

Comments on Fraga, Goldfajn and Minella, “Inflation Targeting in Emerging Market Economies”

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The paper by Arminio Fraga, Ilan Goldfajn and Andre Minella is a thoughtful and very important paper on inflation targeting in emerging market economies. Not only does it add substantially to the literature on how to conduct monetary policy in these economies, but as I will argue below, it has important lessons for monetary policy in advanced economies.

Because I have so little to be critical about, my comments will focus on expanding some themes that are discussed in the paper. Specifically, I will first examine why emerging market economies are so different from advanced economies and why this affects thinking about monetary policy. Then I will address several issues for inflation targeting in emerging market economies discussed in the paper: target bands, transparency and formality, response to shocks and IMF conditionality.

I.

Why Emerging Market Economies Are So Different from Advanced Economies

This paper, along with a recent paper I have written with Guillermo Calvo (Calvo and Mishkin, 2003), rightfully emphasizes that emerging market economies (EMEs) are fundamentally different from advanced economies and this is important in designing appropriate monetary policy regimes. The reason: “It’s the institutions, stupid.” EMEs have five fundamental institutional differences from advanced economies that are crucial to sound theory and policy advice. These are:

1. Weak fiscal institutions (what the paper refers to as *fiscal dominance*).
2. Weak financial institutions including government prudential regulation and supervision (what the paper refers to as *financial dominance*).

3. Low credibility of monetary institutions.
4. Liability dollarization.
5. Vulnerability to sudden stops of capital inflows (what the paper refers to as *external dominance*).

Advanced countries are not immune to problems with their fiscal, financial and monetary institutions, the first three items in the list above, but there is a major difference in the degree of the problem in EMEs. Weak fiscal, financial and monetary institutions make emerging market countries very vulnerable to high inflation and currency crises, which is not only a source of high volatility, but also means that the real value of domestic money cannot be taken for granted. As a result, EMEs have much of their debt denominated in foreign currency, usually dollars, hence leading to what is called *liability dollarization*. As pointed out in Mishkin (1996) and Calvo (2001) liability dollarization is what leads to an entirely different impact of currency crises on the economy in emerging market versus advanced countries. In emerging market countries, a sharp real currency depreciation raises the value of liabilities in local currency, thus causing the net worth of corporations and individuals to fall, especially those whose earnings come from the nontradables sector. This serious negative shock to corporations and individuals' balance sheets, then increases asymmetric information problems in credit markets, leading to a sharp decline in lending and an economic contraction. It should be noted, however, that not all emerging market countries suffer from liability dollarization in a serious way (e.g., Chile, and South Africa, see Eichengreen, Hausmann and Panizza, 2002).

A dominant phenomenon in emerging market countries is a *sudden stop*, a large negative change in capital inflows, which, as a general rule, appear to contain a large unanticipated component (see Calvo and Reinhart, 2000). It is more likely to hit EMEs because of their weak fiscal and financial institutions, and a sudden stop leads to a sharp contraction of investment and the aggregate economy. The effect of sudden stops on individual countries is by no means uniform and appears to have much to do with initial conditions. For example, Chile had low debt relative to Argentina and did not suffer

from liability dollarization, and thus was much less affected by the sudden stop in 1997-98 than was Argentina, which suffered a very serious dislocation.

This paper nicely illustrates that these institutional differences result in a much more complicated environment for conducting monetary policy by conducting very nice illustrative simulations using a dynamic new Keynesian model. These simulations show that low credibility of monetary institutions leads to slower convergence of inflation to targeted levels and a higher cost of disinflation. In addition, low credibility leads to higher volatility of inflation, output, and interest rates. The simulations also show that sudden stops, as represented by an exchange rate shock, also lead to higher volatility of inflation output and interest rates.

One conclusion from the above discussion is that **institutional reforms are especially critical to successful macroeconomic performance in EMEs.** Rounding up the usual suspects provides the following list: 1) **improvements in prudential supervision**, 2) **limits on the government safety net for the financial system**, 3) **discouragement of currency mismatch for the economy as a whole**, 4) **increased trade openness**, 5) **improvements in fiscal relationships between the central government and the provinces and increases in fiscal transparency**, and 6) **public/institutional commitments to price stability and central bank independence**. I will not discuss these institutional reforms here because that would take my discussion to far afield. However, I do want to emphasize that fundamental institutional reform is far more critical to macroeconomic success than is the choice of monetary policy regime (a point emphasized in Calvo and Mishkin, 2003). Inflation targeting (or other monetary policy regimes including hard exchange rate pegs such as a currency board or dollarization) are not a panacea.

Central banks in EMEs can encourage institutional reform, and the Banco Central do Brasil has been very active in this regard. However, a central bank in an EME can only do so much, and it has to take weak institutions as given in deciding on how to conduct monetary policy. The bottom line is that being a central banker is much tougher in EMEs than in advanced economies.

II.

Issues in Inflation Targeting in EMEs

The tougher institutional environment that central bankers in EMEs face is important in policy design with regard to four issues discussed in the paper: target bands, transparency and formality, response to shocks, and IMF conditionality.

Target Bands

The paper advocates target bands for inflation targets that are wide in order to accommodate the higher volatility in EMEs and suggests that the bands should be seen as checkpoints. Although the paper's position on these issues is reasonable, there is a subtlety here that needs to be emphasized.

The use of target bands has a dangerous aspect. Floors and ceilings of bands can take on a life of their own in which there is too great a focus on the breach of the floor or ceiling rather than on how far away actual inflation is from the midpoint of the target range. As discussed in Bernanke et al. (1999) and Mishkin and Schmidt-Hebbel (2002), too great a focus on breaches of the floors or ceilings can lead to the so-called instrument instability problem, in which the attempts of policy makers to keep inflation within the target range cause policy instruments, such as short-term interest rates or exchange rates, to undergo undesirably large fluctuations. A focus on avoiding short-term breaches of the bands can also lead to suboptimal setting of monetary policy and controllability problems in which the inflation target is more likely to be missed in the medium term. Both of these problems have arisen in the New Zealand inflation targeting regime.

One solution to these problems is to use a point target rather than a target range. However, there is still a need for a trigger mechanism to support accountability for the central bank. Indeed, this is exactly what the Bank of England has done: it has a point target for inflation of 2.5% with a requirement that if the inflation rate is more than 1 percentage point above or below this target, then it has to issue a public letter to the government explaining why inflation has moved so far from the target, what policy actions will be taken to deal with the situation and what will be the expected path of inflation back to the 2.5% target. This procedure gets the subtlety right of putting the focus on the midpoint of a target range and not too much on the edges of the target range.

Having a wide target range with the edges of the range seen as checkpoints, as advocated in the paper, can be consistent with the Bank of England procedure and avoid the problems of too much focus on edges of the range. However, this requires that the focus is always on the midpoint of the range and that the edges of the bands are interpreted only as checkpoints and not hard targets that cannot be breached. This is what I think Fraga, Goldfajn and Minella are advocating, but it is important that EMEs be aware that the use of a target range requires some subtlety in the communication process in order to avoid instrument instability and controllability problems.

Transparency and Formality

This paper rightfully emphasizes that the weaker credibility of monetary policy institutions in EMEs requires even more transparency and formality in the inflation targeting regime than in advanced economies. **Because the public is more skeptical of monetary authorities in EMEs, the central bank can strengthen its credibility by providing even more information to the public with measures like the following: releasing minutes of central bank deliberations very quickly, publishing the central bank's forecasts, and publishing a clear and frank *Inflation Report*, which besides publishing forecasts, outlines the goals and limitations of monetary policy, how the numerical values of the inflation targets are determined, how the targets are to be achieved and the reasons for deviations from the targets.**

Fraga, Goldfajn and Minella also emphasize that a formal process for monetary policy decisions with regularly scheduled meetings of a monetary policy committee with a high level of proper preparation and economic analysis is not only crucial to good decision-making, but is also crucial to establishing credibility for the central bank. This point almost seems obvious, but as the authors point out, many central banks in EMEs have not followed this procedure in the past.

It is important to note that the Banco Central do Brasil has been a leader in advancing transparency and formality in EMEs. Before the Brazilian central bank adopted inflation targeting, many central banks in EMEs were skeptical that they could put in place a full-fledged inflation targeting regime with high levels of transparency and

formality. This is one reason that some of these central banks engaged in a very gradual approach to implementing inflation targeting regimes, with the Bank of Mexico being a prominent example. However, in 1999 the Banco Central do Brasil under Arminio Fraga has shown the way for other central banks in EMEs, when it was able to implement a full-fledged inflation targeting regime with all the “bells and whistles” of transparency and formality *within four months* of the initial announcement of inflation targeting. This was an extraordinary achievement that has helped hasten the adoption of inflation targeting in many EMEs.

Responding to Shocks

A key theme of the paper is that EMEs face much bigger shocks than advanced economies which complicates the conduct of monetary policy. How should inflation-targeting central banks in EMEs respond to shocks? When shocks drive inflation away from the target, what horizon should be used for returning to the target? For Brazil, these questions have not been academic: Brazil recently experienced a major exchange rate shock in 2002 in the run up to the election of the new president that caused a major overshoot of its inflation target.

The discussion in the paper on how to respond to shocks gets it exactly right. The first point the paper makes is that the response to a shock and the horizon over which the central bank plans to get the inflation rate back on target depends on the nature and persistence of the shock. In other words, **an optimizing framework in which output and inflation fluctuations are minimized requires that the horizon for hitting an inflation goal is shock dependent. This means that the procedure for responding to a shock derived from an optimizing framework requires the following four steps: 1) identify the nature and persistence of the shock, 2) estimate the first and second order effects of the shock depending on the type of shock, 3) calculate the optimal response depending on weights on inflation versus output fluctuations in the central bank’s objective function, and 4) explain to the public why the particular path of inflation has been chosen.**

The paper provides an excellent discussion of how the Banco Central do Brasil has responded to a large shock when it adjusted its inflation targets in early 2003. First

the central bank estimated the regulated-price shock to be 1.7%. Then taking into account the nature and the persistence of past shocks, it estimated the inertia from past shocks to be 4.2% of which 2/3 was to be accepted, resulting in a further adjustment of 2.8%. Then the central bank added these two numbers to the previously announced target of 4% to get an adjusted inflation target for 2003 of 8.5% ($=4\% + 1.7\% + 2.8\%$). The adjusted target was then announced in an open letter sent to the Minister of Finance in January 2003, which explained that getting to the non-adjusted target of 4% too quickly would entail far too high a loss of output. Specifically, the letter indicated that an attempt to achieve an inflation rate of 6.5% in 2003 would be expected to entail a decline of 1.6% of GDP, while trying to achieve the non-adjusted target of 4% would be expected to lead to an even larger decline of GDP of 7.3%.

The procedure followed by the Banco Central do Brasil has several very important advantages and is a textbook case for central bank response to shocks. First the procedure has tremendous transparency, both in articulating why the initial inflation target was missed, but also how the central bank is responding to the shock and plans to return to its longer-run inflation goal. This degree of transparency helps minimize the loss of credibility from the target miss and the need to adjust the short-term inflation target. Second, the central bank recognized that not adjusting the inflation target was just not credible because the market and the public clearly recognized that inflation would overshoot the initial target. Thus adjusting the target was absolutely necessary to retain credibility for the central bank, because to do otherwise would have just signaled to the markets that the central bank was unwilling to be transparent. Third, by discussing alternative paths for the inflation rate and why the particular path using the adjusted target was chosen, the central bank is able to demonstrate that it is not what Mervyn King (1996) has referred to as an “inflation nutter” who only cares about controlling inflation and not about output fluctuations. By its procedure of outlining that lower inflation paths would lead to large output losses, the Banco Central do Brasil demonstrated that it is not out of touch with the concerns of the public because it indeed does care about output losses, just as the public and the politicians do.

Lessons for Advanced Countries

Although the discussion in the paper and the experience of Banco Central do Brasil in responding to shocks has important lessons for the conduct of monetary policy in other EMEs, it also has important lessons for the conduct of monetary policy in advanced economies.

Inflation-targeting central banks in advanced economies have often adopted a horizon for their inflation targets of two years or so, with the Bank of England being a prominent example. This can give the impression that the horizon for inflation targets is fixed, which could mean that inflation targeting will not be flexible enough. After all, our models tell us that optimal monetary policy will surely adjust the target horizon for inflation depending on the nature and persistence of shocks, a key point made by the paper. Indeed, critics of inflation targeting in advanced economies have pointed to the rigidity of the inflation targeting regimes with a fixed horizon as an important reason for not adopting inflation targeting.

Up to now the use of a specific horizon like two years has not been a problem for inflation targeting in advanced economies like the United Kingdom because inflation has not been subject to big shocks so that it has remained close to the target level. In this case, having the horizon for the target equal to the policy horizon (i.e, the time it takes for monetary policy to affect inflation), which is about two years, is consistent with optimal monetary policy. However, as Svensson (1997) demonstrates, if the inflation rate is shocked away from its long-run target, then the target horizon should be longer than the policy horizon. Although this situation has not occurred yet in advanced-economy inflation targeters, one day a big shock to inflation will come (as it already has in Brazil). **Then for monetary policy to minimize output and inflation fluctuations optimally, the target horizon will need to be longer than two years and vary depending on the nature of the shock.**

Central banks in advanced economies do have some awareness of this issue. For example, in the United Kingdom, the inflation targeting regime stipulates that if inflation is knocked more than 1 percentage point away from its target of 2.5%, then the Bank of England will specify the path of inflation and the length of time that it will take to get back to the 2.5% target. Thus there is a provision for flexibility in which the target

horizon can be varied when big shocks hit the inflation process. However, there are two problems that may arise when a big shock hits the economy. First is that the two-year horizon may have become so fixed in the mind of the public and/or the central bank, that the central bank may not respond flexibly enough to a large shock. Second, is that a big shock may occur that the central bank expects will drive inflation outside the band around the inflation target, but inflation is still within the band for the time being. Even though inflation is not yet outside the target range, the two-year horizon for hitting the inflation targets is unlikely to remain appropriate. Instead, the central bank will need to adopt a procedure like the one the Banco Central do Brasil has followed in order to set policy instruments appropriately in which the horizon and path for inflation would have to be adjusted depending on the nature and persistence of the shock. This kind of flexible response would be harder to do if the fixed time horizon is in place when inflation at first remains within the target range.

Because EMEs like Brazil have already been subjected to large shocks which require changes in the horizon for inflation targets, they illustrate that central banks in advanced economies have to take this contingency into account in designing their inflation targeting systems. **A lesson of the analysis in this paper is that to optimally minimize output and inflation fluctuations central banks in both advanced and emerging market economies need to make it clear, even before it is necessary, that the horizon for inflation targets needs to be flexible and will vary depending on the nature and persistence of shocks, and that they will be ready to use procedures like the one the Banco Central do Brasil has followed recently.**

Stating that they are ready to use a procedure like the one the Banco Central do Brasil has used has another important advantage for central banks in advanced as well as emerging market economies. A well known conundrum for central bankers in both advanced and emerging market economies is that many of them don't like to talk about output fluctuations in discussing monetary policy. They fear that doing so encourages the public and the politicians to demand that the central bank focus on fighting declines in output, so that the pursuit of the price stability goal will be compromised. The problem with central bank unwillingness to discuss output fluctuations is that the public may begin to see the central bank as having different preferences than they do and this can

erode support for the central bank. By acknowledging that a procedure like the one followed by the Banco Central do Brasil will be used when large shocks hit the economy, a central bank can make it clear that it does care about output fluctuations and is not an “inflation nutter”. This has the advantage that it will promote support for central bank independence and the inflation targeting regime. It also has the advantage that it shows that the central bank cares about output fluctuations in a forward-looking context because it highlights decisions that the central bank will make about the future path of inflation and the horizon over which inflation will return to target. It therefore makes it clear that the central bank is focusing on output fluctuations in a longer-term context, which is necessary for avoiding the time-inconsistency problem.

IMF Conditionality

The paper contains a very brief section on IMF conditionality and I have a few brief comments. When a country gets loans under an IMF program it is subject to conditions to evaluate the stance of monetary policy. In the past, a key element of this conditionality was ceilings on the growth rate of net domestic assets. As pointed out by Fraga, Goldfajn and Minella, conditionality based on net domestic assets makes little sense in an inflation targeting regime. **Net domestic assets conditionality which is derived under the IMF’s “financial programming” framework is based on an outdated theory, the monetary approach to the balance of payments (see Mussa and Savastano, 1999), which requires that the growth rate of monetary aggregates is closely linked to inflation.** However, the linkage between monetary aggregates and inflation is almost always found to be very weak when inflation rates are reasonably low as is the case for EMEs that have adopted inflation targeting. As a result targets for net domestic asset targets are likely to lead to inappropriate setting of monetary policy instruments and are likely to decrease monetary policy transparency.

In an inflation targeting regime, it seems natural to replace net domestic asset conditionality with assessment of the country’s inflation performance. Indeed, this is what the IMF moved to in evaluating monetary policy under its program for Brazil when inflation targeting was adopted in 1999. The IMF program has conducted quarterly

reviews on how well Brazil has done in meeting its inflation targets, but there is still a problem that the IMF evaluation is essentially backward looking (Blejer, Leone, Rabanal, and Schwartz, 2001). Inflation targeting is inherently forward-looking so the issue arises as to how IMF conditionality might be modified to be more forward looking. One approach would be for the IMF to monitor monetary policy institutions. Specifically, the IMF conditions could focus on the degree of central bank independence, whether the central bank mandate focuses on price stability as the long-run overriding goal of monetary policy, and whether transparency and accountability of the central bank is high. As part of this monitoring, the IMF could conduct a careful assessment of central bank procedures as to the legitimacy of its forecasting process and whether the central bank provides adequate explanations for misses of its inflation targets.

In a sense this shift in approach is similar to the shift in approach that has occurred in bank supervision in recent years. In the past bank supervision was also quite backward looking in that it focused on the current state of banks' balance sheets. However, this backward-looking approach is no longer adequate in today's world, in which financial innovation has produced new markets and instruments that make it easy for banks and their employees to make huge bets easily and quickly. In this new financial environment, a bank that is quite healthy at a particular point in time can be driven into insolvency extremely rapidly from trading losses, as forcefully demonstrated by the failure of Barings in 1995. Thus bank examinations have now become far more forward looking and now place much greater emphasis on evaluating the soundness of a bank's management processes with regard to controlling risk. Similarly, the IMF could shift its conditionality to focus on the management processes in central banks to keep inflation under control.

III. Conclusions

The paper by Fraga, Goldfajn and Minella is an important paper not only because it has useful lessons for how inflation targeting should be conducted in emerging market countries, but also because it has valuable lessons for advanced countries as well. The

Banco Central do Brasil has been a leader in developing best practice inflation targeting for emerging market countries, sometimes under very difficult conditions.

This reminds me of an incident at the Federal Reserve Bank of Kansas City's Jackson Hole conference which is where top central bankers from all over the world congregate every August. The recently departed Rudi Dornbusch, who we all miss, made the provocative statement that "there are no competent central bankers in Latin America." Of course what Rudi was getting at was that the environment for doing good monetary policy in Latin America is difficult, to say the least. What this paper demonstrates is that in fact some of the most competent central bankers are in Latin America, and we have a lot to learn from them.

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