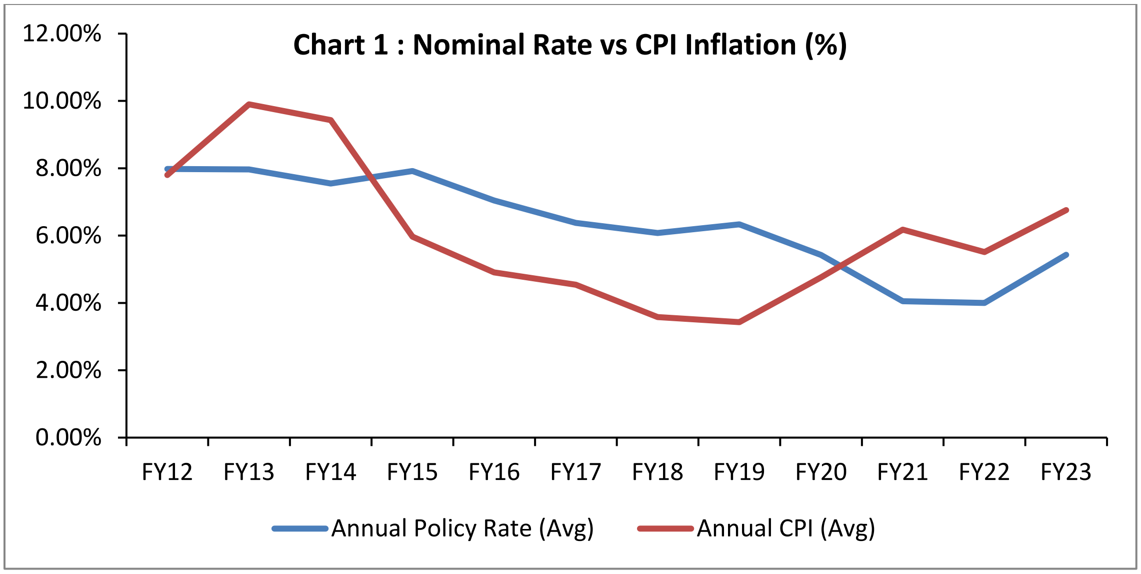
Real Interest Rates in India

Aditya Vyas
aditya@stcipd.com
022-66202245

Introduction: Any nominal variable adjusted for inflation is "real" in the economic sense. A real interest rate is nominal interest rate adjusted for inflation. Since a real interest rate is derived as a difference between the nominal interest rate and inflation, there are various possible real interest rates depending on the choice of nominal interest rate (G-sec, T-bill, repo, fixed deposit, etc.) and measure of inflation (Wholesale, Retail, GDP deflator, etc.). Reserve Bank of India (RBI) defines real interest rates or real rates as the difference between the nominal policy rate (repo) and inflation expectations. Expected inflation is the 1-year forward inflation rate as per RBI's projections. For the purpose of this article the real interest rate is defined as the difference between the nominal policy rate and the actual inflation rate or average inflation for the quarter. Theoretically, in the long run expected and actual inflation converge, hence, it is safe to consider actual inflation. We have considered RBI's policy repo rate as the nominal rate and headline Consumer Price Index (CPI-C) year on year inflation to derive the real interest rate.

Nominal Interest Rate = Real Interest Rate + Inflation
Or
Real Interest Rate = Nominal Interest Rate – Inflation.

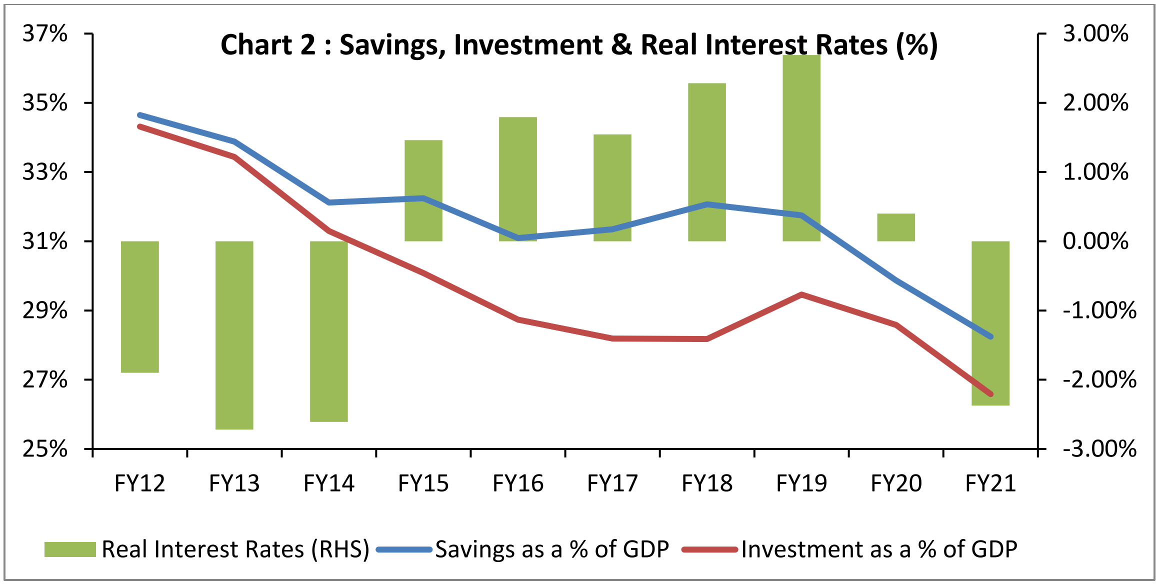
Why is the real rate important? Policy makers, especially RBI, monitor the movement of the real interest rate. This rate determines the behavior of savers, investors, and of corporates making capital investments in the economy. For example, if the real rates are positive and high it would indicate that the nominal rate is higher than the prevailing level of inflation, which would act as a disincentive for borrowers. Conversely, if the real interest rate is negative, then savers and investors would be penalized with a negative return and will not be fairly compensated for inflation risks. The journey of real interest rates in India over the past decade starting from FY12 up to FY22 can provide evidence to the criticality of the real interest rate and the effect it has had on the behavior of macroeconomic variables like saving and investment.



Source: RBI,MoSPI

In India, the years from FY12 to FY14 were characterized by negative real rates as growth was robust and inflation was in double digits. This was the period of the beginning of the “Taper Tantrum”, when the US Federal Reserve was on the verge of unwinding its massive Quantitative Easing (QE), which had led to a sudden outflow of capital from emerging markets. India was a part of the so-called Fragile Five group of countries. A singular characteristic of the economies termed as the Fragile Five was the over dependence on foreign capital flows for financing their widening current account deficits. Most of these countries, especially India, had low foreign exchange reserves. Most of these emerging markets saw rapid depreciation of their currencies and a fast depletion of dollar reserves during that period.

During FY12-FY14, even though growth was robust, real interest rates remained negative mainly on account of the high inflation rates seen during the period. Headline CPI inflation breached double digits in some months on account of the high food and fuel prices. To avoid overheating, the policy rate was kept high at 8-8.5% which affected the level of growth and inflation. This was an era before RBI adopted the Flexible Inflation Targeting (FIT) framework. Post the adoption of the recommendations of the Urjit Patel Committee report (2014), in 2016, inflation ebbed and growth remained within the 5-6% band. For India the saving investment gap widened during these years. This was due to a steep fall in investment as a percentage of GDP while the savings rate remained more or less steady.



Source: RBI,MoSPI

As a result of the high inflation and negative real interest rates, household savers shifted more towards physical assets like gold. This elicited various measures and moral suasion by the government and the RBI to dissuade people from buying gold as it worsened an already widening current account deficit. Savings and investment as a percentage of GDP declined sharply as a result. Savings as a percentage of GDP climbed down from a robust 34% to 32% by FY15, while investment was more responsive and fell from 34% to 30% by FY15. Incidentally, India was saved from a crisis due to abnormally low crude oil prices during the period caused by geopolitics. Also, this was the period when India started building up a war chest of FX reserves which reached a peak size of USD 642 billion in FY22. The savings rate had remained sticky at around 32% when the real rates turned positive during FY15-FY19, though never again reaching the peak levels of around 35%. Also, during FY15-19, investment had been on the decline, as real rates were significantly positive indicating high borrowing costs. Investments briefly got a fillip post the 2019 corporate tax cut given by the government. However, it was brief and post-COVID 19 investments remain weak at 27-28% of GDP and all efforts to ramp up private investment have yielded no significant results so far.

Natural Rate of Interest: To ascertain whether the economy is overheating or has underutilized capacity, it is necessary to have a benchmark rate or an ideal rate with which to compare the situation of the real rate in the economy. This is what is termed as the natural rate of interest. It is the rate of interest which would prevail when the economy is in full employment i.e. the capacity utilization is at a 100%, and inflation is at target, in the Indian case at 4%. The natural rate of interest is not directly observable and has to be ascertained looking at various macroeconomic parameters like demographics, production efficiency, potential growth, fiscal policy, size of government debt, default risk premiums etc.

This concept also has a degree of arbitrariness since the concept of potential output is open to interpretation. For example, a potential output of 7% will yield a natural rate of 3% with inflation at 4%, but if the potential output were to be estimated at 8%, the neutral rate would then be at 4% assuming constant inflation. Depending on the level of the real interest rate in relation to the natural rate of interest, the nature of the monetary policy stance is determined. The monetary policy stance can be classified into three states:

1. An expansionary or accommodative stance where the real policy rates are lower than the natural rate of interest
2. A contractionary policy stance where the nominal rates are higher than the natural rate of interest.
3. Neutral policy stance, where the nominal policy rates equal the natural rate of interest. Hence, monetary policy then has the flexibility to move either ways depending on data like inflation and growth.

The current RBI stance on monetary policy is neither of the three mentioned above and, the RBI-MPC states that the stance it has adopted is one of "withdrawal of monetary accommodation." This would mean that the RBI-MPC endeavors to bring the policy repo rate of a level where real policy rates are either zero or positive. As stated by one of the MPC members Prof. Jayant Varma, this meant withdrawal of accommodation would mean reversing the cycle of interest rate cuts beginning in 2019, when the first 25 basis point rate cut of this cycle was implemented, along with a change in stance from calibrated tightening to neutral.

Recently, RBI published an article[1] which indicates that post pandemic the natural rate of interest for India has declined from 1.6-1.8% during Q4FY15 earlier to 0.8-1% for Q3FY22. This would indicate a lower resetting of the potential output for India as indicated in studies conducted by the RBI. This conclusion is based on the fact that average inflation for the past three years has been around the 5.75% level, again pointing to a high level of inflation. Natural rate can decline if the potential output

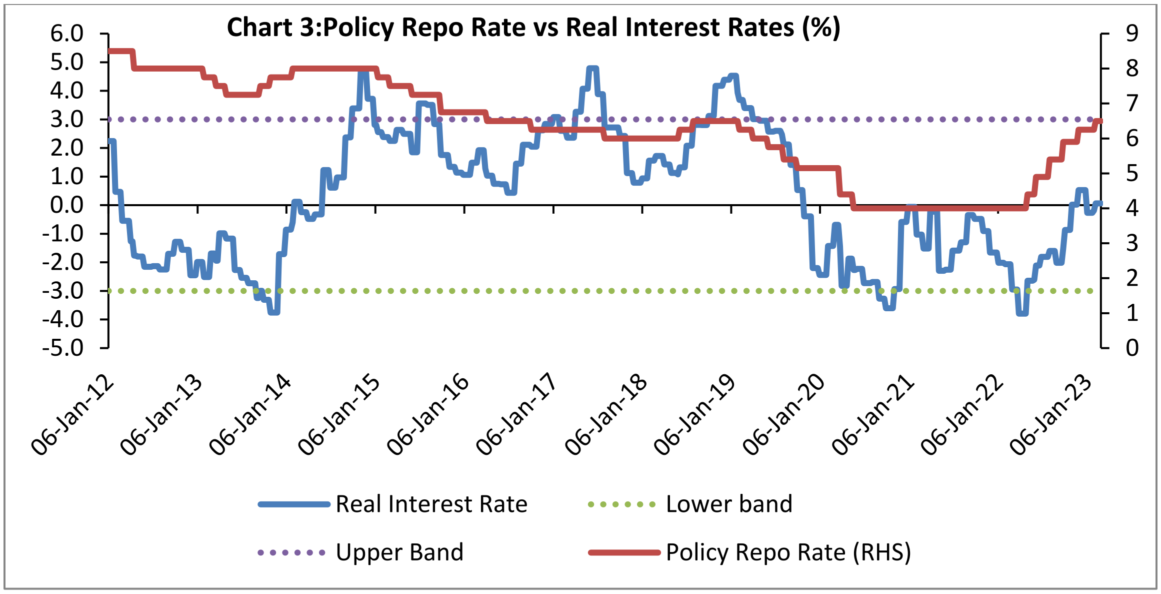
[1] Revisiting India's Natural Rate of Interest – Dr Patra et al, RBI Bulletin June 2022.

recedes or the inflation increases. Since inflation on an annual average basis has not increased it would indicate the economy has reset its level of potential output lower.

The relationship between the natural rate and the real rate: In the present times when most of the central banks have adopted some form of inflation targeting, the concept of a natural or neutral rate (r*) has become central to assess the performance of the central bank against some ideal interest rate prevailing in the economy as discussed above. The actual real rate (r) is realized through the nominal interest rate and inflation though various time periods, just as we have considered realized real rates through FY12 to FY22. Hence not only the real rate but even the natural rate of interest is subject to change over a period of time, as has been recently pointed out in the RBI paper previously mentioned.

India adopted flexible inflation targeting in FY16, which mandated the RBI, through an act of parliament to keep inflation at 4%, and gave flexibility to the framework by adopting a tolerance band of +/-2% around the target. The relationship between real and natural rate is between an ideal and actual rate. The divergence between real and natural rate affects monetary policy decisions as is visible in the actions of the RBI-MPC. For instance, during FY20-22, real rates had been steeply negative as inflation inched up and policy rates remained low for a long time. Also, the credit channels are affected by the real interest rate gap i.e. the divergence between the real and the natural rate of interest. Depending on whether the gap is positive ($r>r^*$) or negative ($r<r^*$), it affects economic activity accordingly. This is in alignment with the experience that if the real interest is positive, credit off-take usually would face a slump.

Fisher Effect: Classical economic theory suggests that money in an economy only affects nominal variables like inflation in the long run and does not affect real variables. Based on this postulate, it stands to reason that real interest rate should be constant even if inflation is variable. This would imply that the nominal interest rate should move in a one-to-one correspondence with the movements in inflation. This effect does not operate in India, to a full extent, and it manifests itself better in the developed world. This may be due to multiple reasons like lags in transmission of monetary policy and also due to the fact that a large part of the Indian economy remains informal and operates outside the banking sector. Moreover, policy responses to high inflation are guided by food inflation which has a ~46% weight in the inflation basket on which effects of monetary policy changes are questionable.



Source: RBI, DBIE

RBI's responses to changes in real rate: RBI's responses have changed according to the various regimes that it has followed over the years. The chart above shows the trajectory of the real interest rates calculated as the difference between the policy repo rate and the headline CPI since the time it has been available, i.e. January 2012. A structural break in the policy responses might be factored in during the past decade as RBI adopted a Flexible Inflation Targeting (FIT) approach in 2016. Till that time, the central bank used a multiple indicator approach to respond to inflation. This created opacity in the decision making process of the central bank, and economic stakeholders could not ascertain for sure as to what had triggered a policy decision that of a rate hike or a rate cut by the central bank.

RBI's reactions to inflation are dependent on the growth environment and the central bank's outlook for the economy, and inflation in particular. We have constructed tolerance bands for the real rates similar to tolerance bands as exist for CPI inflation in the monetary targeting framework and these bands are +/-3% around the real interest level of 0%. In the last decade, the bands have been breached widely seven times in all, as per our estimation of real interest rates. The real interest rate has been in positive territory with the recent inflation print for February 2023 at 6.44% and the policy rate now at 6.5%. Since the ideal real rate is closer to 0.8-1%, there is moderate headroom for the RBI to hike rates further in this cycle.

We expect the central bank to hike interest rates by another 25 basis points in the April 2023 MPC meeting, the room for the entire year will be constrained to 25-50 basis points of hikes thereafter, and hence we expect RBI to pause given that inflation slows down meaningfully below the upper tolerance level of 6%. As per our estimates, inflation is slated to be in the 4.8-5.8% range for FY24 and should give the RBI time to reflect on the effects of rapid monetary tightening.

Conclusion: India is now experiencing decent growth and an episode of high inflation. In this scenario the RBI would be expected to deliver a cure for inflation with minimal sacrifice on the growth front. Controlling inflation and bringing it down to target level will involve some sacrifice of growth. Global headwinds are palpable, as the world is experiencing multi-decade high inflation accompanied by a string of banking crises in US and Europe as fallout of steep monetary tightening as one of the prominent reasons. The Federal Reserve, with its resolve to curb inflation has aggressively raised interest rates, exporting the inflation to other corners of the globe via a strong dollar. Similar rate actions have been implemented in other major central banks like the BoE and the ECB. While slower pace of interest hikes is now in the offing, cumulative actions of these central banks have created fears of slowdown, if not an outright recession.

In these circumstances, the domestic growth scenario for India remains strong for now. There will be natural spillover effects to growth through the external sector. This is manifested in the weak export growth seen recently in the growth statistics. Seeing moderate GDP growth and high inflation, RBI has been nimble footed in raising policy rates by 250 basis points since the off cycle meeting in May 2022. The real rate as per our definition is positive as of now and the space for further tightening by RBI is now limited and we expect another 25 basis points of repo rate still remaining in the closure of the withdrawal of accommodation stance. Further policy actions might be more data and event dependent as RBI is likely to change its stance to neutral in the April 2023 MPC review, which should also set the growth inflation outlook for FY24.

STCI Primary Dealer Ltd.
CIN: U67110MH2006PLC165306
A/B1- 801, A Wing, 8th floor, Marathon Innova, Marathon Next Gen Compound,
Off. Ganpatrao Kadam Marg, Lower Parel (w), Mumbai 400013.

Dealing Room: (022) 66202217-20 ● Settlements: (022)66202262-64, Fax (022) 66202288
Delhi Office: (011) 47676557-58 ● Kolkata Office: (033) 40611435-36● Bengaluru Office: (080) 42183166/1021
Please mail your feedback to stcipd@stcipd.com ● Website: http://www.stcipd.com