were healthy. Levels of public debt were relatively low. Countries that saved some of the windfall gains from high terms of trade had resources to spend during the downturn. Other countries were able to borrow to finance fiscal expansion without serious constraints. In addition, commodity prices quickly rose again after a sharp reversal at the peak of the crisis, providing further fiscal policy space.

On the monetary side, having inflation under control allowed for a loosening of monetary policy. The sharp rise of commodity prices during the buildup to the crisis caused inflation to increase, but the subsequent slowdown put enough downward pressure on prices to allow for interest rate cuts. The pass-through of exchange rate to inflation was much more muted than during previous crises, primarily because of increased exchange rate flexibility.

Rather than transferring turmoil from the international economy to domestic economic activity and employment, as in past crises, exchange rates served as a shock absorber.

This chapter first examines the positive international environment that Latin America enjoyed before the crisis and in particular the very high terms of trade. Although strong commodity prices put the region in a strong position to face the crisis, the commodity price shock also created serious challenges on the inflation front before the crisis and delayed the loosening of monetary policy. Furthermore, commodity prices are also one of the region's main risks, because a decline in the terms of trade can have serious consequences. These can be mitigated by building buffers through fiscal prudence, letting the exchange rate float, and keeping space for monetary policy maneuver. The chapter then reviews recent inflation developments, some common problems and challenges, the role of inflation targets in conducting monetary policy, and the effect of commodity prices on inflation. It reviews recent progress in fiscal policy and the expansionary fiscal policies that helped mitigate the impact of the global financial crisis. The fiscal expansions were unprecedented, and while they did not prevent recession, they did limit the repercussions of the crisis and, following only a mild downturn, set the stage for a quick and long-lasting recovery.

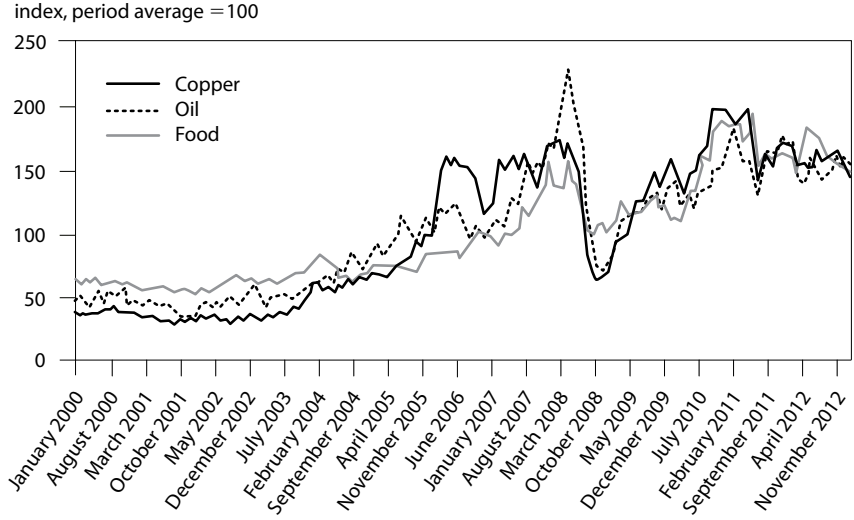
Good Luck and Terms of Trade

The commodity price boom of the 2000s had repercussions all around the region, given that most Latin American countries are commodity exporters. There has been much discussion about the causes of the steep rise in commodity prices during the 2000s, including the financialization of commodities, but the strongest determinant was strong growth in China and other emerging-market economies, which increased demand in the face of an inflexible supply (Bluedorn et al. 2012). Figure 2.1 traces the evolution of commodity prices since 2000. At the start of the decade, commodity prices had fallen to historic lows, in the wake of the Asian crisis and the dot-com bust in the United States. They rose sharply starting in 2004–05, and on the eve of the crisis, they had nearly tripled or quadrupled from their levels at the beginning of the decade. There was a sharp downturn during the crisis, but prices quickly recovered to near-record levels.

While Argentina and Brazil export soybeans, Brazil and Colombia export coffee. Oil is an important export for Colombia and Mexico, but above all for Ecuador and Venezuela. Minerals are the main exports for Bolivia, Chile, and Peru; in the latter two, these are overwhelmingly copper. The countries more exposed to commodity prices are Chile and Venezuela: In Chile copper accounts for about 50 percent of exports, while in Venezuela oil accounts for about 90 percent of exports.

With the rise in commodity prices, the region's economies enjoyed significant terms of trade gains before the global financial crisis. Terms of trade are perhaps the most evident positive external development for emerging markets.

Figure 2.1 Global commodity prices, 2000–2012



Note: Food prices are a simple average of wheat, corn, sugar, coffee, and soybeans.

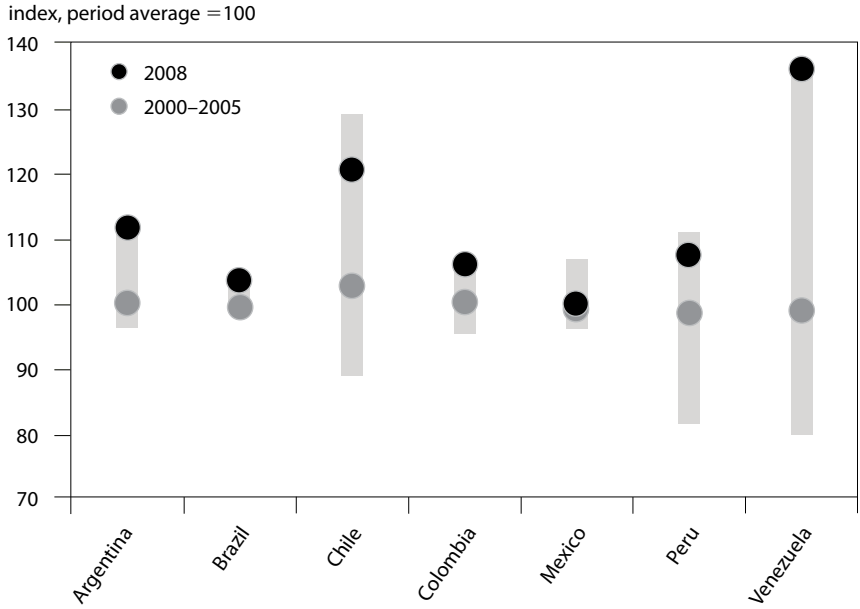
Source: Bloomberg.

It is also where the good economic conditions of trade partners should reflect: better prices for exports. But financial conditions were also very favorable. Therefore, good conditions for trade, such as high terms of trade as well as improved market access, and good financial conditions, such as abundant access to financing at low costs, characterized the external environment for emerging-market economies in the years before the global financial crisis. On the other hand, the rise in commodity prices also increased the price of imports. For example, oil prices have been a negative shock in countries with no production of oil; the same has been true for food and minerals.

Tracking changes in the terms of trade helps identify the macroeconomic impact of commodity price changes. Figure 2.2 shows the terms of trade for the LA-7 using the International Monetary Fund's *World Economic Outlook* (WEO) database. Unlike other measures, these terms of trade data are adjusted by the importance of trade in the countries' GDP. This is important because fluctuations in the relative prices of exports and imports matter more if the economy is relatively open to trade than if it is relatively closed.[1] The bars represent the maximum and minimum values from 1980 to 2010. Average terms of trade

1. The graph is similar using terms of trade data series from the World Bank and from the Economic Commission for Latin America and the Caribbean, although the vertical axis covers a smaller range in this graph. The data are constructed using the rate of change of terms of trade, which is computed as the rate of change in the price of exports times the share of exports in GDP minus the rate of change in the price of imports times the share of imports in GDP.

Figure 2.2 Terms of trade, Latin America, 1980–2010



Note: The bars represent the maximum and minimum values in the 30-year period from 1980 to 2010. The dots are the average terms of trade for 2000–2005 and its value before the crisis.

Source: International Monetary Fund, *World Economic Outlook* database.

have been normalized to the period average, which is equal to 100. The two circles represent the average terms of trade for 2000–05 and the value before the crisis. As shown, the terms of trade for most of these countries were at or close to their 30-year maximum at the beginning of the global financial crisis. The magnitude of the positive effect is more significant for Chile and especially Venezuela. However, Brazil, Colombia, and especially Mexico did not enjoy large terms of trade gains, and they still had good economic performance. This heterogeneity suggests that effective policies played a role in increasing their resilience to the effects of the global financial crisis.

Another point worth emphasizing is that the terms of trade were very low after the Asian crisis until 2004, when they started to rise. Terms of trade were also very low during the debt crisis of the 1980s and indeed were at their minimum in Argentina, Brazil, and Chile. Therefore, during both the Asian crisis and the debt crisis, the decline in the terms of trade further aggravated already poor economic performance in the region. This time was different: Latin American countries had favorable terms of trade when the global financial crisis arrived and again enjoyed favorable terms of trade soon thereafter.

Some years ago, the Inter-American Development Bank emphasized that good performance in the region before the crisis was mostly good luck. To quote from that report:

> [This report seeks] to examine whether Latin America's performance and fundamentals are as sound as they appear at first sight. We will argue that "not all that glitters is gold" and that maybe "this time" is not necessarily that different. After all, it is often the case that fragilities are both generated and easily missed in good times. (IDB 2008, 1)

The 2008 report also recognized some significant progress, but it emphasized the risks the region would face if the external environment deteriorated, and these risks remain relevant. However, fewer people are crediting the region's strong economic performance primarily to good luck (i.e., beneficial terms of trade) as the region has continued to perform quite remarkably during and after the crisis (IDB 2012).

Some recent studies show that sound policies, and not just positive terms of trade, help explain the improved resilience of emerging-market economies in general and Latin America in particular. Mendoza (1995) calibrates an equilibrium model to demonstrate that about half of business cycle fluctuations are due to terms of trade shocks and that the level of economic growth and its fluctuations are affected not only by the terms of trade level but also by its variability. Aguiar and Gopinath (2007) find that fluctuations in emerging markets are mostly due to changes in long-term growth rather than shocks around a smooth trend. They attribute this to recurrent changes in policy regimes, which impact the way the terms of trade are transmitted to the rest of the economy.

Abiad et al. (2012) analyze the resilience of more than 100 economies over 60 years. Rather than looking only at growth and volatility, they also examine the characteristics of the business cycle, the length and strength of expansions, and the speed and steepness of recoveries. They find that expansions have grown longer and recessions have become shallower and shorter.

The evidence in Abiad et al. (2012) confirms that the greater resilience of emerging markets to internal and external shocks is a recent phenomenon, in particular in Latin America, and coincides with a period during which policy frameworks have improved and policy space has expanded. The external shocks examined include terms of trade deterioration, changes in world growth, uncertainty, and sudden stops of capital. The domestic shocks included banking crises and credit booms. The study attributes about 60 percent of the increased resilience of emerging-market economies to better policies and the rest to diminished external and domestic shocks.

The case of Chile supports the view that terms of trade are less important drivers of the business cycle in the region than in the past. Terms of trade are quite important to Chilean economy, and Chile has made a great deal of progress in fundamental reforms and improving its macroeconomic policy frame-

work. The Chilean economy has generally gone into recession when the price of copper has collapsed and has boomed when the price has been high. A number of studies attributed Chile's strong growth from the mid-1980s to the late 1990s to copper exports (Calvo and Mendoza 1998, Spilimbergo 1999). However, things have definitely changed in the 2000s, and copper prices are no longer the main drivers of the business cycle. During the three years from 2000 through 2002, when the copper price dropped to its lowest three-year average real price since the Great Depression, Chile's economy grew at 3.4 percent. In contrast, from 2004 to 2007, when the price of copper rose sharply, the economy grew at an average of 6 percent and did not experience a sharp boom as in the past. The business cycle has been moderated by sound policies, including the application of a fiscal rule, which requires that windfalls from copper exports are saved, and an inflation targeting regime with flexible exchange rates.[2]

Another important case is Mexico. As noted, Mexico did not enjoy a terms of trade boom like most other countries in the region, because the bulk of its exports are manufactures. Moreover, Mexico was negatively affected by the strong growth of China's manufacturing exports, especially after China's accession to the World Trade Organization in 2001. Indeed, China's export development significantly reduced the dynamism of Mexico's exports to the United States that followed implementation of the North American Free Trade Agreement (NAFTA). By 2008, more than 80 percent of Mexico's exports went to the United States, and so the Mexican economy contracted sharply during the global financial crisis. Total exports fell by about 10 percent in real terms during the crisis, and output fell by more than 6 percent in 2009. However, Mexico recovered to an average growth rate of 4.4 percent in 2010–12, despite having an anemic neighbor to the north. This is another example of how important macroeconomic and financial policies, adopted after the Tequila crisis, were in overcoming the global financial crisis, since for Mexico, the "good luck" component was not relevant.

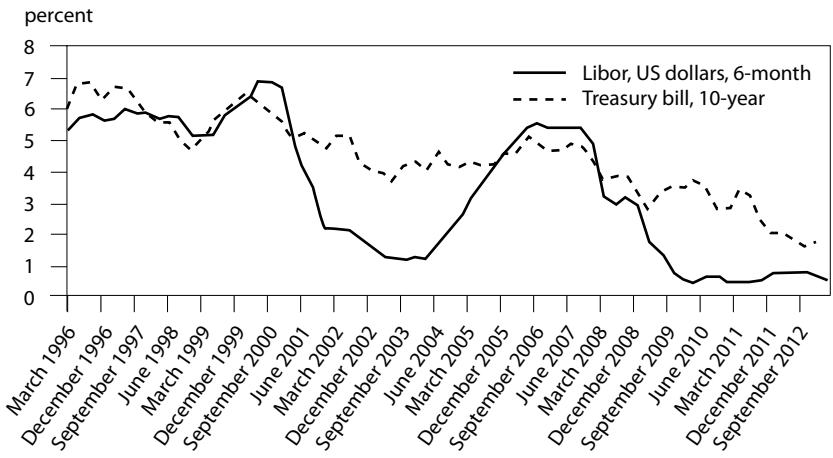
In addition to positive terms of trade and strong policies, the region has benefited from supportive international financial conditions. Figure 2.3 tracks international short- and long-term interest rates (panel a) and the sovereign risk premium for Brazil, Chile, Colombia, Mexico, and Peru (panel b).[3] Unlike in previous crises, when the region's risk premiums rose sharply, during the global financial crisis they increased fairly mildly and only during the peak of the crisis (the third quarter of 2008 through the second quarter of 2009). Risk premiums increased by about 400 to 500 basis points for Brazil, Colombia, Mexico, and Peru, and by 200 to 300 basis points for Chile. In comparison, risk premiums for these countries were well above 500 basis points during the

2. For further discussions of the role of copper in the Chilean economy, see De Gregorio and Labbé (2011).

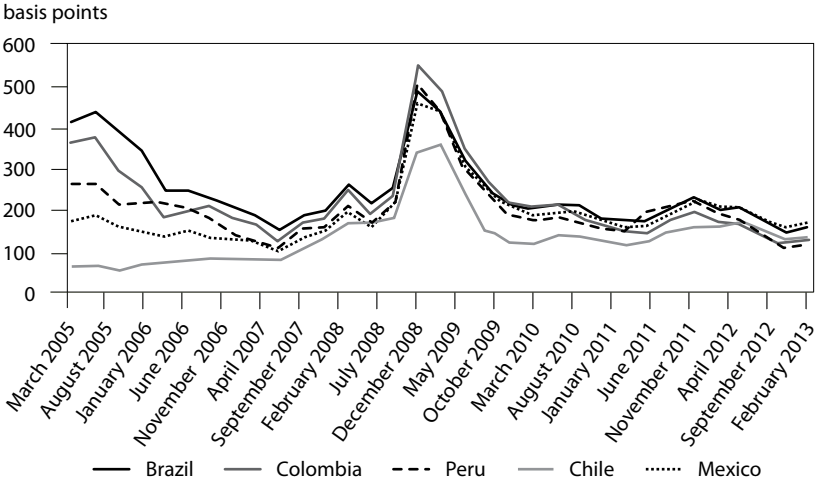
3. Argentina and Venezuela have been excluded. They have had risk premium averaging about 1,000 basis points since the start of the global financial crisis.

Figure 2.3 International financial conditions

a. Interest rates, 1996–2012



b. Sovereign risk premium, 2005–13



Libor = London interbank offered rate

Note: Argentina and Venezuela are excluded from panel (b) because they have had a risk premium averaging about 1,000 basis points since the global financial crisis began.

Source: Bloomberg.

Asian crisis, except for Chile, which already had a history of strong fiscal policy. Because risk premiums depend on perceptions of risk, they are supported by good macroeconomic conditions and sound policies (internal factors), in addition to international interest rates and the risk appetite of foreign investors (external factors).

During the worst part of the crisis, financial conditions deteriorated in the region because of a flight to safety by international investors and increased uncertainty. And the global recession also resulted in a sharp, but short-lived, decline in the region's terms of trade. These external factors largely underlie the recession in Latin American countries in 2009. What explains the region's quick and strong recovery is the implementation of good policies, to which we now turn.

Controlling Inflation

The Latin America and Caribbean region has historically had the highest inflation rate in the world. All LA-7 countries had two- or three-digit inflation rates during most of the postwar period, including several periods of very high inflation and some hyperinflations. Indeed, all but a few Latin American countries have been on the brink of hyperinflation in recent decades.[4] Colombia is the only LA-7 country that did not experience inflation above 100 percent a year since 1970, and all had two-digit average inflation rates during the 1980s (figure 2.4). High inflation clearly has been a widespread problem among countries large and small. According to the *World Economic Outlook*, average annual inflation in Latin America and the Caribbean reached one digit only in 1999.

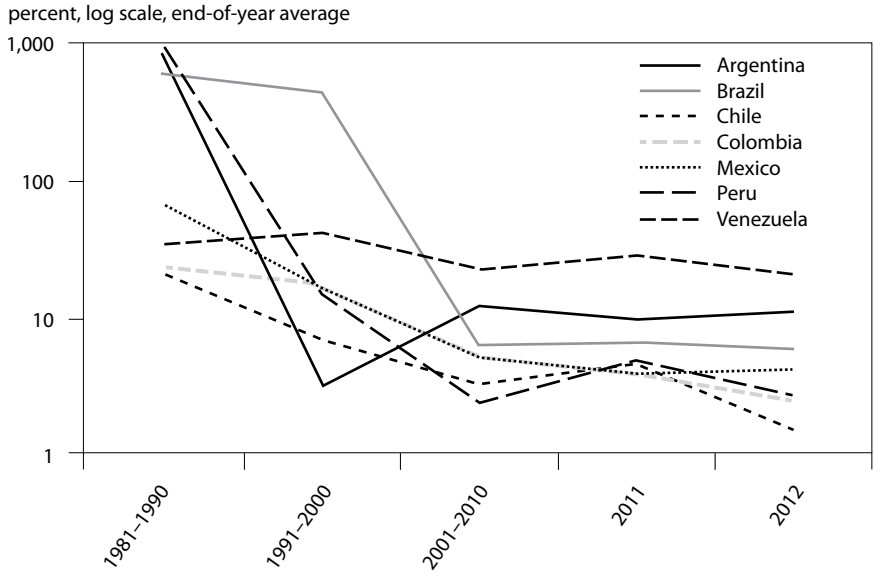
High inflation has decisively hindered growth in the region (De Gregorio 1992), but it is also a symptom of the institutional weaknesses that make it difficult to implement appropriate macroeconomic policies, including weak tax collection systems or weak central banks (Fischer 1993, De Gregorio 1993). Inflation affects growth through a number of channels, and in turn inflation can be affected by other underlying problems. Inflation raises transaction costs as people avoid the use of money and devote excessive effort and resources to avoid the costs of inflation. Firms often hedge against future inflation rather than devoting resources to more productive activities. Inflation also mirrors and exacerbates social tensions and inequality.

Causes of Inflation

Economic theory identifies two main causes of inflation. One reason is fiscal imbalances. Inflation is a tax, and under a weak tax system authorities often have to rely on seigniorage (the difference between the value of money and the

4. Cagan (1956) defines hyperinflation as 50 percent a month, which leads to a rate of 13,000 percent a year. Extreme inflation is defined as 1,000 percent a year—15 to 20 percent a month (see Dornbusch et al. 1990).

Figure 2.4 Inflation in Latin America, 1981–2012



Note: The scale in this figure is logarithmic, which is the only way to represent inflation in Latin America during the last 30 years. Bolivia also had inflation above 1,000 percent during a hyperinflation in the mid-1980s. For scale reasons Peru was set at 1,000 percent, but its average for the decade was 1,300 percent.

Source: International Monetary Fund, *World Economic Outlook* database.

cost of producing it). In this scenario, inflation results from the government spending more than it can finance through regular taxation. High collection costs, such as a broad informal economy or widespread corruption, or political conflicts that excessively increase government expenditure may cause the government to use monetary financing. The way to reduce inflation is through fiscal consolidation.

The Latin American experiences with hyperinflation were all intimately tied to fiscal imbalances. When seigniorage requirements are greater than what can be stably financed with money creation, authorities may need to keep accelerating the rate of money growth to finance the budget, which causes accelerating inflation rates (Kiguel 1989, Bruno and Fischer 1990).

A modern fiscal source of inflation is "fiscal dominance," a situation in which monetary policy cannot anchor inflation because it is dominated by fiscal needs (Woodford 2003)—for example, the central bank announces an inflation target that cannot be achieved because inflation is too low to meet fiscal requirements. Although the government may be able to avoid financing fiscal needs by borrowing instead of increasing the money supply, the buildup of public debt will also cause inflation. This phenomenon was described by Sargent and Wallace (1981), who called it unpleasant monetarist arithmetic and emphasized

that it is not necessary to undertake money financing of the budget in order for fiscal imbalances to cause inflation. The anticipation of future monetization is sufficient to create inflation pressure, as long as regular taxes are not an option.

Another cause of inflation in Latin America is inflation bias, first explained by Barro and Gordon (1983). Stated simply, central banks have incentives to keep unemployment below its full employment level, and a way to do this is through an unexpected increase in inflation. This induces a spurt of economic activity. When the public recognizes this incentive, and anticipates the increase in inflation when forming expectations, the central bank is forced to maintain inflation above its optimal level. This generates an inflationary bias. Weak public finances can also create an inflation bias because unexpected inflation also reduces the burden of public debt. To combat inflation bias, the discretion of monetary authorities to spur inflation must be limited in some way.

Tackling Inflation Inertia

The appropriate policy response to inflation caused by either fiscal imbalances or inflation bias is to build credible institutions with a clear and credible anti-inflation commitment. The most important policies are to grant independence to the central bank, make low inflation its legal mandate, and prevent money financing of the budget. Many countries around the world, and particularly in Latin America, have pursued these reforms since the early 1990s.

Eliminating the sources of inflation is not sufficient, however, to ensure low inflation, even in an economy with sound fundamentals. Inertia in the price-setting mechanism can propagate inflation and increase the costs of reducing inflation. In Latin America, the long history of high inflation made indexation a pervasive feature of price- and wage-setting behavior. And inflation adjustments were used to manage the exchange rate, feeding past inflation back into current prices. When an economy becomes trapped in a high-inflation equilibrium, inflation can become indeterminate, in the sense that inflation today is what it was yesterday, and inflationary shocks therefore have a permanent effect and there is no nominal anchor.

The decline in inertia comes only after inflation is reduced in a credible form; starting the other way around is very unlikely to succeed, as demonstrated by the failed attempts at stabilization in Latin American during the 1980s. The so-called heterodox programs sought mainly to eliminate inertia but failed to eliminate the root causes of inflation and ended up causing severe inflation outbreaks. Examples include the Austral plan in Argentina, the Cruzado plan in Brazil, and the Inti plan in Peru. They relied on monetary reforms that introduced an indexed new currency and were complemented by incomes policies that froze some key prices.

Some other countries have used the exchange rate to anchor inflation and eliminate inertia, for example, Chile and Mexico. Chile had a fixed exchange rate from 1979 to 1982, which collapsed during the debt crisis, and Mexico launched a crawling peg in the early 1990s that ended with the Mexican crisis

of 1994.[5] In both cases, the promise of a fixed or semifixed exchange rate caused a rapid increase in foreign borrowing for activities in the nontradable goods sector. The exchange rate was used as an inflationary anchor, but inertia eroded competitiveness enough to make the programs unsustainable. Specifically, the rate of the currency depreciation is set at a level below the previous level of inflation—zero in the extreme case of a fixed exchange rate. During the time it takes for inflation to come down, there is a severe currency misalignment, the current account deficit rises to unsustainable levels, and the experiment ends with an exchange rate collapse and a rise in inflation.[6]

The anchoring and dynamics of inflation in the region changed dramatically during the 1990s as a result of two key policy changes: central bank independence and the use of inflation targets.

Central banks were made legally independent in many Latin American countries, including Chile (1989), El Salvador (1991), Argentina (1992 and 2002), Colombia (1992), Nicaragua (1992 and 1999), Venezuela (1992 and 2001), Ecuador (1992 and 1998), Peru (1993), Mexico (1993), Bolivia (1995), Costa Rica (1995), Uruguay (1995), Paraguay (1995), Honduras (1996 and 2004), Guyana (1998), and more recently Guatemala (2001) and the Dominican Republic (2002). However, legal independence does not always equate to de facto independence. The process by which central bank board members are selected, approved, and removed can be key to a central bank's ability to act independently.[7]

In Argentina, for example, congress has failed to approve most board members for a full term, instead appointing them on an interim basis, which limits their ability to act independently. In addition, during 2010, the governor of the central bank was removed by use of a "presidential emergency decree" for refusing to allow the government to use central bank reserves to pay government debt. Finally, a 2012 change to the central bank law identified three objectives for the bank: monetary stability, financial stability, and the development of the economy with full employment of resources and social equity. While these are all fine public policy objectives, the third is completely inappropriate for a central bank. At the other extreme is Brazil, which has not yet passed a law granting independence to the central bank but did grant it de facto independence in a 1999 decree that established an inflation targeting regime. Brazil's central bank has enjoyed as much independence as many central banks

5. For the Mexican case see Dornbusch and Werner (1994) and for Chile Edwards and Cox-Edwards (1991).

6. One of the few examples of successful exchange-rate-based stabilization is Israel in the mid-1980s, which also pursued income policies to reduce the misalignment of the exchange rate. Inflation fell from about 400 percent in 1984 to 20 percent in 1986. But in Israel there was also a significant fiscal adjustment. See Bufman and Leiderman (1995).

7. For further discussion of central bank independence in Latin America, see Jácome and Vásquez (2008).

Table 2.1 Inflation targets in Latin America, 2012

Country	Target, 2012	Target horizon
Brazil	4.5 percent ± 2 percentage points	End of year
Chile	3 percent ± 1 percentage point	Two years
Colombia	2 to 4 percent	Medium term
Guatemala	4.5 percent ± 1.5 percentage points	End of year
Mexico	3 percent ± 1 percentage point	Medium term
Peru	2 percent ± 1 percentage point	At all times

Source: Hammond (2012).

that have been granted independence by law. However, by not being legally mandated, this independence is not assured since the government could exert undue influence on monetary policy.

Inflation Targeting

There are 26 inflation targeting countries, of which six are in Latin America (Hammond 2012), including five of the seven largest countries in the region (table 2.1).

Many countries in the region originally adopted inflation targets in the context of IMF programs in the wake of the debt crisis or as part of a set of policies to address broader issues such as fiscal imbalances. In general, inflation targeting was not considered a framework for monetary policy but part of a more consistent macroeconomic framework. As such, most countries initially set their inflation targets on an annual basis, and the targets served more as inflation forecasts than as policy targets, given that the ability to influence inflation during a one-year horizon is quite limited. Even so, the initial inflation targets were useful for building credibility and signaling the commitment and competence of central bankers. A number of countries later moved to set targets for multiple years and then for even longer terms.

Inflation targets have two key elements: the target itself, with its tolerance range, and the time horizon over which inflation deviations are expected to return to the target.[8] The method of defining the target horizon varies from country to country. Some countries seek to meet the target at all times (Peru), some at the end of each year (Brazil and Guatemala), but most seek to achieve the target most of the time. Moreover, some countries, including Peru, make note of deviations from the target and define in official monetary policy reports a forecast horizon over which any such deviation is expected to be corrected.

Conceptually, no country seeks to correct deviations over a very short period of time, which explains why they follow flexible inflation targeting regimes,

8. Given the autocorrelation process of inflation, there is a one-to-one relationship between the tolerance range and the time horizon (De Gregorio 2007).

rather than rigid ones. This is because it is costly in terms of employment to bring inflation back to target—there are output costs to disinflation. Flexible inflation targets implicitly take into account the implications for unemployment by virtue of the fact that shocks to inflation are expected to be absorbed gradually. The authorities minimize the losses resulting from deviations in inflation from the target and deviations of output from full employment by allowing inflation to adjust gradually. The target horizon and the tolerance range also reflect the lag with which monetary policy affects aggregate demand and inflation. The time horizon is generally the medium term, or two to three years.

The inflation target is expected to anchor inflation expectations over time, and for this reason it must remain highly credible. As long as the public expects inflation to be equal to the target, output and prices are less volatile and monetary policy can reach the target with low output costs. Overall, low inflation and low output volatility contribute to economic growth. In the past, the money supply or the exchange rate were used as nominal variables for anchoring monetary policy to achieve the inflation target. However, the demand for money can be highly unstable and therefore is not sufficiently correlated to inflation to provide a reliable anchor. The hazards of using the exchange rate as an anchor include the loss of monetary policy as a tool and the difficulties in absorbing shocks such as changes in the terms of trade or changes in the international financial conditions. As experience in the region also shows, inflation inertia generates relevant exchange rate misalignments.

Monetary Policy with an Inflation Target

As discussed above, inflation targeting is not a framework that cares only about inflation. However, since monetary policy has to do with inflation, the inflation target is an efficient framework to conduct monetary policy. The issue then is how to operationalize this framework: When should monetary policy be tightened or loosened?

The most traditional answer is to follow the Taylor rule, which defines the extent to which the central bank should change the nominal interest rate in response to changes in certain economic conditions, including inflation and output.[9]

Of course, the rule is an analytical simplification to explain central banks' behavior. Moreover, it contains two variables that are affected by the central bank—inflation and output—and that cannot be treated separately since they are related in the economy through the relationship between inflation and the output gap, the Phillips curve.

In practice, central banks do not use a mechanical rule to set interest rates. With monetary policy central banks want to make inflation reach the target in the policy horizon. Therefore, the optimal policy rule is to adjust the path

9. The Taylor rule was first introduced in Taylor (1993).

of interest rates in a way that the inflation forecast converges to the target in the policy horizon. This is actually how most central banks decide policy. The question in monetary policy committee meetings is what should be monetary policy, and its likely future course, in order for inflation to be at the target in the policy horizon? Here is where judgment and beliefs of committee members are key. Policy needs to be tightened (raise interest rates) when inflationary pressures indicate that inflation on the horizon could be above the target. But policy should be loosened when the target is likely to be missed from below, and hence a cut in rates should stimulate output and employment for inflation to rise to the target in the policy horizon.

Forecasting inflation rates can be quite complicated, and for this reason communication and transparency are particularly important in the context of inflation targeting. As in the rest of the world, in Latin America inflation targets are implemented with regular meetings, communiqués after the meetings, release of minutes, and regular quarterly or biannual inflation reports. It is essential that the markets have access to the views of the central bank and understand how the bank will use monetary policy to reach the inflation target over the policy horizon. Transparency also helps the private sector to smooth its expectations.

What variables should policymakers use to set interest rates: asset prices? exchange rates? commodity prices? unemployment? The simple answer is: whatever affects the inflation forecast. If asset prices reveal a boom in activity that will increase the output gap and put upward pressure on inflation, it may be appropriate to tighten. Unemployment is certainly related to price and wage pressure, and so it is clearly a relevant indicator. If the exchange rate has the potential to permanently affect inflation because its movements are large or persistent, it also must be taken into account when setting interest rates.

It is not just the level of a particular variable, for example, the exchange rate, but also its outlook over the policy horizon. Those types of forecast are difficult and are generally inaccurate, which means that the monetary policy stance must often be revised when actual developments differ from the forecasts.

This has been particularly true for commodity prices in recent years, which have risen sharply and fluctuated significantly. There are two issues involved in using commodity prices in setting interest rates. The first is whether the target should be based on headline or core inflation, and the second is whether monetary policy should be adjusted in reaction to commodity price developments.

There are sound reasons to focus on headline inflation instead of core inflation (De Gregorio 2012):

- Headline inflation is easier to understand. It is difficult to communicate why food and energy prices are excluded from general cost of living indices.
- The public is interested in the stability of prices for the entire consumer basket, including food and energy.

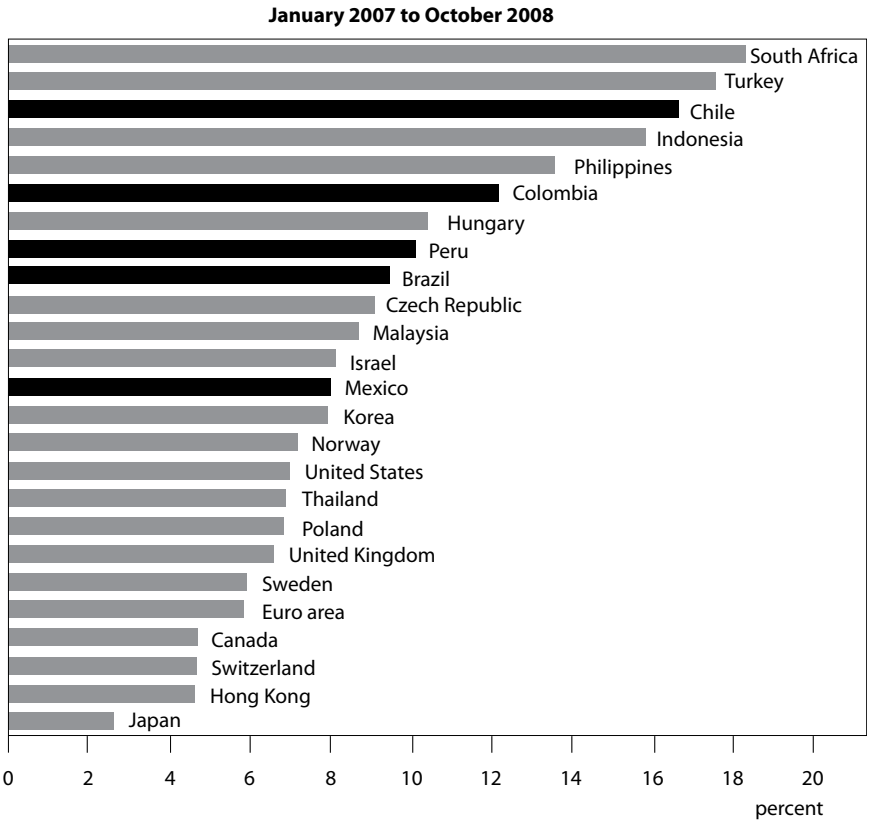
- Headline inflation is more consistent with price indices used for other policy purposes, such as the budget.
- When core inflation is targeted, expectations for headline inflation are more volatile, and this may in turn increase the volatility of headline inflation and possibly economic activity.
- The original idea behind inflation targeting was to exclude highly volatile prices that are subject to shocks of short duration. The problem is that commodities such as food and oil have been shown to have very persistent movements and may have significant second-round effects.
- The use of core inflation indicators may reduce the credibility of the central bank's anti-inflation commitment because proposals to use core inflation measures usually emerge when there are inflationary commodity price shocks.
- The use of headline inflation is also consistent with the fact that most inflation targeting countries that used to focus on core inflation have moved to target headline inflation, and their inflation targets are expressed in terms of headline inflation (Hammond 2012).

Regardless of how the target is defined, policymakers should pay close attention to commodity price developments since they directly affect inflation and can also have significant second-round effects on other prices.

The commodity price shock of the mid-2000s started with a dramatic increase in the price of oil. Between January 2004 and its peak in July 2006, the price of West Texas Intermediate crude increased by 125 percent, while food prices increased by only 14 percent (see figure 2.1). The surprising fact was that the severe oil price shock did not cause a global slowdown or a rise in inflation. Improved monetary policy was credited as one of the most important factors behind this unprecedented and unexpected performance (De Gregorio et al. 2007, Blanchard and Galí 2009). In addition, unlike previous oil shocks, this price spike was due to strong demand rather than a disruption of supply.

However, once food prices did start rising, the evolution of inflation changed dramatically, especially in emerging-market economies. Between July 2006 and the peak of food prices in June 2008, food and oil prices both rose by about 90 percent. This provoked a major rise in inflation in emerging markets (figure 2.5). The largest increase in inflation in Latin America occurred in Chile, which experienced a rise in the CPI of almost 17 percent. By October 2008 annual inflation in Chile was 9.9 percent, owing mainly to food price increases, but second-round effects were already under way as evidenced by the fact that, even excluding food and energy, inflation stood at 6.4 percent, more than double the 3 percent inflation target. More important, the increase occurred very quickly in mid-2008: The annual core rate of inflation was between 3 and 4 percent during the first four months of the year, very much in line with the inflation target. What accounts for the steep rise in inflation after May? Chile is a very open economy with few distortions in the price-

Figure 2.5 Accumulated increase in consumer price index, 2007–09

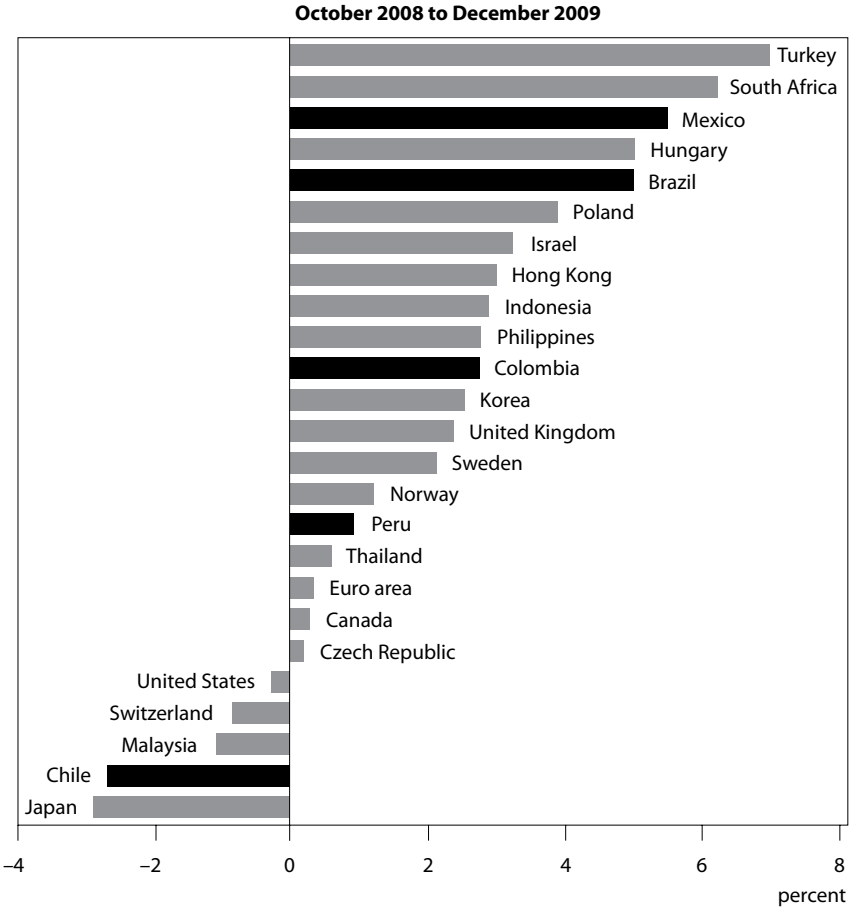


(continues on next page)

setting mechanism, and so changes in external prices are quickly reflected in the domestic market. Some idiosyncratic shocks also significantly increased the cost of energy. Mexico was at the other extreme of the sample, with only half the rise in consumer prices as Chile during those 22 months. In Mexico there are more controls on domestic prices, including some basic foodstuffs.

Once the global economic crisis hit in the fall of 2008, inflation declined and commodity prices retreated, and the countries that had the largest increases in inflation also had the largest declines, particularly Chile, Colombia, and Peru. Brazil and Mexico, which had the smallest increases in inflation also had the smallest declines. Within the region, relative prices eventually adjusted to the new external environment of higher relative prices of commodities. The second wave of commodity price increases, after 2009, had less effect on inflation because relative prices had already adjusted, and there was some room within these economies to absorb the higher international prices with limited

Figure 2.5 Accumulated increase in consumer price index, 2007–09
(continued)



Sources: National statistics bureaus; Bloomberg.

second-round effects. In fact, allowing prices to adjust without delay creates policy space, as there is no repressed inflation that may limit the ability to loosen monetary policy.

The recent experience also shows that food prices, much more than oil prices, can have pervasive effects on inflation, and prompt reaction to persistent increases in food prices may facilitate inflation control. The difficulty from a policy standpoint is assessing when food prices increase will be persistent. The overall lesson from this experience, however, is that despite the spikes in CPI inflation, it did not take long for prices to return to normal levels, compared with the past when indexation and other forms of inflation inertia

were very pervasive. The empirical evidence, although not conclusive, indicates that inflation targeting has been generally effective in lowering inflation and reducing output volatility.[10] The experience in Latin America with inflation targets ratifies these findings.

Two countries have not reduced inflation as much as the others: Venezuela and Argentina (see figure 2.4). As we explore in more detail below, these are also the most fiscally vulnerable countries in the region because they have relied much more heavily on terms of trade windfalls.

Venezuela has had an average inflation rate of about 25 percent during the past 10 years with the rate very stable around that level. Unlike most other countries in the region, Venezuela has a fixed exchange rate regime with strong foreign exchange controls. When the currency is considered to be misaligned, the exchange rate is devalued; many times, devaluations come after the misalignment has been allowed to grow large, and they therefore do not correct the full disequilibrium, generating a cycle of devaluation and foreign exchange controls, reminiscent of the historical dynamics in most countries of the region before the 1990s.

In Argentina, the official inflation rate has averaged about 9 percent a year since 2007. However, independent analyses indicate that inflation has been much higher, on the order of about 25 percent a year.[11] The strongest indication that official inflation data are amiss is the behavior of other nominal variables, which are inconsistent with the lower officially reported inflation rates. For example, nominal aggregate wages have grown an average of 24 percent a year during the same period. Therefore, since 2007 real wages have grown 130 percent, while labor productivity has risen only 30 percent. It is extremely difficult to explain how real wages have almost doubled with respect to productivity. In addition, the problems with the consumer price estimates have translated into problems with GDP measures. According to some independent analysts GDP in 2012 was overvalued by as much 15 percent, due to the cumulative discrepancies starting in 2007.

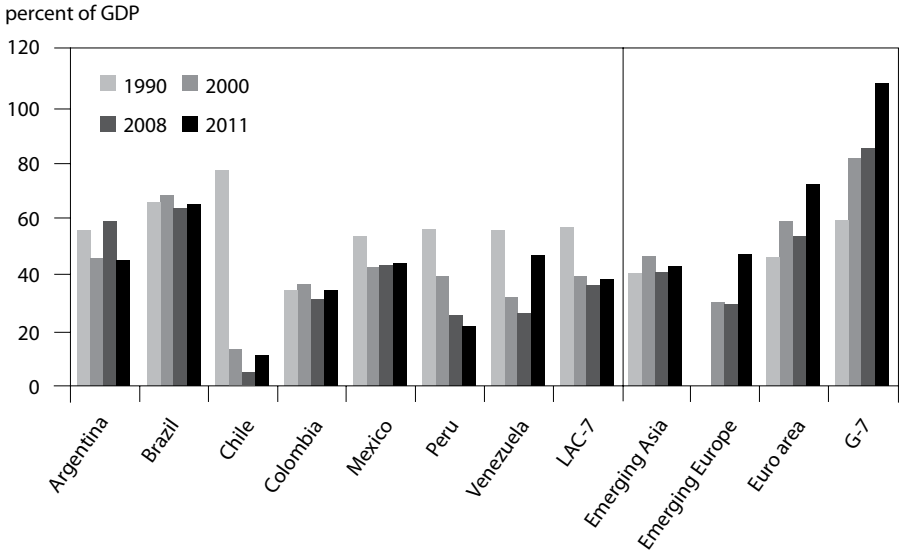
Progress on the Fiscal Front

Establishing the independence of central banks with a focus on monetary stability and limiting, or forbidding, monetary financing of the budget was an important step toward conquering inflation. But it was also necessary to eliminate the deep roots of inflation, which in many countries were of fiscal origin.

10. Truman (2003), Hyvonen (2004), and Vega and Winkelried (2005), among others. Ball and Sheridan (2005) show that the available evidence does not support this conclusion for developed economies. Mishkin and Schmidt-Hebbel (2007) corroborate this differentiated benefit and conclude that the winners are emerging economies using inflation targets.

11. In an unparalleled move, in February 2013 the IMF issued a declaration of censure against Argentina and required remedial measures to be adopted to address the inaccuracy of consumer price and GDP data.

Figure 2.6 Public debt in Latin American countries and selected regions



LAC = Latin America and the Caribbean; G-7 = Group of Seven

Source: Abbas et al. (2010), revised database at www.imf.org/external/pubs/ft/wp/2010/data/wp10245.zip.

Fundamental fiscal reforms and the adjustment of expectations, including by enhanced credibility, were central in reducing inflation in the region (Sargent, Williams, and Zha 2009). There were two important developments regarding fiscal policy. First, the beneficial international conditions before the crisis helped strengthen the fiscal position of the Latin American countries, which opened fiscal space for the expansionary policies launched to counteract the worst effects of the crisis once it hit. The second was that fiscal policies became countercyclical in several key countries.

The evolution of public gross debt in Latin American countries and in other regions since 1990 is presented in figure 2.6. Overall, public debt in the region declined before the crisis and has shown a small rise since then. The most significant declines have been in Chile, Peru, and Venezuela. Debt levels in the other countries in the region have been fairly stable. Latin American debt levels are not very different from those in emerging Asia and are below most advanced economies and emerging European economies. In Europe and the Group of Seven countries,[12] public debt levels mirror the difficulties these countries have faced since the crisis began and the implications for fiscal deficits.

Of particular interest is the evolution of public debt from 2000 to 2008, during the surge in commodity prices. Except for Argentina and Mexico, public

12. Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

debt declined in Latin American countries. It is important to note that Brazil, Colombia, and Mexico are the countries that benefited least from the rise in commodity prices (see figure 2.2). However, even where debt was not reduced, creditworthiness improved, primarily because the value of these countries' natural resources at high commodity prices has increased. This should alleviate credit constraints (Caballero and Krishnamurthy 2001), allowing countries access to financial markets when needed to finance a fiscal expansion.

Since 1960, most developing economies have run procyclical fiscal policies, with spending increasing and taxes decreasing during booms, and spending decreasing and taxes increasing during recessions (Gavin et al. 1996, Gavin and Perotti 1997), while the opposite has been true of advanced economies, which follow either a more neoclassical or a Keynesian approach (Frenkel, Végh, and Vuletin 2013). The neoclassical approach to fiscal policy favors a smoothing of tax rates when the tax base fluctuates with the business cycle, and therefore a fall in revenues associated with a downturn is assumed to induce a fiscal expansion. In contrast, the Keynesian view suggests that, in order to smooth business cycle fluctuations, fiscal policy should be expansionary in recessions and contractionary during expansions.

Two main factors, which reinforce each other, account for the procyclical behavior of fiscal policy in emerging-market and developing economies. First, the history of debt defaults and a lack of fiscal responsibility constrained government borrowing. In the extreme case, if the government cannot borrow, it may be forced to completely spend its revenues at all times, and so during booms there will be a fiscal expansion and during busts there will be a contraction. The second factor is institutional weakness, mostly in the form of social conflict and political fragmentation.

Despite the overall trend for fiscal policy to be procyclical in most developing economies and countercyclical in most advanced economies, some emerging-market economies have escaped this pattern. Two studies in particular examine this issue in detail.

Céspedes and Velasco (2011) examine commodity price booms and the cyclical response of the fiscal balance for two episodes during the 1970s and the 2000s. The first period goes from 1965 to 1985 and the second from 1995 to 2008. Frenkel, Végh, and Vuletin (2013) study fiscal policy in emerging-market countries during two subperiods, from 1960 to 1999 and from 2000 to 2009, and show how several emerging-market economies have evolved to run procyclical fiscal policies.

The two studies look at the same issue from different perspectives. Frenkel, Végh, and Vuletin (2013) study the correlation between government expenditure and real GDP, and Céspedes and Velasco (2011) examine the elasticity of the fiscal balance with respect to the price of the relevant commodities for each country (a countercyclical fiscal policy would aim at a positive elasticity). Table 2.2 summarizes the findings of both studies.

According to Frenkel, Végh, and Vuletin (2013), all Latin American countries had procyclical government expenditures at the start of the period, except

Table 2.2 Cyclicality of fiscal policy in Latin America: A comparison of two studies

	Frenkel, Végh, and Vuletin (2013)		Céspedes and Velasco (2011)		
Country	1960–99 (1)	2000–2009 (2)	1965–85 (3)	1995–2008 (4)	Difference (5)
Argentina	+	0	–0.02	0.11	0.13
Bolivia	+	–	–0.02	0.09	0.11
Brazil	+	–	–0.09	0.08	0.17
Chile	+	–	0.10	0.21	0.11
Colombia	0	+	–0.03	0.06	0.09
Costa Rica	+	–	n.a.	n.a.	n.a.
Ecuador	+	+	–0.04	0.09	0.13
El Salvador	+	–	n.a.	n.a.	n.a.
Guatemala	+	+	0.02	0.04	0.02
Honduras	+	+	n.a.	n.a.	n.a.
Mexico	+	+	–0.04	0.06	0.10
Nicaragua	+	+	n.a.	n.a.	n.a.
Panama	+	+	n.a.	n.a.	n.a.
Paraguay	+	–	n.a.	n.a.	n.a.
Peru	+	+	0.09	0.07	–0.02
Uruguay	+	+	n.a.	n.a.	n.a.
Venezuela	+	+	0.05	–0.07	–0.12

n.a. = not available

Note: Columns (1) and (2) report the sign of the correlation between the cyclical component of government expenditure and the cyclical component of real GDP. Columns (3) and (4) correspond to the coefficient of a regression of the log of the fiscal balance on the log of the relevant commodity price for each country. Column (5) is the difference between the coefficients for the two periods.

Sources: Frenkel, Végh, and Vuletin (2013, figures 2 and 3); Céspedes and Velasco (2011, table 9).

Colombia, where it was acyclical. Bolivia, Brazil, Chile, Costa Rica, Ecuador, El Salvador, and Paraguay subsequently "graduated" from procyclicality. Céspedes and Velasco (2011) paint a somewhat better picture. All the Latin American countries in their sample, with the exception of Peru and Venezuela, increased the elasticity of the fiscal balance with respect to commodity prices in the most recent boom, i.e., increased the countercyclicality of their policies. For example, the improvement in the fiscal balance has increased for a given rise in commodity prices.

Both papers also explore the question of what explains the improved behavior of fiscal policy. They show that an improvement in the quality of institutions is central to this result. In addition, Céspedes and Velasco (2011) find that exchange rate flexibility increases countercyclicality to commodity price booms, and the presence of fiscal rules is marginally significant.

Like rules in monetary policy, fiscal rules, if they have enough flexibility to confront uncertainty, should help to improve the behavior of fiscal policy. Although causal evidence would corroborate this hypothesis, the statistical

evidence is rather elusive. The reason is that, contrary to well-known monetary policy rules, not all fiscal rules are the same. They are not always designed to reduce procyclicality; they target different fiscal variables—the budget, debt, expenditure, or revenues; and, above all, they are not always enforceable because authorities have access to different mechanisms to limit and to sidestep the application of these rules.

In Latin America, Chile has been at the forefront of fiscal rules. In 2001 it implemented a rule that set a target for structural balance. This balance was adjusted by the cycle and by the long-term copper price, thereby building in countercyclical behavior. In addition, independent committees of experts determine the cyclical adjustment and the long-term copper price. The rule initially was set at 1 percent of GDP structural surplus, but it was then reduced to 0.5 percent in 2008 to take into account the improved fiscal position gained through high copper prices and, consequently, the need to generate surpluses. Later, it was reduced again to provide fiscal stimulus during the crisis. The current administration, which also faced exceptional expenditures from the 2010 earthquake, set as a target a 1 percent structural deficit in 2014.

The fiscal rule is the key to formalizing fiscal responsibility and accountability. In addition, it provides space for maneuverability of fiscal policy through the business cycle. But rather than stabilizing GDP, it has helped to stabilize fiscal expenditures.[13] However, fiscal responsibility has taken much longer. Chile's structural surplus was about 1 percent of GDP from 1991 to 1998, and the country entered a deficit situation only during the Asian crisis. Therefore, application of the fiscal rule does not account for all macroeconomic progress leading up to the global financial crisis; flexibility of the exchange rate and the inflation targeting regime also played a key role.

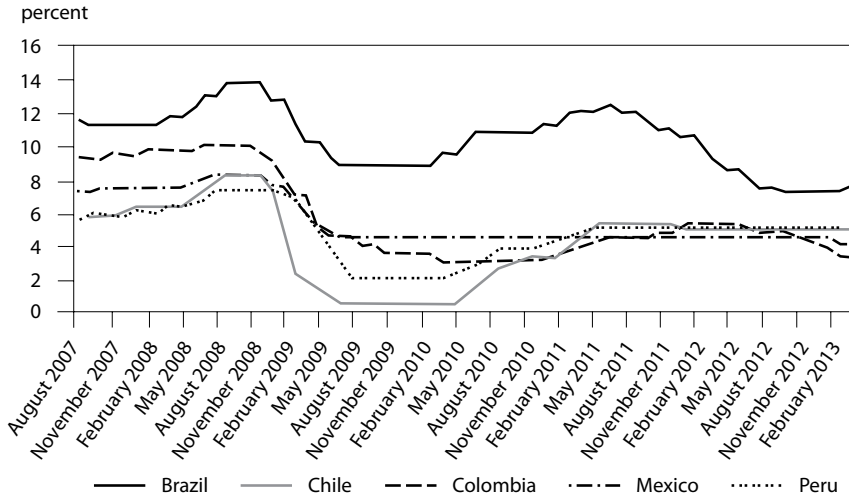
Policy Responses during the Global Financial Crisis

As noted, enhanced fiscal and monetary policy frameworks, as well as the policy space generated by good international conditions and steps taken to control inflation, were critical to allowing expansionary macroeconomic policies during the recent global financial crisis.

The fiscal policy actions during the crisis contrasted sharply with the traditional policy responses of Latin American countries to recessionary shocks from abroad. In the past, authorities relied on monetary and fiscal tightening. Fiscal policy usually had to be contractionary, not because of bad judgment but because there was no space to expand fiscal policy. Fiscal policy was procyclical as creditworthiness deteriorated during periods of bad external conditions, and governments' abilities to finance their budgets were severely impaired. During bad times, fiscal policy followed a very simple rule: Spend as much as you can finance.

13. For further discussion, see Marcel, Cabezas, and Piedrabuena (2012).

Figure 2.7 Monetary policy rates in Latin America, 2007–13



Source: Bloomberg.

In earlier external crises, governments had usually tightened monetary policy because of fear of depreciation, an issue covered in greater detail in the next chapter. The potential inflationary and financial repercussions of a weakening currency were so pervasive that authorities were very reluctant to allow a full exchange rate adjustment, and they defended the parity with high interest rates.

A certain irony is associated with exchange rate management in the region and in many emerging markets. Such management has often begun with the intention of weakening the currency in order to improve competitiveness and then moved toward fiercely fighting depreciation in order to avoid inflation. It has then ended in severe overvaluation and loss of competitiveness.

According to de Carvalho Filho (2010), since August 2008, inflation targeting regimes have had a positive effect on postcrisis economic performance. As for monetary policy, during the global financial crisis countries that followed inflation targets—Brazil, Chile, Colombia, Mexico, and Peru—cut interest rates to historical lows. Although in most of these countries they have since been raised, they still have not returned to the precrisis levels (figure 2.7). The rate cuts began with 50 basis points in Colombia in December 2008, followed by 100 basis points in Brazil and Chile and 50 basis points in Mexico in January 2009, and then 25 basis points in Peru in February. By August 2009, all countries except Colombia were at their minimum levels.

The interest rate cycle was quite synchronized around the region, but the loosening occurred much later than in advanced economies, which were cutting rates by 2007–08. The scenarios were much different, however, in the

emerging-market and advanced economies. The emerging markets were experiencing a positive shock from terms of trade, were growing, and also were facing serious challenges on the inflationary front because of the rise in commodity prices. In the context of inflation targets, the loosening in advanced economies did not imply that a cut had to be made in Latin America. Inflationary expectations were rising, and there was no need to use monetary policy to alleviate financial tensions.

Monetary policy actions, however, were under way during the crisis before the rate cuts. They started just after the collapse of the Wall Street financial services firm Lehman Brothers. Liquidity tensions grew as onshore-offshore spreads rose to unusual levels and interbank rates deviated from the central banks' target rates. Various instruments were used to alleviate liquidity tensions (Canales-Kriljenko et al. 2010). The range of collaterals accepted in liquidity facilities was broadened. The maturities of repo operations were lengthened. Swap lines were implemented to provide foreign exchange liquidity. Most of the liquidity measures were kept in place until mid-2009, but they worked quite effectively and quickly because tensions receded by November 2008. By then, the stage was set for the unprecedented interest rate cuts.

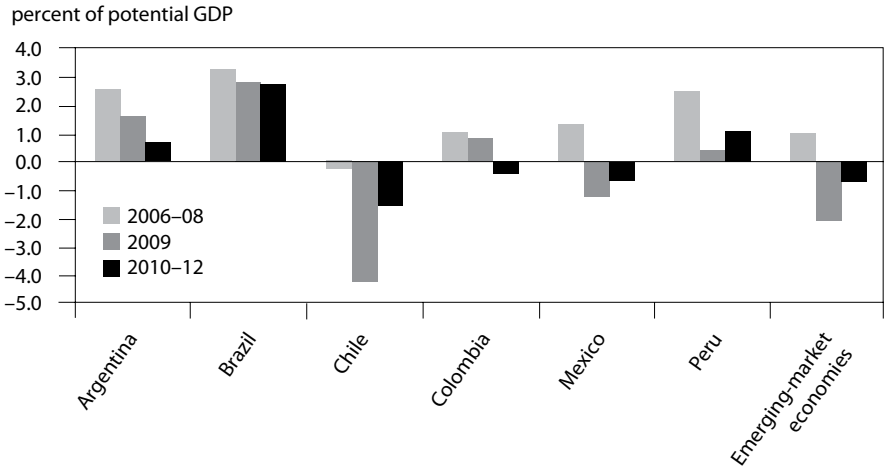
In Chile, in addition to the liquidity measures adopted in conjunction with the rate cuts, reaching the zero lower bound for interest rates, unconventional measures were used to stimulate the economy even further because it was deemed necessary to bring inflation back to the 3 percent target from the 0.3 percent annual rate reached in July 2009.[14] The central bank announced that the low interest rate would remain low for a long time, thus providing "forward guidance" in monetary policy. To reinforce this announcement, a term liquidity facility at the prevailing monetary policy interest rate and for terms of 90 and 180 days was implemented. Thus, if the central bank had changed the rate before six months, it would have incurred losses. Because it was expected to start increasing rates in mid-2010, the term liquidity facility was shortened monthly by 30 days beginning in late 2009.

Fiscal policy during 2009 was very expansionary. Figure 2.8 presents the adjusted cyclical primary budget balanced for the general government as a percentage of potential output. The result is a measure of the magnitude of the discretionary stimulus. The figure compares the two years pre- and postcrisis with 2009. The largest stimulus was in Chile, with about 4 percent of GDP, whereas for Peru and Mexico it was close to 2 percent of GDP and for the rest of the countries about 1 percent of GDP. Emerging-market economies had on average a stimulus of about 3 percent of GDP.[15]

14. The annual inflation rate in Chile declined from 9.9 percent in October 2008 to –2.3 percent in November 2009.

15. These expansions are based on the IMF measures of cyclically adjusted budget, and they are not necessarily the discretionary component announced by the governments because of measurement issues.

Figure 2.8 General government cyclically adjusted primary balance, 2006–12

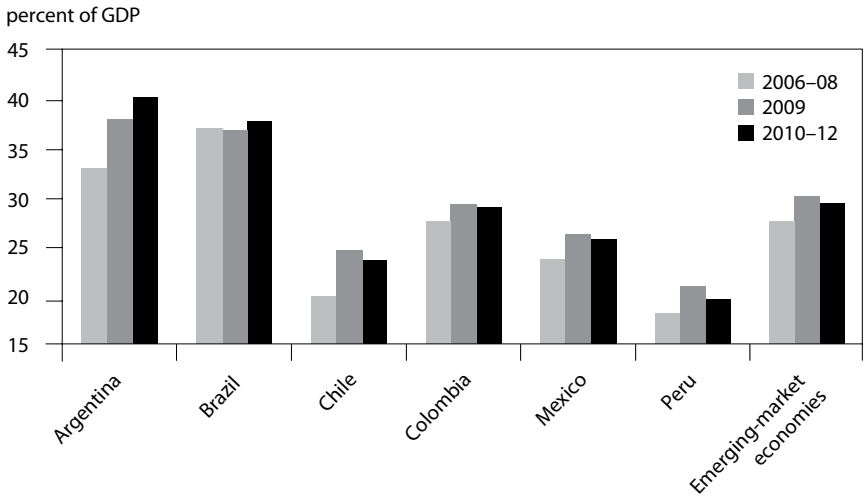


Source: IMF (2012b).

Even after the crisis, some countries—Argentina, Brazil, and Colombia—continued to increase their fiscal stimulus. The others, as expected in countercyclical behavior, withdrew the stimulus but not completely. Chile, Mexico, and Peru, following the same pattern as emerging markets, reversed only partially their fiscal expansion. This pattern revealed a problem with the flexibility of budgets in conducting countercyclical fiscal policy. The problem was the stickiness (resistance to change) of government expenditures (see figure 2.9). In no countries have government expenditures returned to their precrisis levels. This finding could be due to fiscal-stickiness or the timing of permanent increases in government expenditures. An example of the latter is Chile, where higher social protection expenditures were legislated before the crisis. However, the evidence on all emerging markets indicates that fiscal-stickiness along the cycle is a relevant issue.

One important lesson from the macroeconomic point of view is that more flexibility in government expenditure along the business cycle depends on having more automatic stabilizers on the expenditure side, which are basically nonexistent in emerging markets. The traditional automatic stabilizer on the expenditure side is unemployment insurance. The public provision of unemployment insurance is possible, but special care is needed in dealing with the effects on incentives. Otherwise, such programs can become a big fiscal drag and a big distortion of the labor market, such as those in southern Europe. A system that is carefully designed to avoid moral hazard can improve the process of matching in the labor market, raising productivity. In Chile, unemployment insurance is built into workers' savings, and when it is not used it goes into the pension plan. Chile also has a transfer component. Because of

Figure 2.9 General government expenditure, 2006–12



Source: IMF (2012b).

its magnitude, it is not enough to be a relevant fiscal stabilizer, and because of the dynamism in employment creation in the last few years, there is no clear evidence of malfunctioning.[16]

From a comparative perspective, the monetary and fiscal expansions of Latin American as well as Asian countries were quite sizable. In figure 2.10, the numbers for fiscal expansion were taken directly from ministry of finance communications on the intended expansions and therefore are not the same as those in figure 2.8. However, they show basically the same orders of magnitude for the relative figures. Latin America had a significant and unprecedented reaction from its monetary and fiscal policy.

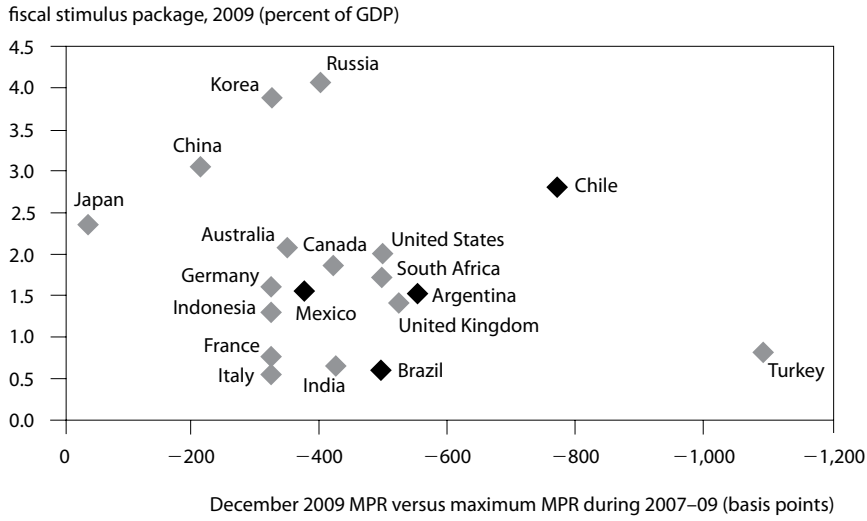
Final Remarks

As Latin American economies have enjoyed a good international environment for several years, evidenced most graphically by high terms of trade, the natural follow-up question is how vulnerable are they to a decline in terms of trade. In particular, if a slowdown in China and other major emerging markets occurs, how will the region react?

On the external front, a currency depreciation, in the context of flexible exchange rates, should operate as an adjustment mechanism if external conditions deteriorate. The current account deficits would widen, the currency

16. Fjanzylber and Repetto (2009) describe the unemployment insurance schemes in Latin America, several of which are based on individual accounts.

Figure 2.10 Fiscal and monetary stimulus, selected countries



MPR = monetary policy interest rate

Sources: Central Bank of Chile; International Monetary Fund; Bloomberg; ministries of finance.

would depreciate, and, in the context of high reserves, financial repercussions could be mitigated. There could be some inflationary pressures, but low pass-through from the exchange rate to inflation, due largely to the credibility of the inflation objective, together with a slowdown of economic activity, should prevent this problem from becoming severe.[17] However, fear of inflation may induce authorities to fight a healthy depreciation of the currency.

The main risk Latin America faces is a potential deterioration in its terms of trade, resulting, for example, from a slowdown in China and in Asia in general. And some softening of commodity prices has recently being observed. A decline in terms of trade can be accommodated, from an external equilibrium point of view, by a depreciation of the currencies. However, from a fiscal point of view the challenges are more complex. Thus the issue is to what extent the fiscal position would deteriorate, forcing a fiscal adjustment and aggravating a potential slowdown of economic activity. A sensitivity analysis should be done of the fiscal position in the region to determine where there is glitter that is not gold.

Adler and Sosa (2013) have undertaken this task for South America, except Guyana, Suriname, and Mexico. They estimate the responses of the domestic economies to changes in external conditions and apply a public and external

17. For further discussion of the declining pass-through from exchange rate to inflation, see chapter 3.

debt sustainability framework to evaluate regional risks. In agreement with the earlier discussion, they find that the threats to external sustainability are not a major risk. In addition, on average, the region can fiscally accommodate a moderate deterioration of the external conditions, but a more protracted and deep external contraction may have very dissimilar effects across countries.

Not surprisingly, however, the authors conclude that Argentina and Venezuela are in a tighter spot and that their fiscal position could be severely impaired. A second set of countries—Brazil, Mexico, Uruguay, and, to a lesser extent, Ecuador—could have some space to undertake countercyclical fiscal policy. And finally, Bolivia, Chile, Paraguay, Peru, and, to a lesser extent, Colombia are well prepared to counteract even a sizable external shock with fiscal policy. The buildup of fiscal buffers during good times could pay off if the external scenario deteriorates sharply.

Avoiding fiscal complacency in good times is essential to being prepared for a change in international conditions. Moreover, even when countries can withstand a decline in terms of trade, relying on their high value is unsustainable. Fiscal needs grow along with the economy, whereas terms of trade, despite being high, will not have that upward trend. Sooner or later, countries that live at the fiscal limit will see their fiscal stance constrained. And yet a deterioration of the external environment can be handled with the policy frameworks already in place. Latin American economies are more stable today than in the past. But the maintenance of stability cannot be taken for granted.

The substantial decline in macroeconomic volatility in the United States and the world over the decades leading up to the global financial crisis has been widely documented by a large body of empirical research. Kim and Nelson (1999) and Blanchard and Simon (2001) were among the first to point to this phenomenon, which later became known as the Great Moderation.[18] The Great Moderation has been discredited, or at least ignored, in the discussions on macroeconomic stability since the global financial crisis. However, as argued in the next chapter, crises are much more related to bad financial regulation than bad macroeconomic policies.

Although it is clear that monetary policy was responsible for controlling inflation in the United States, the discussion about what caused the persistent decline in both output and inflation volatility is ongoing. In their review of the potential explanations of the Great Moderation, Galí and Gambetti (2009) conclude that the decline in the volatility of output stemmed from the smaller contribution of nontechnology shocks. It may be that the underlying shocks became smaller or that the transmission channels generated a more muted response. The authors interpret their results as smaller fiscal and monetary policy shocks and find they are inconsistent with the "good luck" hypothesis.

18. A predecessor was Taylor (1998), who called this period the "long boom." For further evidence on the timing and magnitude of the decline in volatility, see Smith and Summers (2002) and Stock and Watson (2003).

In particular, a stronger anti-inflationary stance led to the decline in output volatility.

Structural reforms, such as the increased openness, may also have helped economies become more stable. Cavallo (2007), for example, asserts that trade openness has reduced output volatility, and thus more open economies are also more stable economies. This evidence refutes the old view that more open economies are more exposed to volatility because they have more opportunities to adjust to international shocks. However, openness without the appropriate macroeconomic management risks forgoing the benefits for output volatility, as shown by the experience of Latin America during the Asian crisis.

Low and credible inflation targets bring significant benefits.[19] Indeed, a credibility bonus comes with a commitment to inflation stabilization. In a standard Phillips curve framework, inflation depends on the output gap (the reason for the output/inflation volatility tradeoff), inflation expectations, and a set of other variables, including inflationary shocks. Consider the case of low credibility in a low inflation objective. In such a case, an inflationary shock may feed back into price and wage formation, requiring a more aggressive monetary policy response and thus making it costlier to reduce inflation. This could happen when expectations not only are backward looking but also are affected by a high degree of inertia. By contrast, when expectations are well anchored to an inflation target, also becoming more forward looking, the monetary policy adjustment required to achieve stable and low inflation is milder and the sacrifice ratio declines, reducing the volatility of both inflation and output.

The unprecedented success of the emerging-market economies and the Latin American countries in particular is a demonstration that the Great Moderation is alive and well. However, these benefits also bring new risks. Higher stability, in particular in the context of low interest rates, induces financial intermediaries to search for yield, which ends up spurring investors to take more risk, as on display in industrial countries (Rajan 2005, King 2012). Indeed, a challenge for preserving stability is to monitor the health of financial markets in tranquil times; otherwise, stability may sow the seeds for the next financial crisis.

19. Gonçalves and Salles (2008) show that inflation targeting also reduces volatility in growth. Also see Corbo and Schmidt-Hebbel (2011) for empirical evidence on how the improved macroeconomic framework in Latin America led to better economic performance during the global financial crisis than during the Asian crisis.