Monetary Policy after the Crisis: Some Issues Regarding Targets and Instruments[1]

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Thank you very much. It is a great pleasure for me to be here in Prague. I am very grateful to the Czech National Bank for inviting me to participate in this conference. The title of this panel is "Decision Making in the Post Crisis World: Targets and Instruments". I will be speaking precisely about this issue taking into account the recent Chilean experience. More specifically, I am going to talk about recent developments in monetary policy in Chile, some lessons learned from the crisis and the current discussion on these matters. I will start with a brief summary of recent macroeconomic and policy developments. Then I am going to turn to a more specific and conceptual analysis on monetary and exchange rate policies in the aftermath of the crisis.

Recent Macroeconomic Developments in Chile

The international crisis hit the Chilean economy strongly. In 2009 GDP fell 1.5% in which was the first recession in 10 years. Domestic demand dropped 6% and the CPI fell 1.4%, our first negative inflation since the 1930s. Macroeconomic policy reacted rapidly. On the one hand, fiscal policy became very expansionary and the budget went form a surplus of 4.6% of GDP in 2008 to a deficit of 4.4% in 2009. Government spending rose 18% during 2009 and tax revenues decreased sharply not only because of the economic contraction, but also because there were some transitory tax reductions. As in the rest of the world, there is an ongoing debate on the effects of fiscal policy which I do not intend to address here. Still, it is important to mention that the fiscal position of Chile was very strong before the crisis (and it still is). Indeed, during the previous five years the budget had posted an average surplus of 5% of GDP. Net government debt was negative, this is the Chilean government had become a net creditor. This means that in Chile nowadays fiscal sustainability is not an issue as it is in many countries. However, there has been discussion on the way out of fiscal expansion. The government has committed to reduce the structural deficit from the 3% of GDP in 2009 to 1% of GDP by 2014 (the end of the current presidential term).

The Central Bank of Chile, on the other hand, used both conventional and unconventional monetary policy instruments to address the crisis. During the two previous years, inflation had been above target, very much influenced by the increase in food prices in the world (Chile is a net importer of grains) but also by a very dynamic aggregate demand. Hence, the

[1] I am grateful to Sofía Bauducco, José De Gregorio and Pablo García for valuable comments; however, all views expressed here are my own.

monetary policy interest rate had been raised and in September 2008 it had reached 8.25%. Over the fourth quarter of 2008, as financial and liquidity tensions spread worldwide, the Central Bank undertook a number of financial stability measures. Collaterals for Central Bank liquidity operations were expanded to include not only government and central bank instruments but also bank deposits. A USD repo program at long tenors was instituted, as well as longer tenor repo operations at a floating rate. In January 2009, as the effects of the international crisis were being felt domestically, the Central Bank initiated an aggressive process of reducing the interest rate. In July 2009 it reached its historical minimum of 0.5%. As it was deemed that this was still not enough, the Central Bank decided to implement also unconventional policies. The most significant one was the denominated FLAP (Facilidad de Liquidez a Plazo, or Term Liquidity Facility) which consisted of longer term (up to 180 days) repo operations to the banking system. The aim of this instrument was to bolster the assurance given to the market that short term rates would remain low for a prolonged period of time (this in addition to the explicit announcement of the monetary policy minutes and communiqués that the policy rate would be kept low for at least up to the second quarter of 2010).

By the second half of 2009, the Chilean economy started to show signs of recovery. Fourth quarter growth (yoy) was positive and the expectations for the near future improved substantially. The earthquake of February of this year (the fifth strongest ever recorded in magnitude in the world) introduced a pause in the process of recovery, and GDP in the first quarter grew only 1.5%. However, after the initial negative effects growth resumed with great dynamism and in the second quarter GDP grew 6.5%. For the year we estimate that GDP will grow between 5% and 5.5%, while for the next year it is expected to grow between 5.5% and 6.5%.

The unconventional measures were gradually phased out and completely eliminated by June. Conventional policy has followed the same path since in June, for the first time in one year, interest rates were increased by 50 basis points to 1%. In the following policy meetings rates have kept their upward trend and are now at 2.5% with a clear message that the process will most likely continue in the future, the specific path depending of course on internal and external conditions.

Monetary and Exchange Rate Policy Issues

I am going to turn now to a more conceptual discussion on three issued that I think are quite relevant for central banks in a post crisis world: the monetary policy target, the exit strategy of non-conventional policies or policies on the zero lower bound of nominal interest rates, and exchange rate policy.

Monetary policy target: inflation versus the price level

There has been a debate in the profession about whether an inflation target is a reasonable target for a situation where inflation and inflation expectations are too low or even negative. If this is the case, real rates will be positive even with short term nominal rates being close to zero. A possible solution is to commit to a low interest rate for a time span longer than initially estimated so as to shape interest rate expectations. [2] This would influence longer rates and would have an effect on aggregate demand. This approach intends to reduce long term real interest rates through a reduction in the expected nominal short term rates. The Central Bank of Chile did this after reducing the policy rate to its minimum. On the other hand, in principle it is also possible to influence real rates through inflation expectations. An alternative to achieve this in a period of low inflation rates is to target the price level.[3] Since inflation is too low or even negative, this target means that in the future inflation will be higher to achieve a given price level, and that in such a situation no corrective action should be taken by the Central Bank via increasing interest rates. This would guarantee low or negative short term real rates for a longer period of time. One of its advantages is that, in principle, it is more automatic than trying to directly influence expectations on future short term interest rates. In addition it is more of an anchor to the price level than inflation targeting.

Although the idea seems conceptually interesting, it has, from my point of view, some difficulties both theoretical and of implementation. I basically see a problem of time inconsistency. Once inflation has returned to normal levels it becomes very difficult for monetary authorities to let inflation go above these levels even if they have previously committed to do so. This is especially true if there is inflation inertia (in some developing countries where indexation is significant this could be the case), since future inflation is not anymore the required anchor.

The opposite case is even more complex. Assume, for instance, that inflation has been high for a while and that the price level is way above target. In this case, targeting the price level may require negative inflation rates for some time. The real costs of it can be too high to bear. For instance, in Chile we had two years of above target inflation in 2007 and 2008. To aim at a deflation in order to achieve price stability would have been very difficult to explain at that moment. (In a way this resembles to me the discussion of the 1920s on the convenience of going back to the gold standard at the prewar parities.) Going back to the Chilean experience, the fact is that at the end the following year (2009) was a year of

[2] Bernanke and Reinhart (2004).

[3] Vestin (2006), Ambler (2009).

negative inflation ex post due to the international financial crisis, but that had nothing to do with an *ex profeso* decision to achieve a given price level.

From a theoretical standpoint, this debate is related to what is in the loss function of the central bank. I assume that the argument of that function is inflation rather than the price level, which explains why using the latter has a potential time inconsistency problem.

From a communicational point of view it is also more difficult to explain a price level target than an inflation target.[4] [5] In summary, although the debate is valuable, I see that the costs of implementing a price level target outweigh the benefits. On the other hand, inflation targeting is clearly not problem-free (it does not necessarily provide an anchor for the price level –this is, a jump in the price level needs not be reverted-, or, as we initiated this discussion, can prove to make it difficult to achieve low or negative long term real interest rates). Nonetheless, as compared to a price level target, these costs are of less significance.

Unconventional monetary policy: the exit strategy

It is interesting to note that these days different countries face different dilemmas regarding unconventional monetary policies. On the one hand, developed countries discuss how useful it would be to strengthen quantitative easing as the economies keep showing signs of weakness. The basic issue is how effective it is to deepen these measures, since there are some doubts on whether more of them would have a marginal effect through the credit channel in an environment where long term interest rates are already quite low. As far as I see it, this is not to question quantitative easing per se, but just the convenience to increase it further. On the other hand, developing economies are in the process of withdrawing unconventional policies as their economies are in a solid growth process.

It is clear that when conventional policies reach a limit, unconventional ones have a role to play and should be used accordingly. Whether this is done either by altering the composition of the central bank's balance sheet and/or by expanding its size depends on the specific situation that the economy is facing. In a dramatic situation, such as the ones facing many developed economies during the recent crisis, most likely both and others will be needed.

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[4] Although some literature finds that it is not always the case. Preston (1998), for instance, finds that if the central bank does not correctly understands agent´s behavior, price level target work best as anchor for expectations.

[5] In the case of Chile the existence of and indexed unit such as the UF can help. Indeed, in this case what has to be announced as target is the value that the UF will have in a year.

By their nature, these measures should be short lived. However, in practice it is more complicated. One can think of two types of unconventional policies. The more traditional ones, the ones to which I am referring here, are those aimed at deepening the effects of monetary policy when nominal interest rates are near the zero lower bound. The other ones, that in a way resemble quasi-fiscal policies, are those aimed more directly at fixing a disrupted credit market (like buying bad credits). This second case is more complicated (Chile has actually a long experience due to the banking crisis of the early 1980s. Fortunately, in the current crisis there was no need to use this type of measures). In this case, exit is cumbersome and it is not easy to have a predetermined strategy. Anyway, the costs of a late exit are that it aggravates the moral hazard for the future and deteriorates the balance sheet of the central bank. The cost of an early exit is a deeper recession.

The exit strategy for unconventional policies with a strict monetary policy objective (inflationary) is not easier, as it involves a time inconsistency problem. On the one hand, to have an effect on expectations they should stay in place for a given period, even after inflation has resumed. On the other hand, for policymakers it is quite difficult to maintain them in place in this case. In Chile our strategy was to focus on the monetary policy interest rate as the key element, assuring the market that it would be kept at its low level for a given period of time ("at least until the second quarter of next year" said the press releases in the third quarter of 2009). At the same time, quantitative easing was introduced to support that claim. As the deadline for keeping low rates approached and the economy started to show clear signs of dynamism, unconventional policies were gradually phased out and their complete withdrawal coincided with the first increase in the monetary policy interest rate.

The exit strategy is not always easy. In this sense Chile was fortunate since, as the economy was in a clear path of recovery, there were no doubts that unconventional policies were not needed anymore. Moreover, it was also clear that an over-expansionary conventional policy was not needed anymore either.

Exchange rate policy

Some emerging economies have witnessed capital inflows resuming in the last few months. For some of them, such as Chile, this has come together with an increase in the terms of trade as the prices of commodities have increased (for the case of Chile the price of copper is the most relevant). Hence, it is not a surprise that the currencies of these countries have appreciated significantly this year. Capital flows and the appreciation have also raised the fears of bubbles in the prices of assets in these economies.

Inflation targeting requires a flexible exchange rate system so as to avoid having more than one target. However, it is clear that especially (but not only) for small open economies the real exchange rate is a very important price. So much so, that it is not unusual to see mounting pressures over the central bank to "do something to reduce the appreciation of the local currency". Interventions can be very costly and many times ineffective, so they should be seen as a last resort measure. Nonetheless, it is important to be pragmatic and if there is clear evidence that the current exchange rate is beyond its fundamentals, intervention should not be ruled out. Actually, if that is the case (which it is not easy to be completely sure of) intervention will result in profits for the central bank. In Chile we have had three episodes of interventions during the last decade. In 2001 and 2002, the Central Bank sold foreign currency as the crises of some neighbors produced upward pressures to the exchange rate, which at some point was deemed to be out of fundamentals. In early 2008, when the opposite happened, the Central Bank announced a program to buy foreign currency over a period of eight months (the program was suspended before completion as the international crisis led to a depreciation of the peso).

Capital controls cannot be ruled out either, but their effectiveness is even more disputed. In a global economy it is increasingly difficult to impose such controls, particularly on outflows or inflows done by domestic agents.

There are other measures, less dramatic, that can be considered when dealing with a significant appreciation of the currency. Next, three of them are discussed:

(i) First, the communication policy regarding what can and cannot be done should be very clear. Sometimes there is the idea that the Central Bank has all the tools to manage the exchange rate at its discretion. It is important to communicate that it has not. There are fundamental forces that cannot be modified by the sole will of the authorities. For instance, a permanent increase in the terms of trade (we have lived this in Chile with the increase in the price of copper) will inevitably cause a reduction in the equilibrium real exchange rate. Economic agents need to have it clear so as to reduce the impact of a futile debate.

(ii) Second, promotion of a derivatives markets. This is very important for emerging economies where this market is not well developed. Economic agents subject to the volatility of the exchange rate, value greatly to be able to reduce the uncertainty regarding this variable. Of course for them it is more important the first moment of the distribution but that is not to say that they do not care also about the second moment.

(iii) Finally, there is always the question on what monetary policy can and cannot do. If an economy is in a good economic stand relative to the rest of the world it is presumable that the interest rate differential will increase and that this will induce capital inflows. The textbook solution for economies facing this scenario with flexible exchange rates is that precisely the exchange rate will do the job, this is, arbitrage will hold with an appreciation of the currency that generates expectations of future depreciations. If this is the case, interest rates have to increase by whatever is necessary to keep inflation under control, and the adjustment variable is the exchange rate. However, it should also be considered that a more appreciated currency (if it is not just a very short term phenomenon) reduces price pressures, which in turn reduces the need for further monetary tightening.

Of course all these devices are not intended to change the structural trend of the exchange rate. That would be impossible.

To finish, a related point. It is interesting to note that monetary policy has been blamed by many for not controlling the boom in asset prices before the crisis. Although it is not the topic of this presentation, I would like to mention that in emerging economies the asset price booms come generally together with (or in the form of) an appreciation of the local currencies. If that is the case, further monetary tightening, as long as it attracts more capital inflows, could foster more asset price inflation. This is an example of why choosing to deal with asset price bubbles exclusively through monetary policy is not necessarily a good idea.[6]

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[6] De Gregorio (2010).