*Financial markets in India: In Pursuit of Stability and Development**

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It is my pleasure to be part of the Annual FIMMDA[1]-PDAI[2] Conference today. I would like to place on record the Reserve Bank's appreciation of the critical role played by FIMMDA and PDAI in the development of financial markets in India over the years, and more recently, in partnering with the RBI in guiding the markets and the economy through the turbulent times of COVID-19, the war in Ukraine and the turmoil in financial markets.

Today, as I speak before keen market players, veterans and experts, I thought this would be an opportune moment to recapture the journey of our financial markets in the last decade or so and reflect on where we are and what we think about the course ahead. An attempt to draw from the past and forge ahead, so to speak.

From the global financial crisis to the Eurozone sovereign debt crisis; from the taper tantrum to Brexit; from unprecedented quantitative easing to among the most accelerated monetary tightening in recent memory; from a pandemic which brought humankind to a standstill to a geopolitical crisis which threatens the world order as it exists today - it would not be an exaggeration to say that the world has moved from one storm to another in the years since the global financial crisis.

Against this backdrop, the journey of Indian financial markets has been driven by two key objectives – stability and development. Crisis management has been a key component of this journey. Nonetheless, the pursuit of developmental reforms, with the key objective of widening and deepening of financial markets was continued even amidst the worst storms.

The Journey so far

Let me take a moment to reflect on the journey of Indian financial markets over the past few decades. Right up to the end of the 1980s, the Indian economy was characterised by an administered interest rate regime, fixed exchange rates, a captive government securities market and current and capital account restrictions. Policy measures during the decade of the 1990s set the stage for a transition to market-determined interest and exchange rates, shift to a multiple indicator approach and eventually to flexible inflation targeting in the conduct of monetary policy, convertibility in the current account and gradual liberalisation of the capital account. The policy measures were bolstered by several key legislative changes: the Foreign Exchange Management Act (FEMA), 1999; the Government Securities Act, 2006; the amendments to the RBI Act in 2006 to give explicit regulatory powers to the Reserve Bank over government securities, derivatives, and money market instruments; and the Payment and Settlement Systems Act, 2007. The Clearing Corporation of India Ltd. was set up in 2001 to provide clearing and guaranteed settlement for money, government securities, forex and derivative markets. A Real Time Gross Settlement System (RTGS) and the NDS-OM platform were operationalised. A Trade Repository was put in place for derivatives. Some of these initiatives became important at a global level only after the G20 rolled out its reforms agenda in the 2009 Pittsburgh Summit.

After the global financial crisis (2008), the Indian financial markets were nascent but growing. The approach to foreign participation in most market segments was cautious. Derivative markets, the markets for the purpose of hedging risks, were limited

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1 Fixed Income Money Market and Derivatives Association of India (FIMMDA)

2 Primary Dealers' Association of India (PDAI)

in terms of participants and products. Meanwhile, the BIS Triennial survey published in 2013 showed that there was growing interest in the Indian Rupee overseas. The onshore and offshore markets for the Rupee, however, remained segmented, with the spreads between the onshore and offshore forex and interest rates being wide.

Headwinds and Tailwinds

Coming to more recent times, many of our policies over the last decade have been guided by the learnings from crisis management as well as the developmental objectives our country aspires to achieve. As the world moved through one storm after another, we were compelled to navigate through the spillovers of major global headwinds.

Equally compelling in guiding policy were the needs of the economy. As the real sector grew over the last decade, expectations from the financial markets also grew. The needs of the economy reflect these developments. To place this in perspective, let's look at some figures. Nominal GDP increased four-fold from ₹64 lakh crore for FY 2010 to ₹273 lakh crore for FY 2023.[3] External trade also increased over four-fold from ₹29 lakh crore to ₹137 lakh crore during the same period.[4] The ratio of trade to GDP[5] has risen to 45 per cent in 2021 from 25 per cent in 2000. Foreign Direct Investment (FDI)[6] in the country has risen sharply by two and a half times since 2010. The flow of resources to the commercial sector in India almost doubled from ₹12 lakh crore in FY 2012 to ₹22 lakh crore in FY 2022.[7] While banks continue to be a dominant source of financing, market borrowings[8] of the commercial sector increased from ₹74,000 crore in FY 2012 to ₹3,16,000 crore in FY 2022. As our economy and financial markets grew, the integration with the world economy and global financial markets has also risen. The growing economy and our aspirations to be and remain among the fastest growing economies has expanded our funding needs. All these necessitate larger and deeper financial markets.

The policy response to headwinds

It is relevant to look at some of our policy responses in recent times, especially to major global headwinds. Each successive episode of turmoil over the last decade and half has posed a specific set of challenges for the economy. Each has warranted a specific response.

In 2008, policy actions were aimed at ensuring comfortable system liquidity; augmenting forex reserves and maintaining a crisis management framework to support the economy through the global financial crisis. Conventional tools such as policy interest rates and cash reserve ratio (CRR) were used. Measures to manage forex liquidity included, *inter alia*, relaxing the interest rate ceiling on foreign currency deposits by non-resident Indians and external commercial borrowings (ECB) for corporates. Unconventional measures included a rupee-dollar swap facility for Indian banks, a refinance window for mutual funds and a special purpose vehicle for supporting nonbanking financial companies.

Post the announcement of early taper of quantitative easing by the Federal Reserve in 2013, the need for restoring confidence of market participants and containing the pressure on the Rupee guided the Reserve Bank's policy responses. Monetary conditions were tightened through unconventional tools. Forex market measures included both direct intervention and administrative measures to manage capital flows. These included import restrictions of non-essential items, opening of a special dollar swap window for

3 Source: Ministry of Statistics and Programme Implementation

4 Source: Ministry of Statistics and Programme Implementation, RBI Balance of Payment Statistics

5 Source: World Bank

6 Source: Reserve Bank of India

7 Source: RBI Handbook of Statistics

8 Market borrowing includes public & rights issues by non-financial entities, gross private placements by non-financial entities and net issuance of commercial papers subscribed to by non-banks.

PSU oil companies, a concessional swap window for Foreign Currency Non-Resident (FCNR-B) deposits, increased overseas borrowing limits of banks, enhanced foreign investment limits in government debt and restrictions on outward investment flows, Liberalised Remittance Scheme (LRS) entitlements as well as exchange-traded derivatives.

The outbreak of the COVID-19 pandemic in March 2020 necessitated swift and focussed policy responses to address the emerging or potential market dislocations. As in the past, policy rates were reduced and systemic liquidity was expanded. But, this time, the policy corridor was asymmetrically widened and the fixed rate reverse repo became the effective anchor for the evolution of short and longer-term interest rates. To improve transmission of policy rates and ensure flow of credit to the affected sectors, unconventional measures were used *viz.*, the Long-Term Repo Operations (LTROs), targeted LTROs and special refinance facilities to All India Financial Institutions. A special liquidity facility for mutual funds aimed at assuaging redemption pressures was also instituted. For the first time, the Reserve Bank pledged its balance sheet to revive the economy through a Government Securities Acquisition Programme (G-SAP) which provided an upfront commitment on the amounts to be purchased. Special open market operations involving simultaneous purchase and sale of securities (Operation Twist) were undertaken for orderly evolution of the yield curve and liquidity management. Forward guidance gained prominence with the emergence of time and state-contingent guidance, with assurances on the Reserve Bank's commitment to maintain congenial financial conditions. Communication became a significant part of our monetary policy toolkit.

The onset of the war in Ukraine again weakened risk sentiment, with commodity prices and inflation rising to multi-decade highs. As major central banks accelerated policy rate hikes and tightened liquidity to tackle inflationary pressures, financial market volatility spiralled, and the Rupee came under considerable pressure. The policy response this time eschewed administrative measures to contain outflows and instead focused on measures to enhance inflows through incentivising non-resident deposits, foreign investments in debt instruments and ECBs. To promote exports and support the increasing global interest in the Rupee, an additional arrangement for invoicing, payment and settlement of exports/ imports in Rupees was put in place.

The point I want to emphasise here is that while there were clear common strands in the Reserve Bank's response to various episodes of turmoil, the response was customised to each episode in terms of policy objectives and choices, and use of toolkits. Every response was a function of the underlying macroeconomic conditions and reflected learnings from earlier crises. In this context, I would like to mention three distinctive features of our policy responses. First, all liquidity management operations by the Reserve Bank, including measures for mutual funds and NBFCs, have always been through banks which are the liquidity conduits for the Reserve Bank even in peace times. Second, the measures entailed no dilution of collateral standards and ensured that the central bank remained cushioned from counterparty risks. Third, most of the measures this time around were time-bound and expired as per their originally defined maturity. Illustratively, the G-SAP was discontinued, relaxations with respect to CRR were allowed to normalise and the liquidity management framework was tweaked in April 2022 to operationalise the standing deposit facility (SDF). This approach has enabled us to get out of a potential liquidity trap, the Chakravyuh.

Interestingly and perhaps paradoxically, the measures to reform and develop financial markets have taken place at an unprecedented pace during a decade of unprecedented challenges. The reforms were aimed at deepening onshore financial markets and increasing the efficiency of price discovery. The more recent reforms sought to (i) remove market segmentation by simultaneously easing access of non-residents to domestic markets and permitting residents to access offshore markets; (ii) expand the participation base by encouraging non-resident participation in financial markets and retail participation through the provision of easy access, for example through the Retail Direct and FX Retail platforms; (iii) facilitate more sophisticated users to access markets for their hedging needs and to express their views on market movements; (iv) promote innovation through the introduction of a larger suite of products which can be customised to the needs of individual market participants;[9] and (v) ensure fair user conduct through protection of the retail user and a sound, receptive and a customer suitability framework. A robust infrastructure and conduct framework has been put in place through efficient clearing and settlement arrangements, benchmark reforms, transparency requirements and stipulations on market abuse, among others.

India has also come a long way towards achieving higher levels of capital account convertibility. Liberalisation of Foreign Direct Investment (FDI) flows continued over the last decade, with FDI becoming unrestricted except in certain sensitive / strategic sectors. Limits for non-resident investments in domestic market markets were liberalised. The Voluntary Retention Route (VRR) was introduced to facilitate non-resident investment in government and corporate bonds. A Fully Accessible Route (FAR) which places no limit on non-resident investment in specified benchmark government securities was introduced as part of further liberalisation of portfolio debt inflows. The ECB framework was comprehensively liberalised and is now subject only to an overall soft limit and a few "end use" restrictions. Regulations for Overseas Direct Investments (ODI) have also been rationalised and liberalised. The LRS is now available for both current and capital account transactions.

Where do we stand today?

In the aftermath of multiple shocks, the global economy is projected to contract significantly in 2023. The worst for the global economy, both in terms of growth and inflation, seems to be behind us. Lately, with some ebbing of COVID-related restrictions and cooling of inflation in various countries, though still elevated, central banks have started what appears to be a pivot towards lower rate hikes or pauses. At the same time, they continue to emphatically reiterate their resolve to bring inflation down closer to targets. High policy rates for a longer duration appear to be a distinct possibility, going forward. On the growth front, projections are now veering around to a softer recession as against a severe and more widespread recession projected a few months back.

In this hostile and uncertain international environment, the Indian economy remains resilient, drawing strength from its macroeconomic fundamentals. Our financial system remains robust and stable. Banks and corporates are healthier than before the crisis. Bank credit is growing in double digits. India is widely seen as a bright spot in an otherwise gloomy world. Our inflation remains elevated, but there has been a welcome softening during November and December 2022. Core inflation, however, remains sticky and elevated.

On the external front, de-globalisation and protectionism are gaining ground as witnessed during the recent global supply-chain shock. It is thus necessary to build and strengthen bilateral trade relations to deal with such challenges. India

[9] The directions on market making in OTC derivatives which came into effect from January 2022 permitted market makers to offer a variety of derivative products to residents to efficiently design strategies to hedge their risks. Subsequently, several new products, *e.g.*, FX barrier option, binary option, targeted range forwards in the forex market and swaptions and total return swaps in the interest rate market have been introduced.

has recently signed bilateral trade agreements with the UAE and Australia and more such agreements are works in progress. The average current account deficit to GDP ratio stands at 3.3 per cent during H1:2022-23. The slowing global demand is weighing on merchandise exports; but our exports of services and remittances remain strong. The net balance under services and remittances remains in a large surplus, partly offsetting the trade deficit. Consequently, the current account deficit is eminently manageable and within the parameters of viability.

On the financing side, net FDI flows remain strong and foreign portfolio flows have resumed since July 2022, with intermittent outflows from time to time. The size of forex reserves is comfortable and has gone up from USD 524 billion on October 21, 2022 to USD 572 billion as on January 13, 2023. Further, India's external debt ratios are low by international standards. This has enabled the Reserve Bank to eschew measures to control capital flows and take steps to further internationalise the domestic currency, even during episodes of significant capital outflows.

Every global risk-off episode resulted in an appreciating US dollar imposing downward pressures on most other currencies. Comparison of the performance[10] of the Rupee across successive crisis episodes tells its own tale. During the global financial crisis, the Rupee witnessed its worst depreciation - between April 1, 2008 and March 3, 2009 - when it lost 23 per cent against the US dollar. Similarly, it depreciated by 22 per cent during the taper tantrum between May 01, 2013 and Aug 28, 2013. However, the extent of Rupee depreciation was lower in each subsequent episode of turbulence. In the initial days of the pandemic, *i.e.*, between February 17, 2020 and April 21, 2020, the Rupee depreciated by only 7 per cent. Even during the period of geopolitical tensions emerging out of Ukraine in 2022, while the Rupee lost 9 per cent against the US dollar between February 24, 2022 and October 19, 2022, it outperformed the currencies of most advanced and many emerging market economies.

Importantly, the Rupee's performance in terms of volatility remained impressive. For example, the 1-month implied volatility of the Rupee touched a high of 25 per cent during the global financial crisis on October 10, 2008 and 20 per cent during the taper tantrum period on August 29, 2013. During the COVID-19 pandemic, however, the implied volatility peaked at 10 per cent on March 24, 2020 and has remained well anchored[11] thereafter, despite the uncertainties associated with the war and monetary tightening by major central banks. The Government bond market has also remained resilient, with average bid-ask spreads being the lowest among peer nations. The yield curve has also evolved in an orderly manner without any undue volatility, despite the significantly higher government borrowing.

Looking ahead

Today, when we look ahead, we still see challenges, but we can prepare for them with optimism and confidence. The Indian financial markets have developed appreciably over the years. Liquidity in the government securities and the overnight money markets have grown. Bid-ask spreads remain narrow, reflecting efficiency in price discovery. In the forex market, overall trading volumes have grown, and a suite of hedging products have emerged. Volumes in the interest rate swap market have grown consistently and new products in these markets are also developing. Onshore and offshore markets are getting increasingly

[10] Source: Data from Bloomberg has been used to evaluate the performance of Rupee.

[11] Daily average 1-month implied volatility of Rupee was 5 per cent between January 1, 2022 and January 20, 2023 and reached a high of 8 per cent on March 7, 2022.

Source: Bloomberg.

integrated with narrowing of forex and interest rates across the markets. Non-resident participation in markets is growing, *albeit* gradually.

The global economy is still marred by shocks and uncertainty. Financial markets remain volatile and the geopolitical situation continues to be tense. International food, energy and commodity prices have eased but uncertainties do remain. Inflation remains high and broad-based across countries. The IMF has projected contractions in over one-third of the global economy.

In India, we have come a long way in the development of financial markets, but this remains work in progress. The Reserve Bank and stakeholders like FIMMDA and PDAI need to work together and focus on certain specific areas. Secondary market liquidity in g-secs is concentrated in a few securities and tenors. The MIBOR-based OIS remains the only major liquid product in the interest rate derivative market. A term money market remains absent, notwithstanding a host of facilitative policy measures. Access of the retail segment to markets, especially derivative markets, needs to improve further. In the forex markets, while corporates benefit from the tight bid-ask spreads, smaller users continue to face pricing disadvantages notwithstanding regulatory requirements for fair and transparent pricing. Likewise, there remains a need for improvement in ensuring liquidity for retail investors in the government securities markets.

Conclusion

The journey of Indian financial markets through the last decade has been a story of steady progress with stability. We have been steadfast in our commitment and consistent in our approach to keep the ship stable while continuing to move ahead. Going forward, greater challenges will emerge as the footprints of Indian banks increase in the offshore markets, the range of products expand, non-resident participation in domestic markets grows and as capital account convertibility increases. Market participants will have to prepare themselves to manage the changes and the risks associated with globally integrated markets. The achievement of desired outcomes is contingent on financial institutions and market participants taking forward the reform agenda so that we have more vibrant and resilient financial markets.

Thank you.