Macroeconomic adjustments to challenging global conditions: Lessons from a small, commodity exporter, emerging market economy *

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April 9, 2016

* Remarks prepared for the IIF Latin America Economic Forum, Nassau, Bahamas. I thank Elías Albagli and Natalia Gallardo for their help in the preparation of this note.

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In the latest monetary policy report of the Central Bank of Chile, published just a few days ago, one of the central messages was a significant reduction –about 75bp-- in our growth prospects for the Chilean economy for 2016, with a very slow recovery towards 2017. This adds to two previous years of average growth of just 2%, well below our estimates of medium term potential growth of about 3.5%. The reasons behind this adjustment are essentially a further deterioration of the external outlook, particularly growth from our main trading partners, a lower projection of terms of trade (ToT), and less favorable funding conditions. This correction to the growth outlook comes with a background of inflation above target, something which would look odd for some advanced economies but which captures common trends in LATAM. Indeed, the experience of Chile is quite representative from that in other countries of the region, so I believe these reflections will ring a familiar tune to many members of the audience here today.

At the same time, however, the macroeconomic framework in Chile has some particularities which have shaped in important ways how our country has responded to the changing economic environment. As I narrate our journey through more troubled waters in recent years, I will place special emphasis in these particularities, which I will term our four pillars of macroeconomic management. These are i) the structural government budget rule, where expenditures are consistent with a long-run price of copper and economic growth, ii) an independent Central Bank with a credible inflation target, iii) a fully flexible exchange rate regime, and (iv) a sound and well-regulated financial system.

Chile is a small open economy with a large copper mining sector, whose most important client is China. Consequently, Chile's economy benefited enormously from the copper price boom in the decade spanning from 2003 to 2012. Investment in the mining sector increased from around 3% of GDP in the first half of the 2000s to a peak of more than 8% of GDP throughout 2013. One notable consequence was the accumulation of fiscal resources due to Chile's structural budget rule. This rule –the first main pillar of our macroeconomic framework-- dictates that the government should save when growth and/or copper prices are above long-run trends. Hence, the GFC that erupted in 2008 caught Chile with an important pool of savings, allowing for strong fiscal expansion despite low growth. This fiscal expansion, together with a strong monetary stimulus and a rather quick recovery of commodity prices, helped the Chilean economy to a fast rebound, with economic growth averaging 5.3% between 2010 and 2013.

The scenario for Chile started to change more noticeably around the taper-talk episode in early 2013. By then, copper prices were already well below their 2011 peaks, and the message that the Fed was about to embark in a process of monetary normalization marked a sharp turn of capital flows out of emerging markets, including ours. In the last two years, copper prices and mining investment have declined substantially, with negative spillovers on non-mining investment and activity in general. In addition, both business and consumer confidence have deteriorated substantially.

This lower rate of economic growth (about 2% average in 2014-15, a projection of about the same rate for 2016 and 17 according to our latest projections) required a countercyclical macroeconomic policy, according to our policy framework. On the one hand, fiscal expenditure has expanded more than actual revenues, and is expected to maintain this trend throughout 2016, consistently with the structural budget rule. On the other hand, the Central Bank lowered the policy rate by 200 basis points between 2013 and 2014, leaving Chile with one of the lowest (if not the lowest) real rate among emerging economies. While it is hard to put a reliable point estimate on the effect, it is likely that the significant cut in interest rates has played an important role in smoothing the negative impact of external developments on domestic activity. For instance, it is clear from monthly surveys that we conduct at the Central Bank that, while firms are more pessimistic about the current and future economic outlook, they do not experience tighter funding conditions, and few mention lending constraints as a relevant force behind the slower pace of investment expenditure.

Moreover, our reduction of interest rates –with a background of policy normalization in the FED—implied an additional depreciation of the nominal exchange rate (NER), adding further inflationary pressures to the economy. On this last point—the impact of the exchange rate on domestic prices—I would like to expand a bit more. The third pillar of our macroeconomic framework, exchange rate flexibility, is in our view crucial for a small open economy that is also very well integrated to global goods and financial markets. Such a system allows the economy to rapidly and effectively accommodate external shocks, such as large changes in the terms of trade, by adjusting the real exchange rate. Indeed, our current account deficit of 2.1% in 2015 is about 160 bp lower from its peak in 2013, which provides a certain degree of relief that the brunt of the macroeconomic adjustment has already taken place. Moreover, this exchange rate flexibility gives independence to domestic monetary policy to help smooth the domestic business cycle independent from monetary policy in advanced economies.

Of course, allowing the exchange rate to freely float is not without complications, as inflationary pressures from sharp depreciations could be very significant. This phenomenon is particularly important for countries where exchange rate pass-through is high. This is a question we explored recently in a paper with Elias Albagli and Alberto Naudon that was the base of my discussion in the 2015 meeting at Jackson Hole. There, we presented evidence that the degree of exchange rate pass-through into domestic inflation is significantly higher in emerging markets than in advanced economies. One of the reasons might be that our import composition is largely denominated in dollars, and as a small player in world trade, our trading partners only slowly adjust their dollar prices to reflect the gain in competitiveness brought about by a stronger US currency. This hypothesis is consistent with findings from a recent study published in our latest MP report, as well from recent international evidence presented by Gita Gopinath, also at Jackson Hole. In the case of LATAM, a large pass-through compounds with the fact that the end of the commodity super-cycle has affected ToT negatively for the region, leading to large NER depreciations. Consequently, in Chile and other LATAM countries, such as Brazil, Colombia, and Peru, inflation has increased fast and markedly. This contrasts with the recent experience of other commodity-exporting, advanced countries, like Canada or Australia, in which the degree of pass-through to domestic inflation has been much lower.

How can monetary policy strike the right balance between mounting inflationary pressures and low growth? This has been, by far, the main difficulty faced during my term as governor. To deal with this tradeoff, our <u>second pillar of our macroeconomic framework</u> – an independent central bank with a credible inflation targeting regime—has been crucial. While a central bank could, in principle, adjust its policy to achieve inflation close to target in a short period of time, the costs for a small open economy like ours (and perhaps for any economy) would be disproportionate. For this reason, our inflation targeting regime is based on a monetary policy path that is consistent with a gradual convergence of inflation towards the center of our band (3%) within a period of 2 years. Indeed, every single monetary policy decision taken during this adjustment process has been totally consistent with inflation returning to the target in said horizon, as predicted by our macroeconomic models and the best judgement of the bank´s board and staff. Of course, in retrospect, we have missed the target for longer than usual, but this is perfectly consistent with a depreciation of the NER that has been more intense and persistent than originally estimated

A key input for achieving inflation convergence in an environment of adverse external shocks is credibility. Throughout our adjustment towards new economic realities, inflation expectations at the 2 year horizon have remained steady at the 3% objective, despite important variations in short-term inflation expectations. We interpret this remarkable behavior as the market´s endorsement of a time-consistent inflation targeting regime. However, this does not mean that we are complacent with more than 2 years of inflation above 4% --the upper limit of the band--, as credibility cannot simply be taken "as given". In fact, a large body of literature on monetary economics clearly stresses the advantages for a monetary authority that operates under the benefit of credibility, but it is relatively silent about how such credibility is built and maintained through time. The worry is that, faced with persistently high inflation, economic agents might begin doubting the capacity of the authority to meet its set target within a given time interval. If this happens, direct inflation pressures stemming from NER pass-through can prove to be much more persistent through the so-called second-round effects, as new contracts and wages begin incorporating higher inflation expectations. This worry is even higher in countries where, as is the case in Chile, indexation to past inflation is prevalent in many contracts, including mortgages, salaries, house rents and long term loans.

In this context, it is prudent to be on the conservative side, transmitting with words and actions, and as clearly as possible, that the Central Bank will not allow medium-term inflation expectations to become de-anchored, and to take the necessary measures before this undesirable scenario unfolds. Indeed, in the second part of 2015, we confronted the issue openly by suggesting a faster than previously anticipated normalization of monetary policy, which was then materialized with two, 25 bp moves in October and December 2015. Obviously, the risk that inflation expectations might become decoupled from the target at the two year horizon weights strongly on this decision. In addition, it is important to mention that the unemployment rate has remained low and wage pressures high during all this period of low growth. Hence, although we expect a deterioration in labor market conditions in the future and that we see early signs that it might be happening, that has not materialized in a clear way so far.

A further issue that complicates the decision-making process for central banks in general, and that has also been the case for Chile in this last episode, is assessing the role of the output gap in reining-in inflation. The output gap, defined as the difference between current and potential output, is a complicated concept to deal with for several reasons. First and foremost, there is significant ambiguity about what exactly it is supposed to capture. For example, many contend that because medium-term (or structural) growth in Chile should be in the order of 3.5%, a 1.75% growth rate (the center of our forecast for

2016) implies a rather large gap. However, the level of growth that is consistent with price stability is not necessarily the medium-term, or structural, rate of growth, as the former has to take into account the effects of temporary supply shocks. In the case of Chile, the last two years have been marked by an important process of resource reallocation from the mining sector into other areas, and it is therefore natural to think that, at least in the near term, the level of potential output growth that is consistent with stable prices might well be below the medium-term level of economic growth. It is also relevant to note that because Chile grew above potential for several years during the commodity boom period, the output gap was clearly positive before the current slowdown began. So, in spite of the recent relatively poor performance of the economy, our assessment is that today the output gap is only moderately negative, and then, if our growth projections are correct, although it will help, it will not be a significant driver, as it was in previous episodes, in the process of reducing inflation to the target. This view is also consistent with statistics from the labor market, with an unemployment level which is still well below historical patterns, while real wages continue to expand, albeit more modestly than during the 2010-13 period.

The second reason why output gap is a complicated concept is because, as it is the case with any unobservable variable, it is very hard to estimate in a precise manner. But not just that; there is also significant disagreement in the importance of the output gap as a driver of domestic inflation. In fact, several recent studies and speeches by prominent central bankers tend to downplay the role of activity in the determination of inflation.[1] This could be due to a number of factors, including: i) a better anchoring of inflation expectations, which tends to tone down the response of inflation to temporary output gaps, ii) a more prominent role for global output gaps, which tends to reduce the importance of domestic economic slack in Phillips curves, and iii) downward wage rigidity, which may shift the lead-lag relation between unemployment and wage inflation.[2] In short, while our models suggest that the economy might be running below full capacity, there is little reason to believe that this will play a major role bringing inflation down any time soon. That is why our central projections for the monetary policy rate still consider some degree of normalization, as emphasized in our latest monetary policy report.

In summary, Chile faces many of the current challenges that have made life difficult for policymakers in the emerging world. The end of the commodity super cycle and the

[1] See Yellen (2014) for the case of the US, and Weale (2014) for the case of the UK.
[2] See Moccero et al. (2011), IMF (2013), and BIS (2014) for a discussion on the role of inflation expectations; Borio and Filardo (2007), Milani (2010), Bullard (2012), and BIS (2014) for the role of the global output gap; Krugman (2013) and Yellen (2014) for the role of downward wage rigidities.

reversal of capital flows have led to important nominal exchange rate depreciations. As opposed to other emerging market economies, in Chile the adjustment of the current account took place rapidly, which gives us an advantage in the sense that we do not need to make major further adjustment in this matter. In addition net public debt in Chile is nil, inflation expectations are well anchored at the inflation target level and the financial system is stable, well-regulated and supervised. In other words, from a macroeconomic point of view, the economy is quite healthy.

However, the depreciation, while part of the necessary relative price adjustment in a situation with lower commodity prices and capital inflows, creates relevant inflationary pressures due to the large degree of pass-through into internal prices that characterize emerging market economies. This high inflation and slower pace of economic growth present a difficult tradeoff for central banks. In the case of Chile, the fact that inflation expectations have remained well anchored has allowed the Bank to provide a significant stimulus despite higher observed inflation in the last 2 years. However, we all know that reputation, while difficult and lengthy to build, can be ruined in a short period of time. This principle conveys a relevant message which we take very seriously at the Bank, and explains partly why we have hardened our communication and policy stance over the last few months towards a gradual reduction of the large monetary stimulus still in place.