Assessing Central Bank Credibility in Emerging Markets

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Monetary policy in emerging markets (EMs) underwent drastic change at the beginning of the 21st century. Following the Asian (1997) and Russian (1998) financial crises, many central banks in EMs stopped targeting exchange rates and adopted an inflation targeting framework. Broadly speaking, that switch has been successful at reducing inflation and bolstering central banks' credibility.

But the recent acceleration and persistence of inflation in many EMs raises new challenges for central bankers and investors. In our view, the current high inflation is the result of (mostly) exogenous shocks but also of domestic polices, like a slow retrenchment of pandemic-era fiscal expansion.

The recent rise in inflation might, then, put these central banks' hard-earned credibility at risk. In this note, we look at the experience of five major EM central banks that have adopted an inflation-target framework (Table 1).

Table 1: Inflation Targets of Select EM Central Banks

	BRAZIL	CHILE	HUNGARY	MEXICO	SOUTH AFRICA
TARGET	Target band set annually, 30 months in advance. **For 2020:** 2.5-5.5% (CPI)	2-4% (Headline CPI)	2-4%	2-4%	3-6%
ADOPTED IN	1999	2007	2001	2003	2000

Source: IMF, as of April 2023.

Anchoring inflation expectations is a key component of the inflation target framework. When expectations are de-anchored, the risk of runaway inflation increases. This, in turn, might require stricter monetary tightening than if the central bank had acted earlier. For that reason, anchoring expectations when inflation surges is an important pre-emptive action for central banks that have adopted an inflation-targeting framework.

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To analyze the behavior of the five central banks in our sample, we first assess how successful they have been in anchoring inflation expectations. We do so by computing a simple “credibility index”, as described in the Appendix. That index is a normalized measure of the difference between inflation expectations and the central bank’s inflation target, where 1 = full credibility of the target.

Table 2: Summary Statistics on Inflation, Inflation Expectations and Central Bank Credibility

Country	Inflation target (%)	Average inflation		Average inflation expectations		Credibility index	
		First 10 years	Since	First 10 years	Since	First 10 years	Since
Brazil	2-5 (set annually)	6.7	6.4	5.3	5.1	0.86	0.87
Chile	2-4	3.7	4.4	3.0	3.1	0.90	0.80
Hungary	2-4	5.7	3.7	6.4	4.3	0.43	0.76
Mexico	2-4	4.3	4.5	3.6	3.5	0.89	0.92
South Africa	3-6	5.3	5.2	6.1	5.7	0.41	0.54

Source: PGIM Fixed Income, Haver, as of April 2023.

Table 2 shows that inflation expectations generally converge towards the inflation target even when actual inflation is outside of the target band. Hungary and Brazil are the only countries where average inflation expectations remain above target - albeit slightly - even after our arbitrarily-imposed 10 year “credibility building” period.

Second, we look at descriptive statistics to find regularities in central banks’ policies and outcomes.

Figures 1 to 5 show that, all else equal, the faster and more determined a central bank is in rising rates, the faster inflation expectations drop.

A single large hike may not be enough (as in Hungary’s recent experience) and other sizeable hikes may be needed (as in Chile and Mexico) to lower inflation expectations. Once inflation expectations are anchored within the target band, prudent rate cuts can follow (Chile currently, Chile and South Africa in 2008, Brazil in 2002).

Figures 1-5: Changes in Inflation Expectations and Policy Responses

FIGURE 1: Brazil - Policy Rate Response

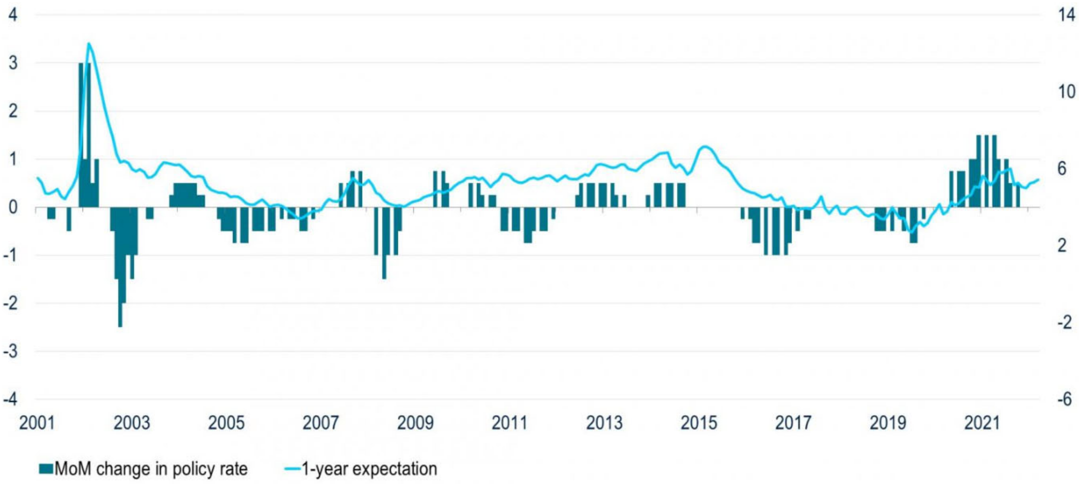


FIGURE 2: Chile - Policy Rate Response

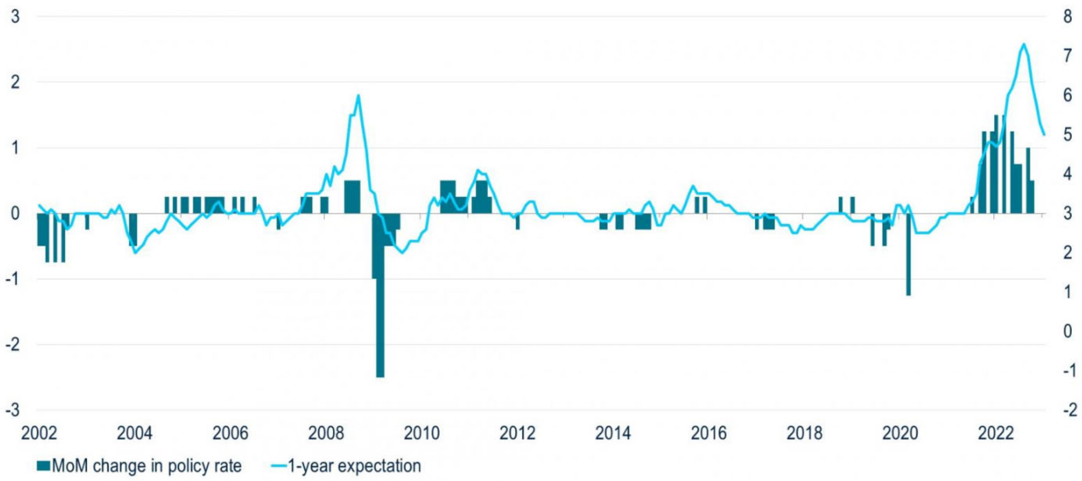


FIGURE 3: Hungary - Policy Rate Response

FIGURE 4: Mexico - Policy Rate Response

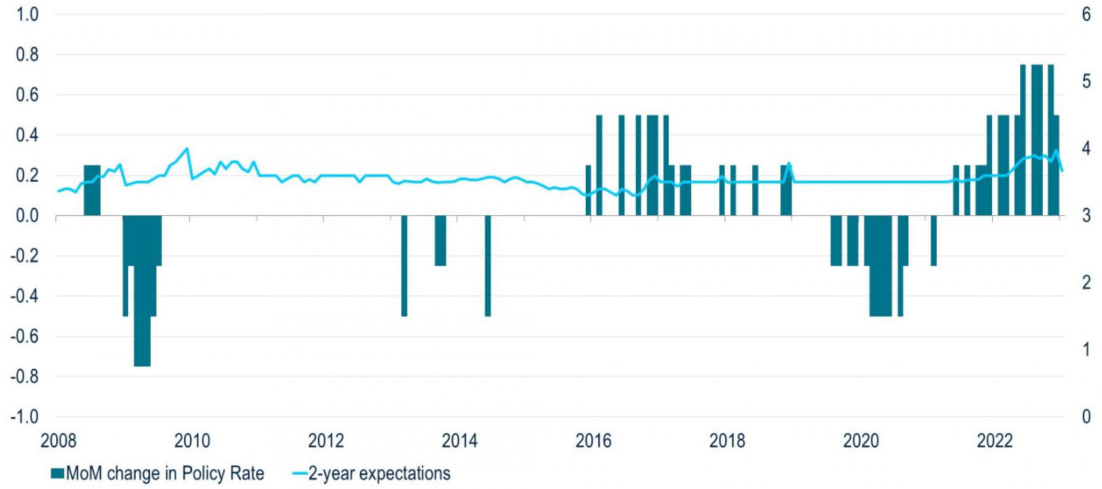
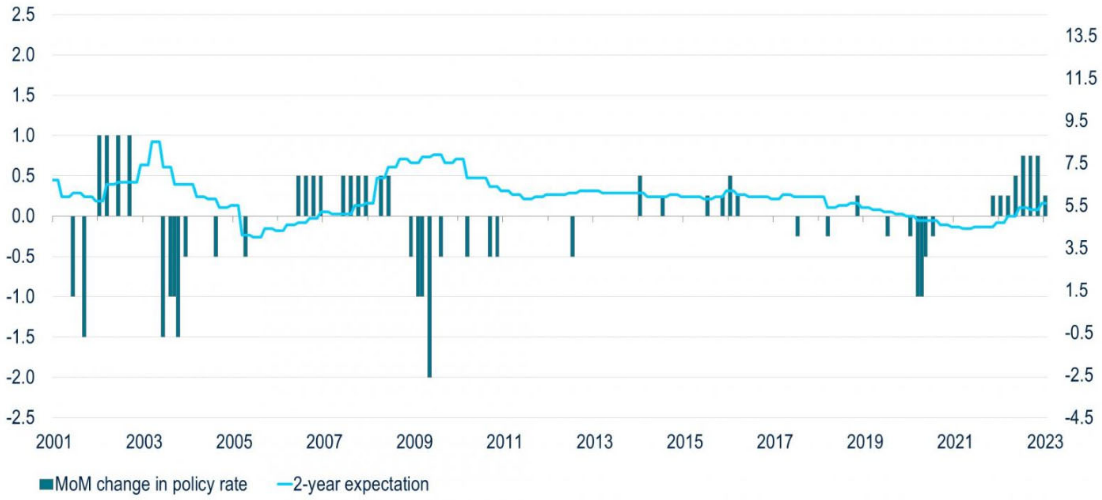


FIGURE 5: South Africa - Policy Rate Response



Source: PGIM Fixed Income, Haver, as of April 2023.

These findings have important investment implications. The countries in our sample are a varied bunch: they differ in fiscal policy, output gaps, capital flows, central bank independence, ex-ante real interest rates etc. But all else equal, we find that central banks that hike first and more significantly appear to gain benefits in terms of credibility. As a result, they are likely to cut policy rates first. Investors in local-currency bond markets should therefore closely monitor the speed with which central banks respond when inflation accelerates.

APPENDIX: Our central bank credibility index

For each survey, we calculate the difference between 1-year inflation expectations (or 2-year expectations, depending on the inflation target set by the respective central bank) and the central bank's inflation target. Since these countries have a target band, we calculate the difference between expectations and the mid-value of that band. We then normalize that time series of differences to fall between 0 and 1, using the normalization formula. The index at time "t" then becomes[1]:

Index(t) = 1- dP(t)/{max[Ex(0…T) – P*] – min[Ep(0…T) – P*]}

Where:

P^* = inflation target

$Ep(t)$ = expected inflation at time "t"

$dP(t) = Ep(t) - P^*$

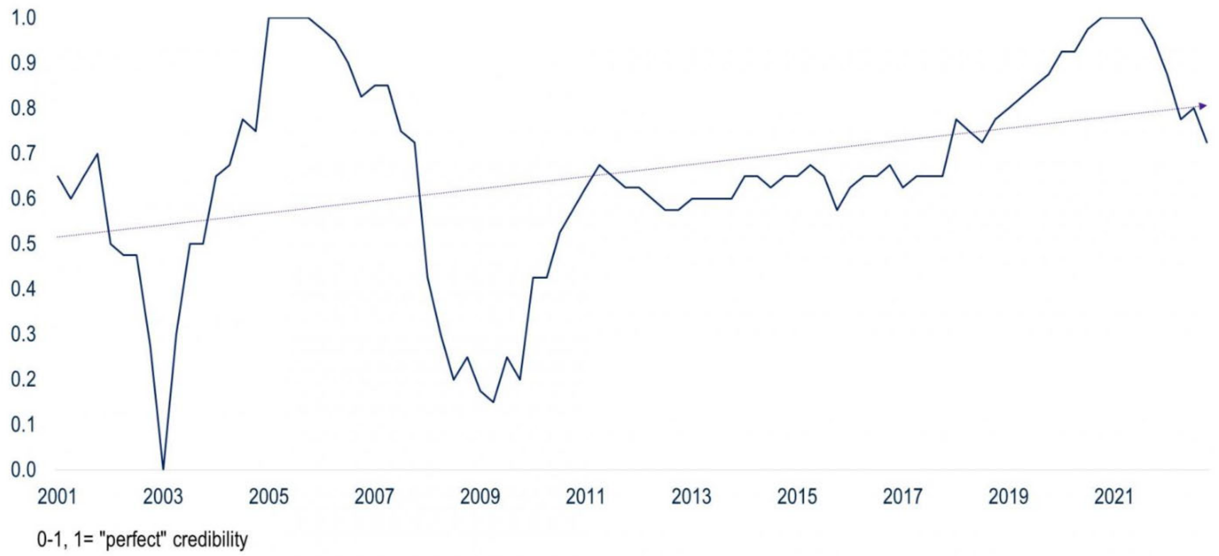
$0 < t < T$

And a value of 1 indicates full credibility.

Sample = 0…T

As an example, Figure A.1 shows the index for South Africa.

FIGURE A.1: South Africa - Central Bank Credibility Index



Source: PGIM

[1] If inflation expectations fall below the target, we assign a value of zero (i.e., target met) to that observation.

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