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Intervention and the Indian Exchange Rate

India's basic exchange rate regime has stayed the same since the liberalizing reforms of the nineties—market-determined but with different types of intervention aimed at preventing excess volatility. Implementation has, however, varied over the years.

Controversies have arisen recently. First, regarding what is the appropriate regime under inflation targeting. Second, the IMF has endorsed the textbook view that a free float is appropriate. It has labeled the Indian regime as a 'stabilised arrangement' not 'floating' over December 2022 to October 23, suggesting there was too much intervention. This piece examines these issues.

Reasons for intervention

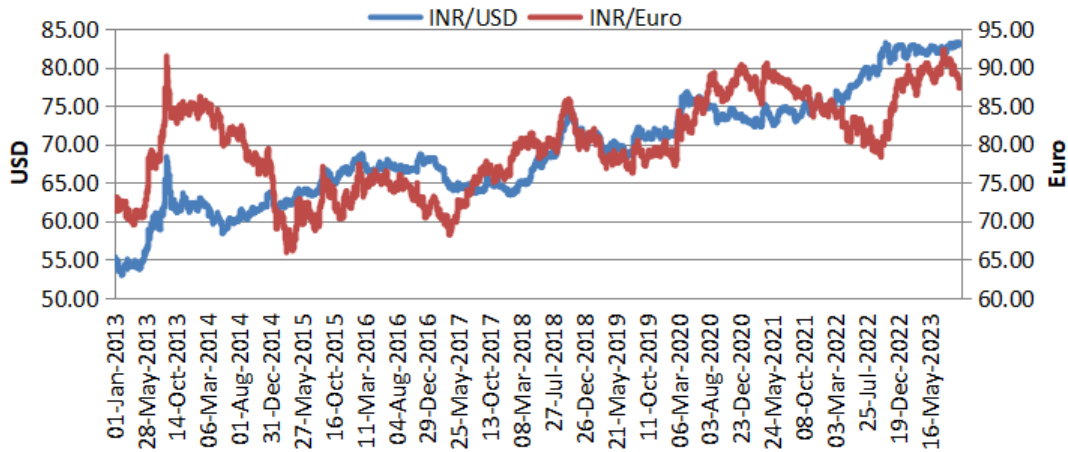
After nominal depreciation over the 1990s, two-way movement of the exchange rate was established in the early 2000s. External

shocks were associated with larger movements, due to risk-on risk-off shifts in foreign capital and changes in the dollar value, not necessarily to discovery of fundamental value in domestic markets.

While daily volatility became substantial after 2005 as FX markets deepened, there were periods of relatively low volatility such as 2009, 2016 and 2023. Figure 1 includes the last 2 periods. Volatility tends to be higher in the INR/Euro pair since intervention is mostly in USD, in which 80% of India's trade is invoiced. In both the periods the INR/Euro appreciated compared to the INR/USD, because net inflows of foreign portfolio investment were large (Figure 2).

These surges driven by global factors can create persistent misalignment of real exchange rates from equilibrium values. One reason for intervention can be to prevent this.

Figure 1: Daily exchange rate of Rupee vs. USD and Euro

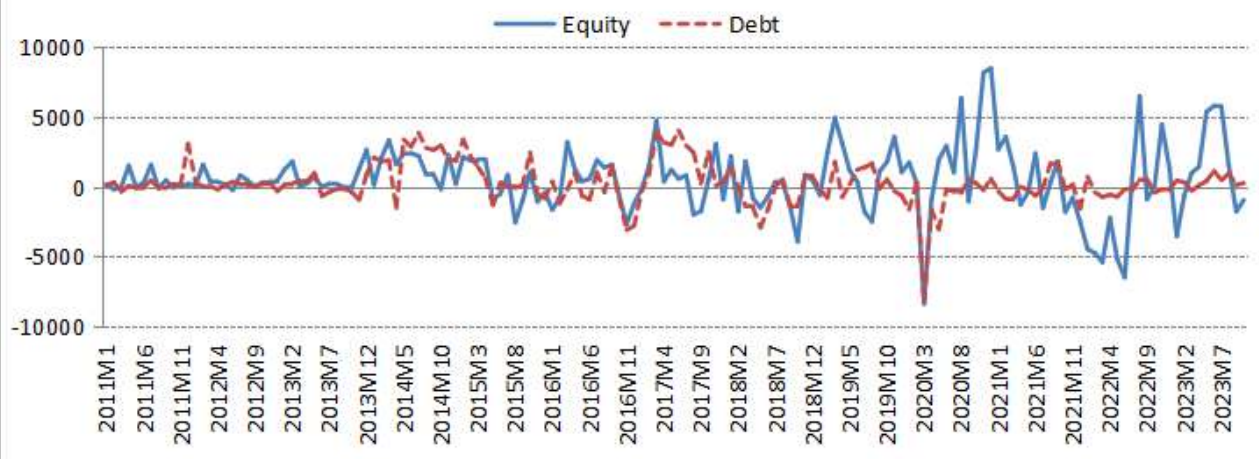


Preventing persistent real misalignment

India has a large current account deficit (CAD). Post-liberalization experience, as well as research (Banerjee and Goyal, 2021), suggests India’s equilibrium level of the real effective exchange rate (REER) index is about 100. Figure 3 graphs export-weighted REER indices with 2 different base periods. The sustained real appreciation shown in the

2010s coincided with slowing exports and widening the CAD. Indian export growth tends to be more sensitive to world growth and demand than to the real exchange rate, but Goyal and Kumar (2018) find a real appreciation sustained over two years or more hurts exports. Excess nominal volatility also hurts exports. Intervention was required to prevent over-appreciation again with the inflow surges after late 2022.

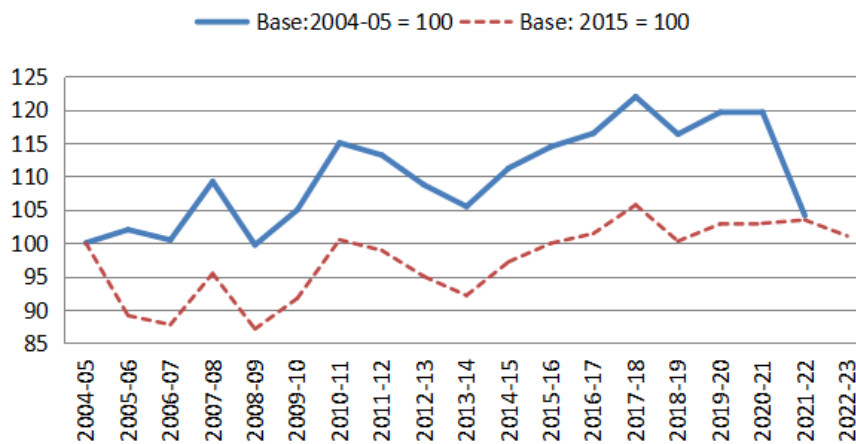
Figure 2: Monthly equity and debt inflows (USD million)



Post-pandemic was also a time when US macroeconomic policy inflicted large spillover on the rest of the world. It was necessary for Indian monetary policy to establish independence from the US Fed and

align rate changes to domestic needs. This was a second reason for intervention in FX markets.

Figure 3: Export-based weights (REER indices)



Exchange rate volatility and the interest differential

Uncovered interest parity (UIP) tells us under free capital flows emerging market (EM) nominal interest rates must equal those of the US + expected depreciation+ country risk premium. Since UIP involves the exchange rate expected over time, the interest rate differential (IRD) covers expected depreciation plus a risk or UIP premium.

IRDs in EMs tend to be always positive and rise with excess exchange rate volatility, even though the latter is often due to global and not domestic factors. There is a case, therefore, for intervention to reduce exchange rate volatility.

Global interest rate shocks, raise capital flow and exchange rate volatility in EMs, aggravate EM UIP premia (estimated to normally be about 3%) and raise borrowing costs.

Episodes of sharp depreciation in EMs are not fully offset by appreciation, whereas in advanced economies (AEs) there is more even two-way movement. Even so, IRD overcompensates and exceeds actual depreciation in EMs. Shocks to the IRDs, are usually not offset by realizations of EM depreciation,

giving excess returns to foreign investors (Goyal and Ray, 2023).

Therefore EM exchange rates fail to act as a shock absorber, unlike in AEs where overshooting of nominal exchange rate tends to reverse. An expected appreciation towards equilibrium levels allows interest rates to remain low. In EMs, however, overshooting tends to intensify and become persistent as it provokes capital flight. But raising interest rates sharply can aggravate this as falling growth raises country risk. Thin markets can get trapped in cumulative one-way movements and panics. As self-fulfilling depreciation raises inflation, policy rates have to rise eventually. Excess nominal appreciation can also end in sharp depreciation.

It follows a pure float is not the appropriate currency regime for EMs. A higher expected depreciation risk requires IRD to be high for EMs, even if that depreciation is only rarely observed in the data. The excess premium global investors charge from EMs may be driven by policy uncertainty and expectations of exchange rate fluctuations. It follows less volatility can reduce IRD.

The Indian experience shows it is possible to reduce exchange rate volatility despite global

risk-on and offs. Over 2019-22 mean IRD was 3.4 and average depreciation was 4.2 despite the pandemic shocks, compared to an average IRD of 5.17 over 2004 to 2022. Lower exchange rate volatility contributed to falling risk premiums. How was it achieved?

Use of multiple instruments

Better fundamentals helped reduce risk premiums. These included stronger Indian macros, lower inflation differentials, stable growth among the highest in the world, growing economic size and diversity. Higher GDP had increased capacity to absorb foreign capital.

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Unlike the US, excess demand or tight labour markets were not driving Indian inflation.

There were no second round effects from supply-shocks. Fiscal policies were moderating the latter. Timely regulatory and other relief to the financial sector, as well as its timely withdrawal, had prevented moral hazard, reduced risk and interest rate spreads.

Creating space for domestic policies to counter external shock-led capital flow volatility requires multiple instruments, coordination across policies as well as many types of intervention in foreign exchange (FX) markets.

Pragmatic policy makers understand this. Most EM CBs use strategic intervention, signals, prudential regulation and capital flow management in order to reduce excess nominal volatility. FX reserves serve an essential precautionary purpose, enabling intervention as well as reducing country risk perceptions. Separate instruments for multiple targets work better than trying to do everything through the interest rate. Buffie et al. (2018) find FX intervention greatly enhances the efficacy of inflation targeting. They remark CB practices are a serious problem for theorists whose position seems to be: Floating works in theory, so what if it doesn't work in practice. For these purists, inflation targeting demands a free float as the correct response to capital flows.

RBI has all these weapons in its armoury, including degrees of freedom from a sequenced approach to capital flow management. Because of market size related caps on debt inflows, the share of interest sensitive foreign debt securities has averaged about 8 per cent of total foreign liabilities since 2010, peaking at 11 per cent. But even though capital affected by UIP was small enough as a share of the market to give monetary policy independence, in 2013 and 2017 a rise in Indian policy rates followed Fed tightening, partly because of a fear of market reactions.

Rising US Fed rates does lead to equity outflows to risk free US government securities, but domestic rate rise does not keep them here. It only dampens expectations of growth and therefore induces more equity outflows and raises country risk-premiums. Reducing domestic demand is a costly and inefficient way to respond to the threat of outflows.

Markets tend to easily become nervous in EMs and are focused too much on differentials with US Fed rates. But Indian post-pandemic policy successfully demonstrated that there is real independence to set rates based on domestic requirements. IRD fell without provoking outflows.

A larger tool box is an essential defense against continuing global fragilities. Since the international financial architecture offers hardly any support to EMs, markets tend to have more confidence in countries with self-insurance through large buffers, such as India's FX reserves. Better global safety nets would especially help smaller EMs for whom building such buffers is expensive. But many risk-reducing policy instruments are available.

But these tools work best if they help markets find and maintain the fair value of the currency. Intervention did help the rupee approach equilibrium in an orderly way despite global volatility.

Since flexibility helps markets discover prices and has other benefits, intervention needs to avoid reducing nominal exchange rate flexibility too much or for too long.

Other effects of the exchange rate

In theory an exchange rate regime can contribute to multiple objectives including maintaining a real competitive exchange rate, neutralizing inflationary commodity price shocks and deepening FX markets. Two-way movement of the rupee encourages hedging.

Better anchoring of inflation expectations and falling oil intensity of production is helping reduce pass through of oil price rise. But there is a new tendency for the USD to strengthen with international oil prices, due to US shale oil production. Since oil imports are denominated

in USD, this makes a stronger case for intervention to reduce rupee depreciation in such periods in order to abort inflationary impulses from international price shocks.

If Indian inflation range of 4-5 per cent exceeds that of the rest of the world (range 1-3 per cent) the rupee has to depreciate to the extent a higher productivity differential does not compensate. The mild depreciation required to maintain the REER at equilibrium need not be inflationary, if it is achieved through continuous two-way movements so that sharp depreciations are avoided.

Was intervention too much?

Our analysis suggests the optimal exchange rate regime under inflation targeting for EMs should be flexible with intervention to prevent excess volatility as well as misalignment from competitive real exchange rates, while allowing some volatility to aid price discovery in FX markets. Most EM CBs attempt something like this in practice. In the presence of capital flow volatility due to global shocks, effective implementation requires the availability and use of multiple instruments.

It may also require volatility to be low for some periods as in 2023 when inflows would have led to over-appreciation, raised expected depreciation and the IRD, without intervention. The IMF is therefore incorrect to judge and label India's regime from this short period, while ignoring the global shocks it had to smooth.

After the pandemic India's real exchange rate was maintained around equilibrium levels, with orderly depreciation despite large outflows. A major achievement was demonstrating that Indian monetary policy had effective independence from US policy, as the IRD was allowed to narrow, but did not provoke major

outflows. Markets easily panic in EMs and were concerned about the IRD. But as good fundamentals and market-based interventions acted together to reduce misalignment and excess nominal volatility, risk premiums and interest rate spreads fell.

Deviations of real interest and exchange rates from equilibrium levels due to volatile capital flows distort real sector decisions. There is an argument that less intervention and more rupee depreciation would reduce the CAD. But less intervention led to a chaotic fall and jittery

markets in 2011. As inflation rose with nominal depreciation, real appreciation resulted worsening the CAD. It is best therefore for EM policy to prevent over-depreciation, or its reverse, due to global shocks.

IMF advice tends to be biased to favor capital exporting countries, while it underprovides global safety nets against spillovers from these systemic countries. EMs would do better to learn from Indian post-pandemic experience and policy.

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