Monetary Policy Management in a Changing Environment[1]

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- I would like to start by thanking the organizers for inviting me to this conference. It is the second time I participate, and I very much enjoyed the meetings a couple of years ago.
- The last few years have been extraordinary challenging for monetary policy management, especially in developed countries. The way we think about monetary policy has evolved because of both the challenges posed by the crisis itself and the persistent weaknesses in many advanced economies. Just to mention a few, new discussions involve (i) the management of monetary policy at the zero lower bound, (ii) new instruments for expanding the balance sheet of central banks, (iii) the effectiveness of monetary policy and the complexities of the transmission mechanism, and (iv) financial stability considerations of monetary policy.
- I would like to share my views on some of these issues from a policy maker's perspective in a country that, this time, was not at the center of the financial crisis. Still, these debates are extremely important for developing countries. They not only convey an intellectual challenge regarding our understanding of monetary policy, but they also have important practical implications. In a globalized world, expansionary policies in developed countries are rapidly transmitted across borders, having direct implications on financial flows, search for yield and asset prices in emerging economies. Thus, monetary policy management in developing economies is directly affected by these phenomena.
- In particular, I would like to touch upon four issues: (i) why are rates so low in the world and how to interpret this, (ii) our understanding about monetary policy independence in emerging economies, (iii) asset prices and implications for financial stability, and finally (iv) some remarks on inflation targeting in developing economies.

Why are rates so low abroad?

- The reasons behind the extraordinary monetary expansion in developed countries are multiple, and I do not want to go over each particular country. Rather, I will use the example of the United States to make some points. First, although there has

[1] Remarks at the Symposium on Building the Financial System of the 21st century: An Agenda for Latin America and the United States, Harvard Law School, Cambridge, MA on Friday, November 18, 2016. This speech does not imply endorsement by the Central Bank of Chile or its Board.

been a clear normalization in growth and employment numbers, the recovery has consistently surprised on the downside. Coupled with low inflation prints, a very gradual normalization of the Federal Funds rate has been required.

- A second consideration is about the value of the dollar. Our traditional thinking is that differences in monetary policies across countries essentially adjust through variations in exchange rates. This is the logic in Central Bank macro models. Naturally, the relative strength of the US economy vis-à-vis other developed economies suggests a divergence in interest rates and a strengthening of the US dollar. One possibility is that too strong a dollar would affect the recovery in the United States, so that Fed decisions have taken this into account.
- But we cannot rule out an alternative, which is that the interconnectedness of financial markets across countries is so intense that there are limits to the extraordinary interest rates differences, at least as were observed in the past when global financial links were smaller. Simply put, it is possible that QE in Europe and Japan has pushed down rates everywhere, effectively limiting the ability of the Fed to control a significant part of its yield curve.
- One might think that the events in the last few days do not support this view. I think they do in the fundamental sense; the news in the United States has generated a rise in medium and long term rates all over the world, showing that global factors are becoming extremely relevant in the determination of bond prices, and other asset prices as well. I'll come back to this issue later.
- A third explanation for the very mild normalization of short term interest rates by the Federal Reserve, and nowadays probably the dominant one, is the idea that neutral rates have decreased – in tandem with the adjustment of potential growth – and hence monetary policy is not as expansionary as was thought to be.[2] Demographics and lower productivity contribute to lower real rates, which is a phenomenon that has been observed for many years. Members of the Board of the Federal Reserve have validated this view in their communications.
- There are good reasons to give credit to this explanation. The downward trend in long term rates has lasted decades, which suggests that a scenario of high demand for savings has been dominant for a long time. Also, the stable wage and inflation dynamics in the last six years in a context of large swing in activity and unemployment suggest that the output gap has been quite stable, favoring a more conservative stance on potential growth, and hence real neutral interest rates.
- However, we need to take this explanation with caution. First, the recovery in the United States has been slower than expected, true, but the idea that medium term

[2] Summers, L., "Low Real Rates, Secular Stagnation and the Future of Stabilization Policy," speech in the annual conference of the Central Bank of Chile, November 10th, 2015.

inflation expectations were pointing toward a permanently weak demand over time has proved highly volatile. Indeed, the reaction of markets in these last few days shows that the expectation of a fiscal program in the United States have induced a sharp steepening of the yield curve, and an increase in inflation expectations. It may be too early to fully understand the new scenario, but at least it suggests that the idea of persistent weakness and no inflation should be analyzed with some distance by policy makers.

- Second, while the slope of the yield curve has been very flat for quite a long time, once we input movements in the term premium using the methodology developed in the Federal Reserve, we find that monetary policy is being quite expansionary.[3] In other words, the fall in long term rates not only reflects a lower convergence level for the Federal Funds Rate, but it also responds to a significant downward trend in the term premium, a phenomenon we have yet to fully understand.[4]
- A few implications for developing countries arise for this analysis. I would like to focus on two of them. First, the baseline scenario is one where long term rates will stay relatively low for a long time. Of course I am not thinking of any particular level, but it is difficult to imagine a fundamental change in some of the conditions driving global neutral rates. This requires adequate calibration of monetary policy decisions in developing countries, and careful evaluation of asset prices.
- However, we also need to take into account that the term premium is a crucial component of long term rates, and a very volatile one. As we know from experience, changes in actual or expected policies rapidly affect asset valuations across countries, which raises the question of how independent are central banks in developing countries in setting their own financial conditions, which brings us to our second theme.

Monetary policy independence in emerging markets

- The degree of expansion of monetary policies in developed economies and the degree of interconnectedness in global financial markets have generated significant spillovers across the countries. Capital flows and asset price fluctuations reflect these phenomena.
- After decades of instability, emerging markets have generally converged to a macroeconomic framework that rests on fiscal sustainability, inflation targeting by independent central banks, together with exchange rate flexibility, capital mobility

[3] Adrian, T., Crump, R. and Moench, E., 2013, Pricing the term structure with linear regressions, Journal of Financial Economics 110(1): 110-138.

[4] See, for example, the discussion by the former governor of the Federal Reserve Jeremy Stein, "Incorporating Financial Stability Considerations into a Monetary Policy Framework," speech at the International Research Forum on Monetary Policy, Washington D.C., March 21st, 2014.

and prudent financial regulation. These ingredients have proved quite important for protecting countries from foreign shocks, leaving the space for managing domestic interest rates according to domestic conditions, and allowing the exchange rate to absorb the shocks.

- It is evident however that this framework cannot insulate countries from the so-called Global Financial Cycle or a Global Risk-On Risk-Off Cycle. First, because it was never intended to do so; FX flexibility is a shock absorber, not a shock killer. But more importantly, the experience of recent years shows that the channels of transmission of monetary policy from developed to emerging markets are more sophisticated than we thought.
- As we discussed in this very same conference two years ago, the correlation of long-term rates is quite significant.[5] Although many emerging market economies have been able to manage short term interest rates quite independently from the Federal Reserve's actions, for example, the co-movement in long term rates remains very strong.[6] To some extent, the ability of Central Banks to determine local financial conditions is conditioned on the determinants of long term rates, many of which reflect global factors. The taper tantrum of 2013 and the current episode are good examples of that.
- Also, there is evidence that long term rates in emerging economies respond to monetary policy movements in the developed world mainly through changes in the term premium. In a research with co-authors, we find that in contrast to what we observe for developed economies, where changes in U.S. Fed rates affect the expected path of short term rates in other advanced economies, for emerging markets we see that it is mainly the term premium that drives the response of long term rates.[7]
- The fundamental message here is quite new. Besides changes in policy rates and exchange rates, the risk-taking channel is also an important mechanism through which monetary policy in developed markets affects emerging economies. In some cases, THE most important one.
- In this context, the spillovers to emerging market economies impose some limits on monetary policy management because asset price valuation is a centerpiece of the transmission mechanism of monetary policy in a world in which collateral constraints are binding. Therefore, fluctuations in asset prices due to global

[5] Claro, S. and L. Opazo, 2014, Monetary Policy Independence in Chile, BIS Papers 78:111-123.

[6] Claro, S., "US Monetary Policy and its impact on Monetary Policy in Chile," remarks prepared for the Symposium "Building the Financial System of the 21st Century: An Agenda for Latin America and the United States," organized by the Program on International Financial Systems, Harvard Law School., November 13th, 2014.

[7] Albagli, E., L. Ceballos, S. Claro and D. Romero, 2015, Channels of US Monetary Spillovers into International Bond Markets, Working Paper 771, Central Bank of Chile.

appetite for risk represent a crucial channel through which global monetary policy affects domestic financial conditions.

- In the current circumstances, to the extent that emerging markets have required an expansionary monetary policy, this has not been problematic. Where these countries require a more contractionary stance, this might become an issue.
- A related issue arising from the impact of monetary policy on risk taking and asset prices is about the effectiveness of monetary policy. I want to be brief here, as this might require a full conference. But the basic idea is simple: a very expansionary monetary policy in developed countries has had an arguably limited impact on growth (I am not so sure about that), but a large effect on asset prices. Likewise for emerging markets; the spillovers of expansionary conditions are pretty clear in asset prices; not so much in activity. The symmetric perspective might be more relevant in the future; it is not at all clear how contractionary for emerging market economies might an increase in long term rates in the United States be, especially if driven by an increase in the term premium.
- But besides the discussion of monetary policy effectiveness and the shape of the Phillips curve, the debate on whether monetary policies by major central banks are generating financial vulnerabilities across the globe is open. Let me make a few comments on this.

Asset prices and financial stability

- The third issue I want to discuss here is based upon the recognition that not only the transmission mechanisms of monetary policy across countries are much broader than before, but also that changes in interest rates and risk appetite may have important implications for financial stability.[8]
- This distinction is very relevant because the business cycle logic behind how central banks analyze inflation dynamics may be different from the credit cycle that concentrates the core of financial stability.
- One the bigger – if not the biggest – causes of asset price changes is fluctuations in risk premiums. Because monetary policy can have important effects of risk taking, it can encourage or attenuate the accumulation of vulnerabilities. Then, the ability of monetary policy to affect not only the structure of risk-free rates—especially its short segment of the yield curve—but also to influence the structure of risk premiums gives it an even greater role in the determination of asset prices. To what extent should central banks incorporate these considerations in their monetary policy decisions?

[8] For a review of the literature, see Adrian , T. and N. Liang, 2016, Monetary Policy, Financial Conditions and Financial Stability, Federal Reserve Bank of New York, Staff Report 690, September.

- This is an open question that has generated a hot debate. Of the many dimensions involved in answering the question, let me focus on one. There is considerable consensus that risks to financial stability accumulate through the combination of appreciated asset prices and leverage, debt and maturity transformation. In other words, the debt accumulated to finance assets whose prices are rising could pose a risk to financial stability inasmuch as the appreciation of assets and leverage does not obey to fundamental considerations. A monetary policy that affects risk valuation and induces such behavior could incubate financial risks.
- This point reflects a fundamental idea: it is the interaction between credit and asset prices what can be most costly to the economy when the boom ends. Therefore, it is necessary to understand the extent to which significant increases in asset prices –for example arising from changes in risk premiums – may be accompanied by leverage and maturity transformation. That is where the main sources of vulnerability accumulate.
- Real–estate and housing provide the best example. The nature of the asset, which faces universal demand (we all need a home) and the obvious advantage that it can be used as collateral, results in upward and downward price trends that in most occasions are smooth and have lags. Therefore, upward price cycles are normally accompanied by upward cycles of credit flows, which means that the purchase of an appreciating asset is financed partly with high levels of debt. To the extent that it is difficult ex-ante to properly account for these risks in the asset's valuation, this mechanism may enter a feedback loop, generating vulnerabilities in the financial system. In that case, it comes as no surprise that a big price adjustment in real estate prices may cause significant damage to the financial system, which is creditor of these loans.
- This co-movement in real estate prices and debt is at the core of the debate between financial stability and monetary policy. When risk taking, leverage and housing price booms are driven by global factors, the role of domestic monetary policy is more difficult and the argument for leaning against the wind is more limited, as the spillovers from global financial conditions might require considerable changes in the stance of monetary policy. Here is where targeted measures —the so-called macro-prudential measures – might be required. On the other hand, experience shows that favorable global financial conditions – which might explain housing appreciation in the first place – are usually accompanied by activity domestically, so that a less expansionary monetary policy might be needed anyway. In other words, traditional output-inflation considerations suffice.
- But let me go back to the nature of the problem we are discussing: financial stability risks accumulate in periods where asset price appreciation is accompanied

with leverage. In this context, because many times both effects reinforce each other, either through monetary policy or special measures, the goal is to limit the appreciation and accumulation of debt.

- In other asset markets, however, the opposite approach is required: it is the rapid adjustment in asset prices what prevents speculative flows and limits the creation of vulnerabilities. The best example of this is the forex market. A rapid adjustment of currency values, and therefore the values of many domestic assets, may hold back the buildup of excessive credit and debt flows, thus safeguarding financial stability. Why? Simply because often the flows are after not only the interest rate differential but also the capital gain associated with the expected price increase. Rapid price adjustments avoid the buildup of speculative positions.
- I put emphasis on this because the debate on spillovers to emerging markets and the optimal response of macro policies often focuses on the role of monetary and macro-prudential policies in avoiding excessive asset price appreciation and excessive leverage. In many important markets it is asset price fluctuations that avoid the accumulation of financial vulnerabilities. In a liberal interpretation, a credible flexible exchange rate framework constitutes itself a macro-prudential framework.
- Of course, exchange rate flexibility will not suffice to prevent an imbalance. Speculative strategies may be established that temporarily deviate currencies away from their equilibrium levels, but in general they tend to be more the exception than the rule. By contrast, monetary policy oriented at stabilizing the exchange rate may not only tend to be overly pro-cyclical but can also generate vulnerabilities in the balance sheets of companies and banks.
- This point becomes very clear when we analyze the performance of inflation targeting regimes in some developing countries. Let me finish with some remarks regarding the challenges for inflation targeting in this framework.

Inflation targeting in developing economies

- The fundamental logic of a floating exchange rate for developing countries is twofold. On the one hand, it facilities relative price adjustments to changes in macroeconomic fundamentals. On the other hand, it helps to smooth domestic financial conditions in response to changes in financial conditions – both local and global –, mitigating the buildup of financial vulnerabilities. An unwavering commitment with the floating exchange rate strengthens these objectives, as it discourages currency mismatches, limits the degree of pass-through from the exchange rate to inflation, and allows to better shield the funding conditions in domestic currency from the external cycle.

- But experience has it that under certain conditions there is tension between the inflationary objectives and the fluctuations of the exchange rate. Small open economies subject to systematic changes in terms of trade or in global financial conditions require fluctuations in the exchange rate that, depending upon the nature of the shock, might be quite persistent. In some cases, and we have experienced that in Chile in the last decade, this implies a deviation of inflation from the target for a prolonged period of time.
- What does this all mean? For as long as monetary policy is committed with exchange rate flexibility, because of both macroeconomic and financial stability concerns, deviations of inflation from the target will be inevitable. And as long as the causes behind exchange rate fluctuations are persistent, the real exchange rate's adjustment cycles could require persistent deviations away from the inflation target.
- In other words, the commitment to exchange rate flexibility, which I think is optimal under most circumstances, both because of resource allocation considerations and because of financial stability concerns, may require more tolerance to persistent deviations of inflation away from the target, especially in small, open economies.[9]
- Obviously, to make exchange rate flexibility compatible with the unwavering commitment with medium-term price stability may be a difficult task, but that is precisely one of the challenges of current monetary policy making for small economies. Here, communication and consistency are key, simply because the stability of inflation expectations is the anchor of the overall monetary system.
- Thank you.

[9] For a discussion on this issue, see Claudio Borio, 2016, Towards a financial-stability oriented monetary policy framework. Presentation at the 200th anniversary conference of the Central Bank of Austria, September.