

## COMMENTARY

# Monetary Policy and Financial Stability: An Emerging Markets Perspective\*

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The world has endured a deep financial crisis and a great recession. Emerging markets are performing much better than they have in the past, especially in Latin America. The huge difference between the recent crisis and previous ones in emerging economies is that this time ‘it was not our fault’. The evidence from the emerging countries facing this unprecedented global downturn indicates that policy-makers have learned some lessons from previous crises.

In this article, I discuss the role of monetary policy in the context of an inflation-targeting regime and the challenges it faces regarding the need to preserve financial stability. Monetary policy has been under significant stress. It had to face a rapid increase in inflation as a result of soaring commodity prices, followed by declining inflation as the world entered the Great Recession. In addition, it has had to preserve financial stability, and in emerging countries it has had to deal with many challenges on the exchange

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rate front. In particular, I discuss below the issue of targeting asset prices, because in emerging markets, tightening monetary policy when asset prices are rising too fast could induce an appreciation that might result in further increases in domestic asset prices. I analyse these issues below, with an emphasis on the Chilean experience.

The next section presents a discussion on the role of monetary policy in creating a housing bubble and the financial crisis. Then, in Section II, I discuss the role of asset prices in the conduct of monetary policy, arguing that although asset price bubbles are a concern for central banks in their role of securing financial stability, monetary policy should not be the tool to deal with asset price fluctuations. In small open emerging economies, a key asset price that can contain bubbles and generate distortions is the exchange rate, and this issue is addressed in Sections III and IV, in particular regarding the role of monetary policy and foreign exchange intervention. The other important development from the perspective of inflation-targeting countries was the sharp rise and fall in inflation, which I analyse in the context of the Chilean economy in Section V. Finally, I present some concluding remarks.

## **I. The Causes of the Crisis: Monetary Policy versus Financial Fragility**

The argument blaming monetary policy for the current crisis claims that low interest rates combined with large current account surpluses in emerging economies, particularly Asian and oil-exporting countries, created an abundance of liquidity that triggered excessive increases in asset prices (that is, a bubble). This was particularly acute in the housing market. When the bubble burst, the crisis erupted. This argument contends that monetary policy failed to act in a timely fashion and allowed severe imbalances to accumulate. Nonetheless, soaring asset prices do not necessarily result in a crisis like this one. Closer attention must be paid to the financial fragility that accompanied this process, whose main culprit was the unrestrained financial innovation that generated deep distortions that neither markets nor regulators were able to predict.

An expansionary monetary policy undoubtedly can induce excessive increases in credit and asset prices. The ultimate role of monetary policy is to smooth the business cycle and control inflation.<sup>1</sup> Therefore, a very expansionary monetary policy, beyond what is needed to reach the inflation

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<sup>1</sup>A flexible inflation-targeting regime considers the cost of output fluctuations and the cost of inflation instability; the result should be a decline in the volatility of both output and inflation. For further discussion, see De Gregorio (2009a).

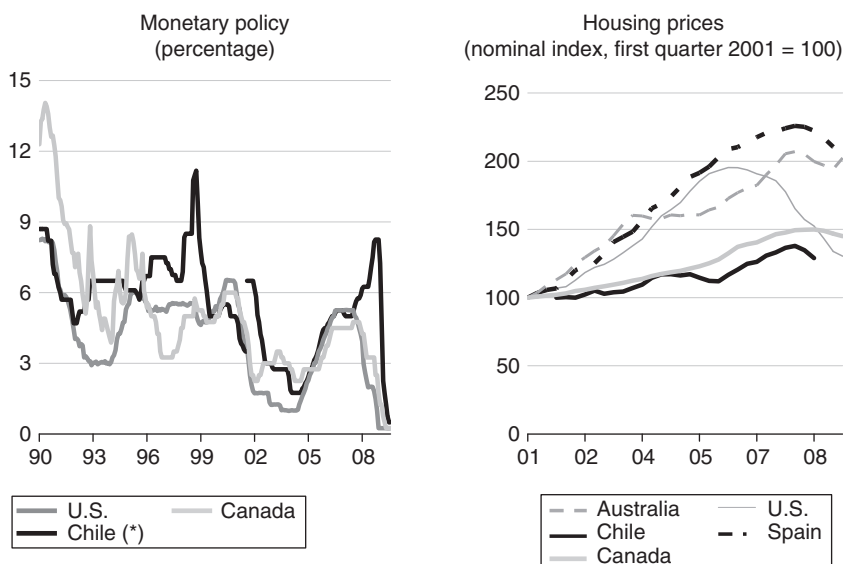


Figure 1: Monetary policy and housing prices

\*Starting August 2001, the MPR is set in nominal terms. Previously it was set in inflation-indexed terms.

Source: Central Bank of Chile, Bank of Canada, Bloomberg and US Federal Reserve.

target, could conceivably exacerbate an economic boom. Moreover, such a policy would have serious consequences for output once the monetary impulse is withdrawn. However, expansionary monetary policy by itself cannot explain the severity of the financial collapse and the recent global recession.

There are countries where monetary policy was expansionary, with interest rates at their minimum, and yet no housing bubble or financial collapse occurred. Examples include Canada and Chile, two inflation targeters, where, consistent with this policy framework, monetary policy rates (MPR) hit very low levels not so distant from the federal funds rate (Figure 1). Still, housing prices generally did not experience increases comparable to those of other economies, and their financial systems have remained sound.

Furthermore, in some cases, such as Australia and Spain, housing prices soared, with clear indications that a bubble was forming, but their financial systems remained stable and they have avoided acute financial crises despite the current difficulties. Naturally, when facing disproportionate increases in housing prices, both the expansion in credit and the boom in construction are symptoms that the downturn will be severe. This need not result in a systemic financial meltdown, however.

In any case, monetary policy can play a role in the creation of bubbles, although not so much through the level of the interest rate as through the broad monetary policy strategy with which financial turmoil is met. In the United States, the strategy of turning a blind eye to skyrocketing asset prices and then aggressively reducing interest rates when the bubble burst used to be the Fed's strategy (the 'mop-up strategy', according to Blinder and Reis 2005). This approach was first used on the so-called Black Monday of October 1987, again with the breakdown of Long-Term Capital Management, and once again with the bursting of the tech bubble. On all these occasions, there was an abrupt relaxation of monetary policy once asset prices declined.<sup>2</sup> This implicit insurance, popularly known as the Greenspan put, certainly makes the creation of bubbles more likely. But while the mop-up strategy worked in some earlier episodes, it failed miserably during the biggest collapse in decades. A monetary policy strategy that provided insurance to speculation during episodes of limited financial turbulence proved incapable of confronting a financial crisis of systemic proportions.

This policy for dealing with bubbles is not derived from inflation targeting, but rather stems from a need to ensure financial stability. In my view, financial stability must be addressed first with appropriate financial system regulation that limits the excesses we saw before the crisis. There may be situations in which it might be appropriate to deviate transitorily from an inflation-targeting regime in order to ensure financial stability, but this must be an exception that is not made in normal times. I think a first lesson for the conduct of monetary policy is to avoid providing insurance to speculators, as this creates enormous moral hazard problems. In emerging countries, we experienced this, albeit with much milder consequences, when we attempted to manage exchange rates in a manner that was disconnected from fundamentals for a prolonged period of time.

Therefore, an examination of monetary policy and financial dislocations around the world suggests that the current crisis was related more closely to the functioning of financial systems than to monetary policy. Two issues that will have to be carefully examined in the future are what caused the real estate boom and the housing crisis and why the crisis occurred in the United States and not in many other countries that also experienced real estate booms. At this point, it is clear that lending standards were relaxed beyond reason and that financial innovation went too far.<sup>3</sup>

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<sup>2</sup>According to Blinder and Reis (2005), who use Taylor rules on data starting in the first quarter of 1988, the Federal Reserve set the interest rates significantly below those prescribed by the rule in all the episodes mentioned.

<sup>3</sup>Ellis (2008) shows that in the United States, there were strong tax, legal and regulatory incentives for households to increase their leverage.

## II. Inflation Targeting and Asset Prices

Those who blame monetary policy for the crisis also argue that when policy-makers are setting the interest rate, they should focus not only on inflation in the prices of goods and services but also on inflation in the prices of assets. Under an inflation-targeting regime, increased lending and asset prices can have repercussions for the inflation outlook through their impact on the output gap. This would require a monetary policy adjustment to prevent a persistent rise in inflation. Hence, in an inflation-targeting regime, asset prices and the level of credit aggregates affect the monetary policy decision to the extent that they affect inflation perspectives (Bernanke and Gertler 1999).

Some argue that monetary policy should react directly to asset prices – for example, by including them in the Taylor rule. Cecchetti et al. (2000) are perhaps the most notable representatives of this position, claiming that central banks should react to asset price misalignments *beyond* their implications for expected inflation over the policy horizon.

There are three reasons, however, why monetary policy generally should not react to asset prices beyond their impact on projected inflation:

- First, it is not clear that an increase in interest rates will be capable of stopping an increase in asset prices. The required adjustments might be so large that they could end up unnecessarily generating high unemployment and an undesired decline in inflation.
- Second, what matters is to safeguard the stability of the financial system. An excessive interest rate aiming at controlling asset prices could trigger financial instability, which is precisely what we mean to avoid, especially if rising asset prices are accompanied by higher financial fragility.
- Finally, under inflation targeting, any interest rate movements that are inconsistent with inflation converging to the target may undermine the credibility of monetary policy, destabilizing inflationary expectations and weakening the effectiveness of monetary policy. This is particularly important in the case of emerging economies with a shorter record of monetary stability.

Another reason that has been put forward for not trying to affect asset prices through monetary policy is that it is simply impossible to determine when prices are significantly misaligned with fundamentals. Although I agree with this claim, I do not think this is the end of the story. Even though it is difficult to determine when prices are fundamentally misaligned, policy-makers should still be concerned with the issue. Instead of acting through monetary policy, however, they should look more closely at financial

regulation: specifically, policy-makers need to explore how they can use financial regulation to limit the procyclicality of the banking system and build enough cushion for future downturns. This should also reduce the fragilities that are generated during the upturn.

### III. Inflation Targets, Exchange Rates and Intervention

An inflation-targeting regime, in which the policy instrument is the interest rate, must operate within the context of a flexible exchange rate. This efficiently and unambiguously solves the well-known impossible trinity for financially open countries, and it allows the control of interest rates at a level consistent with the inflationary objective. Adding an exchange rate objective weakens the capacity to control the interest rate, affecting the ability to meet the inflation target.

However, the exchange rate generally has effects on monetary policy, because persistent movements in it do affect inflation. In this case, the natural result is a *leaning against the wind*. When the exchange rate appreciates substantially, it prompts a decline in inflation in the medium term, which results in a reduction in the interest rate. This, in turn, induces pressures for depreciation. Nevertheless, these effects are not very significant because, in a floating regime, the pass-through coefficient from the exchange rate to inflation is limited.

Emerging economies may feel tempted to keep their currencies undervalued, given the long history of crises caused by exchange rate misalignments. However, managing the exchange rate is risky, in addition to being hardly feasible in the medium to long term. First, the pass-through from exchange rates to inflation increases in less flexible exchange rate regimes, because the level of the exchange rate may become a coordinator of price expectations, given policy-makers' commitment to exchange rate stability. This, in turn, generates increased pressures to keep the exchange rate stable, aggravating the problem. Second, the authority's commitment to exchange rate stability may create perverse incentives for financial risk-taking by artificially lowering the cost of borrowing abroad. This reinforces fear of floating (Calvo and Reinhart 2002), creating a *spiral towards exchange rate rigidity* that results in the currency mismatches and exchange rate misalignments that the policies were intended to prevent in the first place.

I am not saying that attention should not be paid to the exchange rate beyond its effects on inflation. The exchange rate is an important determinant of resource allocation, and excessive deviations from fundamentals may create distortions. However, I think a sensible way to address signs of severe misalignments, beyond leaning against the wind with monetary policy, is

through sterilized intervention. But in order for this to be effective within and consistent with the inflation-targeting framework, some conditions must be met:

- First, it must be consistent with the inflation target, in order for the intervention not to jeopardize the credibility of monetary policy.
- Second, to safeguard monetary policy independence, the intervention must be implemented mechanically once it is announced. This shields the conduct of monetary policy, typically carried out in regular pre-established meetings, from the unusual decision of buying or not buying foreign currency. In particular, the sterilization of intervention allows the preservation of both the credibility and the independent management of monetary policy.
- Finally, and because of sterilization, the cost of intervention must be properly considered, because it entails a quasi-fiscal component that could be significant.

The Chilean intervention of 2008 was in line with the above principles. There was clear evidence of misalignment with respect to the levels deemed consistent with long-term fundamentals, and considering the financial turmoil, there was a need to improve the international liquidity position. The intervention was also consistent with the inflation objective, and it started at a moment – April 2008 – in which there were rather benign inflation figures that revealed a smaller risk of unwanted inflationary propagation. Towards mid-year, it was even possible to raise the interest rate substantially to tackle a surprise rise in inflation that deviated greatly from the target. This was thanks to the fact that the purchase of dollars was being carried out mechanically. The purchase of foreign currency was concluded prematurely due to tensions in global dollar liquidity last September. The subsequent capacity of the Chilean economy to deal with a significant exchange rate depreciation, monetary policy easing and reduced inflationary pressures indicates that there was no inconsistency between the decision to intervene and the conduct of monetary policy (Figure 2). It also shows that the flexible exchange rate regime adopted in 1999 prepared the economy well to absorb exchange rate fluctuations without the turmoil that came with them in the past.

#### **IV. Bubbles, Exchange Rates and Capital Inflows in Emerging Economies**

Latin America went through a period of large capital inflows in the early 1990s (Calvo et al. 1996). We cannot disregard the possibility that after the



**Figure 2:** Nominal exchange rate

*Source:* Central Bank of Chile.

current crisis is over, there will be a resurgence of inflows to emerging economies. This would generate pressures for a sharp increase in the valuation of domestic assets, with a potential bubble in their prices, and this bubble would take the form of an exchange rate appreciation.

To begin this part of the discussion, I should emphasize that capital inflows to capital-scarce economies are a good thing. Capital flows to institutionally strong economies are beneficial (Prasad et al. 2003). Therefore, the role of policy is not to impede capital flows, but to avert the creation of a bubble in domestic assets with consequences on resource allocation.<sup>4</sup> In this regard, having in place sound prudential regulation during periods of abundance of capital is essential for financial stability, as we are reminded by the crisis in Chile in the early 1980s, the Mexican crisis of the mid-1990s, the Asian crisis of the late 1990s and, most recently, the crisis in Eastern Europe.

Even if one could accept that monetary tightening could be an appropriate way to combat an asset price bubble, such as the recent housing price bubble, with all the caveats I discussed above, the problem is more acute in small open economies. Tightening monetary policy may have perverse effects, as it induces further capital inflows and strengthens the currency. In this case, the interest rate is not the most effective instrument with which to burst the bubble.

<sup>4</sup>In addition, a usual concern in emerging markets is that capital may flow out at the same speed that capital is flowing in, generating costly adjustment processes. See Cowan et al. (2008) for a review of sudden starts and stops around the world. Sudden stops of inflows are as common in developed countries as they are in emerging countries, but in the former the stop tends to be offset by a return of domestic capital invested abroad, while in the latter it tends to result in a severe reversal of the capital account. Accumulation of reserves or another form of insurance should help to avoid large swings.



The perverse dynamics are as follows: high interest rate differentials induce capital inflows. Policy-makers then try to avoid the appreciation, which in general is transitory, because the sustainability of exchange rate management is limited. Hence, the incentives for inflows increase not only as the interest rate differential is large but also as there are expectations of appreciation. Finally, the appreciation takes place, which validates the profitability of inflows. This process goes on for a while and may be accommodated gradually or ended by a sudden stop. In this process, there are 'excess inflows' as well as 'excess appreciation', and the question is how to avoid those excesses.

The first line of defence in avoiding excess fluctuations of capital flows is to maintain exchange rate flexibility. This prevents investors from speculating against an authority that will be defending the parity only transitorily. Moreover, by introducing volatility, exchange rate flexibility reduces the incentives for one-sided bets on the exchange rate.

An inflation commitment may also help to stabilize flows. As discussed above, massive inflows that appreciate currencies will result in a loosening of monetary policy that should reduce the incentives for carry trade. In contrast, if capital inflows generate an economic boom without inflationary consequences, due to the appreciation of the currency, there could be the temptation to tighten monetary policy, aggravating the problem of massive inflows. Fiscal policy should help to control expenditure without increasing pressures on the exchange rate.

A credible inflation target with a flexible exchange rate regime should help to avoid the problems we faced in the 1990s. In contrast, during the period of large capital inflows, no monetary policy in Latin America operated under a full-fledged inflation-targeting regime, and most countries had some form of exchange rate rigidity.

Even with a flexible exchange rate and an inflation target in place, an appreciation in the exchange rate could indicate that all domestic asset prices have a bubble. Indeed, the bubble is in the exchange rate. In this case, sterilized intervention, without an explicit objective with regard to the level of the exchange rate, can also help. I discussed above some principles to guide sterilized intervention within an inflation-targeting framework. A much-debated proposal is the use of capital controls. The evidence on their effectiveness is elusive.<sup>5</sup> Effectiveness is also severely impaired, given that

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<sup>5</sup>For a review of the Chilean experience, see Cowan and De Gregorio (2007). The only empirical study that finds some effect on reducing the extent of the appreciation is Edwards and Rigobon (2009). The magnitude of the effect is small, however, because the elimination of the maximum capital controls in the sample would only have appreciated the exchange rate between 2.0% and 2.5%. In any case, the highest real exchange rate appreciation in Chile in the last 20 years occurred in 1997, a year that featured capital controls, massive reserve accumulation, an exchange rate band and high interest rates.

domestic financial markets have reached some degree of development and integration with the rest of the world. With hindsight from the current crisis, what is needed, rather than controls, is a prudential regulatory framework to prevent speculation and excessive risk-taking in the banking system.

## V. The Rise and Fall of Inflation

In this section, I review inflation behaviour in Chile, which recorded one of the sharpest increases in inflation in emerging economies with the run-up of commodity prices, as well as the sharpest decline after the crisis erupted (Figure 3).<sup>6</sup> The most remarkable component of the inflationary process of 2007–08 was the strength with which the increase in international food prices was transmitted domestically. Inflation increased from a year-on-year rate of 2.6% in December 2006 to 9.9% in October 2008. It then declined to –1.0% in August 2009.

What accounts for the steep rise in inflation? It may partially be due to Chile's high degree of commercial openness. There are practically no barriers to imports, nor is there widespread protection of agriculture or any large-scale distortions in the market pricing mechanism, and so changes in external prices are quickly reflected in the domestic market. In fact, at least during the greater part of 2007, growing inflation was mostly caused by increasing food prices, rather than by a widespread inflationary process (Figure 4).<sup>7</sup>

From a monetary policy perspective, the 2007–08 food price shock was considered to be mostly a one-off change in global relative demand and supply, such as the increased use of biofuels, with no severe medium-term inflationary implications. However, with inflation rising, the MPR was raised 100 basis points in the second half of 2007 in order to mitigate undesirable second-round effects of the supply shocks (Figure 5).<sup>8</sup>

By early 2008, the inflationary situation was still complex, but the risks had dissipated, and inflation was expected to reach its target thanks to the monetary policy actions already in place, slower world growth and a

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<sup>6</sup>For more on Chile's response to external shocks in recent years, see De Gregorio (2009b).

<sup>7</sup>Another factor behind the inflationary pressures and the deceleration of growth was the high cost of energy. Not only did thermoelectric power plants have to operate with more costly inputs, but they had to switch to relatively inefficient diesel generation because of unfavourable hydrological conditions and a shortage of natural gas.

<sup>8</sup>For simulations of the monetary policy response to an oil shock, see Desormeaux et al. (2009). The authors conclude that the response should be moderate when the shock is transitory and policy is credible. Batini and Tereanu (2009) suggest using a much stronger response.

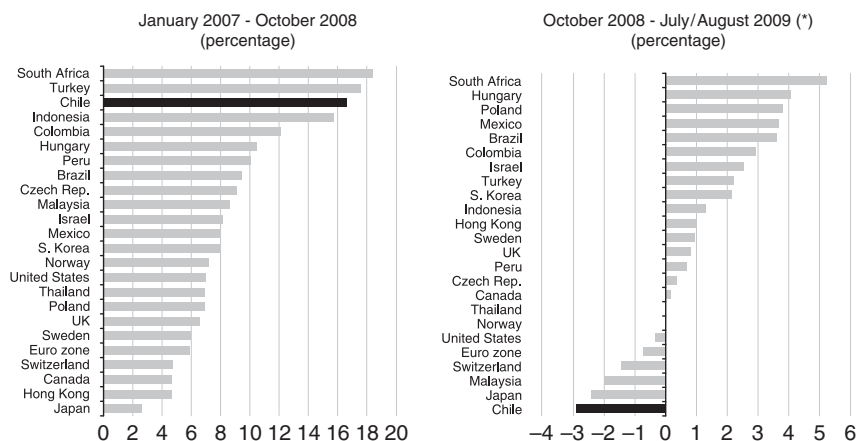


Figure 3: Accumulated CPI change

\*August figures for Brazil, Chile, Czech Republic, Indonesia, Mexico, Norway, Peru, Republic of Korea, Switzerland, Thailand and Turkey.

Source: Statistics bureaus at each country and Bloomberg.

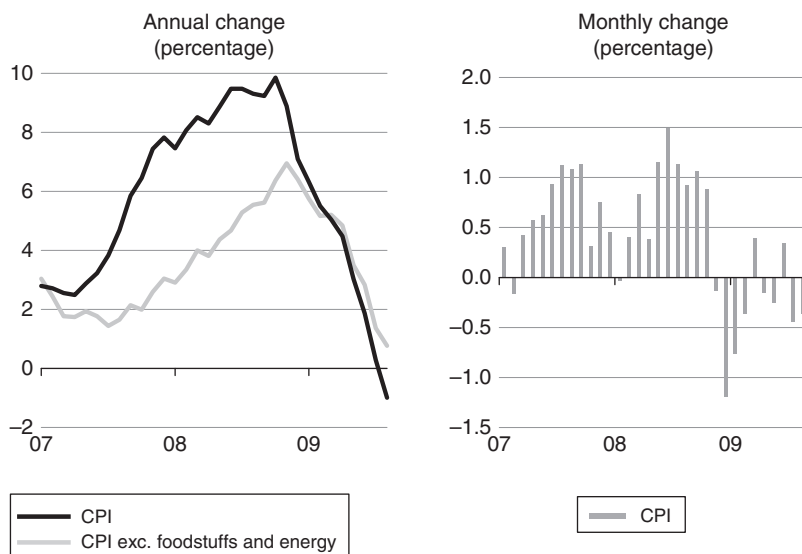
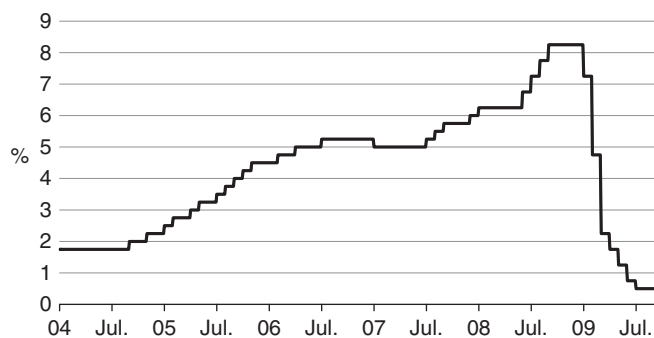


Figure 4: Inflation indicators

Sources: Central Bank of Chile and National Statistics Institute.

strengthened peso. Trend inflation tempered, and monetary policy remained unchanged. During this period, we decided to initiate a process of reserve accumulation. Nevertheless, the inflation path changed radically halfway



**Figure 5:** Chile: monetary policy interest rate

*Source:* Central Bank of Chile.

through the second quarter of 2008: the inflationary trend resumed, unexpectedly, with monthly inflation exceeding 1%. The risks of inflation remaining above the target beyond the policy horizon also grew strongly. Consistent with this fact, monetary policy was tightened. The MPR was increased by 200 basis points in just four months. By September 2008, before the collapse of Lehman Brothers, the central bank estimated that it would be necessary to raise the MPR further, even above market expectations.

Inflation peaked at 9.9% in October 2008. Although it is still too early to determine the specific causes of the strong and sudden propagation of foreign shocks to our domestic inflation, we do know a few general facts. Inflation propagated to most prices, and so core inflation also increased sharply. The output gap widened slightly during the third quarter, although domestic demand was growing strongly.<sup>9</sup> The exchange rate did not add significant inflationary pressures. Perhaps the sharp increase in oil prices – which came close to US\$150 per barrel – caused a generalized rise in domestic prices. Strong demand and a large cost shock may have induced a large share of price-setters to adjust prices, despite the fact that the output gap did not change significantly. However, had this been the case, prices should have remained more stable, rather than experiencing a sharp drop after commodity prices started falling.

As in most of the world's economies, financial tensions were severe after the collapse of Lehman Brothers. Interest rates in both peso and dollar markets posted substantial increases in the most stressful times from mid-September to mid-October 2008. The Central Bank acted quickly,

<sup>9</sup>The output gap is actual output minus potential output; hence, an increase refers to a rise of output above potential output.

providing peso and dollar liquidity facilities to the financial system to ensure resource availability should foreign loans become scarce. These facilities, which were in place throughout 2009, were not used extensively by financial institutions, reflecting their sustained access to external markets. This is an example of how monetary policy can react to mitigate financial turbulences without affecting the path of monetary policy considered to be consistent with the inflation target.

Beyond the stressful episodes in local money markets, the world financial crisis and its aftermaths in the real sector caused a significant decline in domestic demand and economic activity. By the third quarter of 2009, economic activity had already begun to recover. Lending standards have certainly tightened, but the Chilean economy is far from suffering the problems of other countries.

Accordingly, the inflation outlook changed significantly, while monetary policy reacted with a change that was large in magnitude and swift in implementation. Year-on-year inflation peaked in October 2008. November brought some relief, largely caused by the decline in fuel prices in world markets. Nonetheless, given the weakening outlook for output and inflation, the central bank not only did not raise the MPR – which was the most likely path of monetary policy, as discussed in September's Monetary Policy Report presented to Congress – but stated that the most likely course of action would be an easing of policy.

In January 2009, the MPR was lowered by 100 basis points, based on a clear assessment of the reduced inflationary pressures. The central bank further decided to cut the MPR by 250 basis points at its meetings in February and March, given the evidence of alleviated inflationary pressures and drastic increases in downward risks to growth and inflation. The monetary easing process continued, with total cuts of 775 basis points over seven monthly meetings, which brought the MPR to 0.50%, the minimum level deemed adequate for a normal functioning of money markets. In addition, the central bank adopted some unconventional monetary policy measures, extending the overnight liquidity facility for banks at the MPR to 180 days and cutting the issuance of one- and two-year central bank bonds. It announced that the MPR would be held constant at this minimum level for a prolonged period of time, and that it would use with flexibility all the monetary policy tools at hand, beyond setting the MPR every month.

Several lessons and challenges arise from the Chilean experience. First, the volatility of inflation has been very large: inflation spiked sharply in 2008 and declined even more sharply in 2009. Some argued in late 2008 that price and wage indexation was resuming and inflation would remain high, but subsequent events have rendered this highly doubtful. Others pointed to the severity of the shocks hitting the economy, but this argument is not

convincing if we compare the Chilean experience with that of other countries. Yet another plausible explanation is that the change in inflation was due to the widening of the output gap. However, the output gap changed little when inflation was rising, and the current decline in inflation cannot be explained by the current narrowing of the output gap.<sup>10</sup> We used to think that the output gap, as a proxy for marginal cost, is what affects inflation, but the Chilean experience was more of a large swing in the growth of domestic demand rather than output. However, the connection between domestic demand and inflation is less clear than that with the output gap. Finally, the degree of openness and competition in the Chilean economy may increase the sensitivity of prices to demand conditions. More work will have to be carried out to fully understand the dynamics of inflation, but still the inflation-targeting framework has been very useful for conducting monetary policy and stabilizing inflationary expectations.

## VI. Concluding Remarks

Although most central banks have an explicit financial stability objective, it was a secondary issue for many years, as GDP was growing strong and banks and firms displayed sound balance sheets. Now things have changed dramatically. As of last year, financial stability became the key factor driving monetary policy management in developed countries.<sup>11</sup>

Central banks need to oversee price stability and financial stability. One instrument (namely, the interest rate) is not enough for pursuing two objectives. Indeed, a well-functioning financial system strengthens the monetary policy transmission mechanism. There may be exceptional occasions in which the two objectives collide: for example, when monetary policy requires an increase in the interest rate, while financial stability calls for a reduction. Another example could be a bubble in the exchange rate with high inflation. In the context of monetary policy in an inflation-targeting regime, those situations could be accommodated by escape clauses. More generally, the two objectives should be addressed with more than one instrument.

The overall purpose of financial stability is to ensure the proper functioning of markets and to avoid turbulence and dislocation at the level

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<sup>10</sup>For example, the output gap fell between 8 and 10 percentage points, which could explain, without lags, a decline of about 3–4 percentage points in inflation by using both a textbook Phillips curve or a more complex estimation (Brayton and Tinsley 1996) for the United States, which are not very different from the estimations for Chile. The actual decline in inflation in Chile has been about 10 percentage points.

<sup>11</sup>The Fed does not have an explicit financial stability objective, although its role in this matter is widely known. See, for example, Plosser (2007).

witnessed in the last year. For this reason, financial regulation plays a major role in ensuring financial integrity. In its origins, regulation focused on the strength of individual institutions. However, the recent tensions illustrate how fragility in individual institutions may quickly evolve into systemic problems. The interrelationships among financial institutions and the operation of markets where liquidity is traded are essential in the financial system, but as we have seen since the crisis erupted, they can also be the channels of financial contagion. It is therefore crucial to have a systemic approach not only regarding how the different institutions relate to each other but also in terms of how the different types of financial and operating risks intertwine to create potential vulnerabilities.

With regard to price stability, conducting monetary policy within an inflation-targeting scheme is appropriate, and recent experience shows that it may provide ample room for expansionary policies in the face of a global recession such as the recent one. There surely will be a long debate and many research papers that examine the proper mechanism for securing financial stability and how it should be combined with monetary policy management. However, the current experience in many emerging markets demonstrates that the objectives of financial stability and price stability can be preserved even under extreme tension.

In sum, conducting monetary policy through an inflation-targeting regime, with a flexible exchange rate, clear mechanics for exceptional sterilized intervention only when there are clear signs of misalignments, and a strong financial regulatory framework, has worked quite well to mitigate the effects of the worst crisis the world has seen in several decades.

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