*SBI Research, State Bank of India, Mumbai*

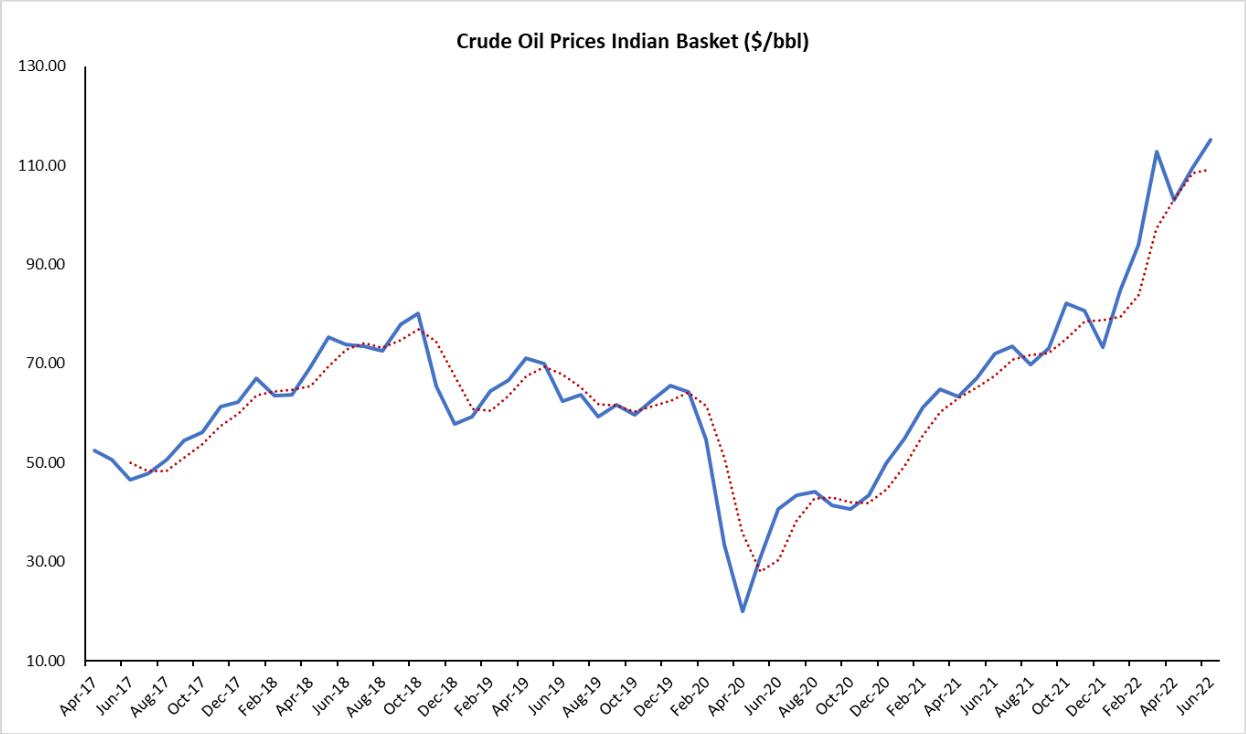
# Prelude to MPC deliberations: Revisiting McKinnon-Shaw Hypothesis

06-June-2022

# Global uncertainty aggravating

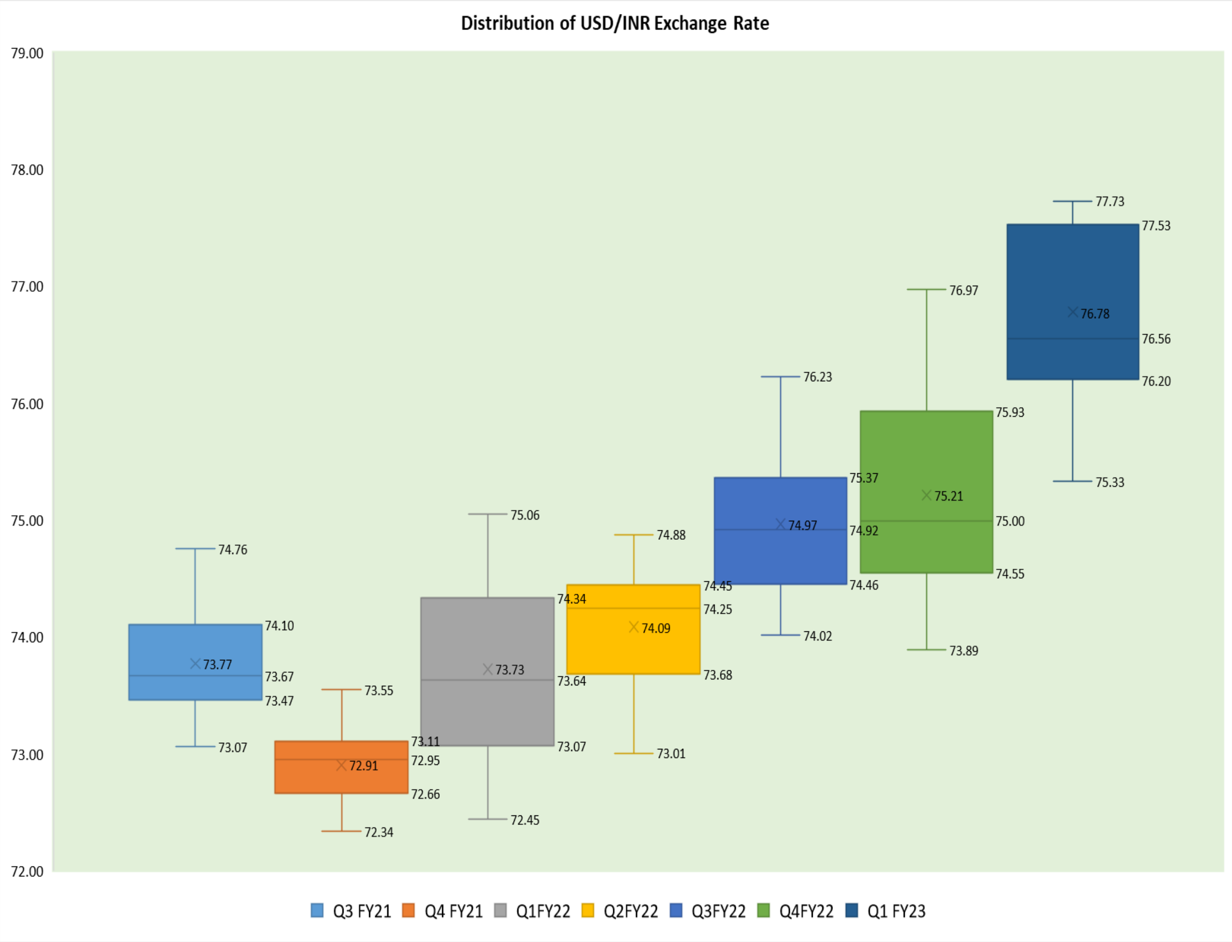
- Uncertainty around the evolution of the pandemic continues to prevail
- Emergence of monkey pox adds further to layer of uncertainty
- Geopolitical tension to increase in coming months as high crude prices impacts growth
- Net impact – volatile capital flows and exchange rate volatility
- Increase in demand for safe haven and thereby some correction in asset prices

# Crude Prices continue to be the uncertain piece in global jigsaw puzzle ……………….




- From its low of $20 per bbl, the crude prices have risen to $115.17 per bbl
- Expected to be in range of $120 per bbl for next two months
- The EU ban on Russian oil is expected to keep the prices high for some time. However, the ensuing slowdown in EU might soon set in motion the correction of high prices
- For India it is good option to look at Iran as source for oil as it is both cheaper logistically and well suited for domestic production technology

# ……USD INR exchange rate unlikely to track the uncertainty in crude prices and stay anchored…



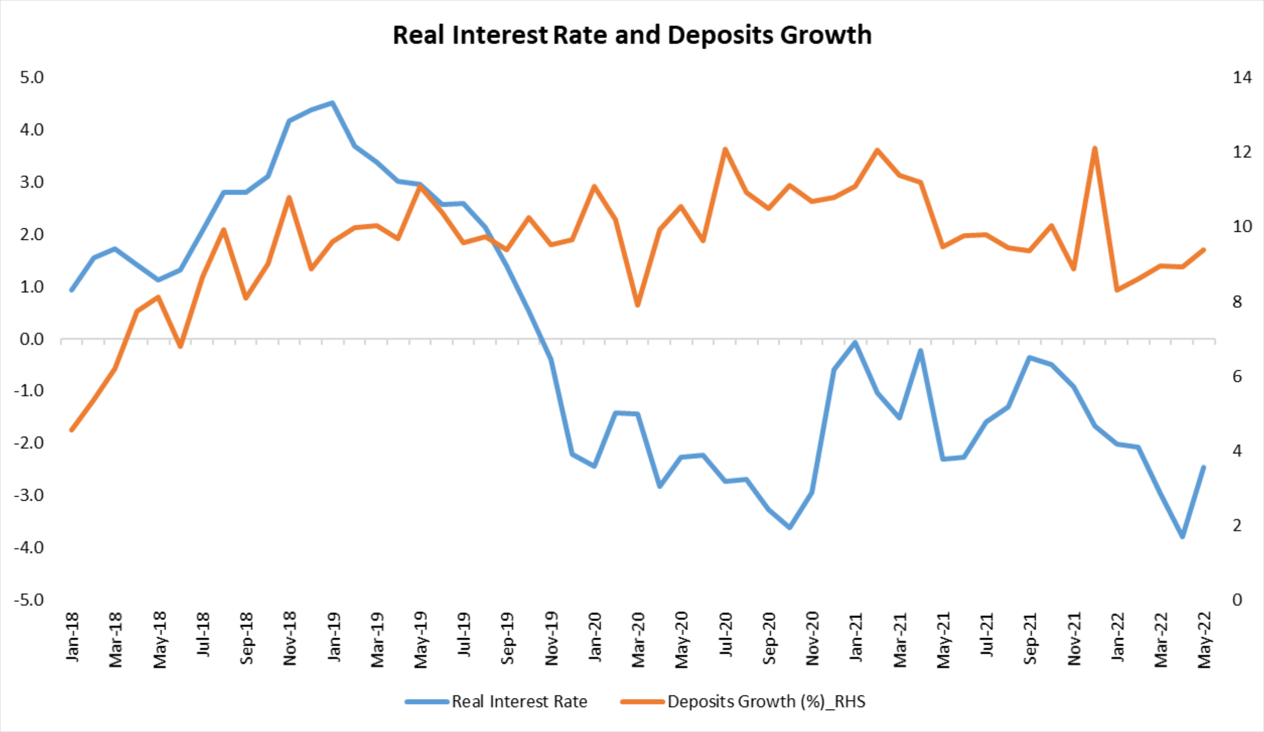

- USD/INR sideways movement in range 73-75 was breached from Q3
- Since then, USD/INR has moved north wards with high volatility
- FII outflows, and high commodity prices have contributed to USD/INR movement
- USD/INR may be in the range 76-78 for the next three quarters
- The pass through of rupee deprecation might be visible in domestic prices in coming quarters

# Does a positive real interest rate materially impact deposits over a longer cycle in Indian context?

- RBI hiked Repo rate by 40 bps in an off-cycle meeting in Apr’22 indicating a high interest rate environment going forward
- In 1973, economists Ronald McKinnon and Edward Shaw had postulated a relationship between high real interest rates and private savings
- In theory, **high real interest rates have two opposing effects on private savings**:
  - First is the *substitution effect*, in which saving increases as consumption is postponed to the future, and
  - Second is the *wealth effect* in which savers increase current consumption at the expense of saving
- The impact of real interest rates on private saving is therefore ambiguous and can only be established empirically
- Further, McKinnon and Shaw said that under conditions of financial repression, the substitution effect dominates the wealth effect, thus enhancing financial intermediation
- In the Indian context, studies show the substitution effect of real interest rate is more than the wealth effect, implying positive impact on savings
  - However, the actual coefficients are significantly small and insignificant in most of the cases. The coefficient ranges from 0.1 to 0.3, suggesting a large change of as much as 3% to 10% in real deposit rates will be needed to change savings rate by 1% and small changes will hardly make any difference, if any
  - A clear definition of positive real rate is also not available in Indian context. Reference has been made both to a one year treasury-bill rate and 10 year rate in past

# Interest Rate Sensitiveness of Deposits/Savings: The Evidence

- We analysed the data for the period Jan'18 to May'22 in Indian context and the analysis indicates the evidence in not clear
- However, as one can see that deposit growth has been higher even when real interest rate was declining, but has continued to hold fort even when real deposit rates turned negative
- In the Indian context, per capita income has a higher impact on domestic savings
- All these facts make us to believe that the peak repo rare in current cycle might be anchored at 5.5% to get the optimal outcome as impact of large increases of real interest rate on deposit is uncertain…



# Repo Rate increases will curtail inflation through the credit channel…Monetary Policy transmission lags may have shortened significantly with EBLR rates…interest rate hikes will have a swift impact

- As of Dec'2021, around 39.2% of the loans are benchmarked to external benchmarks (EBR), so the increase in repo rate of 40 bps will eventually increase interest cost on consumers ~ Rs 12,152 crore and demand may crash during an increasing rate scenario
- Further, if RBI increases repo rate by 75 bps then there would be around Rs 23,114 crore interest cost on Retail & MSME consumers (1 bps increase in repo will have combined impact of ~ Rs 305 crore on Consumers – MCLR Loans: Rs 65 crore and MCLR: Rs 240 crore)

**Share of Outstanding Floating Rate Rupee Loans of SCBs (in %): Interest Rate Regimes**

| Segments | Base Rate | MCLR | EBR |
|---|---|---|---|
| MSMEs | 5.5 | 35 | 58.5 |
| Personal Loans | 6.2 | 57 | 35.3 |
| Housing | 7.3 | 41.9 | 49.1 |
| Vehicle | 4.3 | 57.3 | 38.2 |
| Education | 32.0 | 40.7 | 23.7 |
| Other Personal Loans | 2.1 | 78 | 19.3 |

Source: RBI Bulletin July 2021, SBI Research

**Impact on Retail & MSME Consumers due to Rise in External Benchmark Rates (Rs crore)**

| Type of Loans | Loans Outstanding as end March 2022 | Loans Benchmarked | | Increase in Interest Cost due to rise in benchmark rates due to Repo Hike of 40 BPS | |
|---|---|---|---|---|---|
| | | MCLR | EBR | MCLR | EBR |
| Personal Loans | 3385827 | 1929922 | 1195197 | 1930 | 4781 |
| Housing (Including PS Housing) | 1492232 | 625245 | 732686 | 625 | 2931 |
| Education | 78266 | 31854 | 18549 | 32 | 74 |
| Vehicle Loans | 368422 | 211106 | 140737 | 211 | 563 |
| Other Personal Loans | 767100 | 598338 | 148050 | 598 | 592 |
| MSMEs | 20,22,634 | 707922 | 1183241 | 708 | 4733 |
| *Memo: Total Increase in Interest Cost in Personal Loans & MSME* | | | | | |
| Repo hike 40 bps | Rs 12,152 crore | | | 2638 | 9514 |
| Expected Repo Hike of 75 bps | Rs 23,114 crore | | | 5276 | 17838 |

Source: SBI Research, RBI

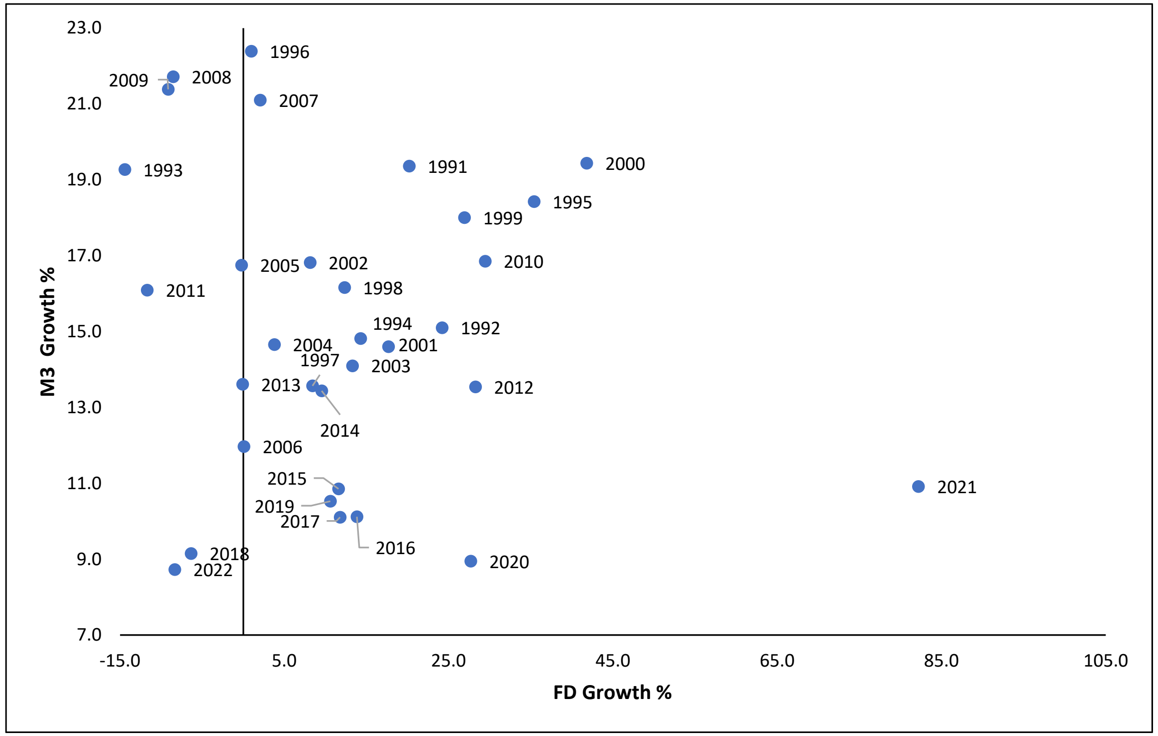
# Forthcoming Policy will continue to have a nuanced communication ...........1

In the forthcoming policy RBI might emphasis on communication by highlighting 3 things

- Quantifying clearly what RBI mean by durable growth
- Clarifying the market of the consistency of an accommodative stance and a rate hike
- In the Indian context, fiscal policy have always dominated monetary policy. Perhaps the pandemic witnessed for the first time the monetary and fiscal policy coordination and the policy statement can allude us to that

❑ Coming back to monetary and fiscal policy coordination, accompanying graph offers a rough impression of the history of monetary-fiscal coordination in Indian context. It plots the change in the consolidated fiscal deficit (as a crude indicator of the thrust of fiscal policy) on the horizontal axis and the change in the growth rate of M3 (as a crude indicator of monetary policy) on the vertical axis for the 30-year period ended FY2020

❑ The scatter of points does not leave a figment of imagination of a strong negative correlation between the two as might be expected from well-coordinated policies. However, such correlation is statistically insignificant across all measures



# Monetary and Fiscal policy has been the hallmark of coordination during pandemic....2

- ….Thus the correlation matrix between the fiscal policy and monetary policy by using Pearson, Spearman and Kendall methods show that the negative correlation is statistically insignificant across all correlation measures, implying little co-ordination in Indian context
- Against this background the policy response by RBI and Government needs to be wholeheartedly complemented. The RBI has been largely successful in communicating to the market about its intentions and seems to have managed the art of managing expectations much better

| Correlation Matrix | | |
|---|---|---|
| **Pearson Correlation** | **M3 (Correlation Values)** | **M3 (P- Value)** |
| Combined Deficits of Central and State Governments | 0.185 | 0.260 |
| Centre's Gross Fiscal Deficit | 0.174 | 0.289 |
| Gross Fiscal Deficit of State Governments | 0.111 | 0.501 |
| **Spearman's Rank correlation** | | |
| Combined Deficits of Central and State Governments | 0.107 | 0.516 |
| Centre's Gross Fiscal Deficit | 0.167 | 0.310 |
| Gross Fiscal Deficit of State Governments | 0.070 | 0.672 |
| **Kendalls Correlation** | | |
| Combined Deficits of Central and State Governments | 0.103 | 0.533 |
| Centre's Gross Fiscal Deficit | 0.138 | 0.401 |
| Gross Fiscal Deficit of State Governments | 0.053 | 0.749 |
| Source: SBI Research | | |

## The sheer joy of Monetary and Fiscal policy coordination through a NASH Equilibrium: Monetary Policy tightening, and Fiscal policy support like (fuel tax rationalisation) provides the optimal solution in current context

- An optimal monetary and fiscal policy response can be derived in the current context between RBI and Ministry of Finance through the use of Game Theory whereby we assume that both the Government and RBI have 2 options between them, either a policy contraction or a policy expansion. We thus effectively have 4 policy options, and each of the options will have a particular payoff
- The payoffs are hypothesized as benefits accruing to the Government and RBI separately when they are deciding on either of the policy option: contraction or expansion. Specifically, the fiscal authority is assumed to favour expansionary policy and gets maximum payoff of 4 and 3 / the first number from each box denotes the payoff to Government (see payoff matrix / lower 2 boxes)
- Separately, the monetary authority wants to contract the economy to fight inflation, and hence the maximum payoff / the second number from each box denotes the payoff to RBI second (and it comes from left lower box and the upper left box.)
- However, as between the two outcomes which combine expansion and contraction, in the current Indian context, it is reasonable to assume that Government prefers a compassionate / expansionary fiscal policy in the current context while expects RBI to control inflation using contractionary monetary policy
- This implies that the **pay-off matrix 3, 3 would be the best optimal solution and the NASH equilibrium**

| | | Monetary Policy | |
|---|---|---|---|
| | | Contraction | Expansion |
| Fiscal Policy | Contraction | 1 4 | 2 2 |
| | Expansion | 3 3 | 4 1 |

# System Liquidity declining significantly: CRR hike should be viewed more through the prism of building up a war chest of supporting the market by releasing the impounded liquidity in future through OMO operations

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- In H2:2021-22, RBI has refrained from providing any additional liquidity and focused on management of the liquidity overhang by rebalancing absorption under the overnight fixed rate reverse repo window towards variable rate reverse repo (VRRRs) auctions of varying maturities
- During 2021-22, an amount of Rs 2.2 lakh crore was also withdrawn from the system through restoration of CRR to pre-pandemic levels, repayment of TLTRO and OMO sales
- Liquidity has significantly declined and thus a further CRR increase will be a touch and go. RBI threshold liquidity beyond which inflation is triggered is Rs 2.7 trillion of NDTL / 1.5% of NDTL: Currently LAF is at Rs 3.6 trillion
- However, Government surplus cash balances currently stand at Rs 3.1 trillion, thus the liquidity situation will depend on how much the Government spends
- If the Government starts to spend, liquidity could again go higher than Rs 3.6 trillion necessitating liquidity adjustment

**RBI Liquidity position**

| Rs Lakh Crore | 31-Mar-22 | 04-May-22 | 03-Jun-22 |
|---|---|---|---|
| Repo Outstanding | 0.83 | 0.84 | 0.84 |
| Reverse Repo Total | 6.78 | 5.02 | 3.06 |
| SDF started on 08.04.2022 | - | 1.83 | 1.82 |
| Net LAF(+absorption) | 5.54 | 5.71 | 3.64 |
| Government Cash Balance | 1.13 | 1.42 | 3.11 |
| Core Liquidity(+surplus) | 8.32 | 6.84 | 6.81 |

Source: RBI, SBI Research

# Back-to-Back Rate Hike is imminent in June policy

- The persistence of high inflation is forcing countervailing monetary policy action at a time when supporting the economic recovery should have been assigned priority

- During 2022 so far, more than 45 central banks across AEs and EMEs have raised policy interest rates and/or scaled back liquidity, with *many central banks hiked interest rates in back-to-back policies*

- Policy trade-offs are becoming increasingly complex going forward and tail risks, including stagflation, loom large in several countries

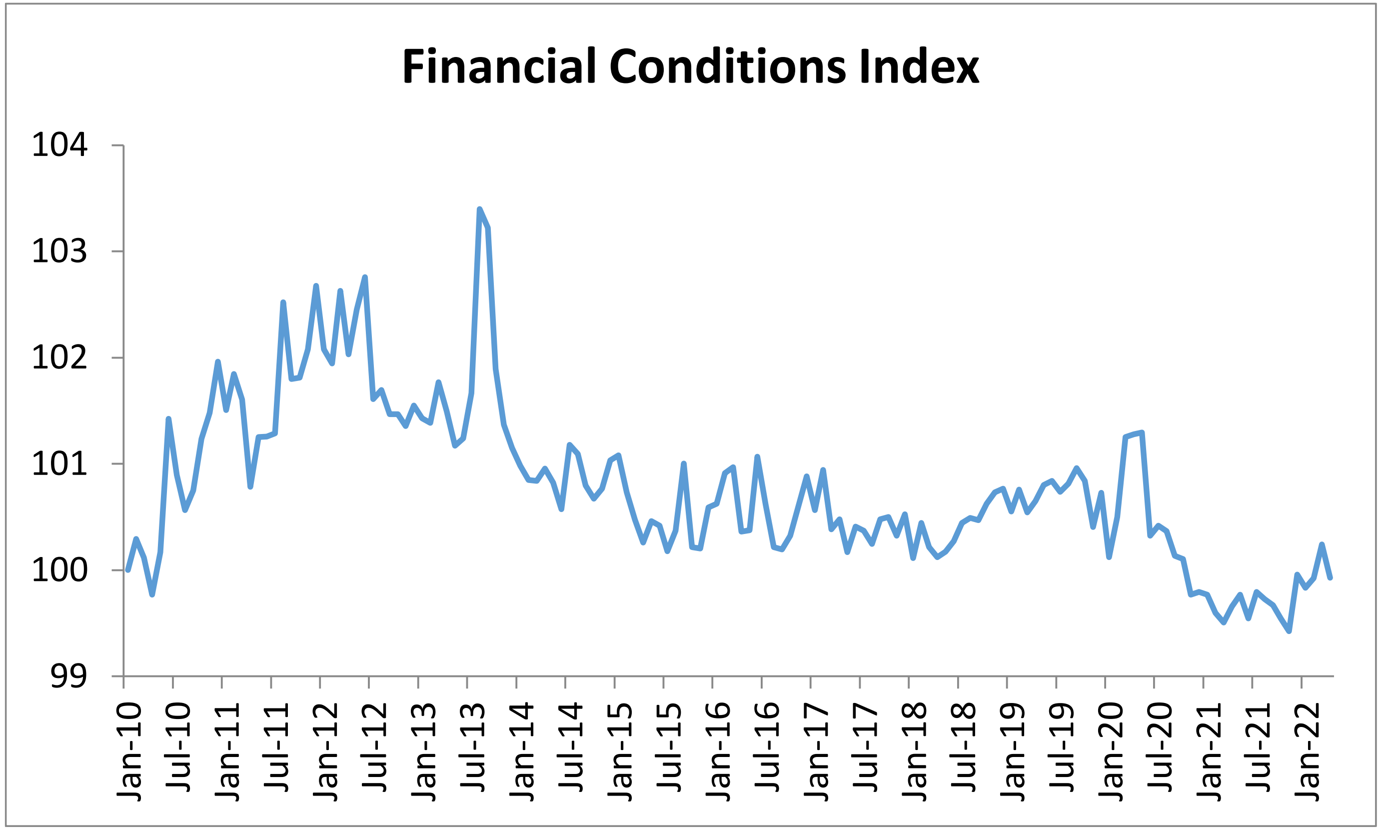
**Back to Back Rates Hikes in Select Economies**

| Country | Rate Hike in bps | | Latest Inflation |
|---|---|---|---|
| | Mar/Apr | May | |
| Argentina | 250 | 200 | 58.0 |
| Bahrain | 25 | 50 | 3.5 |
| Brazil | 100 | 100 | 12.1 |
| Canada | 25 | 50 | 6.8 |
| Israel | 25 | 40 | 4.0 |
| Mexico | 50 | 50 | 7.7 |
| New Zealand | 50 | 50 | 6.9 |
| Poland | 100 | 75 | 12.4 |
| Saudi Arabia | 25 | 50 | 2.3 |
| South Africa | 25 | 50 | 6.0 |
| South Korea | 25 | 25 | 4.8 |
| UK | 25 | 25 | 9.0 |
| US | 25 | 50 | 8.3 |

Source: CB Rate, SBI Research

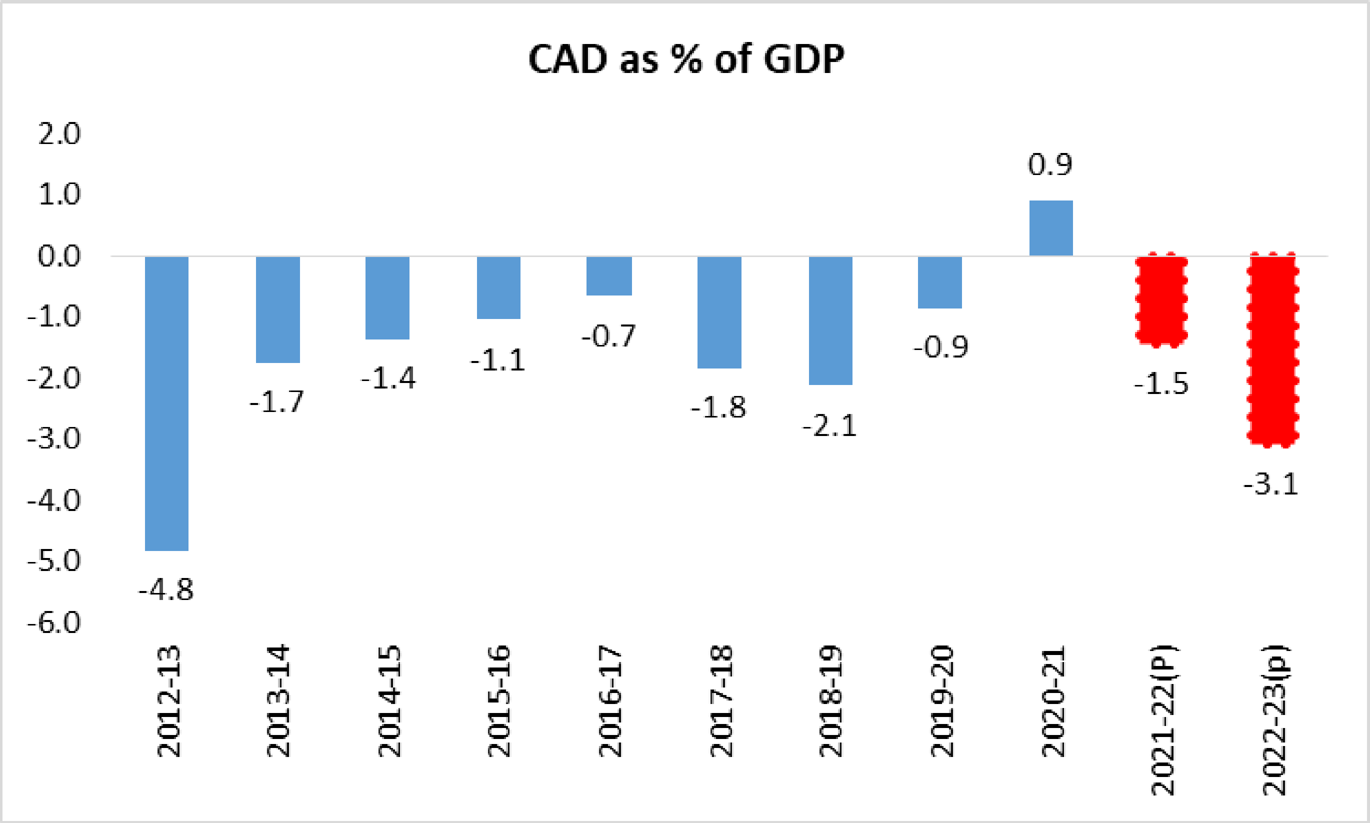
# Financial Conditions have improved and rate hikes will improve it further by repricing risk

- Financial Conditions Index using measures of term/risk spread, market sentiment, liquidity and WACR using PCA analysis as per a RBI study indicates an improvement in Financial stability…
- The year 2021 witnessed improvement in financial conditions and in 2022 after the initial worsening of financial conditions, they improved modestly in April 2022



# CAD may rise to a decade high in FY23

- India recorded a current account deficit of 1.2% of GDP in April-December 2021 as against a surplus of 1.7% in April-December 2020 on the back of a sharp increase in the trade deficit
- FY23 will be a challenging year since as per our estimate CAD will breach the 2.5% mark and may reach 3.1%



## ……High nominal GDP growth is likely to result in better tax collections even in FY23 and thus the Government has further lever to rationalise expenditure even further… fiscal policy clearly emerging as the winner……

| FY | Nominal GDP (% Growth) | Gross Tax Revenue (% growth) | Tax Buoyancy | Excess Gross Tax Revenue from Budgeted (Rs Lakh Cr) | Excess Expenditure from Budgeted (Rs Lakh Cr) |
|---|---|---|---|---|---|
| FY21 | -1.4 | 0.8 | -0.6 | 1.27 | 0.79 |
| FY22 | 19.5 | 33.6 | 1.7 | 1.92 | 0.24 |
| FY23(P) | 16.1 | 7.4 | 0.5 | 1.50 | 1.96 |

# Final thought: Continue with State-Based Guidance

- So, what will be the RBI's policy look like:

| Indicator | Our View |
|---|---|
| Repo rate | ▪ Hike of 50 bps |
| Stance | ▪ Accommodative (*while focusing on withdrawal of accommodation*) |
| CRR | ▪ Touch and Go: Government spending holds the key… |
| Risks for growth/inflation | ▪ Geo-political crisis<br>▪ Elevated oil and commodity prices<br>▪ Fuel price and rupee depreciation pass through<br>▪ Rate hikes by Fed |
| Liquidity conditions | ▪ Growth Supportive |
| Forward Guidance | ▪ The RBI shift from **time-based guidance to state-based guidance** in April 2021 was a commitment to support growth in an implicit manner in the then uncertain environment. Environment continues to be uncertain, thus continuation of state-based guidance is even more relevant today<br>▪ The RBI may now rephrase its forward guidance by quantifying growth on a durable basis thus justifying the state-based guidance and making such guidance more explicit from implicit. Growth still is in nascent stage and hence such a stance will be perfectly justified |




**Contact Details:**
**Dr. Soumya Kanti Ghosh**
Group Chief Economic Adviser
State Bank of India, Corporate Centre
Nariman Point, Mumbai - 400021
Email: soumya.ghosh@sbi.co.in
gcea.erd@sbi.co.in
Phone:022-22742440
:@kantisoumya