

**Central Bank of Chile's Twenty-Second Annual Conference:
"Changing Inflation Dynamics, Evolving Monetary Policy"
Opening remarks by Mario Marcel, Governor of the Central Bank of Chile
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Welcome remarks

Good morning everybody and welcome to the Twenty-Second Annual Conference of the Central Bank of Chile. It is a pleasure to host this event that every year gives us the opportunity to reflect and discuss about issues that have direct implications on our work as central bankers and stimulate the related academic agenda. I am looking forward to active discussions today and tomorrow on this year's conference theme: changing inflation dynamics and its implications for monetary policy. This conference is being followed online via live streaming on our website.

Inflation dynamics and monetary policy in recent years

The last ten years have been an extraordinary time for macroeconomics. The deepest financial crisis since the Great Depression was followed by an unprecedented bold, coordinated, unorthodox and persistent response by central banks in advanced countries. In all, a decade in which the world economy stood a long way from normal and, as it depended so much on emergency support, it was not easy to detect how much the economy was changing underneath.

So it is perhaps not that surprising that once the same central banks began to envisage a gradual, cautious and well communicated approach to monetary policy normalization, some challenges appeared on the road. True, some of them had to do with political change and policy uncertainty to the heart of the developed world, but on top of that, major empirical and theoretical puzzles are challenging central tenets of monetary policy.

In particular, inflation appears not to be responding to monetary policy as expected in advanced economies. Despite record- low interest rates over many years and massive liquidity injections by central banks through asset purchase programs, inflation has not picked up as expected. Explaining the apparent unresponsiveness of inflation has become a theoretical and empirical challenge that has drawn great attention from academia and policymakers in the last couple of years.

Inflation dynamics and the way they interact with other economic variables are, of course, crucially important to central banks that have price stability as their core mandate. Most of them currently deliver on this mandate under a forward inflation targeting framework, whereby the stance of monetary policy seeks to achieve convergence of forecasted inflation to the target over a medium-term horizon. This prevents central banks from having to respond to short-term price volatility, but if inflation does not respond to monetary impulses as predicted by models, policymaking may become a much more complex game. If price responses get delayed in a highly accommodative environment, financial imbalances may build up, fiscal discipline may be eroded and inflation risks may get underpriced by markets, exposing themselves to reversals with data surprises in the future.

It is in this context where the topic of this year's conference falls right into the core business of central banks: understanding inflation dynamics, and how they influence monetary policymaking.

Indeed, throughout the post crisis period we have observed a puzzling behavior of inflation in many developed countries, as standard Phillips curve approaches have done a rather poor job predicting price pressures. During this period, the unemployment rate has reached historically low levels, but inflation has remained low.

Economists have referred to a “twin puzzle” in inflation dynamics and several explanations with different policy implications have been put forward. Some have pointed to the existence of “hysteresis” as causing a drop in potential output and, consequently, smaller gaps in the economy after the crisis. Others argue that the weakening of the relationship between activity and inflation responds to structural changes, like globalization forces pulling wages down, or technological innovation prompting changes in industrial organization. Another alternative, a sort of “catch 22” for central bankers, is that the flattening of the Phillips curve may be the consequence of the success of central banks in targeting inflation.

Measurement issues should not be ruled out either. Measuring a common movement of prices throughout the economy has never been a straightforward task, but this may be getting harder as standardized goods take a smaller and smaller share of household consumption compared to services and to goods that are subject to fast change. Some have argued that output gaps and prices retain their historical association if the right measure of “output gap” is compared to prices that are responsive to it. But then, what is a “correct measure” of the output gap, given that this is a not directly observable variable? In recent months, the Fed has been underscoring that some key structural variables for monetary policy, like the output gap itself, the neutral interest rate and natural unemployment are estimated with considerable uncertainty and may have shifted in recent years. We will hear about measurement challenges and structural parameters across this conference.

Inflation dynamics in emerging countries

As we hold these discussions in an emerging country, it is also important to note some differences with the advanced world concerning price dynamics and monetary policy. For one, average inflation in emerging economies has been traditionally higher and more volatile than in advanced countries. This keeps our countries generally far from the risk of deflation, but has also contributed to the buildup of indexation mechanisms and more volatile inflation expectations, which may make inflation targeting more difficult. Also, in many emerging countries, the domestic economy is relatively small compared to foreign trade, and pass-through from the exchange rate to prices is a much more relevant determinant of short term inflation. The larger size of the informal sector also tends to weaken the relationship between wages and prices. So the relative weight of past inflation, the exchange rate, wage inflation, market expectations and output gaps in inflation dynamics may differ significantly from advanced economies.

Chile has pioneered monetary policy innovation in the emerging world. After four decades of double-digit inflation, our Central Bank was given independent status and a mandate of price stability nearly 30 years ago and exercised it swiftly, with the support of a first version of inflation targets in the early 1990s. The monetary policy framework further evolved after the Asian Crisis to a fully-fledged forward inflation targeting regime with a floating exchange rate in 1999. This was soon complemented by a major upgrading of monetary policy communications and a structural fiscal policy rule.

This framework has basically remained in place for the last 18 years and its effectiveness has improved as markets, agents and institutions have adapted to it. Over time, markets have developed adequate FX hedging mechanisms, inflation expectations have become more anchored at the monetary policy target level, the Central Bank has overcome fear of floating, financial markets have deepened and the labor market has gained some flexibility. As an open economy, we are not immune to external shocks but the ability to cushion them through the exchange rate and countercyclical policy response has improved significantly.

At the time of the 2007 Global Financial Crisis, this framework helped us to avoid large costs and contain financial problems despite our strong ties with the global economy. In the aftermath of the Global Financial Crisis, the local currency depreciated around 45 percent in seven months, while the monetary policy rate was reduced from a relatively high level of 8.25 percent in December 2008 to a 0.5 percent in July 2009, where it stayed for about a year. Together with lowering the interest rate, the Central Bank implemented a program of liquidity provision that significantly reduced the market interest rates to a level much closer to the monetary policy rate.

The active monetary policy response, together with an expansionary fiscal policy, facilitated a speedy adjustment. After only one year of negative annual growth in 2009, the economy was able to sustain growth rates above 4 percent in the years that followed. The inflation rate fell well below the target range for about a year, but inflation expectations remained anchored at the 3 percent target in the two-year horizon.

Undoubtedly, this is the strongest countercyclical macroeconomic policy response we have ever articulated, proportional to the magnitude of the shock, but our monetary policy framework has also been useful to face subsequent challenges at home and abroad, like the end of the commodity price boom in 2013-2014, delivering lower price and output volatility. In each of these episodes, anchored inflation expectations, automatic fiscal stabilizers, foreign exchange hedging, and a sound financial sector have contributed to provide monetary policy with sufficient room for maneuver. But it is crucial to remark that these factors are not exogenous to macroeconomic policy. They were nurtured by a consistent macro policy framework built and maintained in the last two decades.

The challenge for central banks

The Chilean experience illustrates that for forward inflation targeting to work, central banks need to develop the right set of tools—data sources, models and judgment—to formulate and communicate a policy path that is coherent with such convergence. As the local and world economy evolve, the relevance of all these tools needs to be kept constantly in check.

Over time, economies are subject to major changes, especially in the case of emerging economies, and this may alter well-established relationships. The current focus in the relevance of the Phillips curve and price dynamics is a good example of this. But the extent to which structural changes involve a permanent change in the responsiveness of prices to output gaps or one-off changes delaying inflationary responses for some time is equally relevant, especially for policymaking. This also applies to structural changes that are especially relevant for emerging countries, like demographic transition or the lengthening of international value chains.

The quantity and quality of data available to make monetary policy decisions may also change substantially over time. The traditional dominance of regular economic surveys is increasingly challenged by growing administrative datasets and big data. In this regard one should never forget that data is only an instrument to capture true economic behavior. From a policymaking perspective, data collection, processing and statistical methods are a way to produce evidence for better decision making. A central bank that operates in a forward-looking environment, dealing with a large number of unobservable concepts, has an ultimate responsibility to use all the relevant information at hand. Monetary policy making is not a bureaucratic procedure, but an intense exercise of judgment. Of course, we must be able to share such information and judgment with the public to make our decisions easier to understand.

As for judgment, a major challenge for central banks is to connect incoming information with medium-term prospects. While central bank boards generally meet at regular intervals, they need to assess when accumulated information is sufficient to indicate a change in the medium-term scenario, possibly demanding a change in the trajectory of monetary policy. In the case of emerging countries, FX pass-through poses a major challenge, as currency parities may exert substantial pressure on inflation in the short run, gaining a lot of public attention, but they may not prevail in longer spells. The source of currency volatility and the exposure of economic agents to FX risk are key factors that, in our experience, may help assess the medium-term impact of exchange rate movements and condition the need for a monetary policy response.

A similar challenge to the exercise of judgment by central banks is to distinguish between “normal” times and stressed scenarios. While in normal times, economies can adjust gradually and tolerance for deviations for a charted path may be higher, a stressed environments is characterized by a very low tolerance to risk, shorter time horizons and powerful feedback loops with financial markets. The recent experience of fast-shifting conditions for some emerging economies that were caught in the ebbing tide of capital movements is in stark contrast with the slow-motion of monetary policy in advanced countries, which is also a source of theoretical puzzles and information challenges.

Acknowledgements

To guide our discussions on these issues over the next two days, we can rely on a distinguished group of economists that have joined us to present and discuss issues concerning inflation dynamics and monetary policy. I would especially like to thank Gonzalo Castex, Jordi Galí, Diego Saravia, and Joaquín Fuenzalida for putting together the program, and Carolina Besa, Paloma Navarro, and María José Reyes for helping with the organization. I wish you all a fruitful discussion and a pleasant stay in Santiago.
