Recent challenges of inflation targeting

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It is a pleasure to be once again at LACEA. The Bank for International Settlements (BIS) invited us to talk about the challenges of inflation targeting (IT). I will do so generally, with some references to the Chilean economy. My remarks will touch upon three issues that I believe are relevant today for managing monetary policy. First, price versus financial stability, which is related to Iceland's suspension of IT because of financial stability concerns. Second, the performance of IT – how well did it work before the Lehman Brothers bankruptcy, as inflation was going up because of commodity prices; and how will it work as inflation goes down. Finally, a very important issue for emerging markets, the exchange rate and how it fits into IT.

Price versus Financial Stability

Most central banks have a dual objective. The Federal Reserve has a dual objective of maximum employment and stable prices, but most central banks have a role in both price and financial stability. Financial stability was for a long time rather ignored. Now it has become the main actor in monetary policy. There are issues regarding the definition of financial stability and the scope of central bank actions needed to support it. The definition is broad. From the point of view of a central bank, you care about systemic risk. In the case of Chile, we have to ensure the normal functioning of the payment system, both domestic and international, which implies that financial stability also involves concerns about balance of payments crises. This is very different from the concerns of agencies regulating the institutions in the financial system because they care about microregulation and supervision. That is a question I want to highlight here – whether microregulation should or should not be the responsibility of the central bank. In thinking about regulation, I prefer a system in which the central bank cares only about broad issues in the financial system – systemic risk and some broad regulation – while microregulation is left to some other agency.

The second issue regarding financial stability – the possible scope of central bank actions – has been discussed in the context of the current crisis: how should monetary policy react to asset price bubbles or more generally to financial instability? Here comes to mind the old and well-known *Tinbergen principle*, which says that we must have at least as many instruments as objectives. The conventional wisdom of the Greenspan era was to do nothing with asset price bubbles and to react following the collapse of a bubble by providing plenty of liquidity. Although it is very easy to say that this was wrong or that we should be careful about bubbles, there is some truth to that earlier belief. It is extremely difficult to identify a bubble. In hindsight we can say the bubble was there. But, in emerging markets particularly, it is difficult to identify an asset price bubble in real time because it is unclear whether exchange rates are overreacting or whether there is a non-fundamental force driving them.

Another issue regarding bubbles – and this is the subject of the most recent discussion – concerns monetary policy. There are two aspects to this issue. First, can you disinflate the bubble by raising interest rates, especially if the bubble is a component of prices that is

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based on non-fundamentals? To support this view we have to tell a story showing that we will be able to do so with a reasonable monetary policy. That is, I am certain that if you increase interest rates to 10% you can prick the bubble, but you also induce a collapse for the whole economy. So I am talking about the possibility of addressing bubbles with regular monetary policy. In this respect there is a debate. And, of course, John Taylor has an interesting simulation showing that tighter monetary policy in the United States could have prevented or ameliorated sharply increasing housing prices, although we do not know whether they would have been able to disinflate the bubble or to avoid the bubble.[2]

Second, dealing with financial stability through monetary policy has another problem – tighter monetary policy in the context of a weak financial system can undermine the financial system itself. That could be the story of late 2007 and the first half of 2008. Despite high inflation, there was always a lot of worry about raising interest rates in the United States because the financial system was extremely weak. Here is where the *Tinbergen principle* comes into play. Monetary policy and price stability can be handled with interest rates, but for financial stability we need something else.

In general, there is not that much to worry about in a well functioning system, but in order to prevent crises and excessive weakness we need to have some form of regulation and evaluation of financial vulnerabilities. This is one of the lessons of the recent crisis; there was weak or ambiguous regulation and weak evaluation, or no evaluation at all, of financial vulnerabilities. Many central banks, including the Central Bank Chile, followed the lead of the Bank of England, so starting some years ago we began issuing financial stability reports twice a year to look at the potential vulnerabilities and to give at least some warnings about weaknesses. The International Monetary Fund does this more broadly with its Global Financial Stability Report. Fundamental to assessing the resilience of the financial system is running stress tests, although we still need to develop better models for doing so. For example, in the United Kingdom the financial stability report identified some vulnerabilities, but it seems that the crisis has gone beyond what anyone was expecting, even regulators at central banks. So I think that, in addition to suggesting regulation to avoid financial crises, what we need is a clear view of how monetary policy is related to financial stability, of what that has to do with IT, and a way to assess vulnerabilities in the financial system.

In short, we have to pay more attention to financial stability. I used to have a discussion with my monetary policy friends about whether we should look at other things – not just inflation and interest rates but also look at monetary aggregates. But that was a discussion about price stability. The current discussion is about monetary aggregates and financial stability, and in that regard, it is much better to look at credit aggregates or broader measures of credit to monitor the sustainability of credit expansions. Combining credit and asset prices gives you a clear picture of whether systems are vulnerable or not. What we missed in this crisis – or I should say one of the things that we missed, because we missed many – was a huge increase in house prices and credit. So, there is a role for looking into quantities rather than just prices and, certainly, looking at credit aggregates helps.

IT performance before and after the Lehman bankruptcy

The second point about IT – relevant to Chile, an emerging market – is the performance of IT before and after the Lehman bankruptcy. After that event, we realised that the recession was big, whereas before the Lehman bankruptcy, we were worrying about the inflation that had

[2] J Taylor (2007): "Housing and monetary policy", paper presented at the Jackson Hole Economic Symposium organised by the Federal Reserve Bank of Kansas City.

been building-up since mid-2007. The build-up was, in most emerging markets and particularly in Chile, an exogenous commodity price shock: increases in oil and food prices. In the case of Chile, oil price inflation was particularly important, because, aside from its effects on costs and on gas prices, it also affected electricity generation. Chile did not have gas because of the drastic reduction of imports from Argentina; and because of a drought, Chile had to move a lot of its energy generation to diesel. That was very expensive. So the oil price shock caused a huge increase in costs generally, as well as specifically in the price of electricity. The latter was an important component in the rapid increase of inflation in Chile, which reached 9.9% in October 2008. Now, inflation is coming down to the target of 3%. So for us, the build-up of inflation due to the exogenous shock was extremely significant.

Monetary policy has a huge challenge in adjusting to negative cost shocks. We can think of how to adjust to negative productivity shocks: we have to raise interest rates. But as you raise rates, an additional cost is added that further reduces economic activity. Thus, you have a cost shock together with the increasing interest rate imposed in order to contain inflation. If you do not contain inflation and interest rates have been increasing, then you end up with increasing inflation expectations. This is the beginning of the wage-price spiral, so it is much more difficult to reduce inflation if you let it go. An important discussion that we had at the central bank was whether we should lengthen the horizon for achieving the inflation target. Inflation targeting deals with supply shocks and cost shocks by means of the time horizon. All deviations from the target can be adjusted within the time horizon. In the Chilean case we have a 3% inflation target with a two-year horizon. Why do we have that horizon? The answer is because some supply shocks are transitory, so they can be left to die without increasing the interest rate, as they would otherwise be too costly to deal with. But if they become persistent, and they were persistent up to June/July this year, then this imposes a double cost on activity. But then, what can be done in that context? The answer is to have a longer time horizon that takes into account that monetary policy has lags and that reducing inflation has output costs that you want to spread through time.

What happened after September 2008? We realized that we were facing an unprecedented recession – in fact, not just a recession but a financial crisis. But that should bring a reduction in inflation, which is what we have seen. Currently, we have a positive cost shock – let us say positive because it’s good: the decline in commodity prices. Most countries, including Chile, can thus now achieve their inflation target much more easily than before.

Just to tell you a little more about the case of Chile, in September 2008, before the Lehman bankruptcy, we at the central bank presented our monetary policy report, which said that we were going to continue raising interest rates – we had raised interest rates in the previous four months. We said that in the next three months we would raise interest rates at least 100 basis points to create enough slack capacity to bring down inflation and to avoid propagation. Then came the Lehman episode on September 15 and we realized that our assumptions about oil prices and foreign inflation were too high or too pessimistic from an inflationary point of view; the world economy would provide the reduction in aggregate demand that we had planned to achieve through monetary policy. So, after the Lehman bankruptcy, we presented another monetary policy report – updating it after just two months instead of the usual four – saying that perhaps we would maintain rates for a while, but we were not going to raise rates as we had been doing. As a result we will have, as has been seen everywhere in the world, countercyclical monetary policy. Given that the source of the inflation was demand, monetary policy easing with respect to what was planned two months ago is containing the slowdown and, at the same time, going with the reduction of inflation.

Exchange rates

Finally, let me make some points about exchange rates, which are at the center of the debate. Exchange rates in an IT framework must be taken into account if they affect inflation. They do not affect inflation now as much as we were used to because the exchange rate pass-through to inflation is not as large as it was in the past. But exchange rates enter the IT framework in a very mechanical and simple way.

The first thing we have to realise is that there are rigidities around the world. So what we saw in the build-up of inflation for all countries – the commodity price shock – was an external shock. Of course, for the entire world this was not an external shock. If there had been a super central bank – if the BIS, for example, had been the central bank of the world – it would have raised interest rates before inflation happened. But in a decentralised world, how do we adjust to those shocks? With flexible exchange rates. Flexible exchange rates would have allowed exchange rate adjustments, and domestic inflation would have been contained. But what we had was the fear of an extreme appreciation, which led many countries to control interest rates to avoid that outcome. This is a problem that we had at the beginning of the adjustment; most countries, including Chile, at some point intervened, and I will talk about Chile later on. But what I think the recent experience shows is good news – I do not know if Guillermo Calvo agrees because we haven't talked about this with him – but it seems that we are getting rid of the fear of floating exchange rates, because the impressive depreciation in most developing countries is doing a large part of the adjustment. Especially in many countries that cannot run an expansionary fiscal policy, the exchange rate is doing the work and is the shock absorber. In the case of Chile – the extreme case, providing the minimum and the maximum readings on the Bloomberg screens – the minimum exchange rate in 2008 was 430 pesos per dollar and the maximum was 680 pesos per dollar. Nobody would have thought 10 years ago that a country would be willing to tolerate such a large depreciation without the huge fear of floating – mainly because the effect that this would have had, not just on banks but mostly on the corporate sector, through the currency mismatches. Despite some problems, we have seen that, all over Latin America, countries have been able to accommodate very large depreciations, and this is good news. Although the bad news is that all the gains that we have made on the inflation front are being somewhat dampened by this, I think that we will still see inflation coming down.

Sometimes a relative suspension of IT occurs when countries intervene in the foreign exchange market. We did it in March this year, and the move was intensely discussed. Since the exchange rate had appreciated sharply, we thought that there could be some sort of "bubble" or overreaction of the market – this was at the time of the Bear Stearns episode. At the same time, we had accumulated $18 billion of reserves and also knew – especially from Guillermo Calvo's research on sudden stops when there are financial crises – that we needed to get ready for a sudden stop. We decided that if the crisis turned worse, we would accumulate 15% more of reserves. Thus, we went from $16 billion to $24 billion in six months. To make the accumulation consistent with the inflation target, we did it gradually, $50 million a day. Initially we planned the accumulation period to last eight months; however, we shortened it to six months because we did well in terms of the profitability of reserves. Intervention was done mechanically in order to let the exchange rate float with that accumulation of reserves. Inflation worsened at the same time because of some unexpected propagation; but then came the Lehman collapse, so we stopped intervening. We are now – again in order to fulfil our objective of financial stability – providing liquidity in dollars and in pesos to the financial system to help it function normally. We have seen that it is currently functioning without problems, and not all the liquidity that is being provided is being demanded by the financial system.

The big issue for discussion, not just for Chile but everywhere in the world, is how the exchange rate and global imbalances will be adjusted. If the recession in developed countries is to be contained, part of the solution will have to come from replacing lost domestic demand with foreign demand – and this at the global level. That means lower current account surpluses or more deficits in emerging markets and surpluses or a reduction in deficits in developed countries, especially in the United States. Now, in emerging markets we do not like to have current account deficits, so I think that is part of the challenge that the world will face. I think that, more than a challenge to IT, this has to do with the challenges to the international financial architecture. That question is beyond the scope of the topic for this session, so I will stop here.