

ECONOMIC SURVEY

2022-23



Relevant for UPSC Prelims & Mains Exam 2023

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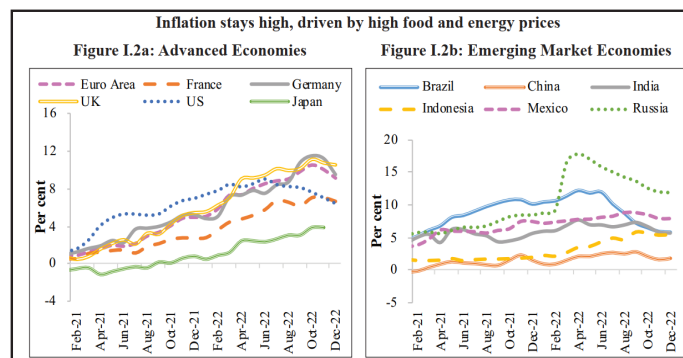
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A C A D E M Y

STATE OF THE ECONOMY 2022-23: RECOVERY COMPLETE

The global economy battles through a unique set of challenges

- The global economy battles through a set of following six challenges-
 - COVID-19** pandemic induced global shock;
 - Russia-Ukraine crisis** triggered commodity price rise (inflation)
 - Monetary tightening** of global central banks
 - Slowing down of cross-border trades** and rise in protectionist policies
 - Expectation of **slowdown in Chinese Economy** due to its faulty COVID policies.
 - Loss in education and earning opportunity** induced by nearly two years of lockdown.
- The simultaneous occurrence of all these challenges at once is **unprecedented in Human History**.

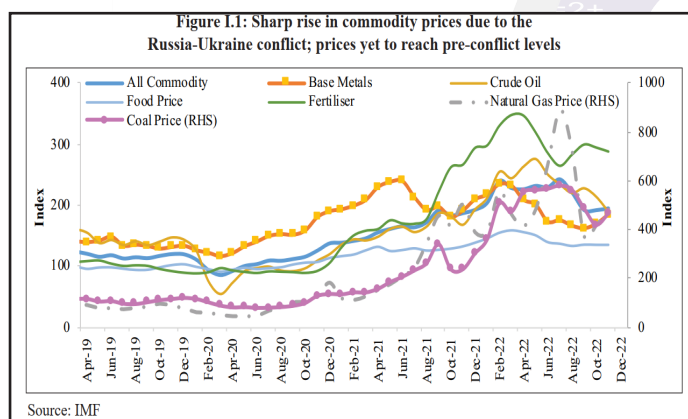
- The central banks around world led by **US Federal Reserve** have indulged into a synchronised effort of **raising interest rates** to control the stubborn inflation in their respective economies.



- It led to a **hardening of bond yields** across economies and resulted in an **outflow of equity capital** from most of the economies around the world into the traditionally safe-haven market of the US.

- This **flight of hot money** is not only from emerging markets but also from other Advanced Economies (minus USA), which has resulted into **strengthening of dollar** and weakening of other currencies, widened their CAD, increased inflationary pressures in net importing countries like India.

- All these have led to a slowdown in global output. (IMF's World Economic Outlook (WEO)).



- The global commodity price rise has resulted into inflation in **Emerging Market Economies (EMEs)**, which were cautionary in providing fiscal stimulus unlike **Advanced Economies (AEs)** which have flooded market with liquidity.

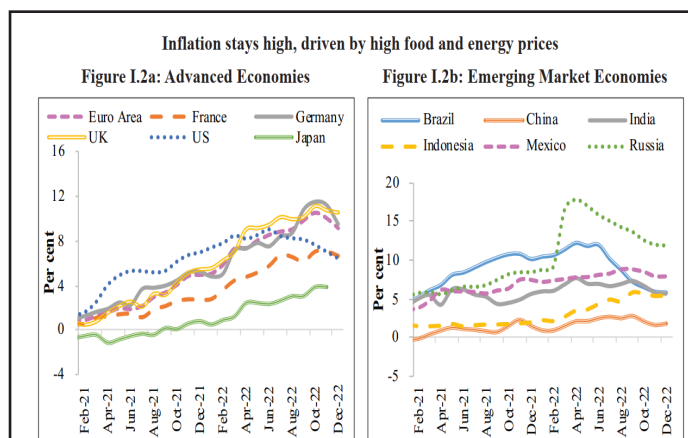
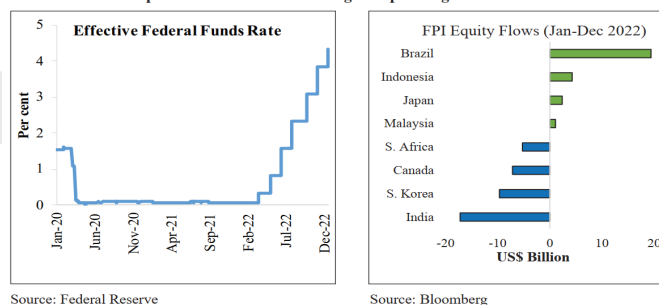


Figure I.5: The Federal Funds Rate was raised by a cumulative 425 basis points since Jan 2022 leading to capital flight from EMEs and AEs



	Growth Projections (per cent)		Change from WEO Update (July 2022) (per cent)	
	2022	2023	2022	2023
World	3.2	2.7	0	-0.2
Advanced Economies	2.4	1.1	-0.1	-0.3
United States	1.6	1	-0.7	0
Euro Area	3.1	0.5	0.5	-0.7
UK	3.6	0.3	0.4	-0.2
Japan	1.7	1.6	0	-0.1
Emerging Market Economies	3.7	3.7	0.1	-0.2
China	3.2	4.4	-0.1	-0.2
India*	6.8	6.1	-0.6	0

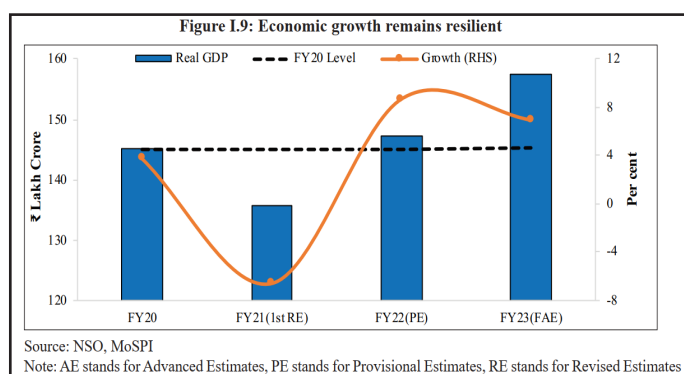
- India on contrary is **relatively safe** as its debt burden decreased post 2008 crisis, but a global debt challenge could impact India also.

Debt/GDP (Avg %)	Core debt of the non-financial sector (Q2 2022, % of GDP)				Change since Q2 2008			
	Household	Pvt Non-Financial	Government	Total	Household	Pvt Non-Financial	Government	Total
Global Avg	62	160	88	248	-4	15	27	38
Australia	117	181	52	232	7	-9	42	33
Brazil	35	88	91	179	17	-36	28	66
Mainland China	62	220	74	295	43	107	47	155
France	67	231	114	345	19	71	47	118
Germany	56	128	67	195	-4	0.4	2	3
India	36	88	82	170	-7	-17	16	-7
Italy	43	113	151	264	4	-4	47	43
Japan	69	187	238	426	9	29	94	122
South Korea	106	222	45	268	35	61	23	84
Mexico	16	40	41	81	3	12	20	33
South Africa	35	67	71	138	-9	-13	45	32
Spain	57	155	118	273	-26	-56	82	26
UK	84	150	107	257	-11	-28	62	34
US	76	155	108	264	-22	-15	48	33

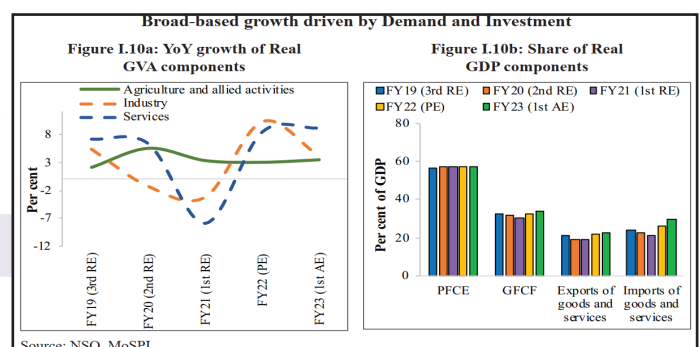
- The global central banks have reduced the pace of rate hikes in recent trends.
- The latest strong employment data and declining inflation from USA, less risk of energy crisis from Europe due to a warmer winter show positive signs.
- At the same time the weaker earning of banks, layoffs in technology companies show some negative trends, which make the overall global economic outlook negative.

Macroeconomic and Growth Challenges in the Indian Economy

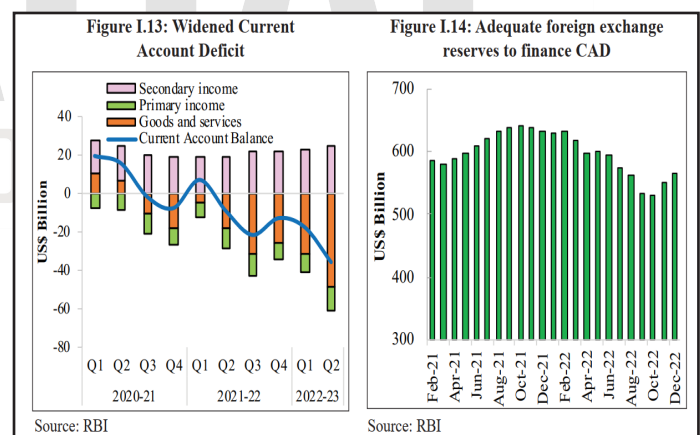
- After seeing a significant contraction in its economy in FY21, Indian economy has seen a full recovery passing its pre-pandemic level of GDP in FY22 and now charting a decent growth rate for FY23.
- This became possible after a calibrated opening of Indian economy, fast pace of vaccination.
- It has shown the world that a faster growth is possible even in the presence of fear of future COVID waves.



- The conflict in Europe has slashed the global growth rate and increased the inflation rate across globe in FY23.
- India's retail inflation rate has cooled down only in December 2022 below the 6 per cent upper tolerance level of RBI.
- The rise in global commodity prices, bad weather conditions have resulted kept the food price and inflation high in India from January to December 2022.
- The government cut excise and customs duties and restricted exports to restrain inflation while the RBI, like other central banks, raised the repo rates and rolled back excess liquidity.



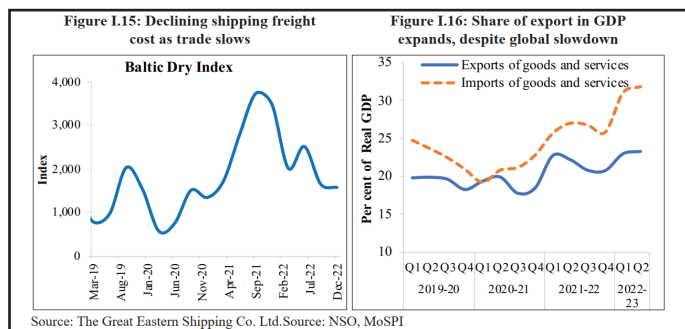
- The tightening of US Fed rate has resulted into depreciation of other currencies. (Indian currency performed relatively better)
- This has resulted into widening of CAD of many nations including India. India's forex reserve is adequate to finance the CAD and to manage other volatility to Indian rupee.



- The global trade surge after the 2021 slowdown is now seeing another slowdown.
- The global monetary tightening has slowed the global trade, this is further slowed down by geopolitical frictions, persisting inflationary pressures, and subdued demand.

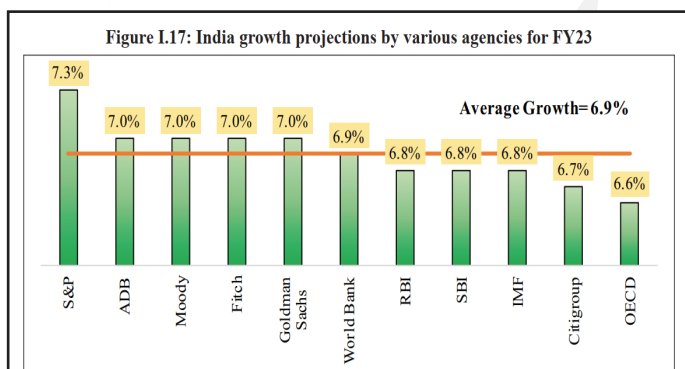
- India's export which had surged in FY22 (India's share in world market of merchandise exports increased) is slowing down and will slow down more in FY23.

- The rebound in consumption has also been supported by the release of 'Pent-up' demand i.e., a demand which was suppressed due to pandemic induced lockdown.
- Accelerating growth in personal loans in India testifies to an enduring release of "pent-up" demand for consumption.
- The big push in construction activities is fueled by much enlarged capital budget (Capex) by central and state governments.

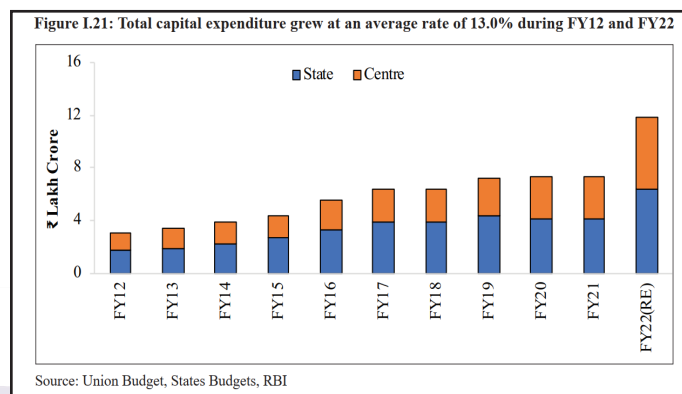


India's Economic Resilience and Growth Drivers

- Despite monetary tightening of RBI, widening CAD and international Geopolitical strife in Europe, Indian economy showing resilience by an expected growth varying between **6.5 and 7 %** in FY22.



- The surge and later moderation in export in FY22 and first half of FY23 led to acceleration of manufacturing and investment in India.
- Domestic consumption rebounded**, driven by high private consumption (58.4 % of GDP in Q2 of FY23).
- The near universal vaccination drives has resulted into revival of contact based economic activities and raised the positive consumer sentiment.



- Following development supports the effort of capex trust by governments in India-
 - A significant increase in the Capex budget in FY23
 - A highly buoyant direct tax and GST collection to support high capex spending
 - A limit on revenue expenditure to support high capital expenditure.

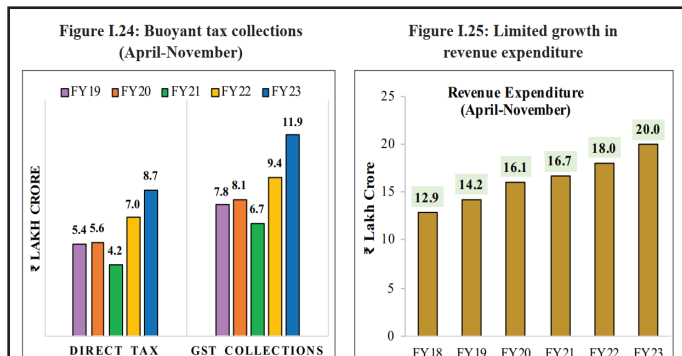
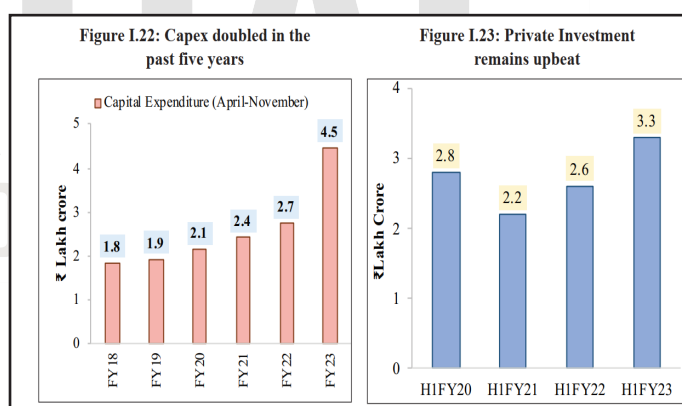
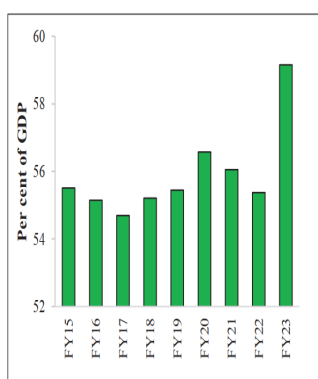
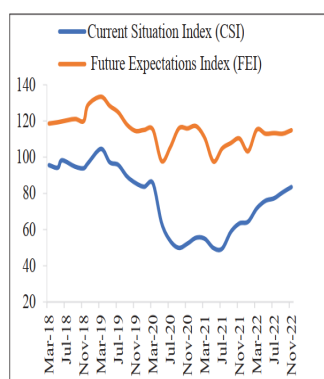


Figure I.19A: Private consumption highest since FY15 across H1



Source: NSO, MoSPI

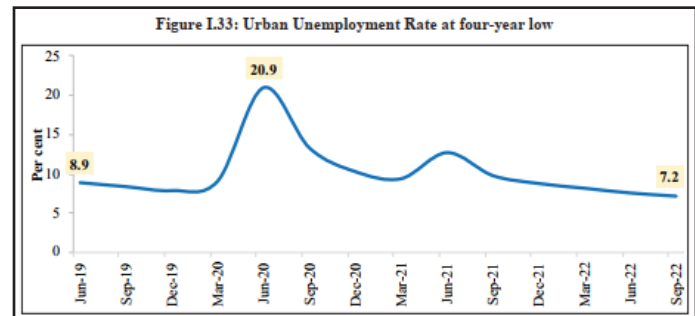
Figure I.19B: Improving consumer confidence



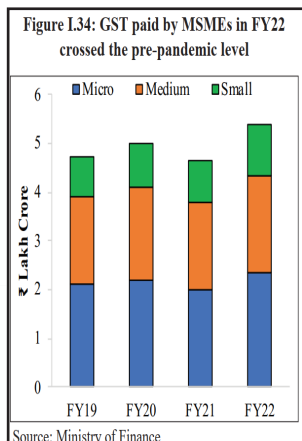
Source: RBI

- In the course of the last decade, **Indian non-financial private sector debt** and **non-financial corporate debt** as a share of GDP declined by nearly thirty percentage points.
- In FY22, the surge in exports also contributed to increasing profits in the corporate world. After-tax profits were also boosted by the lower taxes announced in 2019.
- **Better profitability** helped corporates pay down debt.
- The banking sector responded to the demand of credit.
- As corporates became profitable, banks improved their books, NPA in banks went down and their **Capital Risk-Weighted Adjusted Ratio (CRAR)** improved.

- This is accompanied by an improvement in the labour force participation rate (LFPR) as well.

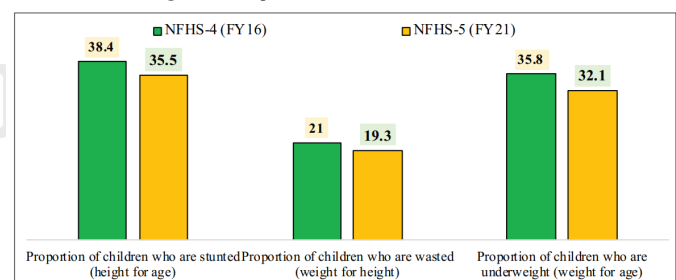


- A recent **CIBIL** report (ECLGS Insights, August 2022) showed that the **Emergency Credit Line Guarantee Scheme** has supported MSMEs in facing the Covid shock, with 83 per cent of the borrowers that availed of the ECLGS being micro-enterprises.



- The GST paid by MSMEs after declining in FY21 has been rising since and now has crossed the pre-pandemic level of FY20.
- **MGNREGA** is creating more assets in 'Works on individual's land' category (about 60% in FY22).
- In addition, schemes like **PM-KISAN** and **PM Garib Kalyan Anna Yojana** have significantly contributed to lessening impoverishment in the country.
- The **National Family Health Survey (NFHS)** in India shows improved rural welfare indicators from FY16 to FY20.

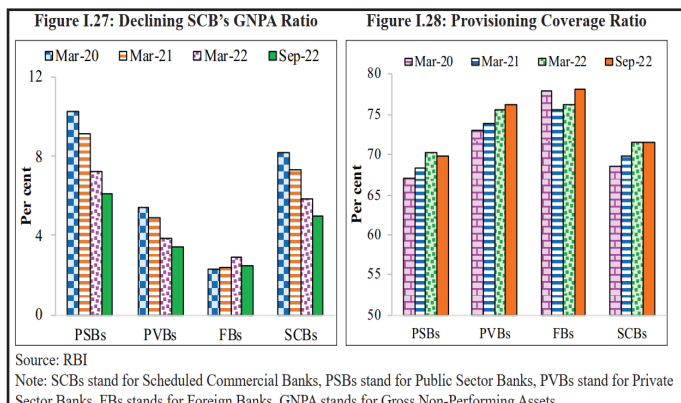
Figure I.36: Improvement in Rural Welfare Indicators



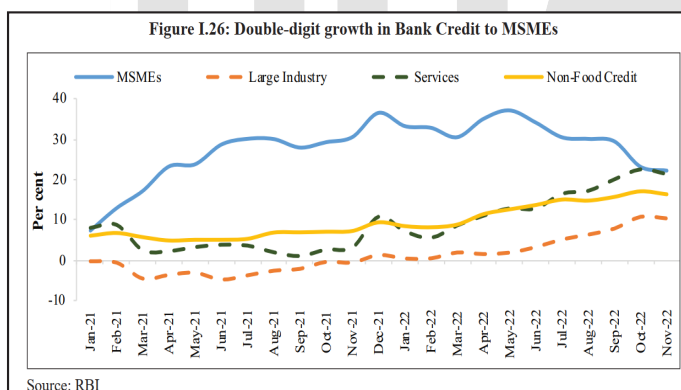
Source: NFHS-4 and NFHS-5

Outlook: 2023-24

- The survey projects a baseline GDP growth of 6.5 per cent in real terms in FY24.
- The actual outcome for real GDP growth will probably lie in the range of 6.0 per cent to 6.8 per cent, depending on the trajectory of economic and political developments globally.



- The credit growth to the MSME sector has been remarkably high, over 30.5 per cent, on average, during Jan-Nov 2022, supported by the extended ECLGS of the central government.



India's Inclusive Growth:

- The **Periodic Labour Force Survey (PLFS)** shows that the urban unemployment rate for people aged 15 years and above declined from 9.8 per cent in the quarter ending September 2021 to 7.2 per cent one year later (quarter ending September 2022).

- The upside to India's growth outlook arises from
 - 1) limited health and economic fallout for the rest of the world from the current surge in Covid-19 infections in China and, therefore, continued normalisation of supply chains;
 - 2) inflationary impulses from the reopening of China's economy turning out to be neither significant nor persistent;
 - 3) recessionary tendencies in major AEs triggering a cessation of monetary tightening and a return of capital flows to India amidst a stable domestic inflation rate below 6 per cent; and
 - 4) This leading to an improvement in animal spirits and providing further impetus to private sector investment.

- The downside to India's growth outlook arises from
 - 1) Slowdown in global economy (from 3.2% in 2022 to 2.7% in 2023 as per IMF's World Economic Outlook) and global trade (from 3.5% in 2022 to 1.0% in 2023 as per WTO).
 - 2) Rise in commodity price and increased import in India due to rebound of demand, hence widening of CAD, and pressure on Indian currency.
 - 3) Tightening of monetary policy by global central banks.

Conclusion: The year FY23 so far for India has reinforced the country's belief in its economic resilience. As expected of a nation of this size, the Indian economy in FY23 has nearly "recouped" what was lost, "renewed" what had paused, and "re-energised" what had slowed during the pandemic and since the conflict in Europe.



INDIA'S MEDIUM-TERM GROWTH OUTLOOK: WITH OPTIMISM AND HOPE

Introduction

Indian economy has undergone the process of 'new Age Reforms', which has improved the ease of living and doing business. These reforms have strengthened the fundamental of Indian economics, which made it capable of sustaining various shocks (From 2014 to 2022) and made it capable of sustaining higher GDP growth in coming years. The chapter would compare the period of 2014-22 with period 1998-02 to show the lagging effects on results of reforms on economy.

PRODUCT AND CAPITAL MARKET REFORMS

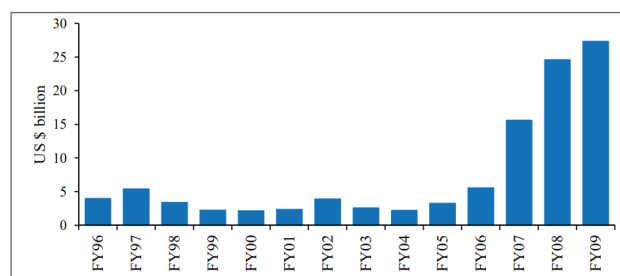
Initiation of the reforms- 1991

- The macroeconomic imbalances of the late 1980s and early 1990s pushed the government towards introducing the structural reforms of 1991.
- The Balance of Payment crisis led to liberalization and privatization of Indian economy.
- The new economic policy encouraged entry of private sector, allowed more FDI, Rupee made fully convertible for current account and partial convertible in capital account.
- These reforms had a positive effect on the economy. The real growth went up from an average of 5.5 per cent during the 1980s to 6.3 per cent from FY93 to FY2000.
- Trade liberalisation had a visible effect on external trade as the total goods and services trade to GDP rose from 17.2 per cent in 1990 to 30.6 per cent in 2000.

Continuity in Reforms with a Renewed Impetus

- **Liberalization of telecom sector** made the telecom sector boom in India possible.
- Similarly, Maruti Udyog, Hindustan Zinc, Bharat Aluminum, and Videsh Sanchar Nigam Limited etc. were privatized.
- Government made specialized ministry for disinvestment purpose. The result of economic reforms on income of FDI can be shown from the following figure-

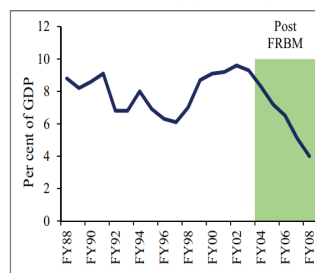
Figure II.1: Foreign Direct Investment to India- Increased after the impetus to investment liberalisation in 2000-2003



Source: RBI

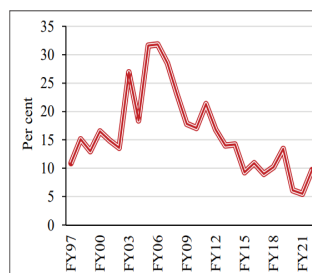
- The largest infrastructure project '**Golden Quadrilateral**' was launched during that period.
- The **Financial Responsibility and Budget Management (FRBM)** was passed to manage the macroeconomics of governments, which brought down the gross fiscal debts of governments as shown in figure.
- Banks' interest rates were deregulated at the same time SARFAESI Act 2002 was passed.
- The deregulation of banks led to increase in efficiency and competition among banks and launch of SARFAESI act led to recovery of secured assets by financial system.
- Both these reforms improved the credit situation in the economy as shown in the figure.

Figure II.2: Gross Fiscal Deficit (centre and states combined) (% of GDP)



Source: RBI

Figure II.3: Growth in Non-Food Credit by Scheduled Commercial Banks

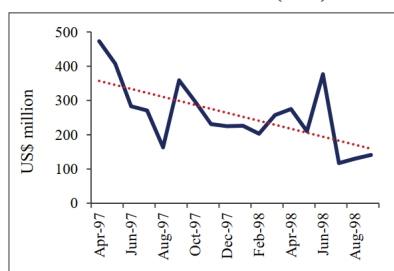


Source: RBI

One-Off Shocks Overshadowed the Reforms of 1998-2002

- The period also saw series of domestic and global shocks like- sanctions on India post 1998 nuclear tests (flight of FDI from India), back-to-back two droughts between 2000 and 2002, end of tech boom post 9/11 attack etc.
- Although Indian financial institution and corporate sector were under repair during this period, the reform of 1991 showed results post crisis in coming future.

Figure II.4: Monthly Foreign Direct Investment came down (1998)



Source: RBI

Table II.1: Occurrence, number of people affected and damages of droughts in India between 2000 and 2002

Date	Location	Numbers
Apr 2000	Gujarat, Rajasthan, Madhya Pradesh, Andhra Pradesh, Orissa, Maharashtra	Affected- 9 crore; Damage- US\$588,000,000
Nov 2000	Mahasamund, Raipur, Kawardha, Rajnandgaon, Durg districts (Chhattisgarh region)	
May 2001	New Delhi, Rajasthan, Gujarat, Orissa	20 deaths
Jul 2002	Uttar Pradesh, Madhya Pradesh, Rajasthan, Punjab, Haryana, Delhi, Karnataka, Kerala, Nagaland, Orissa, Chhattisgarh, Himachal Pradesh, Gujarat, Maharashtra, Andhra Pradesh, Tamil Nadu	Affected-30 crore; Damage- US\$910,721,000

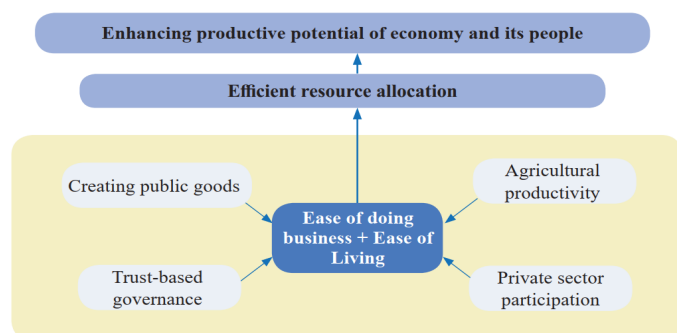
India's Participation in The Global Boom of 2003-08

- The dividend of 1998-02 reforms started showing results in 2003-08 periods.
- While the global growth averaged 4.8 per cent during 2003-2008, the Indian economy grew at more than 8 per cent on average.
- The economic growth during the period was supported by strong capital inflows.
- This combination of structural economic reforms with their lagged effect on economic growth has parallels to what is unfolding in the Indian economy presently.

Reforms for New India-Sabka Saath Sabka Vikaas

The reforms undertaken before 2014 were mostly to reform product and capital market spaces. The post 2014 reforms target the ease of living and doing business, improving economic efficiency and lift the economy's potential growth. The broad principle behind these reforms is shown in the figure-

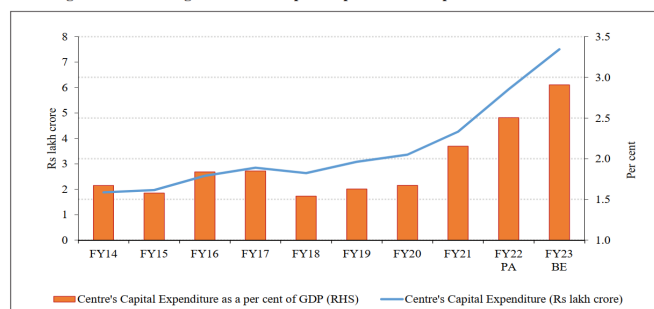
Figure II.6: Underlying framework for Reforms for a new India



1. Creating public goods to enhance opportunities, efficiencies and ease of living

The phenomena of capex investment in huge infrastructure project continued. Post 2014 saw the massive jump in Capex spending, which cushioned the impact of non-financial corporate sector's inability to fund project. This will generate a 'crowding in' effect for private sector in coming decades.

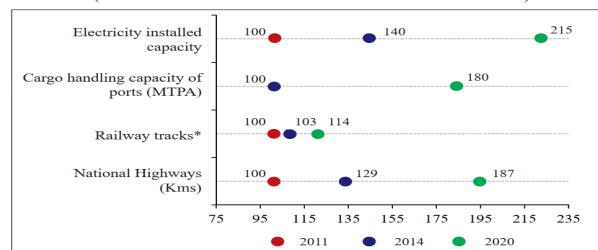
Figure: II.7: Union government's capital expenditure as a per cent of GDP on the rise



Source: RBI, MoSPI, O/o CGA

- The dedicated programs for road connectivity (Bharatmala), port infrastructure (Sagarmala), electrification, railways upgradation, and operationalising new airports/ air routes (UDAN) have significantly improved the physical infrastructure in the last few years.
- With the **National Infrastructure Pipeline (NIP)** (2019) and the **National Monetization Pipeline** (2021), a strong baseline for infrastructure creation and development has been put in place, providing a multitude of opportunities for foreign investment and engagement.
- The NIP was launched with a projected infrastructure investment of ₹111 lakh crore.

Figure II.8: Developments in critical Infrastructure Capacity (Values are as an index with the first available value as 100)



Source: RBI Report on Currency and Finance 2022

Note: (a) Railway tracks denote Running Track Kilometres

(b) The data for national highways for 2019 is the latest available data and is shown against 2020

- The development of digital infrastructure has got equal support from government. A recently published article in the RBI's Monthly Bulletin estimates that India's core digital economy has grown at 2.4 times the overall economic growth between 2014 and 2019.

- The growth of JAM trinity (Jan Dhan account, improving access to formal financial services and reducing transaction costs.
- Another vital contribution of digital infrastructure has been the greater formalisation of the economy.
- The creation of digital identities such as Aadhar, registration of unorganised workers on the eshram portal, street vendors on SVANidhi, taxpaying firms on GSTN, and MSMEs on the Udayam portal, has played a significant role in the inclusion of these groups under the formal economic net.
- The increasing number of GST taxpayers, from 70 lakh in 2017-18 to more than 1.4 crore in 2022, indicates the expansion in formal businesses.
- The National Single Window System for business approvals, the JanSamarth portal for credit-linked Central Government scheme, and the UMANG app for access to Central and state government services are essential steps towards enhancing the ease of doing business through the integration of existing systems.
- Eshram portal, with more than 28.5 crore registered workers, has been integrated with various other digital portals for easy accessibility.
- PM Gatishakti, the GIS-based platform that brings together multiple ministries for integrated planning and coordinated implementation of multimodal infrastructure connectivity projects, aims to reduce logistics costs.
- The Real Estate Regulatory Authorities across the country have disposed off more than 1.06 lakh complaints. With 99262 projects and 71514 agents already registered under RERA, the Act incentivises more investments into the sector.
- Another significant reform to enhance doing business has been the decriminalisation of minor economic offences under the Companies Act of 2013.
- Other reforms involve doing away with 25000 unnecessary compliances, repealing more than 1400 archaic laws, abolishing the Angel tax and removing retrospective taxation on offshore indirect transfer of assets located in India, adopting a unified GST, reducing corporate tax rates, exemption of sovereign wealth funds and pension funds from taxes, and removing the Dividend Distribution tax have reduced the tax burden on individuals and businesses.
- The average monthly gross GST collection has increased from ₹0.90 lakh crore in FY18 to ₹1.49 lakh crore in FY23.
- The Corporate tax collections for April to November 2022 have increased by 21.1 per cent on a YoY basis compared to a longer-term average YoY growth of 10.3 per cent during the corresponding period from FY13 to FY19.
- One prominent reason behind the higher revenue buoyancy is the introduction of technology-backed tax governance reforms for simplifying tax processes, enhancing compliance, and improving fraud detection systems.

2. Promoting the private sector as a co-partner in the development

- Focus on privatization and partnerships with private sector were emphasized in post 2014 reform period. The government's disinvestment policy has been revived in the last eight years with stake sales and the successful listing of PSEs on the stock market.
- During FY15 to FY23 (as of 18 January 2023), an amount of about ₹4.07 lakh crore has been realised as proceeds from disinvestment through 154 transactions using various modes/instruments. The New Public Sector Enterprise Policy for Aatmanirbhar Bharat has thus been introduced.

1. Trust-based Governance

- Simplification of regulatory frameworks through reforms such as the Insolvency and Bankruptcy Code (IBC) and the Real Estate (Regulation and Development) Act (RERA) have enhanced the ease of doing business.
- Until 30 September 2022, 23,417 applications for initiating the corporate insolvency resolution process (CIRP) of corporate debtors having underlying defaults of ₹7.3 lakh crore were disposed of before their admission into CIRP.

- Early estimates of the impact of PLI show encouraging trends in some sectors. The PLI scheme for large-scale electronics manufacturing has attracted an investment of ₹4,784 crore and contributed to a total production of ₹2.04 lakh crore, including exports of ₹80,769 crore (as of September 2022).
- The last eight years have seen further liberalisation of the policy towards foreign investors, with most sectors now open for 100% Foreign Direct Investment (FDI) under the automatic route.
- India's gross FDI has increased from an average of 2.2 per cent of GDP during FY05-FY14 to 2.6 per cent in FY15-FY22 (Figure II.10). The highest-ever annual gross FDI inflow of USD 84.8 billion was recorded in FY22. These trends are an endorsement of India's status as a preferred investment destination amongst global investors.
- The National Logistic Policy (2022) would make cost of logistic cheaper in India, hence boost manufacturing. Investment incentives and easing business compliances have created an ecosystem for the start-ups to nurture.
- The number of recognised Start-ups has increased from 452 in 2016 to 84,012 in 2022.
- Support measures for MSMEs during the pandemic in the form of the Emergency Credit Line Guarantee Scheme (ECLGS) and revision in the definition of MSMEs under the ambit of Aatmanirbhar Bharat helped them face the crisis shock.

3. Enhancing productivity in agriculture

- The agriculture sector in India has grown at an average annual growth rate of 4.6 per cent during the last six years.
- Policies such as Soil Health Cards, the Micro irrigation Fund, organic and natural farming, the promotion of Farmer Producer Organisations (FPOs) and the National Agriculture Market (e-NAM) extension Platform, Agri Infrastructure Fund (AIF), Kisan Rail, Cluster Development Programme (CDP) for horticulture products etc. have helped farmers in increasing productivity, easy access to markets and high returns on their products.

RETURNS TO THE ECONOMIC AND STRUCTURAL REFORMS AFTER 2014

Shocks that the economy faced during 2014-22

- During the said period Indian economy faced 'Twin balance sheet problem'. As per data from the Bank for International Settlements, India's non-financial private sector debt to GDP ratio went up from 72.9 per cent in March 2004 to 113.6 per cent by December 2010.
- The non-financial private sector debt to GDP ratio began to come down meaningfully only from 2015 onwards, dropping to a low of 83.8 per cent by December 2018.
- The Quarterly Credit to GDP Gap remained negative for most of the 2010s.
- Government and RBI took various steps to help the finance sector to come out from the balance sheet crisis.
- Some of these such as the amendment to the SARFAESI Act 2002, implementation of the Insolvency and Bankruptcy Code (IBC), launch of 'Asset Quality Review' (AQR), introduction of prompt corrective action (PCA) framework, recapitalisation of Public Sector Banks (PSB), and merger of PSBs among others, helped in cleaning up the balance sheets of banks/corporates.
- As balance sheet of financial institution was recouping, the collapse of the Infrastructure Finance and Leasing Services (IL&FS) in September 2018 happened with simultaneous collapse of some housing companies.
- This had potential for larger disruption in financial market as banks had re-financed various debts of IL&FC.
- Soon thereafter, the pandemic struck, and the government had to address the emerging health, social and economic consequences of unprecedented nature.
- These back-to-back shocks have delayed the impact of such momentous reforms on the economic growth.

The Period 2014–2022 is Analogous to the Period 1998–2002

The following table shows the parallels between both the periods, as both of them faced an unparalleled reform followed by series of shocks followed by era of unprecedented growth.

1998–2002	2014–2022
Shocks to the economy	
<ul style="list-style-type: none"> • Nuclear device testing 1998; sanctions followed • Banking and Corporate Sector deleveraging and repairing balance-sheets • Two successive droughts • Technology bust; US recession and 09/11 	<ul style="list-style-type: none"> • Period of Banking, Non-Banking and Non-Financial Corporate Sector Balance-sheet stress. • Unprecedented pandemic shock followed by inflation global commodity price shock followed by tightening of financial conditions
Structural reforms in the economy	
<ul style="list-style-type: none"> • Interest rate deregulation • Privatisation • Asset Recovery for banks • Infrastructure (Golden quadrilateral) • FRBM Act 	<ul style="list-style-type: none"> • Unique Identity • Financial Inclusion • GST leading to formalisation • Insolvency & Bankruptcy Code • Privatisation • Tax rates rationalisation and tax administration reforms • Decriminalisation of offences • Vaccines roll-out • Expenditure Management Reforms • AatmaNirbhar Bharat • Public Digital Infrastructure
Growth returns	
<ul style="list-style-type: none"> • One-off shocks delayed the growth returns • Once shocks faded away, structural reforms paid growth dividends from 2003 onwards 	<ul style="list-style-type: none"> • Balance sheets strengthened in the financial sector; the corporate sector deleveraged by about 30 percentage points (Non-financial private sector debt to GDP ratio) • Emphasis on macro-economic stability while dealing with global shocks

GROWTH MAGNETS IN THIS DECADE (2023–2030)

India is prepared to grow at its potential once the one-off shocks recede

- After a long period of balance sheet crisis, pandemic and global uncertainty Indian economy is poised to grow as it grew in post 2003 period.
- This growth would be supported by its healthy financial and corporate sector; a more formalized and digitized economy.

- A recent IMF Working paper analyses the trends in the Credit-to-GDP ratio gap, bank balance sheets and the GDP growth in India since 2012; and shows that better-capitalised banks result in higher credit growth, which further translates into higher GDP growth.
- The digitalisation reforms and the resulting efficiency gains in terms of greater formalisation, higher financial inclusion, and more economic opportunities will be the second most important driver of India's economic growth in the medium term.

- In its recent Article IV report for India, IMF highlighted that India's successful implementation of the wide-ranging reforms and more than expected dividends from digitalisation could increase India's medium-term growth potential.
- The evolving geo-political situation also presents an opportunity for India to benefit from the diversification of global supply chains.
- UNCTAD, in one of its reports, shows that 'reshoring, diversification, and regionalisation will drive the restructuring of global value chains in the coming years'.
- The recently published Chief Economists Outlook 2023 (World Economic Forum) highlights India's opportunity to gain from these global trends of supply chain diversification.

Way forward:

- Some of the reforms that must be taken to accelerate the growth of economy are-
 - **Further deregulation and simplification of compliance process**

- **Power sector reforms**
- **Emphasis on skill development and education to match modern industry requirements**
- **Deal with climate change**
- **Encash demographic dividend**
- **Sensitise population about healthy lifestyle**
- **Long range plans for the access of critical minerals**
- **Monetization of assets of public sector**
- **Reform and handholding support to MSME sector, skilling and capital infusion in MSME sector.**
- **Factor market reforms by state governments**

Conclusion: Had Indian economy not faced with poly-crisis in post reform period, the results of the reforms would have been visible. After various reform initiatives and healthy condition of India's financial sector, Indian economy is poised to grow 7-8 per cent per annum in the medium term.



CHAHAL
ACADEMY

FISCAL DEVELOPMENTS: REVENUE RELISH

Introduction: With continuing global risks and uncertainty, a dilemma came before the government whether to provide fiscal support to vulnerable section of society or withdraw the support, which are creating inflationary pressure on the economy. This chapter deals with governments' fiscal strategy to sail through the above-mentioned dilemma.

Developments in Union Government finances

- The fiscally prudent policies of government, supported by buoyant revenue collection over the last two years, the fiscal deficit, which had reached to **9.2% of GDP** during pandemic year FY21 came down to **6.7% of GDP** in FY22 and it is further expected to reach 6.4% of GDP in FY23.

Union Government on track to achieve the Fiscal deficit target for FY23

- Despite the continued pressure of inflation, commodity price rise, government is on the path of achieving fiscal deficit target for FY23.
- The fiscal deficit of the Union Government at the end of November 2022 stood at 58.9 per cent of the BE, lower than the five-year moving average of 104.6 per cent of BE during the same period.

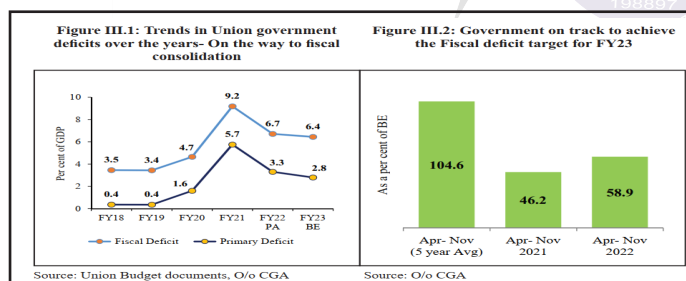
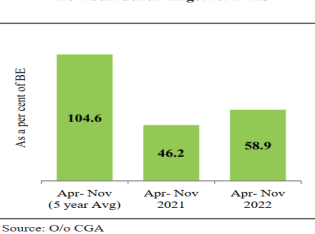


Figure III.2: Government on track to achieve the Fiscal deficit target for FY23



Conservative budget assumptions provide a buffer during global uncertainties

- This resilience in the fiscal performance of the Centre has resulted due to a recovery in economic activity, buoyancy in revenues observed during the year, and conservative assumptions of macroeconomic variables in the Budget.
- The prudent assumptions in Budget FY23 provided a buffer to the government during global uncertainties.
- The annual estimate of **Gross Tax Revenue (GTR)** for FY23 is thus expected to overshoot the budget estimates.

PERFORMANCE OF UNION GOVERNMENT NON-DEBT RECEIPTS

Sustained revenue buoyancy over the last two years

- After plummeting during the pandemic-affected year FY21, revenue receipts registered robust growth in FY22 PA, both on a YoY basis and to the pre-pandemic year FY20.
- This revenue revival was attributed to a rebound in the collection of all major direct and indirect taxes (except excise duties) in FY22.
- Last year's revenue buoyancy momentum is continuing into the current year. The Gross Tax Revenue registered a YoY growth of 15.5 per cent from April to November 2022, and the Net Tax Revenue to the Centre after the assignment to states grew by 7.9 per cent on a YoY basis.
- Revenues have grown at a pace much higher than the growth in GDP is a testimony to the effectiveness of efforts taken by the government to expand the tax base and enhance tax compliance.

Direct taxes propelling the growth in Gross tax revenue

- Direct taxes, which broadly constitute half of the Gross Tax Revenue, have registered a YoY growth of 26 per cent from April to November 2022, enabled by corporate and personal income tax growth.
- The growth rates observed in the major direct taxes during the first eight months of FY23 were much higher than their corresponding longer-term averages.

Figure III.3: Composition of tax profile of Union Government (FY23 BE)

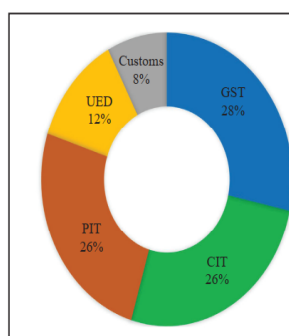
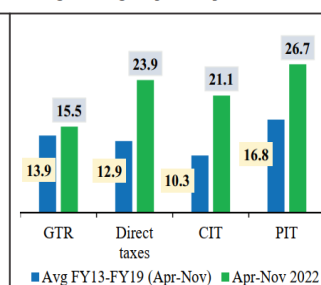


Figure III.4: Growth in Centre's direct taxes are higher than their corresponding longer-term averages during the period April to November



Source: Union Budget FY23, O/o CGA

Note: GTR - Gross Tax Revenue, GST - Goods and Services Tax, CIT - Corporation Income Tax, PIT - Taxes on Income other than Corporation Income Tax, UED - Union Excise Duties

Customs and Excise duties act as Flexi-fiscal policy tools

- Unlike the direct taxes, indirect taxes such as custom duty and excise tax acted as fiscal policy tool to manage unpredictability and global commodity price rise during pandemic and geopolitical crisis.
- The budget estimate had factored in negative growth of 15 per cent on excise collections for FY23. In line with the expectation, the excise duty collection has declined by 20.9 per cent from April to November 2022 on a YoY basis.
- High imports during the current year have led to a 12.4 per cent YoY growth in the customs collection from April to November 2022.

Stabilising Goods and Services Tax yielding returns

- The Goods and Services Tax (GST) has evolved and stabilised as a vital revenue source for central and state governments.
- Their gross GST collections, taken together, were ₹13.40 lakh crore from April to December 2022. Thus, implying a YoY growth of 24.8 per cent.
- The pick-up in GST collections was consistently spread across all the months during the current fiscal year, with an average monthly collection of ₹1.5 lakh crore.
- With the number of GST taxpayers increasing from nearly 70 lakh in 2017 to more than 1.4 crore in 2022.

Maturing system of indirect tax collections

- Has the shift to GST improved or worsened the buoyancy of India's indirect tax system?

	GST CAGR (%)	GDP CAGR (%)	Buoyancy
Pre-GST	11.53	11.54	0.9988
Post-GST	10.9	9.6	1.1299

- This has occurred even though the effective GST rate has fallen from inception (from 14.4 per cent in 2017 to 11.6 per cent in 2019, according to RBI).
- Improved tax collection efficiency was one of the main arguments in favour of GST.
- The evidence so far suggests that GST is indeed showing a higher buoyancy than the pre-GST system. This augurs well for future resource mobilisation in the economy.

Centre on track to meet Non-Tax Revenue targets

- Budget FY23 envisaged a lower collection of non-tax revenue receipts during the current year relative to FY22 (around 22.5 per cent lower than FY22 PA).
- Of the budgeted amount, 73.5 per cent has been collected up to November 2022.

Table III.3: Trends in Non-tax Revenue of Union Government

	FY18	FY19	FY20	FY21	FY22 PA	FY23 BE	Apr-Nov 2022
	₹ lakh crore						
Interest receipts	0.14	0.12	0.12	0.17	0.22	0.18	0.17
Dividends & Profits	0.91	1.13	1.86	0.97	1.61	1.14	0.68
External Grants	0.04	0.01	0.00	0.02	0.01	0.01	0.01
Others	0.84	1.07	1.27	0.90	1.64	1.34	1.12
Non-tax Revenue	1.93	2.36	3.27	2.08	3.48	2.70	1.98

Committed towards disinvestment but dependent on external factors

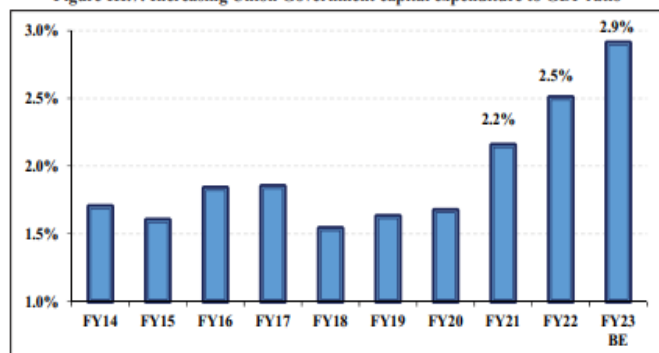
- During FY15 to FY23 (as of 18 January 2022), an amount of about ₹4.07 lakh crore has been realised as proceeds from disinvestment through 154 transactions using various modes/instruments.
- This includes ₹3.02 lakh crore realised from minority stake sale and ₹69,412 crore realised from strategic disinvestment transactions (in 10 CPSEs - HPCL, REC, DCIL, HSCC, NPCC, NEEPCO, THDC, Kamraj Port, Air India and NINL).
- Despite uncertainties, the government has reaffirmed its commitment towards privatisation and strategic disinvestment of Public Sector Enterprises by implementing the New Public Sector Enterprise Policy and Asset Monetisation Strategy.

PERFORMANCE OF UNION GOVERNMENT EXPENDITURE

Pragmatic expenditure policy of re-prioritisation

- Following a counter-cyclic fiscal policy government's expenditure grew to 17.7 of GDP in FY21 during economic crisis.
- This is dropped to 16% of the GDP (PA) in FY22.
- At the same time, Capex rose from 1.7% of GDP (FY09-FY20) to 2.5% of GDP in FY22, which is further expected to rise to 2.9% of GDP in FY23.

Figure III.7: Increasing Union Government capital expenditure to GDP ratio



Capex-led growth to bring back animal spirits and manage debt levels

- The unprecedented budget of ₹7.5 lakh crore for Capital Expenditure in FY23 is a 60% rise over last year.
- While on the one hand, capital expenditure strengthens aggregate demand and crowds-in private spending in times of risk aversion; it also enhances the longer-term supply-side productive capacity.

Figure III.8: Rising share of Capital Expenditure in Total Expenditure of the Union Government

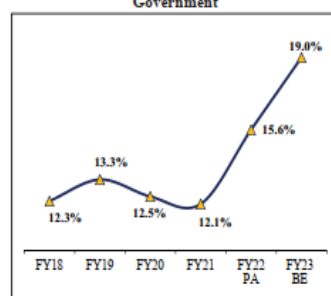
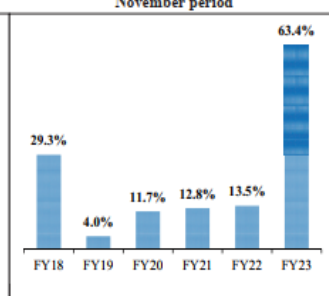


Figure III.9: High growth in capital expenditure of the Union Government during the April-November period



Geopolitical developments stretched the Revenue Expenditure requirements

- With the winding up of the pandemic-related support, the revenue expenditure of the Union government was brought down from 15.6 per cent of GDP in the pandemic year FY21 to 13.5 per cent of GDP in FY22 PA.
- This contraction was led by a reduction of the subsidy expenditure as the economy recovered from the pandemic.
- The subsidy expenditure was brought down from 3.6 per cent of GDP in FY21 to 1.9 per cent of GDP in FY22 PA. It was further budgeted to reduce to 1.2 per cent of GDP in FY23.
- Due to the sudden outbreak of geopolitical conflict resulting in higher international prices for food, fertiliser and fuel, there was a higher food and fertiliser subsidy requirement for supporting the people and ensuring macroeconomic stability.

- Higher resource requirements and lower revenue collections during the pandemic resulted in higher borrowings by the Union Government.
- Interest payments as a proportion of receipts went up after the pandemic outbreak.

Major reforms in the Union budget over the last few years

1. **Improved fiscal transparency and realistic revenue assumptions in the Budget**
 - The Extra-Budgetary borrowings of the Union Government were brought down from ₹1.48 lakh crore in FY20 and ₹1.21 lakh crore in FY21 to ₹750 crore in FY22 (RE).
 - No Extra Budgetary Resources were estimated for FY23 in the Budget. Budget 2022 based its revenue projections on realistic assumptions, thus providing a buffer to the government in an uncertain global environment.
2. **Discontinuation of Plan-Non plan classification**
 - The Budget FY18 discontinued having Plan and Non-Plan classifications of Government expenditure.
3. **Merger of railway Budget with the Main Budget**
 - The railway budget was merged with the Union Budget from FY18. The reform gave a holistic picture of the government's financial position.
 - The initiative envisaged facilitating multimodal transport planning between highways, railways and inland waterways, which have been strengthened in the subsequent years through Gatishakti.
4. **Shifting the date of the Budget to 1 February**
 - The date of the Budget was advanced to 1 February from the Budget FY18. The advancement of Budget presentation by a month has paved the way for early completion of the Budget cycle.
 - It has also enabled the Ministries to ensure better planning and execution of schemes from the beginning of the financial year.

OVERVIEW OF STATE GOVERNMENT FINANCES

Performance of State finances

- State Governments improved their finances in FY22 after being adversely impacted by the pandemic in FY21.
- The combined Gross Fiscal Deficit (GFD) of the States, which increased to 4.1 per cent of GDP in the pandemic-affected year, was brought down to 2.8 per cent in FY22 PA.
- Given the geopolitical uncertainties, the consolidated GFD-GDP ratio for States has been budgeted 3.4 per cent in FY23.
- However, the States' monthly fiscal Accounts data released by O/o CAG shows that from April-November 2022, the combined borrowings of the 27 major states have just reached 33.5 per cent of their total budgeted borrowings for the year.
- Centre enhanced the net borrowing ceilings (NBC) for States to 5 per cent of GSDP in FY21, 4 per cent of GSDP in FY22, and 3.5 per cent of GSDP in FY23.

Figure III.11: Consolidation of States' Deficits as per cent of GDP

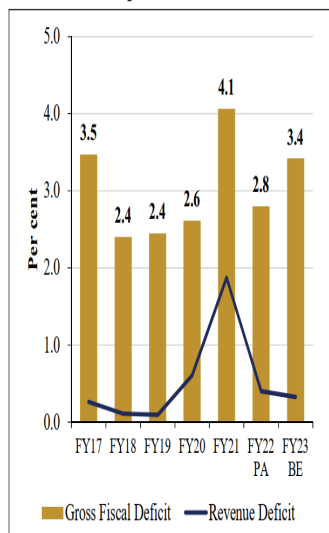


Figure III.12: Lower States' Combined Fiscal deficit during April-November

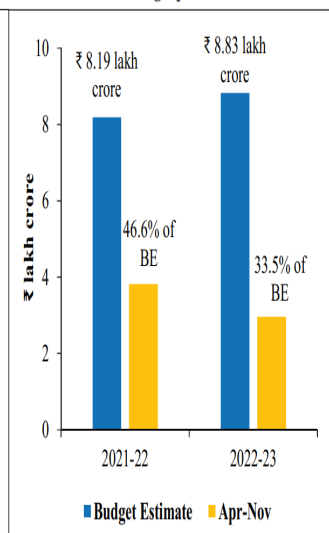


Table III.6: Details of transfers from Centre to States (other than devolution to States)

	FY19	FY20	FY21	FY22 RE	FY23 BE
(in ₹ lakh crore)					
Centrally Sponsored Schemes	3.0	3.1	3.8	4.2	4.4
Finance Commission Grants	0.9	1.2	1.8	2.1	1.9
Other Grants/Loans/Transfers	0.9	2.0	1.9	2.3	3.0

Table III.7: Allocation of grants to the State Governments as recommended by the 15th FC

S/No.	Components	Allocation FY23	Amount released (as on 22 November 2022)
(in ₹ crore)			
1	Post Devolution Revenue Deficit Grant	86,201	57,467
2	Disaster Management Grant (Union Share)	23,294	10,976
3	Local Bodies Grants	69,421	28,609
4	Health Sector Grants	13,192	275
	Grand Total	1,92,108	1,61,230

Supporting the GST compensation payments during crisis

- To meet the shortfall in GST compensation for States, the Government, in addition to the release of regular GST compensation from the Fund, borrowed ₹ 2.69 lakh crore during FY21 and FY22 and passed it on to States on a back-to-back basis.
- During FY23, the Government of India released ₹1.16 lakh crore towards the total GST compensation payable to States up to 30 June 2022 (as of 25 November 2022).

GST and the flow of resources to states

- While comparing the total fiscal resources accruing to States in the pre and post-GST regimes, it is essential to measure the relative performance of taxes vis-à-vis the performance of the economy.
- In the pre-GST regime, when the economy grew at 11.5 per cent nominally, the total fiscal resources accruing to States from the Central and state taxes subsumed in GST (including devolution) grew at 11.1 per cent.
- It implied a buoyancy of 0.97. In the post-GST period, total fiscal resources accruing to the states from the GST (including devolution from the Centre's GST) exhibited a buoyancy greater than that in the pre-GST period.
- This performance is especially noteworthy, considering the reduction of the effective weighted average GST rate from 14.4 per cent at the time of inception to 11.6 per cent in 2019 (RBI).
- In addition to the regular stream of revenues from GST, a compensation was also provided to the states in the post-GST period.

COOPERATIVE FISCAL FEDERALISM DRIVES A WELL-TARGETED FISCAL POLICY

Transfer from Centre to States

- Transfer of funds to the States comprises the share of States in Union taxes devolved to the States, Finance Commission Grants, Centrally Sponsored Schemes (CSS), and other transfers. Total transfers to States have risen between FY19 and FY23 BE.

- Despite having limited fiscal resources in the middle of a crisis, the Centre borrowed funds and passed them on to States on a back-to-back loan basis, in addition to the release of regular GST compensation.
- These loans will be repaid from future inflows into the GST Compensation Cess Fund and hence are not a burden on the states.
- We see from the above analysis that the GST regime and its implementation mechanism have not only safeguarded the States' revenues from the initial teething troubles of a new tax system but also protected the States' finances amidst unprecedented external shocks during the last five years.
- In the absence of GST, Indian states would have had no recourse to compensation, nor could they have contemplated augmenting their revenues through fresh and/or higher levies during a pandemic.

- Sixteen states accessed the additional borrowings upon meeting the Capex target.
- In addition to the net borrowing ceilings fixed for the States, Fifteenth Finance Commission had recommended performance-based additional borrowing space of 0.50 per cent of Gross State Domestic Product (GSDP) to the States in the power sector.
- This special dispensation has been recommended for each year for four years, from FY22 to 2024-25.
- For the financial year FY22, additional borrowing permission of ₹39,175 crore was allowed to 12 States for meeting the stipulated reform criteria.

Centre's support towards States' capital expenditure

1. The Union government has provided 50-year interest-free loans to state governments under the 'Scheme for Special Assistance to States for Capital Investment' for the last three years.
2. A part of the allocation for FY22 was earmarked for providing incentives to the States for privatisation/disinvestment of the State Public Sector Enterprises (SPSEs) and monetisation/recycling of assets.
3. Also, if state governments were allowed this ₹1 lakh crore as an additional borrowing limit, they would bear an interest rate higher than the rate at which the Union government borrows.

Enhanced limit of borrowing for the States and incentives for reforms

- Since the pandemic outbreak, the Centre has kept the Net borrowing Ceiling of the State Governments above the Fiscal Responsibility Legislation (FRL) threshold.
- It was fixed at 5 per cent of GSDP in FY21, 4 per cent of GSDP in FY22 and 3.5 per cent of GSDP in FY23.
- A part of this additional borrowing was linked to reforms encouraging the States to undertake them. For instance, in FY21, a part of the additional borrowing ceiling was conditional on implementing the 'One Nation One Ration Card' System, ease of doing business reform, urban Local body/ utility reforms, and power sector reforms.
- As a result, 17 States implemented the One Nation One Ration Card System, 20 States completed the stipulated reforms in the Ease of Doing Business, 11 States had done local body reforms and 17 States carried out fully/partially Power Sector Reforms. Similarly, a part of the additional borrowing was earmarked for incremental capital expenditure to be incurred by States during FY22.

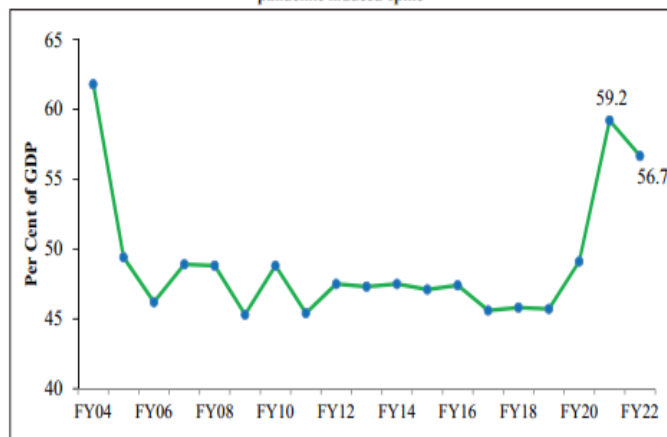
Initiatives by the State Governments to improve their own resources

- States like Tamil Nadu, Telangana and Kerala have revised the property taxes in their States during the year to support their revenues.
- Some states like Tamil Nadu, Andhra Pradesh, Telangana, Karnataka, Madhya Pradesh, Haryana, Kerala, Assam, and UT of Puducherry have considered revising their power tariffs during FY23.
- On the other hand, Uttar Pradesh has announced a new liquor policy whereby it increased the license fee, renewal fees, processing fee, and registration fee across various categories of liquor/ distilleries.
- Some other revenue generating measures adopted by the States include Assam's liquidation scheme for payment of arrears, Haryana's one-time scheme for settlement of old VAT dues, and Assam and Kerala's Green tax to discourage old vehicles.

Debt Profile of the Government

- Given the unprecedented fiscal expansion in 2020, rising government liabilities have emerged as a significant concern across the globe.
- IMF projects⁹ the global government debt at 91 per cent of GDP in 2022, about 7.5 percentage points above the pre-pandemic levels.
- While countries worldwide had started winding up the fiscal support provided during the pandemic, challenging global financial conditions amidst global uncertainties tightened budget constraints.
- In this backdrop, India's total liability spiked to 59.2% of GDP in the pandemic year FY21, this is moderated to 56.7% of GDP in FY22 (P).

Figure III.14: Moderating Union Government's Debt-GDP ratio after the pandemic induced-spike



- Of the Union Government's total net liabilities in end-March 2021, 95.1 per cent were denominated in domestic currency, while sovereign external debt constituted 4.9 per cent, implying low currency risk.
- Further, sovereign external debt is entirely from official sources, which insulates it from volatility in the international capital markets.
- Public debt in India is primarily contracted at fixed interest rates, with floating internal debt constituting only 1.7 per cent of GDP in end-March 2021.
- The debt portfolio is, therefore, insulated from interest rate volatility, which also provides stability to interest payments.

- The weighted average maturity of the outstanding stock of dated securities of the government has increased from 9.7 years in end-March 2010 to 11.71 years in end-March 2022, thus reducing the rollover risk in the medium-term.
- Over the last few years, the proportion of dated securities maturing in less than five years has declined, whereas long-term securities have shown an increasing trend.

Figure III.15: Proportion of external liability in public debt (FY22)

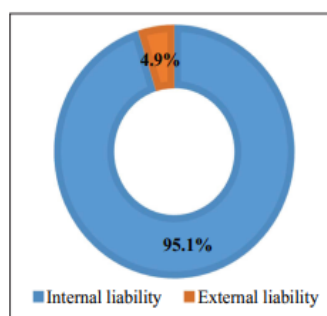
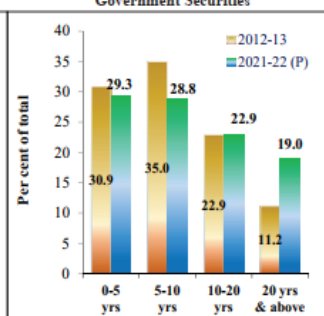


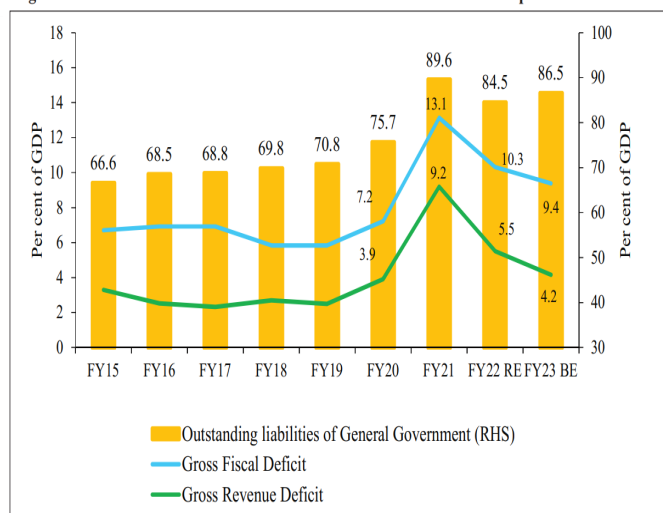
Figure III.16: Elongation of the maturity profile of Outstanding Dated Union Government Securities



Consolidating General government finances

- The General Government liabilities as a proportion of GDP increased steeply during FY21 on account of the additional borrowings made by Centre and States on account of the pandemic.
- However, the ratio has come off its peak in FY22 (RE).
- The General Government deficits as a per cent of GDP have also consolidated after their peak in FY21.
- The General Government is expected to follow the path of fiscal consolidation in the medium term.

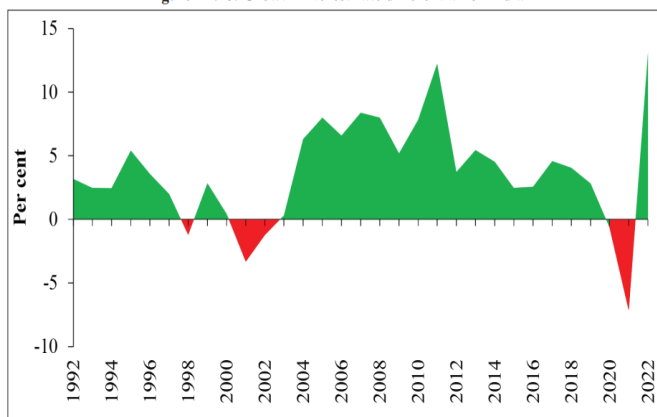
Figure III.17: General Government liabilities to GDP ratio come off their peak attained in FY21



A positive growth-interest rate differential keeps the Government Debt sustainable

- The emphasis on Capex in recent years is expected to boost GDP growth directly and indirectly through multiplier effects on private consumption expenditure and private investment.
- Higher GDP growth would thereby facilitate buoyant revenue collection in the medium term, and thereby enable a sustainable fiscal path.
- The General Government Debt to GDP ratio increased from 75.7 per cent of end-March 2020 to 89.6 per cent at the end of the pandemic year FY21.
- It is estimated to decline to 84.5 per cent of GDP by end-March 2022. The emphasis on capex-led growth will enable India to keep the growth-interest rate differential positive.
- As shown in Figure below, this differential has historically been positive for India.
- A positive growth interest rate differential keeps the debt levels sustainable.

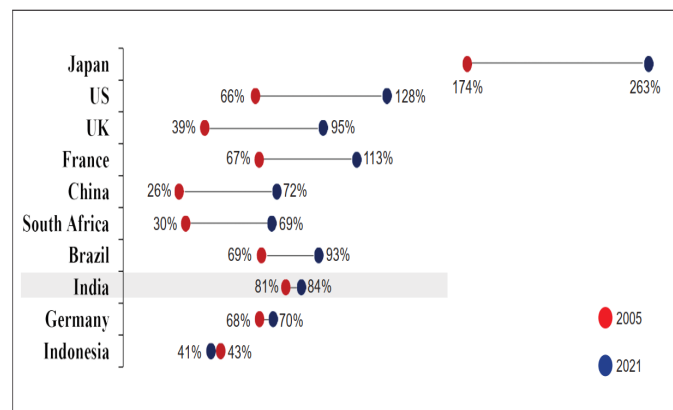
Figure III.18: Growth-interest rate differential for India



Source: RBI, IMF

- A comparison of the change in General Government debt to GDP ratio from 2005 to 2021 across the countries highlights a substantial increase for most countries.
- For India, this increase is modest, from 81 per cent of GDP in 2005 to around 84 per cent of GDP in 2021.
- It has been possible on the back of resilient economic growth during the last 15 years leading to a positive growth-interest rate differential, which, in turn, has resulted in sustainable Government debt to GDP levels.

Figure III.19: Comparing General Government debt to GDP ratio in 2005 with 2021 across the countries



Source: World Economic Outlook, October 2022.

Sustained growth as the path to fiscal consolidation

- The high fiscal deficit to GDP ratio witnessed in the aftermath of the pandemic is a concern for countries worldwide.
- A solution to the increased fiscal deficit and debt-to-GDP ratios lies in persistently high growth for a few years.
- A moderate growth, if sustained, will support fiscal consolidation in the medium run and result in sustainable public finances.
- Two, India's public debt and deficit ratios went up sharply in recent years, not just on account of higher spending and lower tax revenues due to the pandemic but also due to the denominator undershooting trends resulting from financial system stress, followed by the pandemic.
- With both out of the way, nominal growth should return to its trend path, and hence, fiscal parameters would begin to show improvement.
- There is a need for continued vigilance and adherence to the path of fiscal prudence, but an undue alarm is unwarranted.

Conclusion: The Government of India has adopted a holistic policy towards fiscal stability in the last few years. Using the crisis as an opportunity to bring about reforms, the government undertook a series of policy measures in the previous few years. All these measures have led to a greater formalisation of the economy, enhanced compliances and better reporting of the income by the public and imparted credibility to the government's commitment to fiscal management. The Centre should continue incentivising the States for reforms and higher capital spending to ensure a stronger General government. The capex-led growth strategy will ensure sustainable debt levels in the medium term.

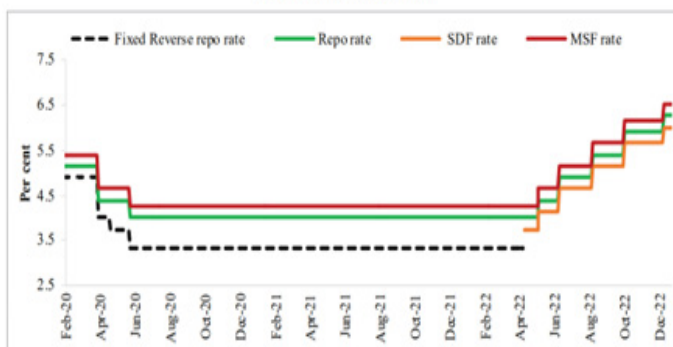


MONETARY MANAGEMENT AND FINANCIAL INTER MEDIATION: A GOOD YEAR

Introduction

- The year 2022 marked the return of **high inflation**, especially in advanced economies, after nearly four decades. Inflation did not spare emerging economies either. These developments led to an **unprecedented, synchronous, and sharp cycle of monetary tightening across countries**.
- Major central banks have implemented sharp increases in policy rates, with the Federal Reserve's rate hikes being the **steepest since the 1970s**. While the Federal Reserve has raised policy rates by 425 basis points (bps), the European Central Bank (ECB) and the Bank of England (BoE) have implemented 300 bps and 250 bps rate increases, respectively.
- The RBI initiated its monetary tightening cycle in April 2022 and has since implemented a policy repo rate hike of 225 bps. Consequently, **domestic financial conditions began to tighten**, which was reflected in the lower growth of monetary aggregates.

Figure IV.1: Policy Rates

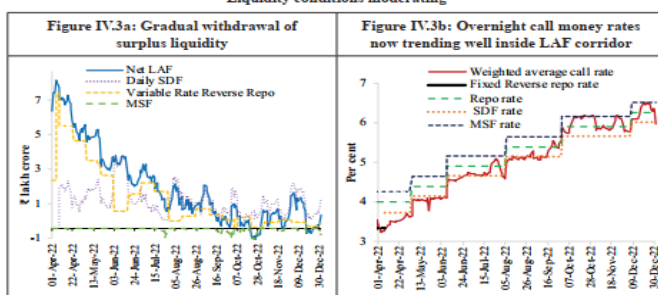


Source: RBI

Liquidity Conditions

- Surplus liquidity conditions that prevailed post-Covid-19 in response to the **Reserve Bank's conventional and unconventional monetary measures** moderated during FY23 in consonance with the changed monetary policy stance that focused on the withdrawal of accommodation.

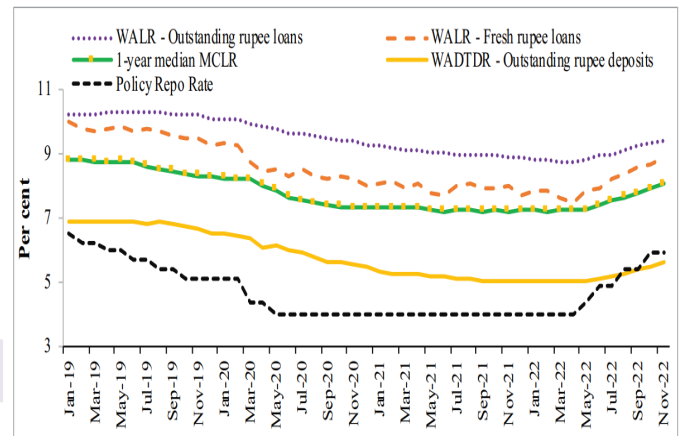
Liquidity conditions moderating



Monetary Policy Transmission

- Lending and deposit rates of banks increased during FY23 in consonance with the **policy repo rate changes**. During FY23 (up to December 2022), external benchmark-based lending rate and 1-year median marginal cost of funds-based lending rate (MCLR) increased by 225 bps and 115 bps, respectively.

Figure IV.4: Transmission to domestic lending and deposit rates picking up

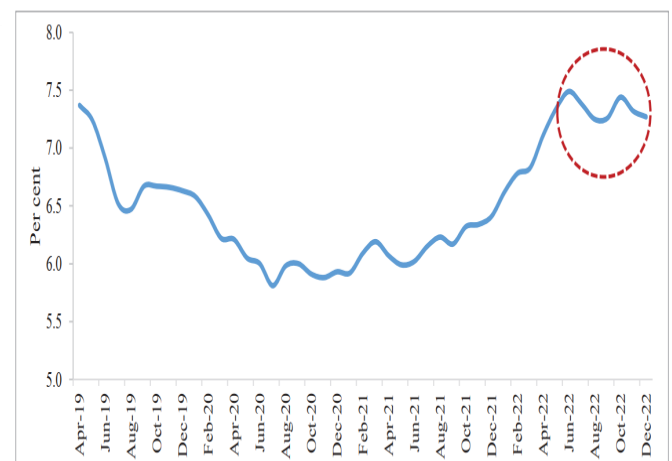


Source: RBI

Developments in the G-sec Market

- After remaining steady through 2020 and 2021, the yield on the 10-year government bond rose in 2022. The monthly average yield on the 10-year government bond stood at 7.3 per cent in December 2022 after having **peaked at 7.5 per cent** in June 2022. Yields moderated in November and December 2022 following smaller rate hikes by major central banks and declining inflation. With the **softening of yields, volatility also declined in the second half of 2022**.

Figure IV.5: G-sec yields easing since July, with decline in oil prices and global bonds yields



Source: FBIL

BANKING SECTOR

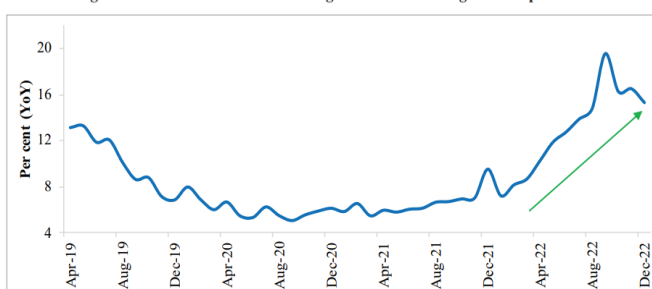
Resilient and well-capitalised Banking System

- Since the middle of the previous decade, RBI and the government have made dedicated efforts in terms of calibrated policy measures like strengthening the regulatory and supervisory framework, implementation of **4R's approach of Recognition, Resolution, Recapitalisation and Reforms** to clean and strengthen the balance sheet of the banking system.
- Consequently, the **asset quality of SCBs** has been improving steadily over the years across all major sectors. The **GNPA ratio has decreased from 8.2 per cent in March 2020 to a seven-year low of 5.0 per cent in September 2022**, while Net Non-Performing Assets (NNPA) have dropped to a ten-year low of 1.3 per cent of total assets. Moreover, with shrinking GNPA's, the Provisioning Coverage Ratio (PCR) has been increasing steadily since March 2021 and reached 71.6 per cent in September 2022.
- During the first half of FY23, the profitability of SCBs, measured in terms of Return on Equity (ROE) and Return on Assets (ROA), improved to levels last observed in FY15. At the system level, Profit After Tax (PAT) witnessed a **double-digit growth of 40.7 per cent in the quarter ending September 2022**, led by strong growth in Net Interest Income (NII) and a significant lowering of provisions.

Credit Growth Aided by a Sound Banking System and Deleveraged Corporate Sector

- The recovery in economic activity in FY22, along with the enhanced financial soundness of banks and corporates, has bolstered the expansion of **non-food bank credit since June 2021**. The YoY growth in non-food bank credit accelerated to 15.3 per cent in December 2022.

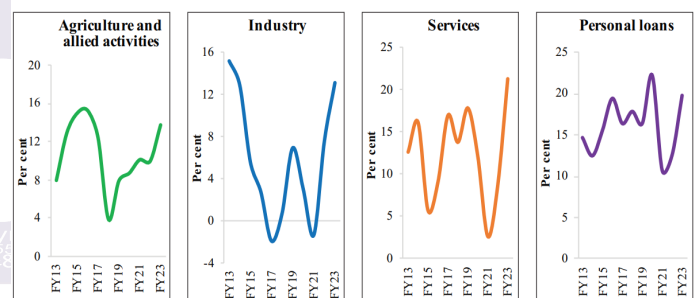
Figure IV.10: Non-Food Bank credit growth in double digit since April 2022



Source: RBI

- Credit growth has been **broad-based across sectors**, with retail credit driving the growth primarily owing to rising demand for **home loans**.
 - **An increase in demand for housing induces greater investment which, in turn, sets off a virtuous cycle of growth and investment.**
- Credit to agriculture and allied activities gained momentum supported by the **Government's concessional institutional credit and higher agricultural credit target**.
- Industrial credit growth has been buoyed by a pick-up in credit to MSMEs, assisted by the benefits accrued from the effective implementation of the **Emergency Credit Line Guarantee Scheme (ECLGS)** and the support provided by the government's production-linked incentive scheme and improvement in capacity utilisation.

Figure IV.11: Broad-based growth in sectoral non-food Bank credit

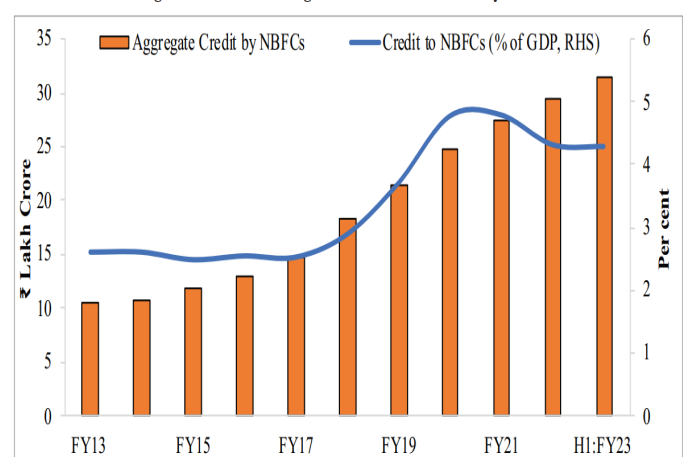


Source: RBI

Non-Banking Financial Companies (NBFCs) Continue to Recover

- The growing importance of the NBFC sector in the Indian financial system is reflected in the consistent rise of **NBFCs' credit as a proportion to GDP as well as in relation to credit extended by SCBs**.

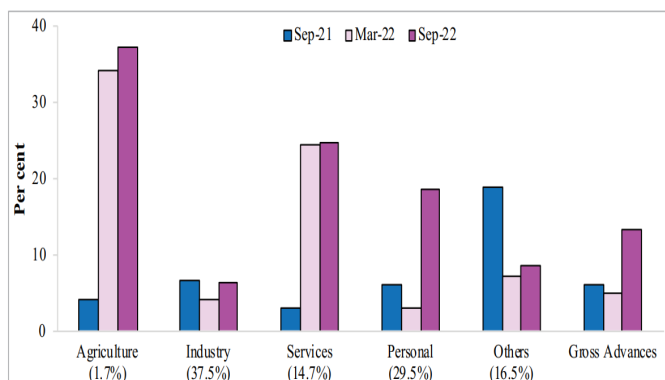
Figure IV.12: Increasing credit disbursed to and by NBFCs



Source: RBI

- The continuous improvement in asset quality is seen in the declining **GNPA ratio of NBFCs from the peak of 7.2 per cent** recorded during the second wave of the pandemic (June 2021) to 5.9 per cent in September 2022, reaching close to the pre-pandemic level.
- The continuous improvement in asset quality is seen in the declining **GNPA ratio of NBFCs from the peak of 7.2 per cent** recorded during the second wave of the pandemic (June 2021) to 5.9 per cent in September 2022, reaching close to the pre-pandemic level.
 - With the decline in GNPA's, the capital position of NBFCs also remains robust, with a **CRAR of 27.4 per cent** in end-September 2022, slightly lower than 27.6 per cent in March 2022.
- NBFCs continued to deploy the largest quantum of credit from their balance sheets to the **industrial sector, followed by retail, services, and agriculture.**

Figure IV.15: Robust growth in credit disbursement by NBFCs across sectors with a slight moderation in Industry



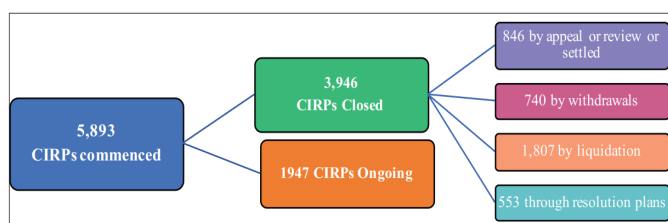
Source: RBI

PROGRESS MADE UNDER THE INSOLVENCY AND BANKRUPTCY CODE

Ease of doing business: Facilitating the process of 'exit'

- The Insolvency and Bankruptcy Code (IBC) has **facilitated the exit of distressed firms**, thereby allocating scarce economic resources towards more productive use.

Figure IV.16: CIRPs status since inception (as on September 2022)



Source: IBBI (Insolvency and Bankruptcy Board of India)

- **Sectoral analysis reveals that 52 per cent** of the ongoing Corporate Insolvency Resolution Processes (CIRP) belong to industry, followed by 37 per cent in the services sector by September 2022.

Behavioural change: Recoding Business Relationships

- One of the far-reaching **spill-over effects of the Code** has been the behavioural change effectuated by it among debtors. The fear of losing control over the CD upon initiation of CIRP has nudged thousands of debtors to settle their dues even before the initiation of insolvency proceedings.
- 69 per cent of the distressed assets rescued, realisation value around 178 per cent of the liquidation value
- 92 per cent of the value realised under the liquidation Process
- **NPA's:** IBC recovers highest amount for Scheduled Commercial Banks
- As per the RBI data, in FY 22, the total amount recovered by SCBs under IBC has been the highest compared to other channels such as Lok Adalat's, SARFAESI Act and DRTs in this period.

Development in Capital Markets

- Though **uncertain global macroeconomic and financial market** developments exercised some influence on Indian capital markets, **India's capital market had a good year, overall.**

Primary Market

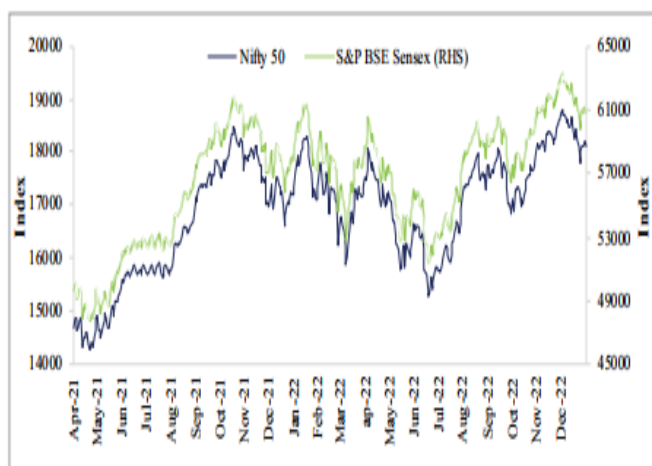
- **Equity:** Large number of SMEs coming out with the public offer
- From April to November 2022, the buoyant performance of the primary market has been observed despite turmoil in global financial markets. This year also witnessed the largest IPO ever in the history of India.
- **Debt:** Underactivity in public debt issuances more than compensated by private debt placements
- In April–November 2022, the amount of **resources mobilised by the issuance of debt securities in the primary market increased by 5 per cent**, compared to the corresponding period last year.

SECONDARY MARKET

Stock Market Performance: Indian stock market witnessing a resilient performance

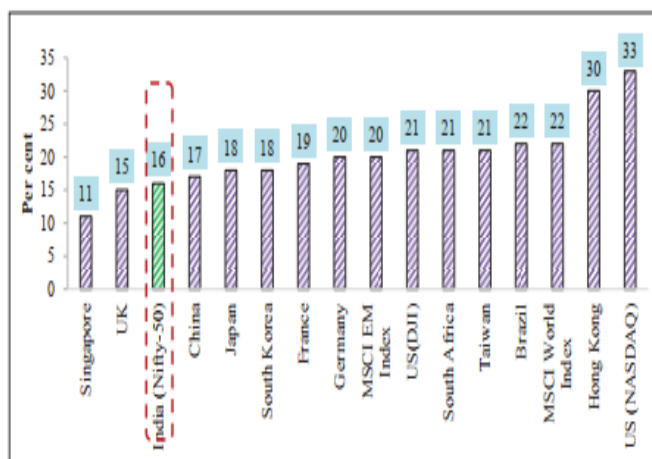
- In April–December 2022, global stock markets declined because of geopolitical uncertainty. On the contrary, the Indian stock market saw a resilient performance, with the **bluechip index Nifty 50** registering a return of 3.7 per cent during the same period.
- At the end of December 2022, **Sensex closed 3.9 per cent higher from its closing level on March 31, 2022**. Even among major emerging market economies, India outperformed its peers in April–December 2022.

Figure IV.20: Indian Benchmark Indices witnessed swift recovery



- Heightened geopolitical uncertainty and **supply chain disruption post-Russia-Ukraine crisis** led to increased volatility in the stock market. India VIX, which measures expected short-term volatility in the stock market, rose to a high of 32.0 on 24th February 2022 with the outbreak of the Russia-Ukraine conflict.

Figure IV.22: Annualised Volatility in Indian Indices during FY23 (April–November) remained relatively low



Retail Participation in the Capital Market

- The share of individual investors in the cash segment marginally declined during FY23 (April–November 2022) compared to the same period during FY22. However, the **number of demat accounts rose sharply**, 39 per cent higher by the end of November 2022 on YoY basis.

Table IV.8: Share of Individual Investors in Equity Cash Segment Turnover declined

Year	Share of Individual Investors (per cent)
FY22	41.1
FY22 (April to November)	42.2
FY23 (April to November)	37.5

Source: NSE, BSE

Note: Individual investors include individual domestic investors, NRIs, sole proprietorship firms and HUFs. Others: Partnership Firms/LLP, Trust / Society, Depository Receipts, Statutory Bodies, OCBs, FNs, etc.

Mutual Funds witnessed lower net inflows

- During April–November 2022, Mutual Funds witnessed significantly lower net inflows than last year. However, during the same period, **some schemes comprising growth/equity-oriented schemes and solution-oriented schemes** observed significantly higher inflows than in the previous year.

FOREIGN PORTFOLIO INVESTMENTS

Strong macroeconomic fundamentals ensure India remains an attractive destination

- Global economic factors, such as inflationary pressures, monetary tightening by central banks and recessionary fears in Advanced Economies, exerted **pressure on FPIs to sell in Indian markets**. Further, investors were also sitting on gains from Indian stocks that could be realised to offset losses elsewhere.
- The total assets under custody with FPIs increased by 3.4 per cent at the end of November 2022 compared to November 2021.

Table IV.13: Assets under Custody for FPIs increased

Period	Equity (₹ lakh crore)	Debt (₹ lakh crore)	Debt- VRR (₹ lakh crore)	Hybrid (₹ lakh crore)	Total (₹ lakh crore)
End November 2022	49.9	2.4	1.4	0.3	54.0
End November 2021	48.0	2.7	1.3	0.3	52.2

Source: SEBI

- Large capital outflows from EMDEs such as India and China, which are **importers of commodities**, were matched by inflows into commodity export-oriented markets such as **Indonesia, Malaysia and Brazil**.

OTHER DEVELOPMENTS

Necessity of a common approach to regulating the crypto ecosystem

- Crypto assets are new forms of digital assets implemented using cryptographic techniques. **The crypto asset market has been very volatile**, with its total valuation swinging from almost **US\$ 3 trillion in November 2021 to less than US\$ 1 trillion in Jan 2023**.
- The volatility of the crypto asset ecosystem has brought to the forefront their fragile backing and governance problems, as well as the increasing complexity and non-transparency. With related financial stability risks rising, the issue of crypto asset regulation has recently moved up the policy agenda of many nations.
- International fora like **OECD and G20** are discussing a globally coordinated approach to regulating crypto assets.

IFSC GIFT City

- Over the last few years, various initiatives taken by the government have opened up new avenues and opportunities for capital market players. Setting up and operationalising India's maiden International Financial Services Centre (IFSC) in GIFT City is the most important one.
- The aim is to facilitate **India to emerge as a significant economic power by accelerating the development of a strong base of International Financial Services in the country**.
- Given this backdrop, setting up and operationalising **India's maiden IFSC in GIFT City** has been a path-breaking financial reform underpinning India's increasingly liberal outlook towards capital account convertibility.
- GIFT-IFSC is housed in **India's first fully operational Smart City** with world-class commercial, social and physical infrastructure.

- To bolster the development of IFSC, the Government took a major policy decision to establish the first of its kind, unified and agile financial sector regulator for IFSCs viz International Financial Services Centres Authority (IFSCA) through an Act of Parliament in 2019. From 1st October 2020, IFSCA assumed the power of four domestic sector regulators, namely **RBI, SEBI, IRDAI & Pension Fund Regulatory and Development Authority of India (PFRDAI)**, in so far as the development and regulation of IFSCs in India were concerned.

DEVELOPMENT IN FINANCIAL MARKETS

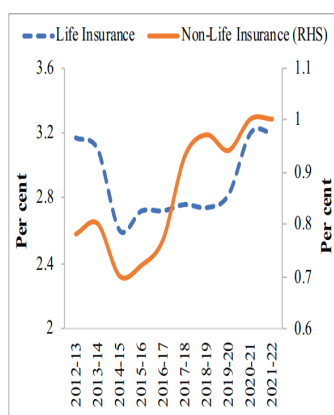
Insurance markets globally have demonstrated remarkable flexibility and resilience in overcoming the impact of the pandemic

- Insurance, an integral part of the financial sector, plays a significant role in economic development. Apart from protecting against mortality, property, and casualty risks and providing a safety net, the **insurance sector encourages savings and provides long-term funds for infrastructure development**.
- Internationally, the potential and performance of the insurance sector are generally assessed based on two parameters, viz., '**insurance penetration**', which refers to the ratio of total insurance premiums to Gross Domestic Product (GDP) in a year and '**insurance density**', which refers to the ratio of insurance premium to population, i.e.; insurance premium per capita and is measured in US Dollar, as they reflect the level of development of the insurance sector in a country.
 - In 2021, total global insurance premiums grew by 3.4 per cent in real terms, with the non-life insurance sector registering 2.6 per cent growth, driven by rate hardening in commercial lines in developed markets.
- In the life insurance segment, global premium growth bounced back strongly, **registering an increase of 4.5 per cent**. The US remained the largest insurance market in the world, with total premiums (non-life and life) of US\$ 2.8 trillion in 2021, followed by China and Japan.

India poised to emerge as one of the fastest-growing insurance markets in the coming decade

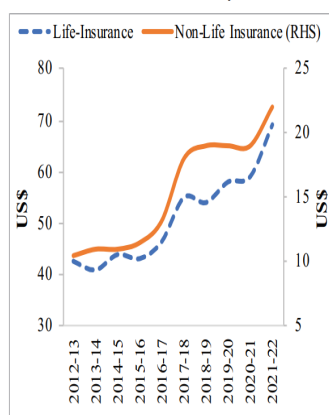
- Insurance penetration in India increased steadily from 2.7 per cent around the turn of the millennium to 4.2 per cent in 2020 and remained the same in 2021. Life insurance penetration in India was **3.2 per cent in 2021**, almost twice more than the emerging markets and slightly above the global average.
- During FY22, the gross direct premium of non-Life insurers (within and outside India) registered **YoY growth of 10.8 per cent**, primarily driven by health and motor segments.

Figure IV.26a: Steady increase in Insurance Penetration



Source: Swiss Re, Sigma various issues

Figure IV.26b: Significant rise in Insurance Density



- Government schemes and financial inclusion initiatives have driven insurance adoption and penetration across all segments. The government's flagship initiative for crop insurance, **Pradhan Mantri Fasal Bima Yojana (PMFBY)**, has led to significant growth in the premium income for crop insurance.
- As per the Swiss Re Institute World Insurance: 'Inflation risks front and centre report'13, India is one of the fastest-growing insurance markets in the world. In total premium volumes, it was the **10th largest globally in 2021**, with an **estimated market share of 1.9 per cent and the second largest of all emerging markets**.
- The digitisation of India's insurance market goes beyond telematics and customer risk assessment. Many digital platforms have emerged over recent years, offering various services, including insurance purchases. These measures, accompanied by an increase in FDI limit for Insurance Companies, are likely to facilitate an increased **flow of long-term capital, global technology, processes, and international best practices**, which will support the growth of India's insurance sector.

- Public listings improve public disclosure, corporate governance, and valuation¹². In keeping with this understanding, India's largest life insurer, the Life Insurance Corporation of India, went public in May 2022, raising US\$ 2.7 billion in the country's largest IPO to date. The private insurance providers have also been seizing such opportunities.
- To facilitate the penetration of insurance to the lower income segments of the population, the **Insurance Regulatory and Development Authority of India (IRDAI) issued IRDAI (Micro Insurance) Regulations, 2015**, which provide a platform for distributing insurance products that are affordable for the rural and urban poor and promote financial inclusion.
 - In FY21, 10.7 lakh new micro-insurance policies were issued to individuals with a new business premium of ₹355.3 crore (in the life-insurance segment), and 53,046 new microinsurance policies were issued in the general insurance segment (excluding standalone health insurers).

PENSION SECTOR INDIA'S

Pension Sector demonstrated remarkable performance during the Covid-19

- The framework of the pension system has evolved globally. In advanced countries, the pension sector is substantial, partly stemming from a large share of formal salaried employment. In 2021, pension assets in OECD countries stood at US\$ 38.5 trillion, **66.9 per cent of the GDP**. In some of the OECD countries, pension assets were over 100 per cent of the GDP.
- The Government of India announced various measures to provide pensions to families who have lost their earning members due to Covid. **Ex-gratia of ₹1,000** was given to around three crore poor senior citizens, widows, and disabled sections of the population (aged above 60 years) for three months during April-June 2020.

- The Government of India is implementing various pension schemes such as the **Indira Gandhi National Old Age Pension Scheme (IGNOAPS)**, **Indira Gandhi National Widow Pension Scheme (IGNWPS)**, **Indira Gandhi National Disability Pension Scheme (IGNDPS)** under the **National Social Assistance Programme (NSAP)** with a total beneficiary coverage of 4.7 crore.
- The National Pension System (NPS) was introduced in January 2004, the primary pension system for government employees with a pay-as-you-go defined benefit plan. The Government introduced APY in June 2015 as a part of the overarching objective of providing universal social security.
 - The **total number of subscribers under the NPS and APY registered a YoY growth of 25.1 per cent in November 2022**, with AuM witnessing a growth of 22.7 per cent during the same period.
- A survey by PFRDA on the socio-economic characteristics of NPS subscribers (all citizen models) for the five-year period FY17 to FY21 showed that **24 per cent were female subscribers**, with the balance 76 per cent being male subscribers. This contrasts with a better gender balance in the case of APY.
 - o **Female subscribers under APY have increased from nearly 38 per cent in the initial years of the scheme to around 44 per cent by March 2021.** Among various states, enrolment from Maharashtra was the highest, accounting for 17 per cent.

- There is tremendous scope for growth in India's pension sector as per capita income is expected to rise further as the economy transitions to a high-middle-income country. India's demographic structure, with a more significant proportion of younger people, favours a phase of accumulation.

Outlook

- The resilience of the domestic financial system is reflected in the healthy balance sheet of banks, **stronger capital levels of NBFCs** and robust growth in the AuM of domestic mutual funds. Further, IBC mechanism continues to support the 'Ease of Doing Business' in India by facilitating easy exit with time bound resolutions for firms.
- India is one of the fastest-growing insurance markets in the world and is expected to emerge as one of the **top six insurance markets by 2032**. Digitisation of India's insurance market, accompanied by an increase in FDI limit for insurance companies, is likely to facilitate an **increased flow of long-term capital, a global technology, processes, and international best practices**, which will support the growth of India's insurance sector.

PRICES AND INFLATION: SUCCESSFUL TIGHT-ROPE WALKING

Introduction

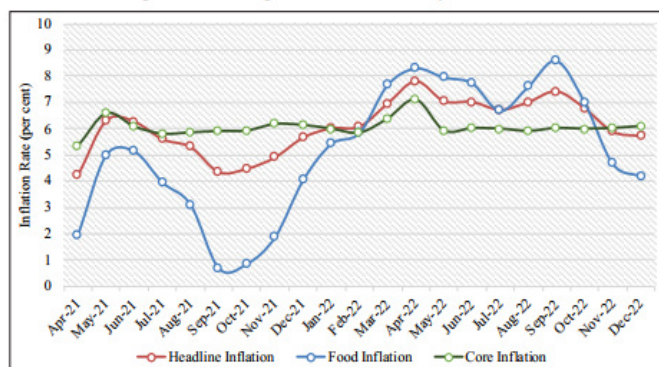
In general, the year 2022 was marked by a return of high inflation in the advanced world after three to four decades, depending on the country. In India, the government and the central bank took decisive measures to cap the rise in prices. India's retail inflation rate peaked at 7.8 percent in April 2022. The overshoot of inflation above the upper end of the target range in India was one of the lowest in the world.

DOMESTIC RETAIL INFLATION

Headline Inflation Declined from its Peak

- FY22 witnessed lower CPI-Combined (CPI-C) based retail inflation as compared to FY21. During FY22, some sub-groups such as 'oils & fats', 'fuel & light', and 'transport & communication' reported high inflation. In FY23, retail inflation was mainly driven by higher food inflation, while core inflation stayed at a moderate level. **Food inflation ranged between 4.2 percent to 8.6 percent between April and December 2022**, while the core inflation rate stayed at around 6 percent except in April 2022.

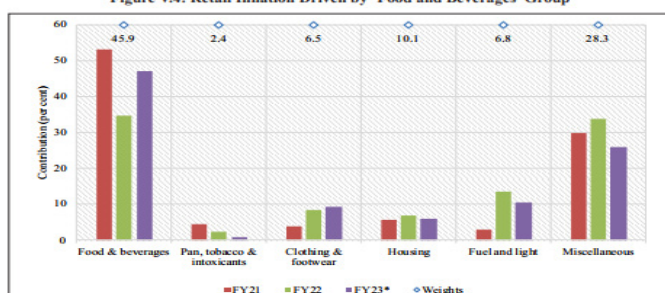
Figure V.3: Declining Food Inflation but Sticky Core Inflation



Retail Inflation Driven by Food Commodities

- During FY23, 'food & beverages', 'clothing & footwear', and 'fuel & light' were the major contributors to headline inflation– the first two contributing more this fiscal than in the previous one.

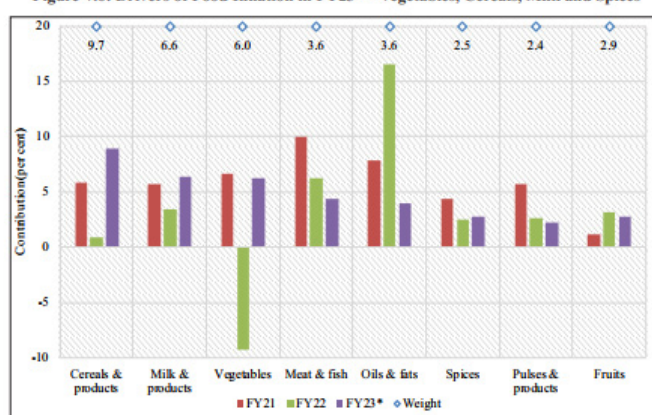
Figure V.4: Retail Inflation Driven by 'Food and Beverages' Group



Food Inflation Caused by Vegetables and Cereals in FY23

- Food inflation based on **Consumer Food Price Index (CFPI)** climbed to **7.0 percent in FY23 from 3.8 percent in FY22**. Though the increase in food inflation is broad-based, the major contributors are vegetables, cereals, milk, and spices.
- High inflation in vegetables from **April to September 2022** was mainly due to a spike in prices of tomatoes owing to crop damage and supply disruption due to the unseasonal heavy rains in the major producing states of **Karnataka, Tamil Nadu, Andhra Pradesh, and Telangana**.
- Inflation in pulses remained muted owing to higher production and measures taken by the government in terms of maintaining a buffer stock and reduction of import duties and cess on pulses.
- International prices of edible oils surged in FY22 owing to a shortfall in global production and an increase in **export tax levies by various countries**. India meets 60 percent of its edible oils demand through imports, making it vulnerable to international movements in prices. However, inflation remained subdued in FY23 because of the rationalization of tariffs and the imposition of stock limits on edible oils and oil seeds.

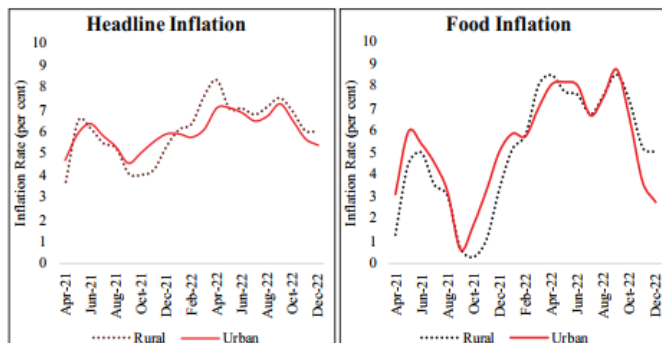
Figure V.6: Drivers of Food Inflation in FY23* – Vegetables, Cereals, Milk and Spices



Rural-Urban Inflation Differential has Declined

- While the current fiscal year saw rural and urban inflation closely tracking each other, FY22 had seen a wider differential between the two. The **gap between rural and urban inflation reached its widest in March 2022** due to a difference in the experience of food inflation.
- Urban areas experienced a **sharper increase in food prices of vegetables and oils** during this time as compared to the hinterlands.

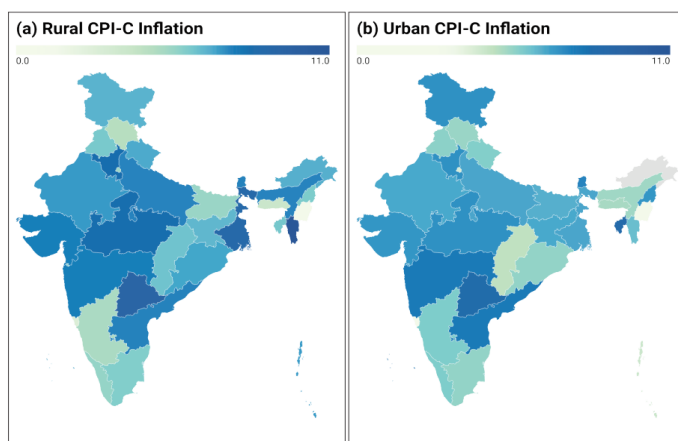
Figure V.11: Urban and Rural Inflation



Majority of the States/UTs have Higher Rural Inflation than Urban Inflation

- Assam, Haryana, Madhya Pradesh, Manipur, Mizoram, Odisha, Uttarakhand, West Bengal, and Delhi** experienced a higher rural inflation than urban inflation. In rural sectors of Haryana, Mizoram, and West Bengal it was because of higher **'food and beverages'** and **'clothing and footwear'** inflation.
- In rural sectors of Madhya Pradesh, Manipur and Assam, it was due to **'fuel and light'** segments. Food, clothing and fuel were the major contributors to higher inflation in urban areas of Bihar, Meghalaya, and Tripura.

Figure V.13: Higher Rural Inflation in Most of States/UTs in FY23*



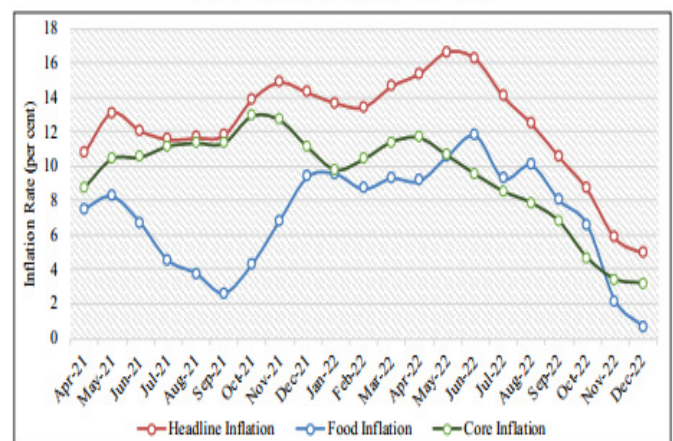
Source: MoSPI
Note: (i) *April-December
(ii) Data for Urban Arunachal Pradesh is not available

DOMESTIC WHOLESALE PRICE INFLATION

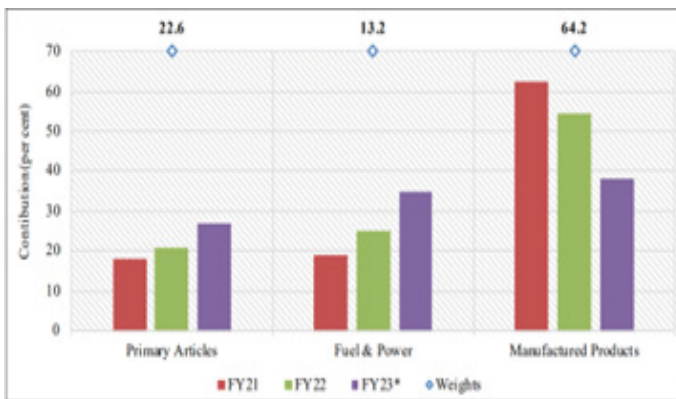
Wholesale Price Inflation Caused by Global Supply Chain Disruption

- WPI-based inflation **remained low during the Covid-19 period**, and it started to **gain momentum in the post-pandemic period** as economic activities resumed. The Russia-Ukraine conflict further exacerbated the burden as it worsened global supply chains along with the free movement of essential commodities. Prices of items like **petroleum products, basic metals, chemicals & chemical products, and edible oils**, with maximum exposure to international pricing translated into a rise in the domestic WPI inflation.
- Part of the double-digit inflation in WPI during H1 of FY23 could be attributed to food inflation, which stayed at 7.5 percent against 6.8 percent in FY22. Inflation in the 'manufactured products' subgroup in FY23 saw a considerable decline compared to the previous year due to the rationalization of duties on critical inputs and moderation in global commodity prices. In **comparison to FY22, core inflation remained lower in FY23**.

Figure V.14: Declining Core and Food Inflation



- The **high import dependence on edible oils** has meant that the transitory effect of rising international prices of these products is also reflected in domestic prices. An RBI study indicates that a **one percent increase in prices across all the countries and sectors due to global inflation shock could increase inflation in India by around 63 basis points** through second-round effects comprising domestic indirect effects (46 basis points) and global spillovers (17 basis points), in addition to the direct impact of 100 basis points.



Source: Office of Economic Adviser, DPIIT

Note: *April-December

Box V.2: Measures to Contain Inflation in Input Prices

- Fuel Prices:** The Central Government has made interventions by calibrating the excise duties on petrol and diesel. The first phase of reduction in terms of ₹5 on petrol and ₹10 on diesel was made effective from 4 November 2021 and the second phase from 22 May 2022 (₹8 per litre on petrol and ₹6 per litre on diesel).
- Plastic products:** The import duty on import of raw materials used in the plastic industry has been reduced to lower the cost of domestic manufacturing. The duties on naphtha, propylene oxide and polymers of vinyl chloride have been reduced from 2.5 per cent to 1 per cent, 5 per cent to 2.5 per cent and from 10 per cent to 7.5 per cent, respectively on 21 May 2022.
- Steel:** On 21 May 2022, import duty on major inputs – ferronickel, cooking coal, PCI coal – has been cut from 2.5 per cent to zero, while the duty on coke and semi-coke has been slashed from 5 per cent to zero. Tax on export of iron ores and concentrates has increased from 30 per cent to 50 per cent, while that on iron pellets has been raised to 45 per cent.
- Cotton:** The government waived customs duty on cotton imports w.e.f 14 April 2022, until 30 September 2022, to benefit the textile industry and lower prices for consumers. Earlier, cotton imports attracted 5 per cent Basic Customs Duty (BCD) and 5 per cent AIDC. The Central Board of Indirect Taxes and Customs (CBIC) notified the exemption from customs duty and AIDC for import of cotton.
- Diamonds and gemstones:** In Budget 2022-2023, customs duty on cut and polished diamonds and gemstones was reduced to 5 per cent and duty on the simply sawn diamond was reduced to nil.
- Chemical products:** Customs duty on certain critical chemicals namely methanol, acetic acid and heavy feedstocks for petroleum refining was reduced in the Budget 2022-23.

and diesel in November 2021 and May 2022, followed by a reduction in Value Added Tax (VAT) by the State Governments, led to a moderation of the retail selling price of petrol and diesel in India.

Convergence of WPI and CPI Inflation

- The convergence between the WPI and CPI indices was mainly driven by two factors. Firstly, a cooling in inflation of commodities such as crude oil, iron, aluminum, and cotton led to a lower WPI. These commodities occupy a larger weight in the WPI as compared to the CPI. Further, these commodities are highly vulnerable to fluctuations in international prices and are used intensively by industries producing wholesale goods. As the prices cooled for these commodities, the two measures of inflation began to converge.
- Secondly, CPI inflation rose due to an increase in the prices of services. Services form a part of the core component of the CPI-C but are not included in the WPI

Figure V.18: Convergence of Headline WPI Inflation with Headline CPI-C Inflation

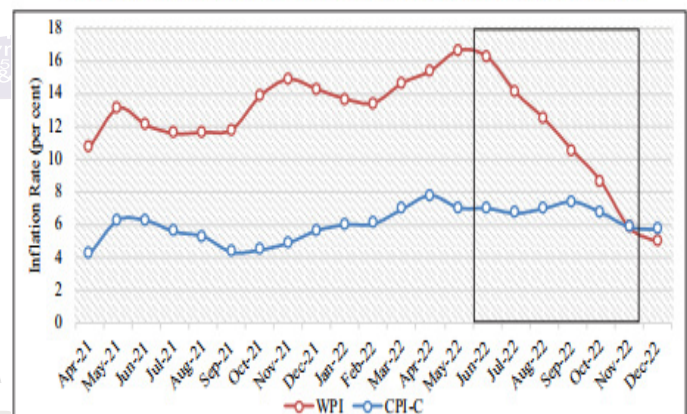
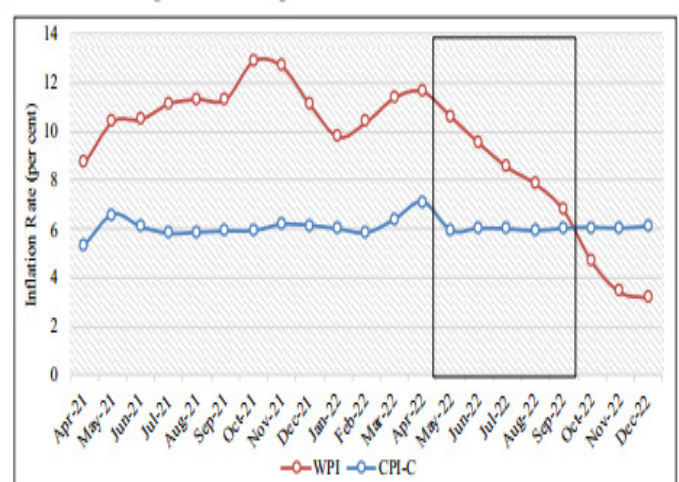


Figure V.19: Convergence in Core Inflation – CPI-C vs WPI



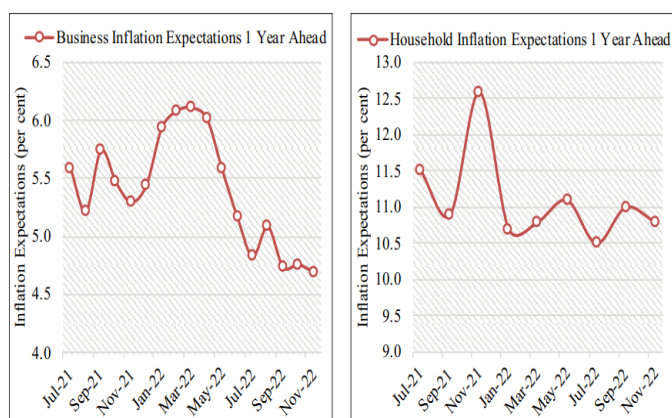
Fuel Price Inflation: Declining Global Crude Oil Prices

- In FY22 and FY23, inflation in WPI 'fuel and power' was mostly driven by high international crude oil prices.
- In response to subdued global demand because of Covid-19 induced restrictions, the price of the Indian basket of crude oil during FY21 stayed in the range of US\$20-65/bbl. Thereafter, prices started surging on account of unprecedented cuts in crude oil supply by the Organisation of the Petroleum Exporting Countries (OPEC) and other oil-producing countries. The upward trend continued in FY22 and FY23, as demand picked up with the easing of Covid-19 restrictions in most regions of the world.
- Also, owing to supply disruption amid rising tensions in Eastern Europe and the Middle East in June 2022, the Indian basket of crude oil peaked at US\$116/bbl. Subsequently, the price declined to US\$ 78/bbl in December 2022. Further, a cut in central excise duty on petrol

Falling Inflationary Expectations

- Inflationary expectations are decisive in charting the course of inflation. The RBI's anchoring of inflationary expectations through forward guidance and responsive monetary policy has helped guide the trajectory of inflation in the country.
- The **one-year-ahead inflationary expectations by businesses** have shown a decreasing trend in the current fiscal. Similarly, inflationary expectations by households- who are the price takers of the economy- determine their consumption choices in the near future. Much like businesses, **household inflation expectations too have moderated.**

Figure V.23: Business and Household Inflationary Expectations are Falling



Source: IIM-A and RBI

Monetary Policy Measures for Price Stability

- RBI's Monetary Policy Committee (MPC) increased the policy repo rate under the liquidity adjustment facility (LAF) by 2.25 percent (225 basis points) from 4.0 percent to 6.25 percent between May and December 2022.

Box V.3: How is the Current Inflation Different from the 1970s?

Unprecedented global inflation in the current year recalls the experience of the 1970's, particularly the aftermath of the oil crises in 1973 and 1979. Both crises contributed to rising commodity prices worldwide and their spill-over effects on the prices of other goods and services. However, the environment and intensity of the crises differ in various respects.

Firstly, recent oil price rises are proportionally smaller than the 1970s crisis, which had taken oil prices to historic highs.

Secondly, in contrast to the 1970s crisis, which was confined to oil prices, the recent crisis has seen pervasive price increases across a broader range of commodities. Prices of non-oil energy, some agricultural goods, fertilisers, and metals have all risen well above their pre-pandemic levels in the current year.

Thirdly, commodity supply disruptions have played a smaller role in recent price increases than in the 1970s. The rise in commodity prices over the past year has been accompanied by a modest rise in the production of many commodities, although not oil. Global commodity supply chains have now become more efficient than in the 1970s and hence, the inflationary pressure can be absorbed with greater ease. However, supply disruptions could intensify over the coming year, as the war in Ukraine will lower global production of wheat, maize and fertilisers, while price caps on Russian oil and gas may reduce the supply of these products.

Fourthly, global inflation, which has risen significantly since the start of 2021, follows several years of low inflation. In contrast to this, the 1973 crisis took place against a backdrop of several years of steadily rising world inflation and signs of a de-anchoring of inflation expectations.

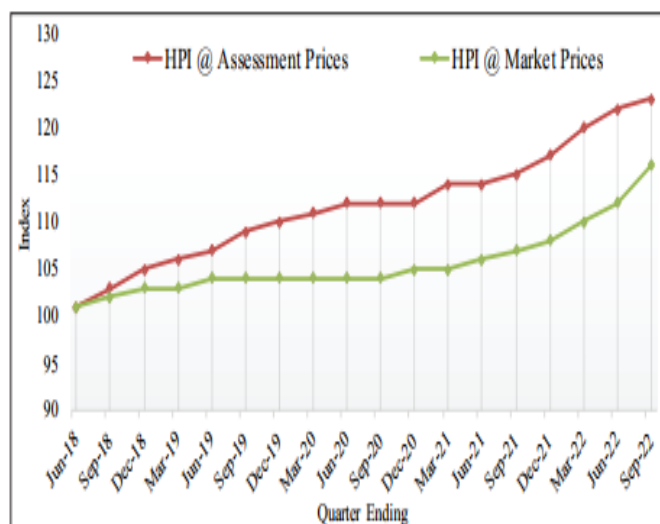
Lastly, the 1973 crisis closely followed the collapse of the Bretton Woods managed exchange rate regime as the goals and even instruments of monetary policy were poorly defined in many countries. Arguably, central banks have much clearer and more robust institutional frameworks that focus on price stability today. This has prevented inflation expectations of the public from becoming unanchored despite a sharp rise in inflation during the year 2022.

Besides commodity market behaviour, higher energy prices could matter less today than in the past. With better coordination among the global central banks and the application of unconventional monetary policy tools, inflation has been controlled in a better way so that its negative spillovers are limited and transitory. The energy intensity of GDP – the amount of energy required to produce a given amount of goods and services – has fallen by around 40 per cent since the late 1970s. With the diversification of input baskets and destinations for sourcing, commodity shocks' impact has been tamed to some extent. Hence, we may expect recent commodity price rises to be less disruptive than those of the 1970s.

Housing Prices: Recovering Housing Sector After the Pandemic

- Housing prices provide **helpful information on the state of the economy via booms and busts in asset markets**, which give rise to economic imbalances. Monitoring housing prices is essential for achieving the objectives of price stability, financial stability, and growth.
- The National Housing Bank (NHB) publishes two Housing Price Indices (HPI), namely '**HPI assessment price**' and '**HPI market price quarterly**', with FY18 as the base year. The annual variation in HPI market price ranged from an increase of 37.7 per cent in Bhubaneswar to a contraction of 6.5 per cent in Indore in the Quarter Ending (QE) Sept 22 over QE Sept 21.
- The annual change in HPI assessment price varied widely across the cities ranging from an increase of 20.2 per cent in Gandhinagar to a decline of 2.3 per cent in Bhiwadi in the QE Sept 22 over QE Sept 21.

Figure V.25: Composite HPI for All-India – Recovering Housing House



- The last three years were challenging for the housing sector. NHB has provided a significant **impetus to obviate the liquidity issues** faced by the Housing Finance Sector in the last 3 years. The Liquidity Infusion Facility Scheme was **launched in 2019 to support HFCs in creating individual housing loan portfolios** that fall under the priority sector, as defined by the RBI.

Keeping a check on Pharmaceutical Prices

- The principles for the regulation of the prices of drugs are based on the **National Pharmaceuticals Pricing Policy, 2012**, administered by the Department of Pharmaceuticals.
- **Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)** was launched to make quality generic medicines available at affordable prices to all. Under this scheme, dedicated outlets known as **Janaushadhi Kendras** are opened to provide quality generic medicines at affordable prices to all and especially to the poor and the deprived.
 - Under the PMBJP, until 31 December 2022, more than **9000 PMBJKs have been opened**

across the country. At present, the product basket of PMBJP comprises 1759 medicines and 280 surgical devices available for sale.

Conclusion

- It is **not wishful thinking that 2023 will show less macroeconomic volatility** than its preceding financial year. Both CPI-C and WPI have fallen below 6 percent (which is the RBI tolerance limit for the former) and are on the descending slope of the surge that hit the economy in the first half of the current fiscal.
- India's inflation management has been particularly noteworthy and can be contrasted with advanced economies that are still grappling with sticky inflation rates. Due to the anticipated slowdown in advanced economies, inflation risks coming from global commodity prices are likely to be **lower in FY24 than in FY23**. Still, overall, the inflation challenge in FY24 must be a lot less stiff than it has been this year. We expect monetary and fiscal authorities to be as proactive and vigilant as they have been this year.

CHAHAL
ACADEMY

SOCIAL INFRASTRUCTURE AND EMPLOYMENT: BIG TENT

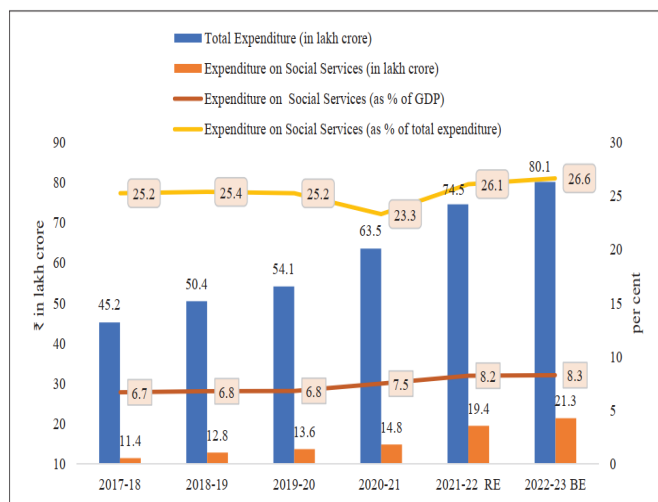
Introduction

- Post the massive, unexpected disruption to human lives caused by the global pandemic, the year **2022** was when humanity once again picked up the threads and took small steps to get back to a semblance of normalcy. However, the challenges posed by the aftermath of this crisis, subsequent waves of the pandemic, and the ensuing **Russia-Ukraine conflict** have impacted the global as well as India's development trajectory. There was a stress on key aspects of the social well-being of citizens such as health, education, social security, etc. and the Government stepped in to continue its support towards social infrastructure development.
- Standing on the brink of FY23, various indicators of social development appear to have recouped. Focus on long-term goals of human development and “**sab ka sath, sab ka vikas**” have assumed salience. The social sector expenditure outlay of the Centre and State Governments has increased steadily to stand at ₹21.3 lakh crore in FY23 (BE), with its share in total General Government expenditure standing at 26.6 percent.

Social Sector Expenditure Keeping Pace with the Growing Importance of the Sector

- The Government's spending on social services has shown a rising trend since FY16. The share of expenditure on social services in the total expenditure of the Government has been around **25 percent from FY18 to FY20**. It increased to **26.6 percent in FY23 (BE)**. The social services expenditure witnessed an increase of 8.4 percent in FY21 over FY20 and another 31.4 percent increase in FY22 over FY21, being the pandemic years, which required enhanced outlay, especially in the health⁴ and education⁵ sectors.

Figure VI.1: Trends in social service sector expenditure by General Government (Combined Centre and States)



- The share of expenditure on **health** in the total expenditure on social services, has **increased from 21 percent in FY19 to 26 percent in FY23 (BE)**. The policy recommended an increase in the Government's health expenditure from the existing 1.2 percent to 2.5 percent of GDP by 2025. In keeping with this objective, Central and State Governments' budgeted expenditure on the health sector reached 2.1 per cent of GDP in FY23 (BE) and 2.2 per cent in FY22 (RE), against 1.6 per cent in FY21.

Improving Human Development Parameters

- 'Human Development' is the key enabler for upward social mobility. According to United Nations Development Programme (UNDP) report, 90 percent of countries have registered a reduction in their Human Development Index (HDI) value in 2020 or 2021, indicating that human development across the world has stalled for the first time in 32 years. **India ranked 132 out of 191 countries and territories** in the 2021/2022 HDI report. India's HDI value continues to exceed South Asia's average human development.
- On the parameter of gender inequality, **India's Gender Inequality Index (GII) value is 0.490 in 2021 and is ranked 122**. This score is better than that of the South Asian region (value: 0.508) and close to the world average of 0.465. This reflects the Government's initiatives and investments toward more inclusive growth, social protection, and gender-responsive development policies.

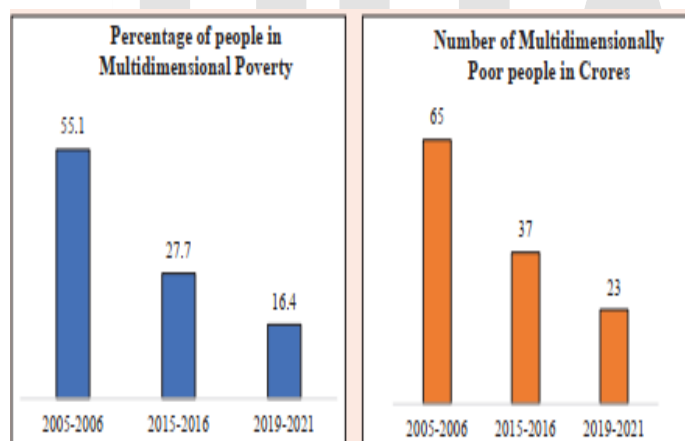
Table VI.2: India's position and trends in the Global HDI 2021

	HDI 2021		HDI Rank 2020	Life expectancy at birth (years)	Expected years of schooling (years)	Mean years of schooling (years)	Gross national income per capita (2017 PPP \$)
	Rank	Value					
Switzerland	1	0.962	3	84.0	16.5	13.9	66,933
Norway	2	0.961	1	83.2	18.2	13.0	64,660
United Kingdom	18	0.929	17	80.7	17.3	13.4	45,225
Japan	19	0.925	19	84.8	15.2	13.4	42,274
United States	21	0.921	21	77.2	16.3	13.7	64,765
China	79	0.768	82	78.2	14.2	7.6	17,504
Brazil	87	0.754	86	72.8	15.6	8.1	14,370
South Africa	109	0.713	102	62.3	13.6	11.4	12,948
Indonesia	114	0.705	116	67.6	13.7	8.6	11,466
India	132	0.633	130	67.2	11.9	6.7	6,590
South Asian region		0.632		67.9	11.6	6.7	6,481
World average		0.732		71.4	12.8	8.6	16,752

Source: 2021/2022 Human Development Report, UNDP

UNDP Multidimensional Poverty Index 2022

- United Nations Development Programme's (UNDP) global **Multidimensional Poverty Index (MPI)** measures acute multidimensional poverty across more than 100 developing countries. The methodology involves measuring each person's overlapping deprivations across 10 indicators in three equally weighted dimensions: health, education, and standard of living.
- The 2022 report of the UNDP on MPI was released in October 2022 and covers 111 developing countries. As regards India, the survey data for 2019-21 has been used. Based on these estimates, **16.4 per cent of the population in India (228.9 million people in 2020) is multidimensionally poor** while an additional 18.7 per cent is classified as vulnerable to multidimensional poverty (260.9 million people in 2020).



Transformation of Aspirational Districts Programme

- Launched in 2018 by the Government of India, in this, the districts are prodded and encouraged first to catch up with the best district of their state, and subsequently aspire to become one of the best in the country, by competing with and learning from others in the spirit of competitive and cooperative federalism.

- 117 Aspirational Districts (ADs) across 28 States/UTs** have been identified by NITI Aayog based upon composite indicators ranging from **health and nutrition, education, agriculture, and water resources, financial inclusion and skill development, and basic infrastructure** which have an impact on HDI. The broad contours of the programme are Convergence (of Central & State Schemes), Collaboration (of Central, State level Nodal Officers & District Collectors), and Competition among districts through monthly delta ranking; all driven by a mass movement.
- NITI Aayog has developed a broad template for the formulation of district plans. Since different districts have different opportunities and challenges, they have been advised to customise the template.
- Achievements of the programme**
 - Many ADs have surpassed the **average state values in several indicators under the Health and Nutrition** theme monitored under the programme.
 - While monitoring the outcome of financial inclusion, it was seen that ADs have performed better than non-aspirational districts.
 - Several ADs have reported saturation in the basic infrastructure indicators like the percentage of households with electricity connection.

Progressing Labour Reform measures

- In 2019 and 2020, 29 Central Labour Laws were amalgamated, rationalised, and simplified into four Labour Codes, viz., the **Code on Wages, 2019 (August 2019)**, the **Industrial Relations Code, 2020**, the **Code on Social Security, 2020**, and the **Occupational Safety, Health & Working Conditions Code, 2020 (September 2020)**.
- The new laws are in tune with the changing labour market trends and, at the same time, accommodate the minimum wage requirement and welfare needs of the unorganised sector workers, including the self-employed and migrant workers, within the legislation framework.

- The Codes also ease compliance mechanism aiming to promote **ease of doing business/setting up of enterprises** and catalyse creation of employment opportunities while ensuring safety, health and social security of every worker. Use of technology, such as, web-based Inspection has been introduced in order to ensure transparency and accountability in enforcement. Decriminalisation of minor offences has also been provided in the Labour Codes.

e-Shram Portal

- **Ministry of Labour and Employment (MoLE)** has developed eShram portal for creating a National database of unorganised workers, which is verified with Aadhaar. It captures details of workers like name, occupation, address, occupation type, educational qualification, and skill types etc., for the optimum realisation of their employability and extend the benefits of the social security schemes to them.
- As on **31 December 2022, total over 28.5 crore unorganised workers have been registered on eShram portal.**

Aadhaar: The Many Achievements of the Unique Identity

- Aadhaar, a **12-digit unique identification number** provides a digital identity to the residents of India and ensures authentication. It connects the Government and the individual, replacing the disentangled web of multiple IDs for multiple purposes, and secures the social contract between the State and the Citizen.
- Aadhaar is an **essential tool for social delivery by the State**. 318 Central schemes and over 720 state DBT schemes are notified under section 7 of the Aadhaar Act, 2016, and all these schemes use Aadhaar for targeted delivery of financial services, subsidies, and benefits.
- **Important Data points:**
 - **Aadhaar Generated- 135.2 crore**
 - **Aadhaar Updated- 71.1 crore**
 - **Authentication Done- 8621.2 crore**
 - **75.4 crore bank accounts are linked with Aadhaar & 1549.8 crore transactions via Aadhaar Enabled Payment Systems**

Key usages of Aadhaar

- Aadhaar – Usage in DBT
- Aadhaar Enabled Payment Systems (AEPS)
- JAM (Jan-Dhan, Aadhaar, and Mobile) trinity
- One Nation One Ration Card (ONORC) Scheme
- PM Kisan Samman Nidhi
- Co-WIN
- Face Authentication

Improving Employment Trends

- Labour markets have recovered beyond pre-Covid levels, in both urban and rural areas, with **unemployment rates falling from 5.8 per cent in 2018-19 to 4.2 per cent in 2020-21, and a noticeable rise in rural FLFPR from 19.7 per cent in 2018-19 to 27.7 per cent in 2020-21.**
- More recent urban employment data shows progress beyond pre-pandemic levels as the unemployment rate declined from 8.3 per cent in July-September 2019 to 7.2 per cent in July-September 2022.

SUPPLY SIDE OF EMPLOYMENT

Annual Periodic Labour Force Survey

- As per usual status, the labour force participation rate (LFPR), **worker population ratio (WPR) and unemployment rate (UR) in PLFS 2020-21(July-June)** have improved for both males and females in both rural and urban areas compared to PLFS 2019-20 and 2018-19.

Table VI.4: Employment trends as per usual status
(principal status + subsidiary status) for persons of all ages

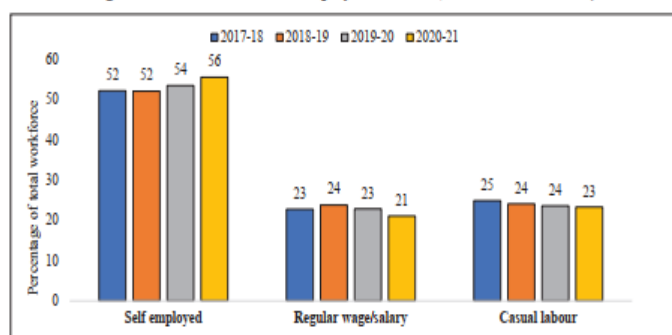
(per cent)

		Rural			Urban			Rural + Urban		
		2018-19	2019-20	2020-21	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
Male	LFPR	55.1	56.3	57.1	56.7	57.8	58.4	55.6	56.8	57.5
	WPR	52.1	53.8	54.9	52.7	54.1	54.9	52.3	53.9	54.9
	UR	5.6	4.5	3.9	7.1	6.4	6.1	6.0	5.1	4.5
Female	LFPR	19.7	24.7	27.7	16.1	18.5	18.6	18.6	22.8	25.1
	WPR	19.0	24.0	27.1	14.5	16.8	17	17.6	21.8	24.2
	UR	3.5	2.6	2.1	9.9	8.9	8.6	5.2	4.2	3.5
Person	LFPR	37.7	40.8	42.7	36.9	38.6	38.9	37.5	40.1	41.6
	WPR	35.8	39.2	41.3	34.1	35.9	36.3	35.3	38.2	39.8
	UR	5.0	4.0	3.3	7.7	7.0	6.7	5.8	4.8	4.2

Source: Annual PLFS 2017-18 to 2020-21, MoSPI

- Region-wise, while rural labour market indicators have been improving for both males and females, the **urban labour market is slightly behind pre-Covid levels in 2020-21** (July-June). However, taking a cue from the Quarterly PLFS reports for urban areas available for more recent quarters, the recovery of urban labour markets beyond pre-Covid levels is discernible.
- According to broad status in employment, the share of **self-employed increased and that of regular wage/salaried workers declined** in 2020-21 vis-à-vis 2019-20, driven by trends in both rural and urban areas. The share of casual labour declined slightly, driven by rural areas.

Figure VI.3: Trends in broad employment status (Persons, rural+urban)



- Based on the industry of work, the **share of workers engaged in agriculture rose marginally from 45.6 per cent in 2019-20 to 46.5 per cent in 2020-21**, the share of manufacturing declined faintly from 11.2 per cent to 10.9 per cent, the share of construction increased from 11.6 per cent to 12.1 per cent, and share of trade, hotel & restaurants declined from 13.2 per cent to 12.2 per cent, over the same period.

Measurement issues in Female Labour Force Participation Rate

- Use of overly broad categories clubbing productive work (collection of firewood, poultry farming, etc.) with **domestic duties can in one sweep shift a significant proportion of women in the labour force into the out-of- labour-force category.**
- **No Recovery questions in the PLFS questionnaire:** The survey design relies mainly on a single question for measuring the labour force status of an individual, which eliminates the scope to rectify any error in self-reporting, considering the large rural population and literacy levels

- **ILO recommends** using multiple probing or recovery questions such as “whether the person helped in the family business” and “whether the person worked in own business in last one week/year” and “whether person helped the family with job”.

- **Measurement of “Work” alongside “Employment”:** There is a need to broaden the horizon of measuring work, which constitutes the whole universe of productive activities alongside employment.

- According to the latest ILO standards²², limiting productive work to labour force participation is narrow and only measures work as a market product. It does not include the value of women’s unpaid domestic work, which can be seen as expenditure-saving work such as collecting firewood, cooking, tutoring children, etc, and contributes significantly to the household’s standard of living.

Women and SHGs

- India has around **1.2 crore SHGs, 88 per cent being all-women SHGs**. Success stories include Kudumbashree in Kerala, Jeevika in Bihar, Mahila Arthik Vikas Mahila Mandal in Maharashtra, and recently, Looms of Ladakh.
- The **SHG Bank Linkage Project (SHG-BLP), launched in 1992**, has blossomed into the world’s largest microfinance project. The SHG movement, now in its 30th year, has emerged as a powerful intervention to cover the small and marginalised sections. Currently, bank-linked SHGs are promoted through Central Government, State Governments, NGOs, etc.
- **Impact of SHGs: Empowered Women, Empowered Hinterland**
 - Women’s economic SHGs have a positive, **statistically significant effect on women’s economic, social, and political empowerment**, with positive effects on empowerment achieved through various pathways such as familiarity with handling money, financial decision-making, improved social networks, asset ownership and livelihood diversification.

➤ According to a recent assessment of the **DAY-National Rural Livelihood Mission**, which is being undertaken through the SHGs, both participants and functionaries perceived high impacts of the programme in areas related to women empowerment, self-esteem enhancement, personality development, reduced social evils; and additionally, medium impacts in terms of better education, higher participation in village institutions and better access to government schemes.

- During **Covid-19**, they emerged as **pivotal players in crisis management**, leading from the front in - producing masks (with cultural variants such as **Gamusa Masks in Assam**), **sanitisers**, and **protective gear**, creating awareness about the pandemic (e.g. **Patrakar Didis of Jharkhand**), delivering essential goods (e.g. **Floating supermarkets in Kerala**), running **community kitchens** (e.g. **Prerna Canteens in Uttar Pradesh**), supporting farm livelihoods (e.g. **Pashu Sakhis for animal health care services**, **Aajeevika Farm Fresh Online selling** and distribution mechanism for vegetables in Jharkhand), convergence with **MGNREGS** (in UP, Bihar, Chhattisgarh), and in delivery of financial services (e.g. **Bank Sakhis** managing bank rush for availing Covid-relief DBT cash transfers).

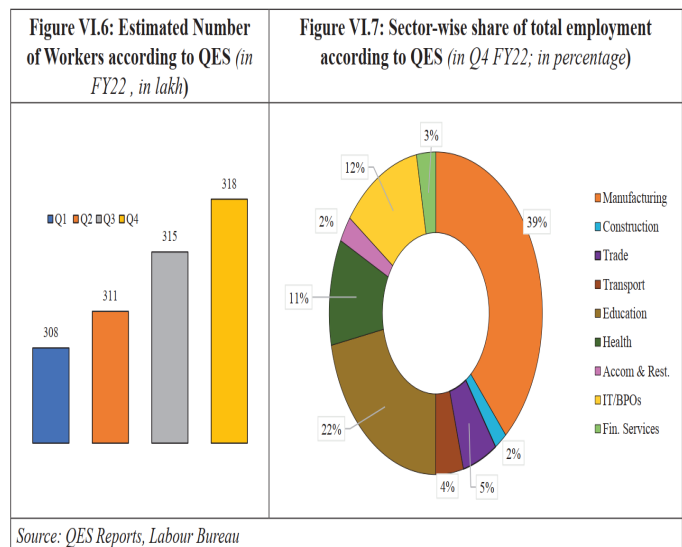


Table VI.6: Sector-wise estimated number of workers as per QES

(in lakh)

Sectors	Apr-Jun, 2021	Jul-Sep, 2021	Oct-Dec, 2021	Jan-Mar, 2022
Manufacturing	125.2	121.4	124.0	122.5
Construction	7.4	6.1	6.2	6.1
Trade	20.4	16.5	16.8	17.0
Transport	13.4	14.4	13.2	13.3
Education	67.3	68.5	69.3	69.0
Health	26.0	33.5	32.9	33.8
Accommodation & Restaurants	8.9	7.8	8.1	8.2
IT/BPOs	20.7	33.2	34.6	38.3
Financial Services	17.4	8.7	8.9	9.1
Total	308.2	310.6	314.5	318.0

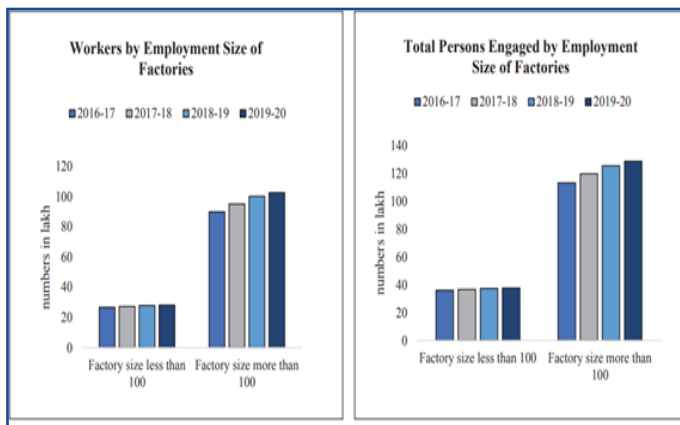
DEMAND SIDE OF EMPLOYMENT

Quarterly Employment Survey (QES)

- The QES, conducted by the **Labour Bureau**, covers establishments with ten or more workers in nine major sectors viz. manufacturing, construction, trade, transport, education, health, accommodation & restaurants, IT/BPOs, and financial services (covering 83 percent of total employment in establishments with ten or more workers as per the 6th Economic Census (2013-14) conducted by MoSPI.)
- The **estimated total employment in the nine selected sectors according to the fourth round of QES (January to March 2022) stood at 3.2 crore**, which is nearly ten lakhs higher than the estimated employment from the first round of QES (April-June 2021). Regarding terms of employment, regular employees constituted the majority of workers across sectors, with a share of **86.4 per cent in the total workforce in Q4FY22**.

Annual Survey of Industries (ASI) 2019-2029

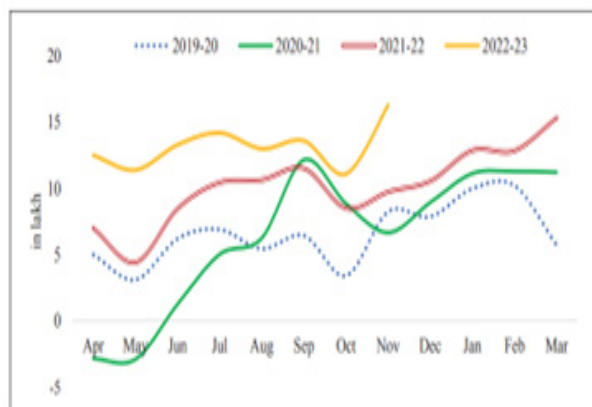
- The ASI, conducted by MoSPI, is an important source of industrial statistics of the registered organised manufacturing sector of the economy. It covers all factories registered under **Sections 2m(i) and 2m(ii) of the Factories Act, 1948**, i.e., those factories employing ten or more workers using power; and those employing twenty or more workers without using power.
- As per the latest ASI FY20, employment in the **organised manufacturing sector has maintained a steady upward trend over time**, with the employment per factory increasing gradually.



Formal Employment

- EPFO data indicates a **consistent YoY increase in payroll addition**, pointing towards improved formalisation as economic activities picked up. The net addition in EPF subscriptions during FY22 was 58.7 per cent higher than in FY21 and 55.7 per cent higher than that in the pre-pandemic year 2019.

Figure VI.10: Net addition of subscribers in the EPFO (in lakh)



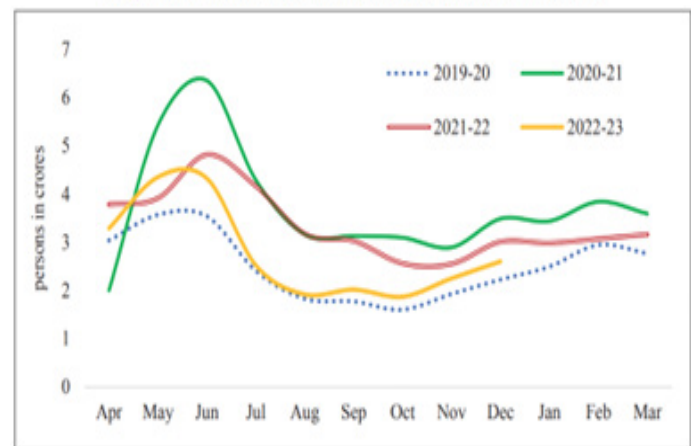
Source: EPFO

Note: Net addition in payroll = No. of new subscribers + No. of exited members who re-joined - No. of members exited.

Demand for work under MGNREGS

- The number of persons demanding work under MGNREGS was seen to be trending around **pre-pandemic levels from July to November 2022**. This could be attributed to the normalisation of the rural economy due to strong agricultural growth and a swift recovery from Covid induced slowdown, culminating in better employment opportunities.
 - In FY23, as on **24 January 2023, 6.49 crore households demanded employment under MGNREGS**, and 6.48 crore households were offered employment out of which 5.7 crore availed employment.

Figure VI.11: Number of persons demanding work under MGNREGS



Source: MGNREGS Web portal

- The number of works done under MGNREGS has steadily increased over the years, with **85 lakhs completed works in FY22 and 70.6 lakh completed works so far in FY23** (as on 9 January 2023).

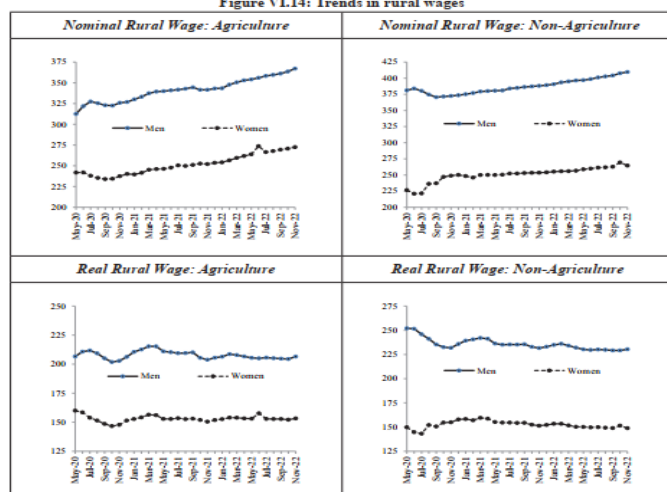
National Career Service Project

- The 'National Career Service (NCS)' project was launched in July 2015, as a **one-stop solution providing an array of employment and career-related services**. It works towards bridging the gap between candidates and employers; candidates seeking training and career guidance and agencies providing training and career counselling.
- As on 5 January 2023, **2.8 crore job seekers and 6.8 lakh employers** have registered in the NCS portal, 2.5 lakh active vacancies and 1.2 crore total vacancies have been mobilised, and more than 9,100 job fairs have been organised as part of the Project. NCS has partnered with the private sector under the Digi Saksham programme to offer a free, self-paced Online/Offline Training Programme on "Career Skills", to equip the jobseekers with an array of soft and digital skills with the mandate of improving their employability.

The trend in rural wages

- Nominal rural wages have increased at a steady positive rate during FY23 (till November 2022). In agriculture, the YoY rate of growth of nominal wage rates in agriculture was 5.1 per cent for men and 7.5 per cent for women, during the period April-November 2022. In non-agricultural activities, the growth of nominal wage rates were 4.7 per cent for men and 3.7 per cent for women, during the same period.
- However, growth in real rural wages has been negative due to elevated inflation.

Figure VI.14: Trends in rural wages



Ensuring Quality Education for All

- It is in this context that the NEP 2020 was laid down as the first education policy of the 21st century, aiming to address the many growing developmental imperatives of the country. This includes its regulation and governance, the creation of a new system that is aligned with the aspirational goals of 21st century-education, including SDG4, while building upon India's traditions and value systems. The NEP provides for nurturing all-around development and skill acquisition by youth in an inclusive, accessible, and multilingual set-up.
- As part of the whole-of-ecosystem approach, the Union Government launched Samagra Shiksha in 2018 as an overarching programme for the school education sector extending from pre-school to class XII with an aim to ensure inclusive and equitable quality education at all levels of school education.

School Enrolment

- The year FY22 saw improvement in Gross Enrolment Ratios (GER) in schools and improvement in gender parity. GER in the primary enrolment in class I to V as a percentage of the population in ages 6 to 10 years - for girls, as well as boys, have improved in FY22. This improvement has reversed the declining trends between FY17 and FY19. GER in Upper-Primary (enrolment in class VI to VIII as a per cent of the population in age 11-13 years), which was stagnant between FY17 and FY19, improved in FY22.

School Drop-out

- School dropout rates at all levels have witnessed a steady decline in recent years. The schemes such as Samagra Shiksha, RTE Act, improvement in school infrastructure and facilities, residential hostel buildings, availability of teachers, regular training of teachers, free textbooks, uniforms for children, Kasturba Gandhi Balika Vidyalaya and the PM POSHAN Scheme play an important role in enhancing enrolment and retention of children in schools.

School Infrastructure

- The basic infrastructure facilities in schools - both in terms of the number of recognised schools and teachers' availability reflected in the Pupil-Teacher Ratio, showed an improvement in FY22. The trend in a number of recognised schools for various levels shows a steady progress.

Table VI.12: Improving school infrastructure
(Schools with basic facilities as a percentage of all schools)

Year	2012-13	2019-20	2020-21	2021-22
Girls Toilet	88.1	96.9	97.3	97.5
Boys Toilet	67.2	95.9	96.2	96.2
Hand wash Facility	36.3	90.2	91.9	93.6
Library/Reading Room/ Reading corner	69.2	84.1	85.6	87.3
Electricity	54.6	83.4	86.9	89.3
Medical check-ups in school in a year	61.1	82.3	50.4*	54.6*
Computer	22.2	38.5	41.3	47.5
Internet	6.2	22.3	24.5	33.9

* Due to Covid, schools were closed physically. Hence, fewer medical check-ups were done.
Source: UDISE+

- The availability of teachers, measured by pupil-teacher ratio, an indicator which is inversely related to improvement in quality of education, has improved at all levels continuously from FY13 to FY22: **from 34.0 to 26.2 at Primary, 23.0 to 19.6 at Upper Primary, 30.0 to 17.6 at Secondary, and 39.0 to 27.1 at the Higher Secondary level.**
- Various programmes and schemes for school education launched during FY23 are presented in the following points:
 - **PM Schools for Rising India:** A Centrally Sponsored Scheme (CSS) launched 7 September 2022. These schools will be equipped with modern infrastructure and showcase the implementation of the NEP and emerge as exemplary schools over a period of time while offering leadership to other schools in the neighbourhood.
 - **The National Curriculum Framework (NCF) for Foundational Stage:** NCF for Foundational Stage has been launched as the new 5+3+3+4 curricular structure which integrates early childhood care and education for all children of ages 3 to 8.
 - **Pilot project of Balvatika:** With a focus on developing cognitive, affective, and psychomotor abilities and also early literacy and numeracy for students in the age groups of 3+, 4+ and 5+ years, Project Balvatika, i.e., 'Preparatory Class', was launched in October 2022 in 49 Kendriya Vidyalayas.
 - **National Credit Framework (NCrF):** Taking the vision of the new NEP, the NCrF is an umbrella framework for skilling, re-skilling, up-skilling, accreditation and evaluation, seamlessly integrating the credits earned through school education, higher education, and vocational and skill education by encompassing the National Higher Education Qualification Framework (NHEQF), National Skills Qualification Framework (NSQF) and National School Education Qualification Framework (NSEQF).
 - **Strengthening Teaching-Learning and Results for States (STARS):** STARS Project is being implemented as a CSS in six states namely Himachal Pradesh, Madhya Pradesh, Rajasthan, Maharashtra, Odisha and Kerala over a period of 5 years i.e., till FY25, partly funded by a loan from the World Bank.
 - **Vidyanjali (A School Volunteer Initiative):** With the aim of strengthening schools and improving the quality of school education through community, Corporate Social Responsibility (CSR) and private sector involvement across the country, the Government has initiated Vidyanjali (a school volunteer management program).
 - **Samagra Shiksha Scheme:** A CSS of Samagra Shiksha of the Department of School Education and Literacy is an **overarching programme for the school education sector extending from pre-school to class XII.** The Samagra Shiksha Scheme has been aligned with the recommendations of the NEP 2020 and extended from FY22 to FY26.

Higher Education

- The infrastructure for higher education has been enhanced overtime. Number of medical colleges in the country have been **increased from 387 in 2014 to 648 in 2022** and the number of MBBS seats have increased from 51,348 to 96,077. Number of Indian Institutes of Technology (IITs) and Indian Institute of Management (IIMs), respectively stand at 23 and 20 in 2022 against 16 and 13 in 2014.
- The Gross Enrolment Ratio in higher education, based on 2011 population projections (revised), was recorded at 27.3 per cent in FY21, which is an improvement from 25.6 in FY20. **GER for males increased from 24.8 in FY20 to 26.7 in FY21 while GER for females has also shown improvement from 26.4 to 27.9 during the same period.**

Table VI.13: Students' enrolment in higher education

(in crore)

Year	Male	Female	Total
2016-17	1.9	1.7	3.6
2017-18	1.9	1.7	3.6
2018-19	1.9	1.8	3.7
2019-20	2.0	1.9	3.9
2020-21	2.1	2.0	4.1

Source: AISHE report 2020-21

Initiatives for higher education

- **Research & Development Cell (RDC) in Higher Education Institutions (HEI):** Launched by University Grants Commission (UGC), the RDC would help create a research ecosystem for reliable, impactful, and sustained research output.
- **Guidelines for pursuing two academic programmes simultaneously:** The Guidelines provide that a student can pursue two full-time academic programmes in physical mode or pursue two academic programmes, one in full-time physical mode and another in Open and Distance Learning (ODL)/Online mode; or up to two ODL/Online programmes simultaneously.
- **Interest subsidy on education loan**

Equipping the Workforce with Employable Skills and Knowledge in Mission Mode

- PLFS FY21 shows that formal vocational/technical training among youth (age 15- 29 years) and the working population (age 15-59 years) have improved in FY21 over FY19 and FY20. The improvement in skills has been for males and females, both in rural and urban sectors.
- As per the reports of the fourth round of the QES (for Q4 FY22) in respect of establishments employing at least 10 workers in major nine sectors, 15.6 per cent of estimated establishments imparted formal skill training and 20.5 per cent imparted on-the-job training.
- The health sector had the highest percentage of estimated establishments imparting formal skill training (24.7 per cent) and on-the-job training (31.6 per cent), followed by financial services (20.4 per cent of establishments imparting formal training and 26.4 per cent imparting on-the-job training).

Table VI.16: Sector-wise percentage of estimated establishments imparting formal skill development training and on-the-job training (per cent)

	Q1FY22		Q2FY22		Q3FY22		Q4FY22	
	Formal	Job Training	Formal	Job Training	Formal	Job Training	Formal	Job Training
Manufacturing	17.4	28.3	13.2	25.2	14.1	22.2	12.8	19.4
Construction	15.5	26.0	7.8	22.7	11.2	25.0	8.4	23.9
Trade	11.2	17.4	11.6	23.7	10.5	20.5	9.8	16.7
Transport	13.0	20.6	10.7	17.9	13.6	21.5	16.5	20.0
Education	21.1	22.1	21	24.7	19.9	24.0	19.1	20.6
Health	20.2	24.0	26.6	36.6	24.8	34.9	24.7	31.6
Accommodation & Restaurants	7.1	13.4	11.3	15.6	10.9	19.4	8.5	14.9
IT/BPOs	29.8	36.1	24.1	34.1	25.1	31.1	18.2	23.4
Financial Services	22.6	34.8	20.9	21.2	27.2	26.1	20.4	26.4
Total	17.9	24.3	16.8	24.3	17.1	23.6	15.6	20.5

Source: QES Reports, 1st - 4th Quarter FY22, Labour Bureau

Skill India Mission

- The Skill Indian Mission focuses on skilling, re-skilling and up-skilling through short-term and long-term training programmes. Under the Mission, the government, through **more than 20 Central Ministries/Departments**, is implementing various skill development schemes across the country.

Box VI.6: Progress of Skill India Mission

Skill Development Scheme	Progress
PMKVY was first launched in 2015. Presently, the third phase of PMKVY, i.e., PMKVY 3.0 is being implemented across the country since January 2021. PMKVY has two training components, viz., Short Term Training (STT) and Recognition of Prior Learning (RPL). Pradhan Mantri Kaushal Kendra set up at District level, are envisaged as state of the art, visible and aspirational model training Centres.	✓ Between FY17 and FY23 (as of 5 January 2023), under PMKVY 2.0 about 1.1 crore persons have trained: 83 per cent certified and about 21.4 lakh placed. Under PMKVY 3.0, during FY21 to FY23 (as on 5 January 2023) 7.4 lakh persons have been trained, 66 per cent certified and 41,437 placed. ✓ PMKVY also provided training to Shramiks (migrant labourers) affected by Covid-19. This component covered 116 districts of 6 States, viz., Assam, Bihar, Madhya Pradesh, Odisha, Rajasthan, and Uttar Pradesh. As on 31 October 2022, 1.3 lakh migrants have been trained/oriented (0.88 lakh in STT and 0.38 lakh in RPL).
Jan Shikshan Sansthan Scheme provides for a lump sum annual grant is released to Jan Shikshan Sansthan (NGOs) for skill training to non-literate, neo-literates, persons with a rudimentary level of education and school dropouts up to class XII in the age group of 15-45 years. The priority groups are women, SC, ST, and other backward sections of society.	✓ From FY20 to FY23 (as of 5 January 2023), 16.0 lakh beneficiaries have been trained of which 28.4 per cent are from urban areas and 69.0 per cent are from rural areas and 2.7 per cent are from tribal areas. Notably, 81 per cent of the trainees are women.
National Apprenticeship Promotion Scheme provides financial support to industrial establishments undertaking apprenticeship programmes under the Apprentices Act, 1961.	✓ Since the launch of the scheme in 2016, as on 31 December 2022, 21.4 lakh apprentices have been engaged by Industries.
Craftsmen Training Scheme provides long-term training in 149 trades through 14,938 Industrial Training Institutes (ITIs) across the country.	✓ Since 2015, 91.7 lakh students have been trained as on 30 October 2022.

Craft Instructor Training Scheme provides comprehensive training both in skills and training methodology is imparted to the instructor trainees to make them conversant with the methodology of teaching and techniques of transferring hands-on skills, to train skilled manpower for the industry.	✓ During the year FY22, a total of 8,847 trainees have been trained in various National Skill Training Institutes and Institute of Training of Trainers.
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Making India Skill Capital of the World	With an aim to make India a Skill Capital of the World and improve mobility of Skilled manpower the National Skill Development Corporation (NSDC) International has been set up, which aims to create a network of institutions across India. This network of institutions will be called as Skill India International (SII) Network. It shall be created through the empanelment of state-of-the-art government and private institutions.
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	✓ MSDE has also signed MoUs with 11 countries, Australia, Belarus, China, Denmark, France, Germany, Japan, Qatar, Switzerland, UAE, and the United Kingdom in the field of skill development and vocational education training.
	✓ NSDC has also signed 18 B2B MoUs with countries like Australia, Canada, Germany, Japan, Malaysia, Kingdom of Saudi Arabia, UAE, etc.

Skill Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP) is a World Bank loan-assisted programme launched in 2018 to decentralise skilling initiatives and align skill development programmes with local demand and aspirations of the youth.	✓ Under the National Component and State Components of SANKALP, 64 and 700 projects respectively have been taken up in the area of Skill and Entrepreneurship development and strengthening of monitoring.
	✓ 724 District Skill Committees (DSCs) have been constituted, which are mandated to plan, manage and monitor skilling activities at the District level.

Quality and Affordable Health for All

- Under the National Health Mission, the Government has made concerted efforts to engage with all relevant sectors and stakeholders to move in the direction of achieving universal health coverage and delivering quality healthcare services to all at affordable cost.

Major initiatives from 2014 to 2022 for better overall health



Table VI.17: Improvement in health-related Indicators

	NFHS-4 (2015-16)	NFHS-5 (2019-21)
Households with any usual member covered under a health insurance/financing scheme (per cent)	28.7	41.0
Total fertility rate (children per woman)	2.2	2.0
Current Use of Family Planning Method- Any Method (per cent)	53.5	66.7
Mothers who had at least 4 antenatal care visits (per cent)	51.2	58.1
Institutional births (per cent)	78.9	88.6
Neonatal mortality rate (per 1000 live births)	29.5	24.9
Infant mortality rate (per 1000 live births)	40.7	35.2
Under-five mortality rate (per 1000 live births)	49.7	41.9
Children age 12-23 months fully vaccinated based on information from either vaccination card or mother's recall (per cent)	62.0	76.4
Children under age 6 months exclusively breastfed (per cent)	54.9	63.7
Children under 5 years who are stunted (height-for-age) (per cent)	38.4	35.5
Children under 5 years who are wasted (weight-for-height) (per cent)	21.0	19.3
Children under 5 years who are underweight (weight-for-age) (per cent)	35.8	32.1
Children under 5 years who are overweight (weight-for-height) (per cent)	2.1	3.4
Women who are overweight or obese (BMI ≥ 25.0 kg/m ²) (per cent)	20.6	24.0
Men who are overweight or obese (BMI ≥ 25.0 kg/m ²) (per cent)	18.9	22.9
Women age 15-24 years who use hygienic methods of protection during their menstrual period (per cent)	57.6	77.3

Source: National Family Health Surveys (NFHS) 2015-16 and 2019-21, MoHFW

- With concerted efforts made under the **Reproductive, Maternal, New-born, Child, and Adolescent Health Plus Nutrition (RMNCAH+N) strategy**, India has made considerable progress in improving the health status of both mothers and children.
- As per the **Sample Registration System (SRS) data**, India has successfully achieved the major milestone to bring the **Maternal Mortality Ratio (MMR) to below 100 per lakh live births by 2020** (laid down in National Health Policy 2017) by bringing it down to **97 per lakh live births in 2018-20** from 130 per lakh live births in 2014-16.

Table VI.18: Trends in Mortality indicators

	2014	2016	2018	2020
Maternal Mortality Ratio (per lakh live births)	167 (2011-13)	130 (2014-16)	113 (2016-18)	97 (2018-20)
Infant Mortality Rate (per 1000 live births)	39	34	32	28
Neonatal Mortality Rate (per 1000 live births)	26	24	23	20
Under 5 Mortality Rate (per 1000 live births)	45	39	36	32
Early Neonatal Mortality Rate - 0- 7 days (per 1000 live births)	20	18	18	15

Source: Sample Registration System

Health Expenditure Estimates

- The National Health Account estimates for FY19 show that there has been an increase in the share of **Government Health Expenditure (GHE)** in the total GDP from 1.2 per cent in FY14 to 1.3 per cent in FY19. Additionally, the share of GHE in Total Health Expenditure (THE) has also increased over time, standing at 40.6 per cent in FY19, substantially higher than 28.6 per cent in FY14.
- Of the Government Health Expenditure, **Union Government's share is 34.3 per cent and the State Government's share is 65.7 per cent.**
- Aligning with the focus on providing healthcare services to all, which comprises one of the policy recommendations of the National Health Policy 2017, the Government is focusing on primary healthcare expenditure which has increased from **51.1 per cent in FY14 to 55.2 per cent in FY19**. This not only ensures quality services at the grassroots level but also reduces the chances of ailments requiring secondary or tertiary healthcare services.
- Out-of-Pocket Expenditure (OOPE)** as a percentage of THE has declined substantially from **64.2 per cent in FY14 to 48.2 per cent in FY19**.

Figure VI.16: Government Health Expenditure (GHE) and Out of Pocket Expenditure (OOPE) as per cent of Total Health Expenditure (THE)

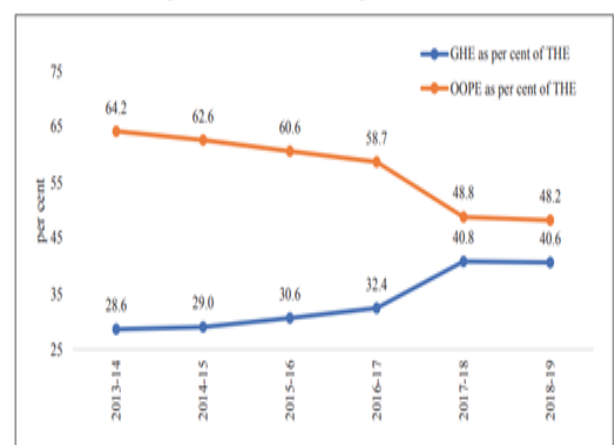
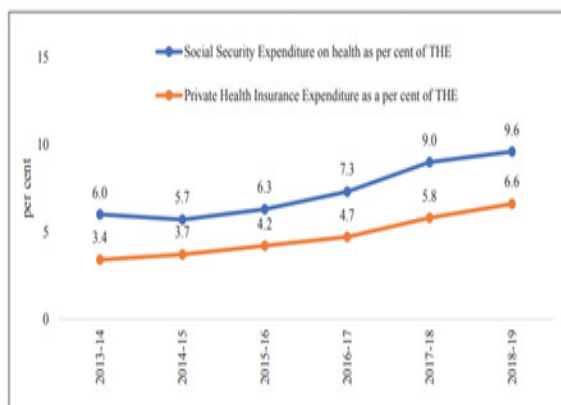


Figure VI.17: Social Security Expenditure and Private Health Insurance Expenditure as per cent of Total Health Expenditure (THE)



Source: National Health Accounts, MoHFW

Rural health care – strengthening of infrastructure and human resource

- The recent health sector reforms in India have laid emphasis on strengthening health infrastructure as well as human resources in the public sector system. This can be observed in the rise in the number of Sub-centres (SCs), Primary Health Centres (PHCs), and Community Health Centres (CHCs) in rural areas, along with the rise in doctors, nurses, and other medical personnel over time.
- With the implementation of the Ayushman Bharat programme, the strengthening of SCs and PHCs is being done by converting them into Health and Wellness Centres (HWCs), in a phased manner, to deliver comprehensive Primary Healthcare services through these Centres. As on 31 December 2022, more than 1.5 lakh HWCs have already been set up.

Progress under Major Government Initiatives for Health

• Immunisation:

- In FY23, Intensified MI 4.0 was conducted in 416 districts (including 75 districts under Azadi Ka Amrit Mahotsav) across 32 states/UTs, to cover children and pregnant women who missed routine immunisation during the Covid-19 pandemic.
- Until December 2022, a total of 11 phases of MI have been completed covering 701 districts across the country under which a total of 4.5 crore children and 1.1 crore pregnant women have been vaccinated.
- Resultantly, NFHS-5 shows a 14.4 per cent increase in Full Immunisation Coverage (FIC) from NFHS-4 and an increase in the percentage of FIC in 30 states/UTs.

• eSanjeevani:

- eSanjeevani is an innovative, indigenous, cost-effective, and integrated cloud-based telemedicine system application to enable patient-to-doctor teleconsultation to ensure a continuum of care and facilitate health services to all citizens in the confines of their homes, free of cost.
- Currently operational in all states and UTs across India. As of 17 January 2023, 1,12,553 HWCs in rural areas and 15,465 Hubs at tertiary level hospitals, and medical colleges in the states have been enabled in the eSanjeevani.

Rural health care system in India

Community Health Centre (CHC)

30-bedded Hospital/Referral Unit for 4 PHCs with specialised services

Primary Health Centre (PHC)

Referral Unit for 6 Sub Centres 4-6 bedded manned with a Medical Officer-in-charge and subordinate paramedical staff

Sub Centre (SC)

Most peripheral contact point between Primary Health Care System & Community manned with one Health worker (female)/Auxiliary Nurse Midwife & one Health Worker (male)

Box VI.7: Progress under Ayushman Bharat

Ayushman Bharat Pradhan Mantri – Jan Arogya Yojana (AB PM-JAY)

AB PM-JAY is the world's largest health insurance scheme that intends to minimise the OOPe of the target beneficiaries arising due to expenditure on healthcare. The scheme provides health cover of ₹5 lakh per family per year for secondary and tertiary care hospitalisation to over 10.7 crore poor and vulnerable families (approximately 50 crore beneficiaries) that form the bottom 40 per cent of the Indian population identified based on the deprivation and occupational criteria of the Socio-Economic Caste Census 2011 (SECC 2011) and other State schemes.

As of 4 January 2023, approximately 21.9 crore beneficiaries have been verified under the Scheme including 3 crore beneficiaries verified using State IT systems. Approximately 4.3 crore hospital admissions, amounting to ₹50,409 crore, have also been authorised under the Scheme through a network of over 26,055 hospitals.

Ayushman Bharat – Health and Wellness Centres (AB-HWCs)

Under the scheme, 1.5 lakh AB-HWCs were envisaged to be established by upgrading the SHCs and PHCs in rural and urban areas which will ensure comprehensive primary health care closer to the community. These AB-HWCs provide Comprehensive Primary Health Care, by expanding and strengthening the existing Reproductive & Child Health services and Communicable Diseases services and by including services related to Non-Communicable Diseases such as hypertension, diabetes and 3 common cancers, viz. Oral, Breast and Cervix. The status of service delivery through AB-HWCs as on 31 December 2022 is as under:

- ✓ The first HWCs was inaugurated on 14 April 2018 in the Bijapur District of Chhattisgarh.
- ✓ 1,54,070 HWCs operationalised across the country.
- ✓ More than 135 Crore cumulative footfall.
- ✓ More than 87.0 Crore cumulative screening of Non communicable diseases
- ✓ More than 1.6 crore Wellness Sessions, including Yoga..
- ✓ Under the e-Sanjeevani teleconsultation platform, more than 9.3 crore tele-consultations have been provided through functional HWCs at 15,465 Hubs (comprising MBBS/ Specialty/Super-Specialty doctors at zonal level) and 1,12,987 Spokes (AB-HWCs at state level) across the country, as on 17 January 2023.

• Ayushman Bharat Digital Mission (ABDM)

- The Mission aims at creating a secure online platform based on open, interoperable digital standards. This will **enable access and exchange of health records of citizens** with their consent through Services such as the **issuance of Health ID, Healthcare Professionals Registry, Health Facility Registry and Health Records.**

Box VI.8: National Deworming Day Grabbing the Low Hanging Fruits in Child Health

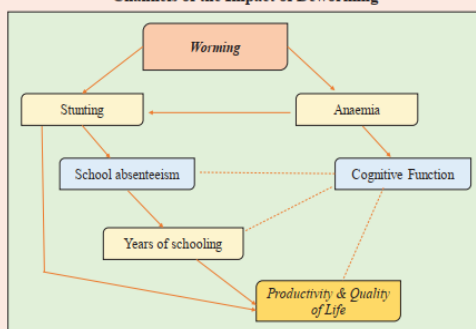
National Deworming Day (NDD), launched in 2015 in 11 states and expanded to the whole country in 2016, is a fixed-day approach to treating intestinal worm infections in children aged 1-19 years with Albendazole tablets. The programme is held every year on 10 February and 10 August through schools and Anganwadis, followed by mop-up days to cover those left out due to absenteeism or sickness. Besides Government and Government-aided schools and Anganwadis, special efforts are made to reach out-of-school children, and private schools have also enthusiastically joined the programme.

During Covid-19, the continuity of deworming efforts were maintained while minimising risks. Frontline health workers were trained to follow appropriate safety guidelines during home visits or through staggered "Village Health Sanitation and Nutrition Day" based model.

Need for the Programme

Soil-Transmitted Helminthiasis (STH), also known as parasitic intestinal worm infection, is a public health concern adversely affecting children's physical and cognitive growth. Intestinal worm infection is known to cause, aggravate, and intensify nutritional losses, particularly of Vitamin A and Iron. Micronutrient deficits and worm infestation together culminate into stunted growth and development in children.

Channels of the Impact of Deworming



• National Covid-19 Vaccination Programme

- India's National Covid-19 Vaccination Programme, which is the world's largest vaccination programme, **began on 16 January 2021, initially with the aim of covering the adult population of the country in the shortest possible time.** The programme was expanded to include all persons aged 12 years and above and for the precautionary dose for all persons aged 18 years and above.
- As on 6 January 2023, India has been able to **administer more than 220 crore Covid vaccine doses across the country.** 97 per cent of eligible beneficiaries have already received at least one dose of Covid-19 vaccine and around 90 per cent of eligible beneficiaries have received both the doses.

Health- a narrative on dedicated Covid infrastructure

- Over two years since the pandemic was declared, the Government has taken various fiscal and social measures to balance the revival of the economy and deal with increasing caseloads. These included **ramping up health infrastructure, both physical and digital,** enhanced training of health professionals and, continuing with the mass vaccination drive.
- Under the **Aatmanirbhar Bharat Abhiyaan**, the Union Government focussed on scaling up expenditure on health infrastructure by
 - investing in **grass root health institutions and ramping up HWCs** in rural and urban areas;
 - setting up **critical care hospital blocks** in all districts; and
 - **strengthening the laboratory network and surveillance** by integrated public health laboratories in all districts and blocks and public health units to manage pandemics.
- This was **complemented by digital infrastructure through Co-WIN for mass vaccination and e-Sanjeevani for telemedicine** to reach the last mile
- A three-tier arrangement of dedicated Covid-19 health facilities in the country had been implemented to reduce the risk of cross-infection to non-Covid patients and to make provision for non-Covid essential health services.
- **Oxygen Infrastructure Strengthening during Covid Pandemic:**
 - **Pressure Swing Adsorption (PSA) Oxygen Generation Plants:** PSA plants are being established in hospitals, especially in far-flung areas enabling the hospitals to become self-sufficient in the generation of oxygen for their needs and, thereby, reducing the burden on the medical oxygen supply grid across the country. It was emphasised that each district of the country should have at least 1 PSA plant from PM-CARES support at the public health facilities.
 - **Oxygen Cylinders:** The Government has ensured an adequate supply of medical oxygen for patient care in the states.

- **Oxygen Concentrators:** A total of 1,13,186 oxygen concentrators have been procured by the Government for Covid management, i.e., 99,186 under PM-CARES through ONGC for use in rural areas; and 14,000 under Emergency Covid Response Package (ECRP) support.

Doctor-Pupil Ratio

- As per National Medical Commission (NMC), 13,08,009 allopathic doctors are registered with the State Medical Councils and NMC as on June 2022. Assuming 80 per cent availability of registered allopathic doctors and 5.7 lakh AYUSH doctors, the **doctor-population ratio in the country is 1:834 against the WHO norms of 1:1000.**
- Initiatives for increasing/hiring/recruitment of Doctors and Staff:
 - Under the “**Upgradations of Government Medical Colleges by the construction of Super Specialty Blocks**” of Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) scheme, 75 projects have been approved.
 - Under the Central Sector Scheme for setting up new AIIMS, 22 AIIMS have been approved. Undergraduate courses have started in 19 of these.
 - **Relaxation in the norms for setting up of Medical College** in terms of the requirement for faculty, staff, bed strength, and other infrastructure.
 - A **CSS for establishing new medical colleges** by upgrading district/ referral hospitals, under which 157 new medical colleges have been approved, out of which 94 are already functional.
 - **Diplomate of National Board qualification has been recognised for appointment** as teaching faculty to take care of the faculty shortage.

Social Protection for Rainy day

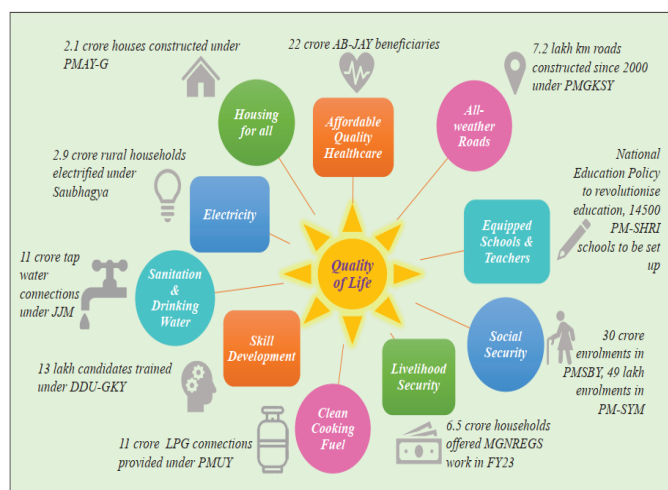
- While growth can lift people out of the low-income trap, it may not be able to ensure that they no longer remain vulnerable to any crisis situations in their lifetime. The government invested numerous resources in social protection programmes and continued to do so in the FY23 with the understanding that strong social protection systems can support the growth process. Some of the key programmes/schemes in this area are as listed below:

- **Pradhan Mantri Vaya Vandana Yojana (PMVVY)**
- **Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJY)**
- **Pradhan Mantri Suraksha Bima Yojana (PMSBY)**
- **Pradhan Mantri Shram Yogi Maan-Dhan Yojana (PM-SYMDY)**
- **PM Street Vendor's Atmanirbhar Nidhi Scheme (PM SVANidhi)**
- **Pradhan Mantri Mudra Yojana (PMMY)**

Development of India's Aspiring Rural Economy

- The percentage of the population living in India's rural areas **presently stand at 65%.** Further, 47 per cent of the population is dependent on agriculture for livelihood.
- The financing needs of rural households and small businesses are being met through microfinance institutions, self-help groups (SHGs), and other financial intermediaries. Taking digitisation and technology to the rural economy has also been a key aspect of the rural development agenda, be it in agricultural activities or governance.
- A primary focus has also been on the health parameters of the rural population, with enhanced emphasis necessitated by the pandemic.

Multifaceted initiatives to improve the ecosystem of quality of life



- The NFHS data for 2019-21 illustrates a significant improvement vis-à-vis 2015-16 in an array of indicators concerning the quality of rural lives, including, inter alia, access to electricity, presence of improved drinking water sources, coverage under health insurance schemes, etc.

Table VI.20: Quality of rural lives – findings from the National Family Health Survey

	For Rural Areas	NFHS 4 (2015-16)	NFHS 5 (2019-21)
Population 👤👤👤	Sex ratio at birth for children born in the last five years (females per 1,000 males)	927	📈 931
	Total fertility rate (children per woman)	2.4	📉 2.1
Household Amenities ⚡	Population living in households with electricity (per cent)	83.2	📈 95.7
	Population living in households with an improved drinking-water source ⁵¹	89.3	📈 94.6
	Households using clean fuel for cooking ⁵² (per cent)	24.0	📈 43.2
	Population living in households that use an improved sanitation facility ⁵³ (per cent)	36.7	📈 64.9
Health 👨⚕️	Households with any usual member covered under a health insurance/financing scheme (per cent)	28.9	📈 42.4
	Infant mortality rate	46.0	📉 38.4
	Mothers who had an antenatal check-up in the first trimester (%)	54.2	📈 67.9
	Mothers who consumed iron folic acid for 100 days or more when they were pregnant (per cent)	25.9	📈 40.2
	Institutional births (per cent)	75.1	📈 86.7
	Children aged 12-23 months fully vaccinated based on information from vaccination card only (per cent)	61.3	📈 84.0
	Children aged 12-23 months who received most of their vaccinations in a public health facility (per cent)	94.2	📈 97.0
	Prevalence of diarrhoea in the 2 weeks preceding the survey (per cent)	9.6	📉 7.7
	Children under 5 years who are stunted (height-for-age) (per cent)	41.2	📉 37.3
	Children under 5 years who are wasted (weight-for-height) (per cent)	21.5	📉 19.5
	Children under 5 years who are underweight (weight-for-age) (per cent)	38.3	📉 33.8
Women Empowerment 👩	Children age 6-23 months receiving an adequate diet	8.8	📈 11.0
	Women whose Body Mass Index (BMI) is below normal (BMI <18.5 kg/m ²) (per cent)	26.7	📉 21.2
	Children aged 6-59 months who are anaemic (per cent)	59.5	📈 68.3
	All women aged 15-49 years who are anaemic (per cent)	54.3	📈 58.5
	Men aged 15-49 years who are anaemic (per cent)	25.3	📈 27.4
	Currently married women who usually participate in three household decisions ⁵⁴ (per cent)	83.0	📈 87.7
	Women who worked in the last 12 months and were paid in cash (per cent)	25.4	📈 25.6
	Women owning a house and/or land (alone or jointly with others) (per cent)	40.1	📈 45.7
	Women having a bank or savings account that they themselves use (per cent)	48.5	📈 77.4
	Women having a mobile phone that they themselves use (per cent)	36.9	📈 46.6
	Women who have ever used the internet (per cent)	na	24.6
	Women age 20-24 years married before age 18 years (per cent)	31.5	📉 27.0

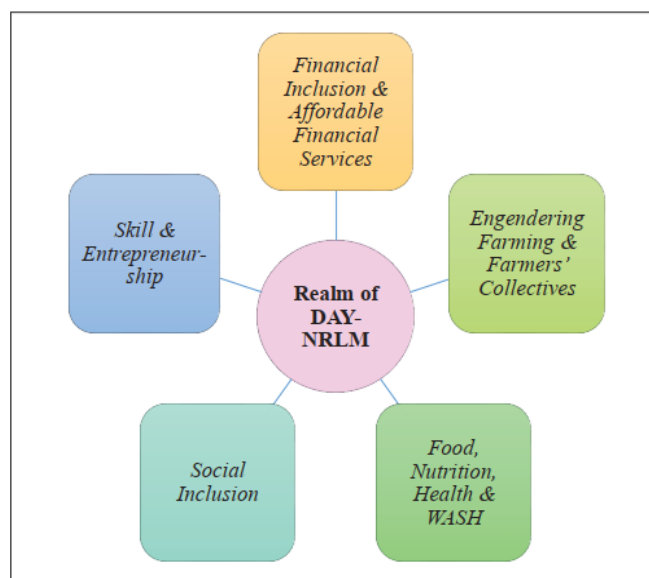
Source: National Family Health Surveys (NFHS) 2015-16 and 2019-21, MoHFW

ENHANCING RURAL INCOMES

Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM)

- NRLM aims to enable economically weak households to access gainful self-employment and skilled wage employment opportunities resulting in sustainable and diversified livelihood options for them. This is one of the world's largest initiatives to improve the livelihoods of the poor.

Components of DAY-NRLM



Mahatma Gandhi National Rural Employment Guarantee Scheme

- The Mahatma Gandhi National Rural Employment Guarantee Act 2005 (MGNREGA) aims at enhancing the livelihood security of households in rural areas of the country by providing at least 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work.
- A total of 5.6 crore households availed employment and a total of 225.8 crore person-days employment has been generated under the Scheme (until 6 January 2023).

Table VI.22: Progress under MGNREGS

Indicator	2018-19	2019-20	2020-21	2021-22	2022-23*
Person-days generated (in crore)	267.9	265.4	389.1	363.3	225.8
Average person-days per household	50.9	48.4	51.5	50.1	40.7
Women participation rate (per cent)	54.6	54.8	53.2	54.7	56.3

*as of 6 January 2023
Source: Ministry of Rural Development

• Achievements under MGNREGA

- **Geo-tagging of the Assets:** More than 5.2 crore assets have been geo-tagged (as of 6 January 2023) and made available in the public domain.
- **Mandatory expenditure on agriculture and allied activities:** As per the provision of the act at least 60 per cent of the works to be taken up in a district in terms of cost shall be for the creation of productive assets directly linked to agriculture and allied activities.

- **e-Payment:** So far, total expenditure through NeFMS/e-FMS is 99.7 per cent
- **DBT:** Under the scheme, 99 per cent of wage seekers are receiving their wages directly into their bank accounts. It is a big step towards transparency.
- **Aadhaar-based payment:** A total of 7.9 crore workers have been linked to Aadhaar Based Payment System.
- **Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)**
 - **DDU-GKY** is a placement-linked skill development programme for rural poor youth under the NRLM. It is a market-led, placement-linked skill development programme for providing wage employment to rural poor youth.

Rural Housing

- **Pradhan Mantri Awaas Yojana (PMAY-G)** was launched in November 2016 with the aim of providing around 3 crore pucca houses with basic amenities to all eligible houseless households living in kutcha and dilapidated houses in rural areas by 2024.
- A total of 2.7 crore houses have been sanctioned and 2.1 crore houses have been completed by 6 January 2023 under the Scheme. Against the total target of completion of 52.8 lakh houses in FY23, 32.4 lakh houses have been completed.

Drinking Water and Sanitation

- **Jal Jeevan Mission:** On the 73rd Independence Day, 15 August 2019, the Jal Jeevan Mission (JJM) was announced, to be implemented in partnership with States, to provide tap water connection to every rural household and public institutions in villages like schools, Anganwadi centres, ashram shalas (tribal residential schools), health centres, Gram Panchayat building, etc., by 2024.

- **Mission Amrit Sarovar:** Mission Amrit Sarovar was launched on National Panchayati Raj Day on 24 April 2022 with the objective to conserve water for the future. So far, against the initial target of 50,000 Amrit Sarovar, a total of more than 93,291 Amrit Sarovar sites have been identified and works have commenced on more than 54,047 sites. Out of these commenced works, a total of more than 27,071 Amrit Sarovars have been constructed so far.
- **JALDOOT App:** JALDOOT app was launched on 27 September 2022 for measuring the water level in a Gram Panchayat through 2-3 selected open wells twice a year (pre-monsoon and post-monsoon).
- **Swachh Bharat Mission – Grameen (SBM(G):)** was launched on 2 October 2014 to ensure cleanliness in India and make it Open Defecation Free (ODF). Having achieved the ODF status in all villages in the country as of 2 October 2019, **Phase-II of SBM (G) is now being implemented during FY21 to FY25**, with the focus to sustain the ODF status of villages and covering all the villages with Solid and Liquid Waste Management, i.e., to convert the villages from ODF to ODF Plus.

Box VI.12: Jal Jeevan Mission as an instrument of public health

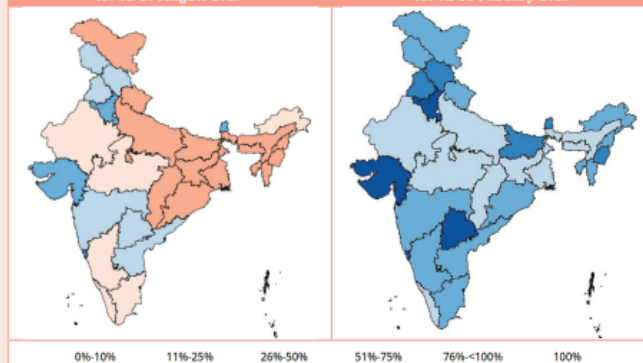
A recent study by Kremer et al. (2022) estimated that supply of microbiological contamination free water through Jal Jeevan Mission (JJM) can prevent 1.36 lakh deaths of under-5 children every year.³⁷ Thus, water treatment is likely to have sizeable net benefits and is complementary to steps such as Swachh Bharat Abhiyan in preventing child mortality through improved hygiene.

With the availability of safe and potable drinking water at the doorstep of every rural household, water-borne diseases have drastically reduced from 1.8 crore in 2019 to 59.0 lakh in 2021, as per data from Directorate General of Health Services, M/o Health and Family Welfare.³⁸

Steps taken for ensuring water quality

- JJM stresses on the provision of potable water of adequate quantity and good quality as prescribed by the Bureau of Indian Standards. Water quality monitoring & surveillance activities are given top priority under the mission.
- To bring focus on water supply, sanitation and hygiene (WASH), thus to improve public health, a nation-wide Water Quality Management Information System (WQMIS) has been launched on by using field testing kits as well as water quality testing in laboratories. The data is uploaded, analyzed and in case of quality issues, local authorities are alerted to take up immediate remedial action.

Percentage of Rural Households with Functional Tap Water Connections As on 15 August 2019 As on 21 January 2023



Source: Jal Jeevan Mission Dashboard

³⁷ Kremer, M., Saleem, A., Wijek, W., Baker, A. (2022). Potential reduction in child mortality through expanding access to safe drinking water in India, Jal Jeevan Samvad, November 2022. Department of Drinking Water and Sanitation. This was based on the meta-analysis in Kremer, M., Luby, S., Maertens, R., Tan, B., Wijek, W. (2023). Water Treatment and Child Mortality: A Meta-analysis and Cost-effectiveness Analysis. Development Innovation Lab. working paper no. 2023-26

LPG Connections

- **Pradhan Mantri Ujjwala Yojana 2.0, Swachh Indhan Behtar Jeevan:** It was launched in May 2016 as a flagship scheme to make clean cooking fuel such as LPG available to rural and deprived households which were otherwise using traditional cooking fuels such as firewood, coal, cow-dung cakes, etc. Under the Union Budget for FY22, provision for the release of an additional one crore LPG connections under the PMUY scheme, i.e., Ujjwala 2.0, has been made.

Rural Connectivity

- **Pradhan Mantri Gram Sadak Yojana (PMGSY):** The objective of PMGSY is to provide single all-weather road connectivity to all eligible unconnected habitations of the designated population size (500+ in plain areas, 250+ in North-Eastern and Himalayan States) in rural areas of the country. Since its inception, a total of 1,84,984 roads measuring 8,01,838 km and 10,383 Long Span Bridges (LSBs) have been sanctioned under all the interventions/verticals of PMGSY.

Electricity

- **Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY)**
 - This scheme was launched in November 2014 with the objective to improve the quality and reliability of power supply in rural areas. A total of 2.9 crore households have been electrified since the launch of the Saubhagya period in October 2017 under various schemes viz (Saubhagya, DDUGJY, etc.).

Direct Benefit Transfer: A Game Changer

- **The JAM Number Trinity – Jan Dhan Yojana, Aadhaar and Mobile numbers** – has allowed the Government to offer this support to identified households in a targeted and less distortive way in the form of DBT. Since the inception of DBT, cumulative transfers of over `26.5 lakh crore in respect of Central schemes have been made through the DBT route.

- With the onset of the Covid-19 pandemic and the imposition of lockdown and enforcement of social distancing norms, the DBT ecosystem faced a **tough trial and emerged as a means of relief to millions of citizens whose livelihoods were impacted**. DBT played a major role in sustaining life, especially for the underprivileged segments of society, helping millions by providing immediate relief.
- To make DBT schemes more accessible and transparent, major DBT schemes are being **end-to-end digitized (EED) with provision for online and mobile-based access**. 170 and 150 Central Government DBT schemes are EED and available on **Unified Mobile Application for New Age Governance (UMANG) mobile platform respectively**.

Enhancing Rural Governance for Inclusive Growth

- Good rural governance is imperative to help translate various programmes and schemes of the Government at the grassroots level, ensure equal rights to all, and achieve sustainability of rural development programmes.

Rashtriya Gram Swaraj Abhiyan

- A CSS of Rashtriya Gram Swaraj Abhiyan (RGSA) was **approved by the Union Cabinet in April 2018 for implementation from FY19 to FY22 with the primary aim of strengthening Panchayati Raj Institutions (PRIs)** for achieving SDG's with the main thrust on convergence with Mission Antyodaya and emphasis on strengthening PRI's in the 117 Aspirational Districts.
- The major focus of the scheme of RGSA was **Capacity Building and Training (CB&T) to empower PRIs** and to prepare convergent Plans at the respective level of Panchayats.
- The scheme has been **revamped and approved in April 2022** for implementation over the period FY23 to FY26.

SVAMITVA Scheme

- SVAMITVA (Survey of Villages and Mapping with Improved Technology in Village Areas) is a **Central Sector Scheme launched on 24 April 2020**, the National Panchayati Raj Day. The scheme aims to provide the **'Record of Rights' to village household owners possessing houses in inhabited rural areas**.
- The **scheme aims to provide the following benefits:**
 - Creation of accurate land records for rural planning and reducing property-related disputes.
 - To bring financial stability to the citizens in rural India by enabling them to use their property as a financial asset for raising loans and other financial benefits.
 - Determination of property tax, which would accrue to the Gram Panchayats directly in states where it is devolved or else, add to the state exchequer.

- Creation of survey infrastructure and GIS maps that can be leveraged by any department for their use.

Conclusion/Way Forward

- As India marches ahead, the ground lost as regards social sector improvements due to the pandemic, has largely been recouped, powered by prompt policymaking and efficient implementation interwoven with technology. Going forward with the vision of **'Minimum Government; Maximum Governance'**, further developments will hold the key to attaining more equitable economic growth.
- Evident ones include stepping up learning outcomes through digital and teaching interventions in schools, enhancing the role of community workers in healthcare, pushing SHGs through better product design and upscaling enterprises.

CHAHAL

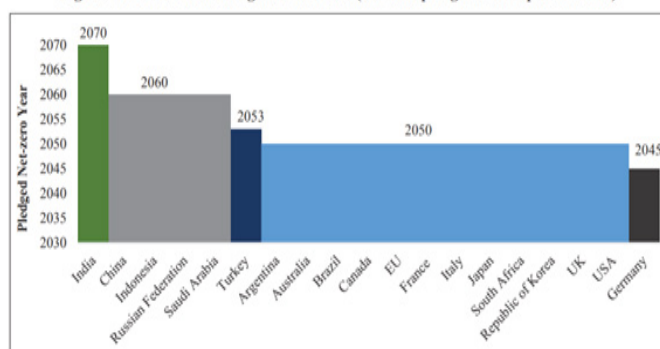
A C A D E M Y

CLIMATE CHANGE AND ENVIRONMENT: PREPARING TO FACE THE FUTURE

Introduction

- Climate change is primarily attributed to **disproportionately high cumulative emissions, both historical and high per capita annual emissions of greenhouse gases (GHGs)** of the developed countries. The global nature of the problem makes India one of the most vulnerable regions despite having contributed only about 4 per cent in the cumulative global emissions (for the period 1850-2019) and maintaining its per capita emission at far less than the world average.
- While India is less responsible for the high stock of emissions, however, it has consistently engaged in demonstrating global leadership towards adopting various measures and ensuring a low-emission growth pathway with a commitment to the net-zero emissions goal by 2070.

Figure VII.1: Net Zero Pledges of countries (the Year pledged is on top of the bars)



Source: Emissions Gap Report 2022, UNEP

- The IPCC's Sixth Assessment Report (AR6) notes that high human vulnerability global hotspots are found particularly in West, Central & East Africa, South Asia, Central, and South America, Small Island Developing States, and the Arctic. 7.5 Further, as per the report, Asia is most vulnerable to climate change, especially to extreme heat, flooding, sea level rise, and erratic rainfall.

Progress on India's Climate Action

- In 2008, India launched the **National Action Plan on Climate Change (NAPCC)**, establishing eight National Missions, covering several initiatives and a slew of measures in the area of solar, water, energy efficiency, forests, sustainable habitat, sustainable agriculture, sustaining Himalayan ecosystem, capacity building and research and development (R&D).

- National Adaptation Fund for Climate Change (NAFCC)**, a central sector scheme, was initiated in 2015-16 to support adaptation activities in the States and Union Territories (UTs) of India that are vulnerable to the adverse effects of climate change.
- Demonstrating higher ambition in its climate action, the Government of India submitted its updated NDC on August 26, 2022. The new NDC with enhanced targets translates the vision of the Hon'ble PM expressed through the "Panchamrit" at the UNFCCC Conference of Parties (COP 26) in Glasgow in November 2021.

India's updated Nationally Determined Contribution (NDC)

- India submitted its first NDC to UNFCCC in October 2015. This was updated in August 2022. The 2015 NDC comprised eight goals, three of which were quantitative targets to be achieved up to 2030.
- The three targets included cumulative electric power installed capacity from non-fossil sources to reach 40 per cent, reduction in the emissions intensity of GDP by 33 to 35 per cent compared to 2005 levels, and creation of additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent through additional forest and tree cover.

Figure VII.2: Progress on Eight National Missions of the NAPCC highlighting achievements across various domains

National Solar Mission	• Solar power capacity of 61.62 GW installed by October 2022
National Mission for Enhanced Energy Efficiency	• PAT Cycle-VII notified in October 2021 for energy saving target of 6.63 Million Tonnes of Oil Equivalent (MTOE)
National Mission on Sustainable Habitat	• 721 km of metro rail network made operational by August 2022 • 62.79 lakh individual household toilets and 6.21 lakh community and public toilets constructed by April 2022
National Mission for a Green India	• ₹ 626.96 crore for afforestation targets over an area of 2.1 lakh ha
National Water Mission	• Jal Shakti Abhiyan: Catch The Rain 2022
National Mission on Strategic Knowledge for Climate Change	• Created and strengthened 12 Centres of Excellence for climate change (June 2021)
National Mission for Sustaining Himalayan Ecosystems	• Inter-University Consortium • 8 Major R&D Programmes initiated
National Mission for Sustainable Agriculture	• Key targets for FY 2022-2023 covering 0.15 lakh ha under organic farming and 10 lakh ha under micro irrigation

Status of Forest and Tree Cover

- The country ranks third globally with respect to the net gain in average annual forest area between 2010 and 2020. This gain is mainly attributed to the robust framework and policies of the National and State Governments that have promoted and safeguarded forests.

- Schemes like the **Green India Mission (GIM), Compensatory Afforestation Fund Management and Planning Authority (CAMPA), National Afforestation Programme (NAP), Green Highway Policy - 2015, Policy for enhancement of Urban Greens, National Agro-forestry Policy, and Sub-Mission on Agro-forestry (SMAF), etc.** are among the most important ones.

Carbon Stock in India's Forest and Tree Cover

- The Indian State of Forest Report (ISFR) estimates the carbon stock of forests to be about 7,204 million tonnes in 2019, which is an **increase of 79.4 million tonnes of carbon stock as compared to the estimates of the previous assessment for 2017**. This translates into carbon emissions sequestered through forest and tree cover to be 30.1 billion tonnes of CO₂ equivalent.
- Among the Indian States, **Arunachal Pradesh has the maximum carbon stock in forests** (1023.84 million tonnes), followed by Madhya Pradesh (609.25 million tonnes).

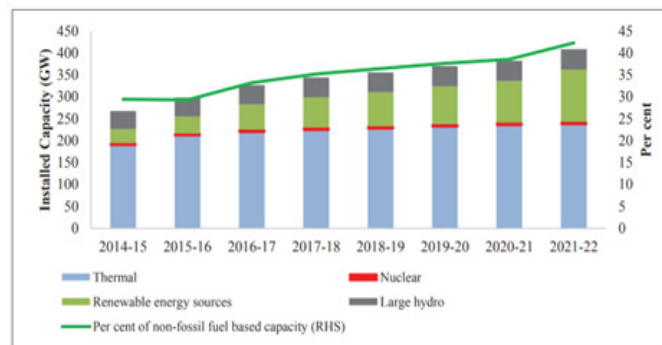
Preservation of Ecosystems: A Critical Adaptation Action

- Ecosystems play an important role in **carbon storage, protect the coastal areas, and enhance water quality besides other services**, such as cultural, spiritual or tourist attractions. **Mangroves and coastal wetlands form the first line of defence for coastal communities against increased storm surges, flooding, and hurricanes.**
- The Government has taken both regulatory and promotional measures to protect and conserve mangroves. The **National Coastal Mission Programme on 'Conservation and Management of Mangroves and Coral Reefs'** is being implemented. Regulatory measures are implemented through Coastal Regulation Zone (CRZ) Notification (2019) under the Environment Protection Act (1986), Wildlife Protection Act (1972), the Biodiversity Act (2002) etc.

Approach to Transition to Renewable Energy Sources

- While the target was to achieve 40 per cent of the installed electric capacity from non-fossil fuel sources by 2030 in the initial NDC submitted in 2015, the target has already been achieved. India is now striving to achieve the **target of 50 per cent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030**, in line with updated NDCs.

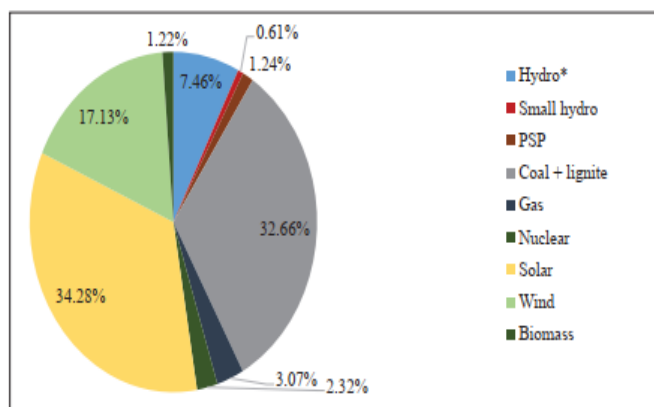
Figure VII.5: Increasing installed Electricity Generation Capacity with a rising share of non-fossil fuel-based capacity



Source: Based on data from the Ministry of Power.

- As per the **Renewables 2022 Global Status Report**, during the period 2014 -2021, total investment in renewables stood at US\$ 78.1 billion in India.
- The **Central Electricity Authority (CEA)** has projected the optimal generation capacity mix to meet the peak electricity demand and electrical energy requirement for 2029-30.

Figure VII.7: Projected optimal mix of installed capacity for 2029-30

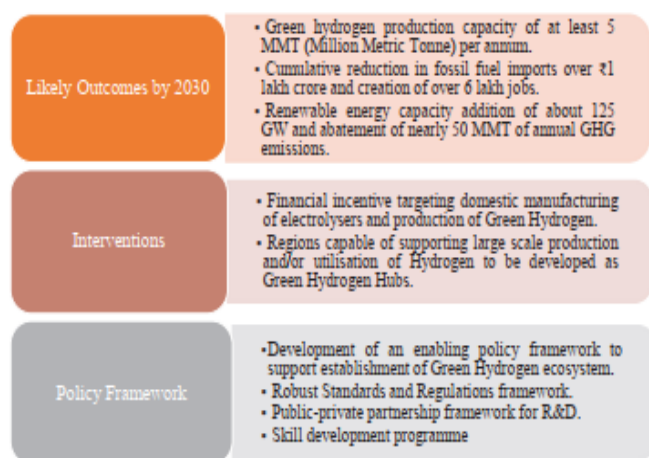


Green Hydrogen-A critical source of alternate energy

- With a vision to make **India an energy-independent nation**, and to de-carbonise critical sectors, the Government approved the **National Green Hydrogen Mission** on January 4, 2023 with an initial outlay of ₹19,744 crore.

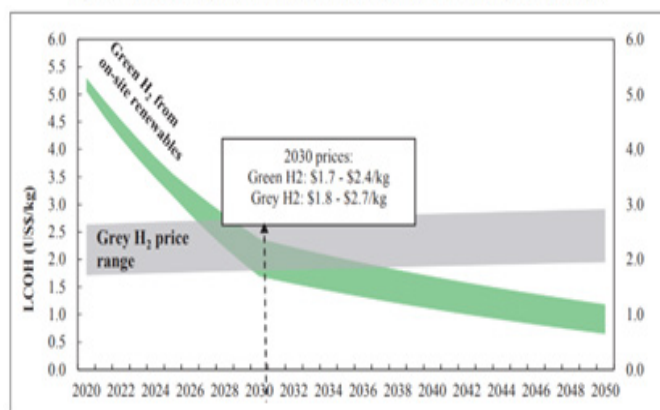
- The Mission will facilitate demand creation, production, utilisation and export of Green Hydrogen and mobilisation of over ₹8 lakh crore of investment by 2030.

Figure VII.9: Salient Features of the National Green Hydrogen Mission



- A report by NITI Aayog in June 2022 shows that in the case of India, renewable tariffs have fallen in recent years, and electrolyser costs are expected to fall in the future.
- NITI's report estimates that the cumulative value of the green hydrogen market in India will be US\$ 8 billion by 2030 and US\$ 340 billion by 2050. The electrolyser market will be approximately US\$ 5 billion by 2030 and US\$ 31 billion by 2050

Figure VII.10: Falling Levelised Cost of Hydrogen (LCOH¹¹) for green hydrogen



Source: NITI Aayog

- However, all this is based on the assumption that access to critical minerals essential for renewable energy at a reasonable cost will continue—an assumption that could be an effective constraint in the face of the concentration of these minerals in certain geographies with a monopoly in access to some countries.

Long-Term Low Emissions Development Strategy (LT-LEDS)

- India submitted its Long-Term Low Carbon Development Strategy (LT-LEDS) on November 14, 2022, at COP 27. The salient features of LT-LEDS are:
- Focus on the rational utilisation of national resources with due regard to energy security.
- Encompasses the objectives of the National Hydrogen Policy.
- Increased use of biofuels, especially ethanol blending in petrol.
- Climate-resilient urban development will be driven by smart city initiatives, integrated planning of cities for mainstreaming adaptation and enhancing energy and resource efficiency, effective green building codes and developments in innovative solid and liquid waste management.
- India's industrial sector will continue on a strong growth path, with the vision of 'Aatmanirbhar Bharat' and 'Make in India'.
- Finance for Sustainable Development

Green Bonds

- Green bonds are financial instruments that generate proceeds for investment in environmentally sustainable and climate-suitable projects. IMF data indicates that green bonds of value around US\$ 620 billion were issued across the world in the year 2021.
- As per SEBI's data on green debt securities, during the period of 2017 to September 2022, 15 Indian corporates have issued green bonds of value ₹4,539 crore. Most of these are related to renewable energy generation, while one is slated to be used for the tertiary treatment of wastewater.
- In keeping with the ambition to reduce the carbon intensity of the economy significantly, the Union Budget 2022-23 announced the issue of Sovereign Green Bonds. The issuance of Sovereign Green Bonds will help the government to tap the requisite finance from potential investors for deployment in public sector projects aimed at reducing the carbon intensity of the economy.

Investing in Resilience for Sustainable Development

- SEBI has been one of the early adopters of sustainability reporting for listed entities and requires mandatory **ESG-related disclosures** for the top 100 listed entities (by market capitalisation) since 2012.
- SEBI has issued new sustainability reporting requirements under the **Business Responsibility and Sustainability Report (BRSR)**, which are more granular with quantifiable metrics in line with the principles enshrined in the 'National Guidelines on Responsible Business Conduct'. The BRSR was made mandatory for the top 1000 listed entities (by market capitalisation) from 2022-23.

Major Decisions at COP 27

- The **COP 27 to the UNFCCC** was held from 6 to 20 November 2022 in Sharm el-Sheikh, Egypt. India participated in COP 27, with a focus on mainstreaming the theme of **LiFE - Lifestyle for Environment**.
- During COP 27, developing nations strongly voiced setting up a separate fund for loss and damage. After negotiations, it was decided to **establish new funding arrangements for assisting developing countries** that are particularly vulnerable to the adverse effects of climate change in responding to loss and damage, with a focus on addressing loss and damage. A transitional committee has been established to work out the modalities.
- Other substantive elements covered in the Sharm el-Sheikh Implementation Plan are the **importance of science in guiding climate action, doubling adaptation finance, dialogue on making finance flows consistent with low-emissions, and climate-resilient development calls on Multilateral Development Banks (MDB) reform for delivering climate finance at scale; diversity of sources of finance** (including new and additional finance), etc.
- Lastly, during COP 27, it was also recognised that the target of US\$ 100 billion per year is yet to be achieved. The COP 21 decided that, prior to 2025, a **New Collective Quantified Goal (NCQG) on climate finance** from a floor of US\$ 100 billion per year, taking into account the needs and priorities of developing countries, shall be set.

INDIA'S INITIATIVES AT THE INTERNATIONAL STAGE

International Solar Alliance (ISA)

- The International Solar Alliance (ISA) is a treaty-based inter-governmental organisation working to create a global market system to tap the benefits of solar power and promote clean energy applications.
- ISA's mission is to unlock **US\$ 1 trillion of investments in solar by 2030** while reducing the cost of the technology and its financing.

Coalition for Disaster Resilient Infrastructure

- The CDRI was launched by the Hon'ble Prime Minister of India during the **United Nations Climate Action Summit on 23 September 2019 in New York**.
- It is a global partnership of National Governments, UN agencies and programmes, multilateral development banks and financing mechanisms, the private sector, and academic and knowledge institutions.
- It aims to promote the **resilience of infrastructure systems to climate and disaster risks, thereby ensuring sustainable development**.

Leadership Group for Industry Transition (LeadIT)

- The LeadIT gathers countries and companies that are committed to action to achieve the Paris Agreement. It was launched by the governments of Sweden and India at the UN Climate Action Summit in September 2019 and is supported by the **World Economic Forum**.
- LeadIT members subscribe to the notion that **energy-intensive industries can and must progress on low-carbon pathways**, aiming to achieve net-zero carbon emissions.

INITIATIVES RELATED TO OTHER ENVIRONMENTAL ISSUES

Ensuring the Conservation of Biodiversity

- Conservation of biodiversity is crucial as it provides resources and services necessary for human beings and for the sustenance of all living beings.

- India ranks eighth in the world and fourth in Asia among the mega-diverse countries in the world. It is also rich in fauna, and nearly 62 per cent of the recorded amphibian species are endemic to India, which is majorly found in the Western Ghats.
- The 1992 Earth Summit held at Rio de Janeiro led to the adoption of an internationally binding legal instrument, the Convention on Biological Diversity (CBD), with the objectives of conservation, sustainable use, and fair and equitable sharing of benefits arising from the use of biological diversity.
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- In conformity with the spirit of the CBD, India enacted the Biological Diversity Act in 2002. The Act mandates the implementation of the objectives through a decentralised system with the National Biodiversity Authority at the national level, the State Biodiversity Boards at the State level, and Biodiversity Management Committees at the local body level.

Wildlife - Its Preservation and Protection

- A comprehensive legislation was enacted in 1972 called the Wildlife (Protection) Act 1972 to provide special legal protection to our wildlife and the endangered species of fauna.
- Animals such as tigers, lions, and elephants are keystone and flagship species whose preservation benefits the entire ecosystems. As of 10 August 2022, India is home to 53 Tiger Reserves covering approximately 75,796.8 sq. km area in 18 States, with about 75 per cent of the wild tiger population at the global level.
- Similarly, the population of Asiatic Lions has shown a steady increase, with a population of 674 individuals (2020), 28.87 per cent (one of the highest growth rates so far) higher than the 523 lions in 2015. India now (2020) has 12,852 leopards compared to the previous estimate of 7910 conducted in 2014.

- The Act has been amended multiple times to strengthen conservation measures and fulfil multilateral commitments on wildlife preservation. Targeting further reforms in wildlife conservation, the government has brought in the Wild Life (Protection) Amendment Act, 2022.

Figure VII.13: Success story of tiger conservation efforts reflected in increased tiger count

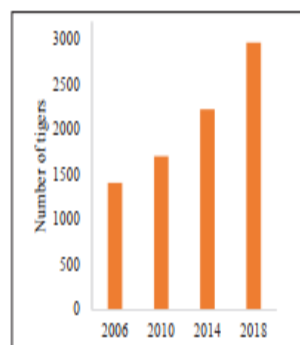
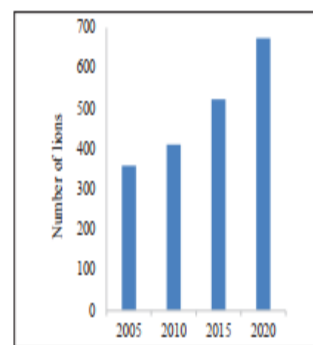


Figure VII.14: Rising lion count over the years, driven by various conservation efforts



Plastic Waste Management and Elimination of Identified Single-Use Plastics

- India is committed to mitigating pollution caused by littered single-use plastics. According to a report on Plastic Waste Management released by the Ministry of Housing and Urban Affairs, the global average of plastic per capita consumption is 28 kg, and India has a per capita plastic consumption of 11 kg.
- The Ministry of Environment, Forest and Climate Change notified the Guidelines on Extended Producer Responsibility for plastic packaging vide Plastic Waste Management Amendment Rules, 2022, on 16 February 2022.
- The Plastic Waste Management (Second Amendment) Rules, 2022, were notified on July 6, 2022. The amendment aligns the rules with the Guidelines on Extended Producer Responsibility for plastic packaging. The amendment provides a statutory framework for biodegradable plastics after conforming to BIS Standards and the Central Pollution Control Board (CPCB) certification.

Battery Waste Management

- The Government published the Battery Waste Management Rules, 2022, on August 24, 2022 to ensure environmentally sound management of waste batteries. Notifying these rules is a transformative step towards promoting the circular economy.

- The rules function based on the **concept of Extended Producer Responsibility (EPR)**, where the producers (including importers) of batteries are responsible for the collection and recycling/refurbishment of waste batteries and the use of recovered materials from wastes into new batteries.

- The recycled quantity will be computed based on end-products to avoid false claims.
- **Provision for generation and transaction of EPR Certificate** has been introduced.

Conclusion

- Even if India has so far undertaken climate actions on its own, the heightened expectations of further large-scale climate measures have to be equated with the enhanced initiatives by developed countries in terms of providing means of **implementation, including finance, technology transfer, and capacity-building support**.
- More importantly, the global climate agenda will advance if **advanced countries can set examples of policy and behavioural changes that work in their backyard and whose trade-offs are well recognised and accepted by their people**. Then, it might be realistic to **expect such policies and behavioural expectations of households to succeed in developing countries with suitable adaptation**.

E-waste Management

- The Government notified the **E-Waste (Management) Rules, 2022, on November 2, 2022**. These rules will replace the E-waste (Management) Rules, 2016, and will be effective from April 1, 2023. These rules will launch a new Extended Producer Responsibility (EPR) regime for e-waste recycling.
- **Important features of rules are:**
 - Applicable to **every manufacturer, producer, refurbisher, dismantler, and recycler** who must register with CPCB.
 - Schedule I has been expanded, and now 106 Electrical and Electronic Equipment (EEE) have been included under the EPR regime.
 - **Management of solar PV modules /panels/ cells** added in new rules.

CHAHAL
ACADEMY

AGRICULTURE AND FOOD MANAGEMENT: FROM FOOD SECURITY TO NUTRITIONAL SECURITY

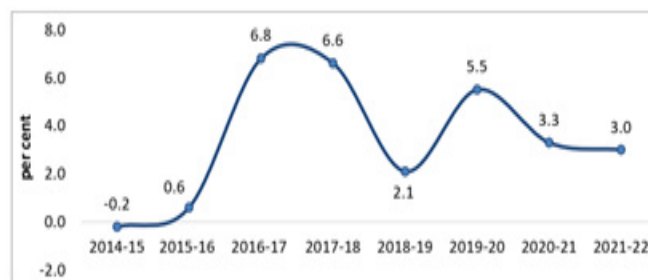
Introduction:

- The chapter documents the performance of the agriculture and allied sector over the past few years.
- It looks into the measures taken by the government to augment crop and livestock productivity, ensure certainty of returns to the farmers through price support, promote crop diversification and improve market infrastructure.
- The chapter also discusses other government interventions to enhance credit availability, facilitate mechanisation and boost horticulture and organic farming.
- It also analyses the importance and challenges associated with food processing sectors and measures taken by the government in this regard.
- It also looks into the importance of food security and the role of the National Food Security Act (NFSA)

Overall Growth of the Agriculture Sector:

- The Indian agriculture sector has been growing at an average annual growth rate of 4.6 per cent during the last six years.
- It grew by 3.0 per cent in 2021-22 compared to 3.3 per cent in 2020-21.
- In recent years, India has also rapidly emerged as the net exporter of agricultural products.
 - In 2020-21, exports of agriculture and allied products from India grew by 18 per cent over the previous year.
 - During 2021-22, agricultural exports reached an all-time high of US\$ 50.2 billion.
- This period of buoyant performance could be ascribed to the measures taken by the Government to promote farmer-producer organisations, encourage crop diversification, and improve productivity in agriculture.

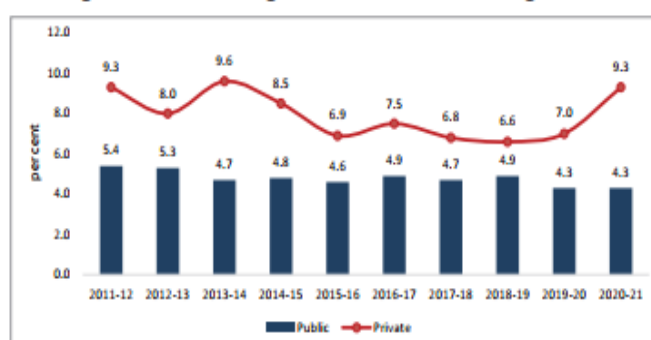
Despite the Covid-19 shock agriculture and allied sector shows resilient growth



Source: MoSPI's Annual and Quarterly Estimates of GDP at constant prices, 2011-12 series.

Crowding in of Private investment in agriculture

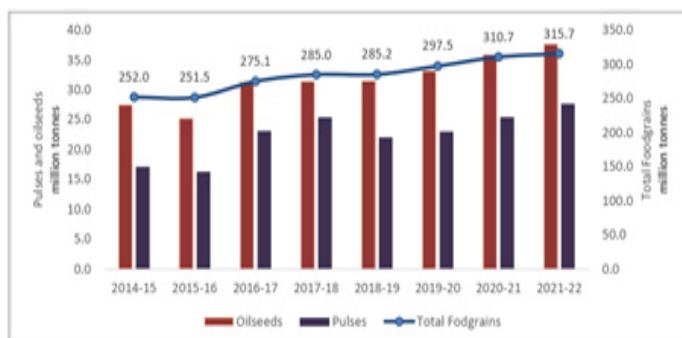
Figure VIII.2: Crowding in of Private investment in agriculture



Record production of food Grains:

- The production of food grains and oil seeds has been increasing Year-on-Year (YoY). Production of pulses has also been notably higher than the average of 23.8 million tonnes in the last five years.
- However, **changing climate** has been impacting agriculture adversely. The year 2022 witnessed an early heat wave during the wheat-harvesting season, adversely affecting its production.
- The year 2022 also experienced a decline in the sown area for paddy cultivation too in the Kharif season due to delayed monsoons and deficient rainfall.
- As per the **First Advance Estimates** for 2022-23 (Kharif only), total food grains production in the country is estimated at 149.9 million tonnes which are higher than the average Kharif food grain production of the previous five years (2016-17 to 2020-21).

Sustained increase in Foodgrains Production in India (Million Tonnes)



Source: 1st Advance Estimates (2022-23) of DA&FW released dated 21.09.2022.

MSP to Ensure Returns Over the Cost of Production:

- The Union Budget for 2018-19 announced that farmers in India would be given an MSP of at least one and a half times the cost of production.
- Accordingly, the Government has been increasing the MSP for all 22 Kharif, Rabi and other commercial crops with a margin of at least 50 per cent over the all-India weighted average cost of production since the agricultural year 2018-19.
- Given the nutritional requirements, changing dietary patterns and achieving self-sufficiency in pulses and oilseeds production, the Government has fixed relatively higher MSP for pulses and oilseeds.

Enhanced Access to Agricultural Credit:

- Ensuring hassle-free credit availability at a cheaper rate to farmers has been the top priority of the Government of India.
- As of 30 December 2022, banks issued Kisan Credit Cards (KCC) to 3.89 crore eligible farmers with a KCC limit of ₹4,51,672 crore.
- With the Government of India extending the KCC facility to fisheries and animal husbandry farmers in 2018-19, 1.0 lakh KCCs have been sanctioned for the fisheries sector and 9.5 lakh for the animal husbandry sector.
- To ensure that the farmers pay a minimal interest rate to the banks, the Government of India has introduced the **Interest Subvention Scheme (ISS)**, now renamed **Modified Interest Subvention Scheme (MISS)**, to provide short-term credit to farmers at subsidised interest rates.

- As a result of the initiatives taken and the measures to strengthen existing policies, there has been a consistent increase in the agriculture credit flow over the years exceeding the target.

Continued Increase in Institutional Credit to Agriculture Sector



Source: Based on data from DAFW and Agricultural Statistics at a Glance 2021.

Farm mechanisation: Key to Improving Productivity

- Farm mechanisation helps increase productivity through the timely and efficient use of other inputs and natural resources while at the same time reducing the cost of cultivation and the drudgery associated with various farm operations.
- Under the **Sub Mission on Agricultural Mechanisation (SMAM)**, State Governments are being assisted in training and demonstrating agricultural machinery and helping farmers procure various farm machinery and equipment besides setting up Custom Hiring Centres (CHC).
 - **21628 CHCs and 467 Hi-Tech hubs and 18306 farm machinery banks have been established as of December 2022.**
- **Increasing fragmentation of farm holdings** (with the average size of household ownership holdings declining from 1.23 ha in 2005-06 to 1.10 ha in 2010-11 and further to 1.08 ha in 2015-16) requires machines that are viable and efficient for small farm holdings.

Chemical-free India: Organic and Natural Farming

- Organic and natural farming provide chemical fertiliser and pesticide-free food grains and other crops, improves soil health and reduces environmental pollution.

- India has 44.3 lakh organic farmers, the highest in the world, and about 59.1 lakh ha area was brought under organic farming by 2021-22.
- Sikkim voluntarily adopted going organic. It became the first State in the world to become fully organic, and other States, including Tripura and Uttarakhand, have set similar targets.
- The Government has been promoting organic farming by implementing two dedicated schemes, i.e., **Paramparagat Krishi Vikas Yojana (PKVY)**
 - **PKVY Scheme is being implemented in a cluster mode (with min. 20 ha size).**
 - **Financial assistance of ₹50,000 per ha for three years is provided to the farmer**
 - **Under PKVY 32,384 clusters totalling 6.4 lakh ha area and 16.1 lakh farmers have been covered.**
- **Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)**
 - **MOVCDNER is dedicated to promoting organic farming of niche crops of the North East Region through Farmer Producer Organisations (FPOs).**
 - **Under the MOVCDNER, 177 FPOs/FPCs have been created, covering 1.5 lakh farmers and 1.7 lakh hectares.**
- The promotion of natural farming began in 2019-20, with the launch of **Bhartiya Prakratik Krishi Paddhati (BPKP)**:
 - **It is a sub-scheme of PKVY and aims to assist farmers in adopting traditional indigenous practices for encouraging all forms of ecological farming, including Zero-Budget Natural Farming (ZBNF).**
 - **The scheme focuses on capacity building, training, handholding, and on-field demonstration of natural farming through champion farmers.**
 - **Under the BPKP, 4.09 lakh ha of land have been brought under Natural farming in 8 States (Andhra Pradesh, Chhattisgarh, Kerala, Himachal Pradesh, Jharkhand, Odisha, Madhya Pradesh and Tamil Nadu).**

OTHER IMPORTANT INITIATIVES IN AGRICULTURE:

PM KISAN Scheme:

- It is a Central Sector Scheme to supplement the financial needs of land-holding farmers. It is one of the largest DBT schemes in the world.
- The financial benefit of ₹6,000 per year is transferred into the bank accounts of farmer families through DBT.
- The Scheme, through a span of over 3 years, has successfully assisted more than Rs. 2 lakh crores to crores of needy farmers.
- In an empirical study with the Indian Council of Agriculture Research (ICAR), the International Food Policy Research Institute (IFPRI) found that the scheme has enabled addressing the liquidity constraints of farmers for buying agricultural inputs.
- Further, for the small and marginal farmers, it has helped them meet their requirement of funds for farm inputs and their daily consumption, education, health and other incidental expenses.

Agriculture Infrastructure Fund (AIF):

- AIF is a financing facility operational from the year 2020-21 to 2032-33 for the creation of post-harvest management infrastructure and community farm assets.
- It also includes 3 per cent interest subvention and credit guarantee support.
- Under this, a provision of ₹1 lakh crore for 2020-21 to 2025-26 has been made, and interest subvention and credit guarantee assistance will be given until 2032-33.
- AIF scheme has the facility of convergence with any other scheme of the State or Central Government and can prove to be a milestone in investment in the agriculture sector.

Pradhan Mantri Fasal Bima Yojana (PMFBY):

- PMFBY is currently the largest crop insurance scheme in the world in terms of farmer enrolments, averaging 5.5 crore applications every year and the third largest in terms of the premium received.

- The scheme promises minimal financial burden on the farmer, with farmers paying only 1.5 per cent and 2 per cent of the total premium for the Rabi and Kharif seasons, respectively, with Centre and State Governments bearing most of the premium cost.

A history of Pradhan Mantri Fasal Bima Yojana (PMFBY):

- PMFBY was launched in the 2016 Kharif season to provide comprehensive insurance coverage to farmers in case of crop failure, helping stabilise their incomes.
- The scheme is implemented through empanelled general insurance companies.
- The Scheme covers all Food & Oilseeds crops and Annual Commercial/Horticultural Crops for which past yield data is available and for which the requisite number of Crop Cutting Experiments (CCEs) are being conducted under the General Crop Estimation Survey (GCES).
- The scheme is implemented on an 'Area Approach' basis. Admissible claims are worked out and paid directly to the insured farmer's account.
- Losses due to localised risks of hailstorms, landslides, inundation, etc., are calculated on an individual-insured farm basis.
- To better resolve grievances within the scheme, **National Crop Insurance Portal** has been developed to handle all grievances from end to end.
 - **This portal is equipped with the necessary features, such as Complaint/Query capturing through multiple modes, farmer authentication & Online ticket forwarding to the concerned company etc.**
- Further, a provision of Stratified Grievance Redressal Mechanism, viz. District Level Grievance Redressal Committee (DGRC), State Level Grievance Redressal Committee (SGRC) has been made in the Revised Operational Guidelines of the Scheme.

The mission for Integrated Development of Horticulture (MIDH):

- The scheme to promote horticulture covering fruits, vegetables, root and tuber crops, spices, flowers, plantation crops etc., was introduced in 2014-15.
- The interventions include introducing improved varieties and quality seeds, incentives for plantation crops, cluster development, and post-harvest management.
- According to third advance estimates (2021-22), a record production of 342.3 million tonnes in an area of 28.0 million hectares was achieved.
- The government has identified 55 horticulture clusters, of which 12 have been selected for the **Cluster Development Programme (CDP)** pilot phase.
- This programme is designed to leverage the geographical specialisation of horticulture clusters and promote integrated and market-led development of pre-production, production and post-harvest activities, including the entire supply chain.

National Agriculture Market (e-NAM) Scheme:

- The Government of India launched the National Agriculture Market (e-NAM) Scheme in 2016 to create an online transparent, competitive bidding system to ensure farmers get remunerative prices for their produce.
- The Government provides free software and assistance of ₹75 lakh per APMC mandi for related hardware, including quality assaying equipment and the creation of infrastructure like cleaning, grading, sorting, packaging, compost unit, etc.
- As on 31 December 2022, more than 1.7 crore farmers and 2.3 lakh traders have been registered on the e-NAM portal.

Climate-Smart Farming Practices:

- This is slowly gaining acceptance with farmers using clean energy sources like solar for irrigation.
- The farmers have been incentivised to transfer electricity generated through solar to the local grid.

- Crop yield prediction models using artificial intelligence and drones for monitoring soil and crop health have been initiated.
- Smart farming also enables crop diversification, which will help farmers reduce their dependence on monsoons for water.
- There are over 1,000 agri-tech start-ups in India. These assist farmers in improving farming techniques.

International Year of the Millets: Our Traditional Staple and a Healthier Alternative



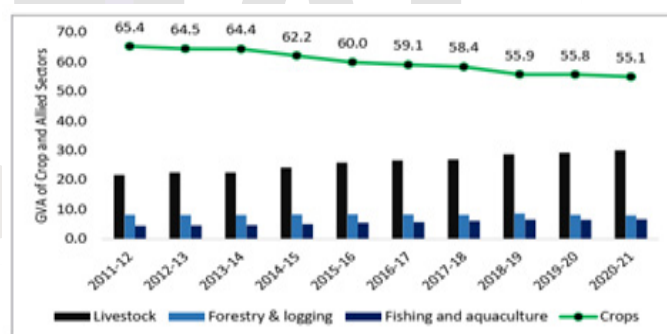
- The United Nations General Assembly, in its 75th session during March 2021, declared **2023 the International Year of Millets (IYM)**.
- Millets are food with high nutritional value, are climate resilient, and align with several UN Sustainable Development Goals (SDGs).
- These are also important by virtue of their mammoth potential to generate livelihood, increase farmers' income and ensure food & nutritional security all over the world.
- India produces more than 50.9 million tonnes of millet which accounts for 80 per cent of Asia's and 20 per cent of global production.
- In India, millets are primarily a Kharif crop mostly grown in rainfed conditions, requiring less water and agricultural inputs than other staple crops.
- Given the nutritional value of the millets, the Government notified Millets as Nutri-cereals in April 2018.

- Under the **National Food Security Mission (NFSM)**, millets have been introduced to provide nutritional support.
- The Indian Institute of Millets Research has incubated 250 start-ups under **Rashtriya Krishi Vikas Yojana – Remunerative Approaches for Agriculture and Allied Sectors Rejuvenation (RKVYRAFTAAR)**.

Allied Sectors: Animal Husbandry, Dairying and Fisheries Catching Up in Recent Years

- The allied sectors of Indian agriculture - **livestock, forestry & logging and fishing & aquaculture** are gradually becoming sectors of buoyant growth and a potential source of better farm incomes.
- The livestock sector grew at a CAGR of 7.9 per cent during 2014-15 to 2020-21.
- Its contribution to total agriculture GVA has increased from 24.3 per cent in 2014-15 to 30.1 per cent in 2020-21.
- The annual average growth rate of the fisheries sector has been about 7 per cent since 2016-17 and has a share of about 6.7 per cent in total agriculture GVA.

Though the Crop sector is still the major contributor to agriculture GVA, the livestock sector is catching up (per cent).



Source: Based on data of MoSPI.

Dairy Sector:

- The dairy sector is the most critical component of the livestock sector, employing more than eight crore farmers directly, and is the most prominent agrarian product.
- While India ranks **first in milk production** in the world, it ranks **third in egg production** and **eighth in meat production** in the world.

- As a part of the **Aatmanirbhar Bharat (ANB)** stimulus package, the **Animal Husbandry Infrastructure Development Fund (AHIDF)** worth ₹15,000 crores was launched in 2020.
 - Under this scheme, the **Central Government provides a 3 per cent interest subvention to the borrower and credit guarantees up to 25 per cent of total borrowing.**
- **National Livestock Mission (NLM)** scheme has been restructured for 2021-22 to 2025-26.
 - The scheme focuses on entrepreneurship development and breeds improvement in poultry, sheep, goat and piggery, including feed and fodder development.
- The **Livestock Health and Disease Control (LH&DC) Scheme** is being implemented to supplement the State/UT governments' efforts towards preventing, controlling and containing animal diseases of economic and zoonotic importance by vaccination.
- **National Animal Disease Control Programme (NADCP)** is being implemented to control Foot & Mouth Disease and Brucellosis by completely vaccinating cattle, buffalo, sheep, goat and pig populations.

FISHERIES SECTOR:

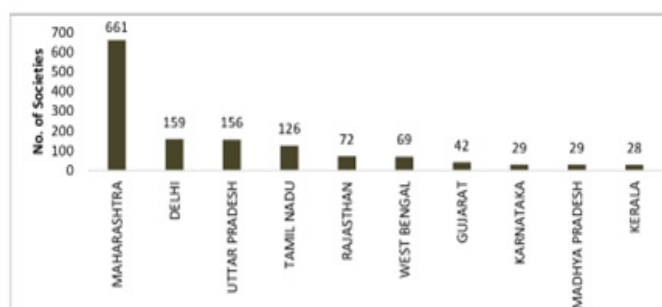
Pradhan Mantri Matsya Sampada Yojana (PMMSY)

- It was launched under the Atma Nirbhar Bharat (ANB) package with a total outlay of ₹20,050 crore.
- PMMSY marks the highest-ever investment in the fisheries sector in India, to be implemented over five years from FY21 to FY25 in all States/ Union Territories.
- The scheme aims to drive sustainable and responsible development of the fisheries sector while ensuring the socio-economic development of the fishers, fish farmers and fish workers.
- Attention had also been paid to addressing infrastructure gaps in the fisheries sector.
- A dedicated Fisheries and Aquaculture Infrastructure Development Fund (FIDF) was also established for five years, from 2018-19 to 2022-23, with an investment of ₹7,522 crore.

Sahakar-Se-Samriddhi: From Cooperation to Prosperity

- The cooperative societies, especially in the agriculture, dairy and fisheries sectors, provide the rural population with livelihood opportunities and a financial safety net with a community-based approach.
 - There are 8.5 lakh registered cooperatives in the country, having more than 29 crore members mainly from the marginalised and lower-income groups in the rural areas.
- Almost 98 per cent of villages are covered by **Primary Agriculture Credit Societies (PACS)**.
- To realise the vision of "Sahakar-see-Samriddhi", a renewed impetus was given to the growth of the cooperative sector.
- A full-fledged **Ministry of Cooperation** was established in July 2021 to provide greater focus to the cooperative sector.
- The Government has taken various initiatives to promote and strengthen PACS, like the computerisation of 63,000 functional PACS and the preparation of by-laws for enabling PACS to expand their activities.
- The **Multi-State Cooperative Societies Act, 2002 (MSCS)** was enacted after repealing the Multi-State Cooperative Act 1984, to facilitate the democratic functioning and autonomous working of Multi-State Cooperative Societies.
 - As of date, there are 1528 registered societies under the Multi-State Cooperative Societies Act 2002. **Maharashtra leads with 661 cooperatives**, followed by Delhi and Uttar Pradesh.
- With the view to strengthening the cooperative movement in the country, a New National Cooperation Policy is being formulated.

Top ten states with Multi-State Cooperative Societies



Food Processing Sector-The Sunrise Sector

- During the last five years ending FY21, the food processing industries sector has been growing at an average annual growth rate of around 8.3 per cent.
- The value of agri-food exports, including processed food exports, was about 10.9 per cent of India's total exports during 2021-22.
- Optimum development of the food processing sector will contribute significantly to tackling several developmental concerns such as disguised rural unemployment in agriculture, rural poverty, food security, food inflation, improved nutrition, prevention of wastage of food etc.

Challenges in Food Processing Sector:

- To facilitate the unfettered growth of the food processing sector, there is a continuous need for **extensive investment in cold chain infrastructure** and address **logistical challenges**.
 - The NITI Aayog Strategy for New India identifies the **lack of adequate and efficient cold chain infrastructure** as a critical supply-side bottleneck that leads to massive post-harvest losses (mostly of perishables) estimated at ₹92,561 crore annually.
 - The **uneven geographic distribution** of cold storage infrastructure also contributes to regional-level disparities.
- Countries worldwide have **stringent guidelines for importing food** and agricultural products and hence the probability of exports from India getting rejected increases with the lack of adequate cold chain infrastructure.
- **Logistical barriers** relating to connectivity also pose supply-side challenges.
 - For instance, Indian national highways, while accounting for 2 per cent of the total road network, carry 40 per cent of all cargo – exemplifying the burden on the existing road networks and the potential for congestion.

Measures taken by the government to facilitate the growth of the food processing sector:

- The Ministry of Food Processing Industries, through the component schemes of **Pradhan Mantri Kisan SAMPADA Yojana (PMKSY)**, provide financial assistance for the overall growth and development of the food processing sector.
- The Ministry also launched the **Prime Minister's Formalisation of Micro Food Processing Enterprises (PMFME) Scheme** as part of the ANB Abhiyan.
 - It aims at enhancing the competitiveness of individual micro-enterprises in the unorganised segment.
 - It also promotes the formalisation of this sector by providing financial, technical and business support for the upgradation/setting up of 2 lakh micro units in the country.
- **One District One Product (ODOP) approach** was also adopted to reap the benefit of scale in procuring inputs, using shared services and marketing products.
 - So far, 713 Districts with 137 unique products were approved under the ODOP in 35 States/UTs
- The **Production Linked Incentive Scheme for Food Processing Industry (PLISFPI)**, launched in March 2022, has the specific mandate to incentivise investments to create global food champions.
- To focus on transporting perishable food products, including horticulture, fishery, livestock and processed products, from the Hilly Areas, North-Eastern States and Tribal Areas, **Krishi UDAN 2.0 version** was launched in 2021.

Food Security: Social & Legal Commitment to the People of the Nation

- The Government is currently running the most extensive legislation-based food security programme in the world, covering about 80 crores of India's population under the National Food Security Act (NFSA), 2013.
- The food management programme in India comprises the procurement of food grains from farmers at remunerative prices and the distribution of food grains to consumers.

- It particularly aims at providing food grains to the vulnerable sections of society, at affordable prices and maintenance of food buffer stock for food security and price stability.
- Till December 2022, the NFSA provided, coverage of up to 75 per cent of the rural and up to 50 per cent of the urban population highly subsidised food grains.
- In a recent decision, the government has decided to provide free foodgrains to about 81.35 crore beneficiaries under the NFSA for one year from January 1, 2023.
- To ease the hardships faced by the poor due to economic disruption caused by Covid-19, the Government initially launched Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY).
 - Under the scheme, 5 kg of additional food grains per person per month has been/is being provided free of cost to NFSA beneficiaries in all the phases.
- To further ease the process of access to food, the Government launched a citizen-centric and technology-driven scheme in 2019 called the One Nation One Ration Card (ONORC) scheme.
 - The ONORC system enables intra-State and inter-State portability of ration cards.
 - Presently, the national/inter-State portability is enabled in all 36 States/UT, covering 100 per cent of the total NFSA population.

- The food subsidy bill was higher during 2020-21 and 2021-22 in comparison to other years as a result of the free food distribution programme of the government under the PMGKAY.

Total Food Subsidy released by the Government of India since 2014-15.



Conclusion:

- The performance of the agriculture sector remains critical to growth and employment in the country. Investment in the sector must be encouraged through an affordable, timely and inclusive approach to credit delivery.
- A focus on the horticulture sector and the thrust towards allied activities have diversified farmers' income making them more resilient to weather shocks.
- A greater focus on the development of the food processing sector can reduce wastage/ loss and increase the length of storage, ensuring better prices for the farmers.
- All the initiatives mentioned in the chapter have led to sustainable and inclusive development of the sector.

INDUSTRY: STEADY RECOVERY

INTRODUCTION:

- This chapter reviews the performance of the Indian industry in the current financial year.
- The chapter explores the demand stimulants to industrial growth, the supply response of the industry, trends in credit to the industry and foreign investment in India's industrial sector.
- It also addresses the developments in key sub-industries and their challenges.
- Towards the end, it evaluates India's aspirations and prospects of becoming a key player in global value chains.

Overall Industrial Growth:

- The industry holds a prominent position in the Indian economy, accounting for **31 per cent of GDP**, on average, during FY12 and FY21 and employing over 12.1 crore people.
- The sector's relevance can be identified through various direct and indirect linkages with other sectors, contributing to economic growth and employment.
 - **Industrial sector ensures that domestic production can accommodate domestic demand and reduces the reliance on imports. Thereby assisting in the improvement of trade and current account balances.**
 - **Industrial growth has multiplier effects, which translates into employment growth. Some industries, such as textiles and construction, have high employment elasticities.**
 - **Industrial growth spurs growth in services sectors such as banking, insurance, logistics, etc.**
- In FY23, the Industry sector witnessed modest growth of 4.1 per cent compared to the strong growth of 10.3 per cent in FY22.
 - **This is likely on account of input cost-push pressures, supply chain disruptions and the China lockdown impacting the availability of essential inputs and slowing the global economy.**

Growth and Share of Industrial Components (in per cent)

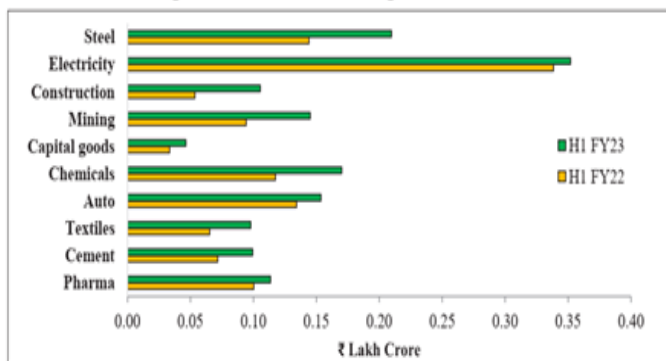
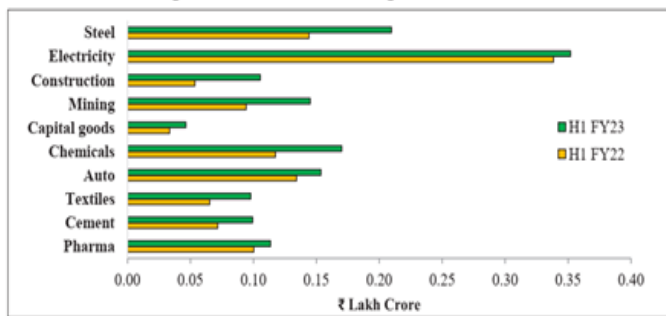
	Growth in Per cent		Real GVA growth in FY23 over FY22	Real GVA growth in FY23 over FY20	Share in total GVA FY23
	H1:FY23	H2:FY23 (Estimated)			
Industry	3.7	4.5	4.1	11.1	30.0
Mining & quarrying	2.2	2.6	2.4	4.4	2.3
Manufacturing	0.1	3.0	1.6	11.0	17.3
Electricity, gas, water supply & other utility services	10.0	7.9	9.0	13.0	2.3
Construction	11.5	7.3	9.1	12.8	8.1
Overall GVA	9.0	4.7	6.7	9.8	-

Source: National Statistical Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI)

Demand Stimulus to Industrial Growth:

- FY23 began with the month-old Russian-Ukraine conflict showing no signs of relenting. Industry, throughout the year, has thus faced high input costs imported into the country.
- The consequent decrease in overall retail inflation has sustained the pent-up consumer demand in the post-pandemic Indian economy, inducing an industrial recovery despite the global headwinds.
- World commodity prices are now on a downward trajectory and showing up in declining rates of India's wholesale inflation.
- Strong external demand also served the Indian industry well in FY22 when manufactured exports soared, responding to a rebound in global growth. Trade had also recovered and grown as bottlenecks in global supply chains eased.
- However, the export impulse has been waning in the first half itself as the year-on-year growth of exports has declined from Q1 to Q2 due to persistently high inflation and rising interest rates in the advanced economies.
 - **Export growth may slow further if the global economy falls into recession.**
- Increase in investment demand has emerged as another powerful stimulus to industrial growth.
 - **It has been triggered by a jump in the Capex of the central government in the current and the previous year.**
 - **The leap also has crowded-in private investment, already upbeat on the pent-up consumption demand, export stimulus, and strengthening of the corporate balance sheets.**

Private Investment gathers momentum



Unfolding of Private Capital Investment Cycle

- A view is fast emerging that the private sector is predisposed to increasing investment in the third decade of the new millennium.
- In the second decade, the balance sheets of both the corporates and banks became stressed.
- As a result, corporates switched focus from investment to deleveraging while banks slowed credit disbursement in view of high **Non-performing Assets (NPAs)**.
- For the banks, the **Insolvency and Bankruptcy Code (IBC)** was instituted to resolve their stressed assets while the equity base of public sector banks was strengthened.
- For the corporates, the **goods and Services Tax (GST)** rollout improved their ease of doing business while the corporate tax rate was slashed to increase their profits/investible reserves for financing investment.
- During the pandemic, the implementation of the **Emergency Credit Line Guarantee Scheme (ECLGS)** lent additional support to the MSMEs.

- Maturing digital infrastructure and easy and cheap data access have further enriched the investment climate.

Deleveraging by the private non-financial sector



Source: Bank for International Settlements (BIS)

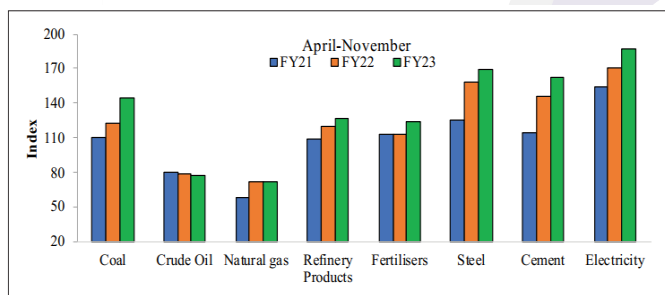
- **Deleveraging** has strengthened the corporate balance sheets, as evident in the declining core debt of the private non-financial sector.
- Credit to the private non-financial sector as a percentage of GDP in India had come down from a peak of 113.0 per cent in 2010 to a low of 83.8 per cent in 2018.
- The Reserve Bank of India's (RBI) **Industrial Outlook Survey** conducted points towards optimism about production, order books, employment, and profit margins for the period covered until Q1 of FY24.
- With the enforcement of the IBC code and a more disciplined approach to credit disbursements, NPA fell to 7.3 per cent in FY21 and to a seven-year low of 5.0 per cent in September 2022.
- The Capital-to-Risk-Weighted Assets Ratio (CRAR) and provisioning coverage ratio (PCR) have also improved.
- With well-capitalised banks ready and willing to lend and corporates financially stronger and willing to borrow, the credit-investment cycle is poised for an upturn in the third decade.

Supply Response of Industry:

- The supply response of the industry to the demand stimulus has been robust.
- **Purchasing Manager's Index (PMI)** -Manufacturing indicated an easing pace of input cost pressures, improving supplier delivery times, robust export orders, and future output.

- The moderation in input cost inflation has also led to an easing in the momentum of output prices.
- However, the pace of expansion in new export orders decreased, reflecting a subdued global demand.
- The sustained growth of manufacturing output is also seen within the overall Index of Industrial Production (IIP) producing consumer durables in sync with the “pent-up” consumption demand.
- Robust growth in the production of capital goods and infrastructure/construction goods is indicative of the beginnings of an investment cycle in the private sector in the next financial year.
- The eight core industries of coal, fertilisers, cement, steel, electricity, refinery products, crude oil, and natural gas are critical in meeting the demand for inputs across industries.

Steady Growth in Components of Index of Core Industries



Source: Department for Promotion of Industry and Internal Trade (DPIIT)

The manufacturing landscape shows uneven growth across various categories:

- The motor vehicles manufacturing segment's performance continues to improve, induced by robust demand and an easing of chip shortage.
- The manufacturing of 'computer, electronic and optical products', an upcoming industry, has also been rising.
 - Multiple players looking to make India a manufacturing hub of semiconductors have made the investment outlook in this sector positive.
- Chemicals and chemical products such as caustic soda, soda ash, fertilisers and petroleum products have also performed well, contributing to sustaining the growth momentum in the agriculture sector while increasing exports.

- Textiles, apparel and leather, have been showing tepid growth, as export demand for these products has been mellowing with the slowing of global output and demand.
- Growth in pharmaceutical output has slowed due to an unfavourable base effect and the waning of the pandemic.

Robust Growth in Bank Credit to Industry:

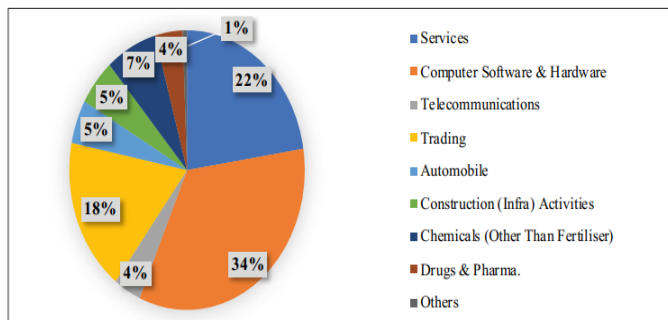
- Growth in bank credit has kept pace with industrial growth.
- A large share of bank credit continues to be assigned to large industries however credit to MSMEs has also seen a significant increase in part assisted by the introduction of the **Emergency Credit Line Guarantee Scheme (ECLGS)**.
 - ECLGS supports around 1.2 crore businesses of which 95 per cent are MSMEs.
 - The impact of ECLGS on increasing the growth of credit to MSME was felt most during the pandemic-impacted years of 2020 and 2021.
 - The share of MSMEs in gross credit offtake to the industry rose from 17.7 per cent in 2020 to 23.7 per cent in 2022.
- The spread between corporate bond yields and marginal costs of funds-based lending rate (MCLR) is narrowing. The volatility in the corporate bond market remains high and due to this corporate appear to be shifting their sources of financing from bond markets to bank capital.

Resilient FDI inflow in Manufacturing Sector:

- Annual FDI equity inflows in the manufacturing sector have been steadily increasing over the last few years.
 - It jumped from US\$ 12.1 billion in FY21 to US\$ 21.3 billion in FY22 as the pandemic-driven expansionary policies of advanced economies led to a surge in global liquidity.
- With the rise in global uncertainty in the wake of the Russia-Ukraine conflict, FDI equity inflow in manufacturing declined in the first half of FY23. The monetary tightening at the global level has further restricted the FDI equity inflows.

- A rebound in FDI inflows is, however, expected as the Indian economy sustains its high growth while monetary tightening the world over eventually eases with the weakening of inflationary pressures.
- The government has implemented an investor-friendly FDI policy under which FDI up to 100 per cent is permitted through automatic routes in most sectors.

Sector-wise FDI Equity Inflows in 2022-23



Source: DPIIT data

FDI Reforms to Bolster Investments:

- India continues to open up its sectors to global investors by raising FDI limits and removing regulatory barriers to attract increased investments, in addition to developing infrastructure and improving the business environment.
- In FY20, 100 per cent FDI under automatic route was permitted for the sale of coal, and coal mining activities, including associated processing infrastructure, subject to provisions of relevant acts.
- 26 per cent FDI under the government route has been permitted for uploading/ streaming of News & Current Affairs through Digital Media.
- 100 per cent FDI has been permitted in Insurance Intermediaries, including insurance brokers, reinsurance brokers, insurance consultants, corporate agents, third-party administrators, Surveyors and Loss Assessors and such other entities as may be notified by the Insurance Regulatory and Development Authority from time to time.
- To curb opportunistic takeovers/acquisitions of Indian companies due to the Covid-19 pandemic, the government amended the FDI policy.

➤ According to this an entity of a country which shares a land border with India or where the beneficial owner of investment into India is situated in or is a citizen of any such country can invest only under the Government route.

- To simplify the approval process of foreign Investment and to promote ease of doing business, the erstwhile **Foreign Investment Promotion Board (FIPB)** was abolished in 2017, and a new regime has been put in place.

➤ Under the new regime, the process for granting FDI approvals has been simplified, wherein the work relating to the processing of applications for FDI has been delegated to the concerned Ministries/ Departments.

➤ DPIIT serves as the nodal department for facilitating the process.

- A revamped portal, “**Foreign Investment Facilitation Portal (FIF Portal)**”, has been launched as the online single-point interface of the Government of India for investors to facilitate FDI.

➤ The portal facilitates single window clearance of applications which are through the government approval route.

➤ The FIF Portal has been integrated with the **National Single Window System (NSWS)**.

Micro, Small and Medium Enterprises (MSMEs)

- The contribution of the MSME sector to overall GVA rose from 29.3 per cent in FY18 to 30.5 per cent in FY20 however the economic impact of the pandemic caused the sector's share to fall to 26.8 per cent in FY21.
- MSME contribution to the manufacturing sector's GVA also marginally fell to 36.0 per cent in FY21.

Measures taken through the AatmaNirbhar Bharat Package to cushion the economic impact of the pandemic on MSMEs:

- The provision of ₹20,000 crore subordinate debt for stressed MSMEs.
- ₹50,000 crore equity infusion through **Self Reliant India fund**.
- **Udyam portal for MSME registration**, a paperless, zero-cost registration portal that is based on self-declaration and only requires Aadhaar.

- **Samadhaan Portal**, set up under the **Micro, Small and Medium Enterprises Development (MSMED) Act** to monitor the outstanding dues to the MSME sector, is helping MSMEs in resolving their cashflow difficulties.
- The government has instructed Central Public Sector Enterprises (CPSEs) and all companies with a turnover of ₹200 crore or more to get themselves onboarded on the **Trade Receivables Discounting System (TReDS) platform** for facilitating the discounting of trade receivables of MSMEs through multiple financiers.
- **CHAMPIONS Portal**, a single-window grievance redressal portal for MSMEs was launched by the Ministry of MSME in June 2020.
 - The portal continues to be improved through initiatives such as the localisation of the portal in 11 regional languages and the introduction of a Chatbot.
- **‘Raising and Accelerating MSME Performance’ scheme (RAMP)**: The World Bank-supported scheme aims at strengthening institutions and governance at the Centre and State, improving Centre-State linkages and partnerships.
 - It also improves access of MSMEs to market and credit, technology upgradation and addressing issues of delayed payments and greening of MSMEs.
 - The RAMP programme will be implemented over a period of five years.

Incentives to encourage semiconductor manufacturing in the US and India

- The global economic recovery from the Covid-19 pandemic exposed the frailties in the supply chains of many goods and services.
- One product that was under the spotlight was the semiconductor (referred to as ‘chips’), and the effect of its shortage was particularly amplified in the automotive industry globally.

- One of the most notable policies is the United States’ **Creating Helpful Incentives to Produce Semiconductors and Science Act, 2022** (CHIPS and Science Act, 2022).
 - The legislation aims to catalyse investments in the domestic semiconductor manufacturing capacity of the US.
 - The country produces about 10 per cent of the world’s semiconductors and relies heavily on East Asia to import chips.
- In the pursuit of Aatmanirbharta India has announced multiple incentives to attract investment for developing a semiconductor manufacturing ecosystem.
- The government will provide financial support for 50 per cent of the capital expenditure to be incurred by the investing firms.

Various incentives under Semiconductor Scheme

Scheme for	Financial Support	R&D Support
Setting up of Semiconductor Fabs in India	50 per cent of firm’s Capex	Up to 2.5 per cent of the scheme outlay
Setting up Display Fabs	50 per cent of firm’s Capex	Up to 2.5 per cent of the scheme outlay
Setting up of Compound Semiconductors / Silicon Photonics / Sensors Fab and Semiconductor ATMP /OSAT facilities	50 per cent of firm’s Capex	Up to 2.5 per cent of the scheme outlay

Source: MEITY

- Recognising that even though India possesses 20 per cent of the world’s semiconductor design engineers but a minuscule share in the intellectual property (IP), the Government of India has also announced a **Design Linked-Incentive (DLI) scheme**.
- Israel-based International Semiconductor Consortium has signed a Memorandum of Understanding (MoU) to set up India’s first chip-making plant in Karnataka.

Sectors/ Industry	Major Developments	Government Initiatives
Coal Sector	<ul style="list-style-type: none"> At the beginning of the fiscal year, coal availability became a challenge for India's largely thermal-based power generation plants. This was because of a resurgence in economic activity, heat waves in March-April and increased demand for power in the country. The coal industry is expected to grow at 6-7 per cent annually. 	<ul style="list-style-type: none"> All generators were asked to import coal to the extent of 10 per cent of their requirements (as against 4 per cent earlier). Section 11 of the Electricity Act 2003 (Act) was invoked to direct imported coal-based plants to run at full capacity. Rural Electrification Corporation (REC)/ Power Finance Corporation (PFC) and commercial banks were advised to facilitate the availability of additional working capital to power generating plants.
Steel Industry	<ul style="list-style-type: none"> The country is now a global force in steel production and the 2nd largest crude steel producer in the world. The growth in finished steel production is aided by double-digit growth in consumption (11 per cent on a YoY basis). 	<ul style="list-style-type: none"> Under the PLI scheme for steel 67 applications from 30 companies have been selected for speciality steel. The government's thrust towards infrastructure projects, pick-up in construction and real estate activity, and healthy demand from the automobile sector augur well for the demand for steel products.
Textile Industry	<ul style="list-style-type: none"> Most significant sources of employment generation, with an estimated 4.5 crore people directly engaged in this sector, including a large number of women and the rural population. The challenge of moderating exports compared to FY22. FDI inflows into the textile sector are yet to recover to pre-pandemic levels. 	<ul style="list-style-type: none"> PM Mega Integrated Textile Region and Apparel (PM MITRA) Parks scheme for developing integrated large-scale and modern industrial infrastructure facilities for the entire value chain of the textile industry. Production Linked Incentive (PLI) Scheme to promote investments and increase the production of Man-Made Fibre (MMF) Apparel, MMF Fabrics and Products of Technical Textiles.
Pharmaceutical Industry	<ul style="list-style-type: none"> India is ranked 3rd worldwide in the production of pharma products by volume and 14th by value. The nation is the largest provider of generic medicines globally, occupying a 20 per cent share in global supply by volume. India is also the leading vaccine manufacturer globally with a market share of 60 per cent. 	<ul style="list-style-type: none"> PLI for promotion of domestic manufacturing of critical Key Starting Materials (KSMs)/ Drug Intermediates (DIs)/ Active Pharmaceutical Ingredients (APIs).
Automobile Industry	<ul style="list-style-type: none"> India became the 3rd largest automobile market, surpassing Japan and Germany in terms of sales. In 2021, India was the largest manufacturer of two-wheeler and three-wheeler vehicles and the world's fourth-largest manufacturer of passenger cars. 	<ul style="list-style-type: none"> Consumption Enhancing Incentive Schemes <ul style="list-style-type: none"> ➤ Fame Phase 1 from 2014 to 2019 and ➤ Fame Phase 2 from 2019 to 2024. Production Linked Incentive Scheme: <ul style="list-style-type: none"> ➤ Advanced Chemistry Cell to reduce the price of batteries and ➤ Auto and Auto Component scheme.

Electronic Industry	<ul style="list-style-type: none"> Electronic goods were among the top five commodity groups exhibiting positive export growth in 2022. In the mobile phone segment, India has become the second-largest mobile phone manufacturer globally. The industrial electronics sector is also seeing growth due to improved digitisation and robotics applications in Industry 4.0. 	<ul style="list-style-type: none"> PLI scheme for Large Scale Electronics Manufacturing PLI scheme for IT hardware Scheme for the Promotion of Manufacturing of Electronic Components and Semiconductors (SPECs). Programme for Development of Semiconductors and Display Manufacturing Ecosystem in India. These schemes and initiatives are expected to boost India's manufacturing capacity, reduce import dependence, and also contribute to achieving the country's ambitions of becoming a major player in global supply chains.
Shipbuilding industry	<ul style="list-style-type: none"> Strategically important industry due to its role in energy security, national defence and the development of the heavy engineering industry. Shipbuilding with its links to other ancillary industries, including steel, engineering equipment, port infrastructure, trade and shipping services has the potential to create a collaborative production ecosystem. 	<ul style="list-style-type: none"> To achieve strategic independence in shipbuilding and the development of niche technology more than 130 Indian Navy (IN) warships have been constructed at Indian shipyards. The Indigenisation initiatives implemented by the IN have resulted in a significant infusion of economic activity by creating employment opportunities for MSMEs and other industries.

India's Prospects as a Key Player in the Global Value Chain: Sub-Sectors under Make in India 2.0

Chain:

- The risk of supply chain shocks has never been more palpable than today, following compounding crises from the US-China trade war, the Covid-19 pandemic, and the war in Ukraine.
- India has a unique opportunity to become a global manufacturing hub this decade and the three primary assets to capitalise on are:
 - potential for significant domestic demand
 - Government's drive to encourage manufacturing,
 - and a distinct demographic edge, including a considerable proportion of the young workforce.

Make in India 2.0 and the Production Linked Incentive (PLI) schemes:

- Make in India 2.0' is now focusing on 27 sectors, which include 15 manufacturing sectors and 12 service sectors.

Figure IX.27: 24 Sub-Sectors under Make in India 2.0



- PLI Scheme across these key specific sectors is poised to make Indian manufacturers globally competitive, attract investment in the areas of core competency and cutting-edge technology and make India an integral part of the global value chain.

Fostering Innovation:

- As per the **Global Innovation Index (GII) 2022** report, India entered the top **40** innovating countries for the first time in 2022 since the inception of the GI in 2007 by improving its rank from 81 in 2015 to 40 in 2022.
- Further, India became the most innovative nation in the lower middle-income group overtaking Vietnam (48th) and leading the Central and Southern Asia region.

Flipping and Reverse Flipping: the recent developments in Start-ups

- India ranks amongst the largest startup ecosystems in the world.
- About 48 per cent of startups are from Tier II & III cities, a testimony of our grassroots' tremendous potential.

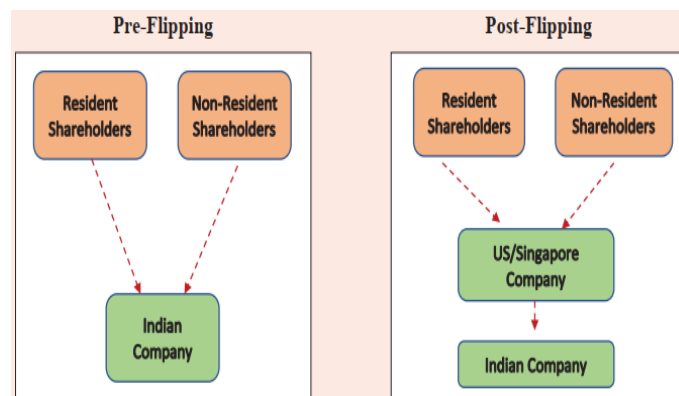
Government Initiative for Startups:

- **Start-up India Initiative**, eligible companies get recognised as Start-ups by DPIIT to access a host of tax benefits, easier compliance, and IPR (Intellectual Property Rights) fast-tracking.
- **National Initiative for Developing and Harnessing Innovations (NIDHI) and Atal Innovation Mission (AIM)**, entrepreneurship and innovation are fostered across the start-up ecosystem in the country.
- The **Fund of Funds for Start-ups (FFS)** and **Credit Guarantee Scheme for Start-ups (CGSS)** support seed funding and successive credit needs.
- **Technology Incubation and Development of Entrepreneurs (TIDE 2.0)** provides an R&D platform for technology sectors.
- **Support for International Patent Protection in E&IT (SIP-EIT) Scheme** encourages international patent filing by Indian MSMEs and start-ups.

What is Flipping?

- It is the process of transferring the entire ownership of an Indian company to an overseas entity, accompanied by a transfer of all IP and all data hitherto owned by the Indian company.
- It effectively transforms an Indian company into a 100 per cent subsidiary of a foreign entity, with the founders and investors retaining the same ownership via the foreign entity, having swapped all shares.
- "Flipping" happens at the early stage of the Start-ups, driven by commercial, taxation and
- Personal preferences of founders and investors.

Effect of Flipping on the structure of the company



To accelerate 'Reverse Flipping', certain measures are possible such as:

- Simplifying the process for grant of "Inter-Ministerial Board (IMB) certification" for startups.
- Simplifying multiple layers of tax and uncertainty due to tax litigation.
- Simplifying procedures for capital flows: Many countries, such as US and Singapore, have easier corporate laws, with lesser restrictions on the inflow and outflow of capital and treatment of Hybrid Securities.
- Exploring the incubation and funding landscape for start-ups in emerging fields like social innovation and impact investment.

Structural reforms enhanced the Ease of Doing Business:

- DPIIT's **Business Reform Action Plan (BRAP) 2020** shows that 7,496 reforms were implemented across States and UTs to enhance the Ease of Doing Business across the country.
- **Reducing the Compliance Burden (RCB)** on businesses and citizens is a continuous exercise to leapfrog to the next level of governance excellence and improve Ease of Living.
- **National Single Window System (NSWS) portal** was launched to further improve the ease of doing business by providing a single digital platform to investors for approvals and clearances.

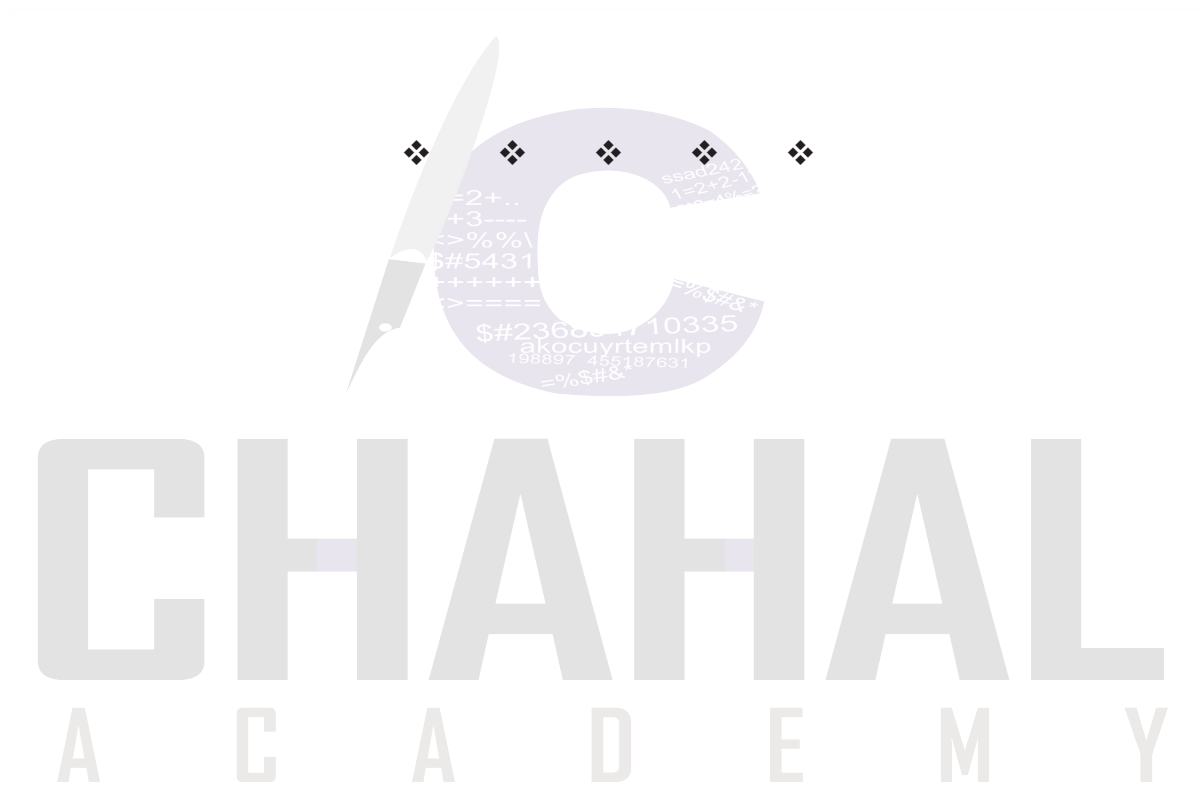
India and Industry 4.0:

- The government is cognisant of the importance of industry 4.0 in achieving the goals of Aatmanirbharta and its ambitions of becoming a key player in global value chains.

- In 2018, the **Centre for Fourth Industrial Revolution** was established in India, which looks to develop policy frameworks for emerging technologies.
- **SAMARTH** (Smart Advanced Manufacturing and Rapid Transformation Hubs) **Udyog Bharat 4.0** under the Ministry of Heavy Industries and Public Enterprises aims to encourage technological solutions to Indian manufacturing units through awareness programmes and demonstrations.

Conclusion:

- Despite global headwinds, industrial production expanded during FY23, backed by sustained demand conditions.
- Credit growth in the industry has also increased remarkably, suggesting that prospects for Capex investments by companies are brighter.
- The PLI schemes are set to unlock manufacturing capacity, boost exports, reduce import dependence and lead to job creation for both skilled and unskilled labour.
- However, exports are slowing down and are likely to moderate along with the probable global economic slowdown.
- Despite the volatility in the international markets, industrial output in India should continue to grow steadily based on resilient domestic demand.

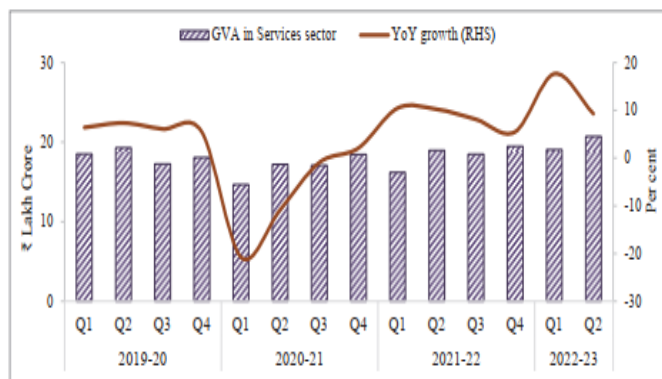


SERVICES: SOURCE OF STRENGTH

Introduction

- The Covid-19 pandemic hurt most sectors of the economy, with the effect particularly profound for contact-intensive services sectors like tourism, retail trade, hotel, entertainment, and recreation.
- On the other hand, non-contact services such as information, communication, financial, professional, and business services remained resilient.
- However, the services sector witnessed a **swift rebound in FY22**, growing Year-on-Year (YoY) at 8.4 per cent compared to a contraction of 7.8 per cent in the previous financial year.
- The **improvement was driven by growth in the 'Trade, Hotel, Transport, Storage, Communication and Services related to broadcasting' sub-sector**, which bore the maximum burden of the pandemic. The **growth momentum has continued in FY23** as well.

Figure X.1: Broad-based growth in the Services sector



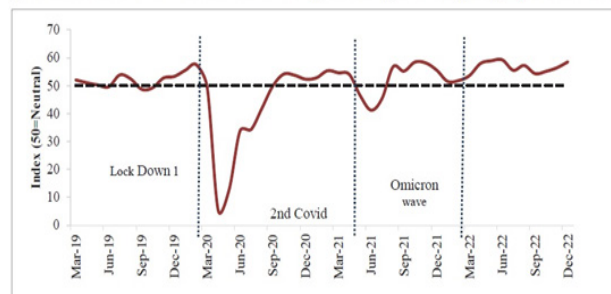
Trends in High-Frequency Indicators:

• Services PMI:

- India's services sector activity, gauged by PMI Services, which remained in the contractionary zone for several months during 2020 and 2021 on account of the restrictions imposed to tackle the Covid-19 pandemic, recovered swiftly with the waning of the Omicron variant at the beginning of 2022.
- However, PMI services again witnessed a setback with the outbreak of the Russia-Ukraine conflict.

- However, following an **overall easing of retail inflation** leading to retreating price pressures of inputs and raw materials, **PMI services** witnessed an **uptick** and expanded to **58.5 in December 2022**.

Figure X.3: PMI Services remained in an expansionary zone despite geopolitical tensions

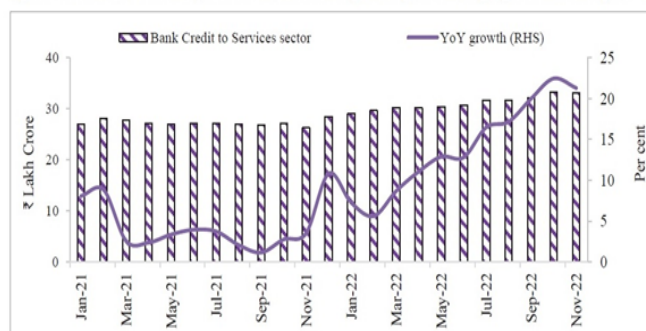


Source: IHS Markit

• Bank Credit:

- Bank credit to the **services sector** has witnessed significant **growth since October 2021** with the improvement in vaccination coverage and recovery in the services sector.
- Within the services sector, **credit to wholesale and retail trade** increased by in **November 2022**.
- **Uncertain growth prospects** in the global markets and **uneven credit allocation to the transport sector** led to a **decline in credit to the shipping and aviation sector** by 7.9 per cent and 8.7 per cent respectively in **November 2022**.

Figure X.4: Credit offtake by the services sector registering double-digit growth since April 2022



Source: RBI

• Services Trade:

- World services trade volume finally **surpassed its pre-pandemic peak** in the second quarter of 2022 and was expected to remain strong in the third quarter, buoyed by spending on **travel, Information and Communication Technology (ICT) services, and financial services**.

- However, **WTO's Services Trade Barometer Index** reading fell to 98.3 for **October 2022** (slightly below its baseline value of 100).
- **Financial and ICT Services** have been so far most **resilient** to the slowing global economy, whereas, **construction services and container shipping** fell into contraction territory.
- Insofar as India is concerned, some **headwinds** may be observed in the coming months because of the slowing growth in some of India's major trading partners.
- On the contrary, **India's services exports** may **improve** as **runaway inflation** in advanced economies drives up wages and makes **local sourcing expensive**, opening up avenues for **outsourcing to low-wage countries**, including India.
- **India** is a significant player in **services trade**, being among the **top ten services exporter countries** in **2021**, having increased its share in **world commercial services exports** from **3 per cent** in **2015** to **4 per cent** in **2021**.
- Among services exports, **software exports** have remained relatively **resilient** during the Covid-19 pandemic as well as amid current geopolitical uncertainties, driven by **higher demand for digital support, cloud services, and infrastructure modernisation** catering to new challenges. **Transport and travel exports** have been the **most impacted** sub-components of the services exports in **FY21** and **FY22**.

Figure X.5: Services Exports remained resilient amid geopolitical uncertainties.



Source: RBI

• Foreign Direct Investment (FDI) in Services:

- The **World Investment Report 2022** of **UNCTAD** places India as the **seventh largest recipient of FDI** in the **top 20 host countries** in **2021**. In **FY22** India received the **highest-ever FDI inflows** of **US\$ 84.8 billion** including **US\$ 7.1 billion FDI equity inflows** in the **services sector**.

- To **facilitate investment**, various measures have been undertaken by the **Government**, such as the launch of the **National Single-Window system**, a one-stop solution for approvals and clearances needed by investors, entrepreneurs, and businesses.
- To ensure the **liberalisation of investment** in various industries, the Government has **permitted 100 per cent foreign participation** in **telecommunication services**, through the **Automatic Route**.
- The **FDI ceiling in insurance companies** was also raised from **49 to 74 percent**, under **Automatic Route**. Further, Government has allowed **20 per cent foreign investment** in **Life Insurance Corporation (LIC)** under the automatic route.

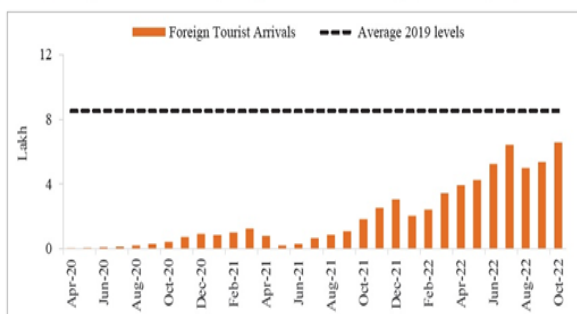
Major Services: Sub-Sector-Wise Performance:

• Tourism and Hotel Industry:

- The post-pandemic scenario of global tourism is gradually converging to the pre-pandemic one. With travel restrictions and health concerns subsiding, tourism has become a vital driver of a strong upswing in contact-intensive activity.
- **Aiding the revival of travel demand** was the **high vaccination rate** in the country, as also **effective pandemic management** that ensured speed in imposing as well as the lifting of mobility restrictions closely tracking the spread and subsiding of the virus. After a two-year hiatus, India also resumed all regular international flights at full capacity as **2021-22** came to a close.
- **Tourism industry** was another sector that was adversely impacted by the pandemic. A significant decline in **Foreign Tourist Arrivals** in India was witnessed in **FY21**.
- However, with the waning of the pandemic, India's tourism sector is also showing signs of revival. **Foreign tourist arrivals** in India in **FY23** have been growing month-on-month with the resumption of scheduled international flights and the easing of Covid-19 regulations.
- **India is ranked 10th out of the top 46 countries in the World** in the **Medical Tourism Index FY21** released by Medical Tourism Association.

- Several factors, such as the presence of world-class hospitals and skilled medical professionals, superior quality healthcare, low treatment costs compared with other countries, credibility in alternative systems of medicine, and increased global demand for wellness services like Yoga and meditation, make India a popular medical tourism destination.
- India has also attempted to improve its attractiveness as a destination for **specialized tourism**. Recent initiatives like the **Ayush visa for tourists** who desire to visit India for medical treatment, the launch of the National Strategy for Sustainable Tourism & Responsible Traveller Campaign, the introduction of the Swadesh Darshan 2.0 scheme, and Heal in India can assist in capturing a larger share of the global medical tourism market.

Figure X.8: Foreign Tourist Arrivals (FTAs) in India are catching-up with the pre-pandemic levels



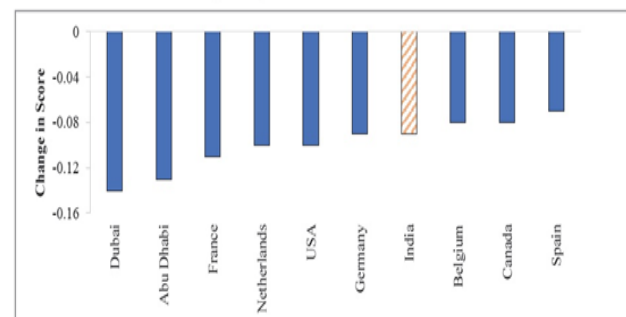
Source: Ministry of Tourism

• Real Estate:

- The onset of the Covid-19 pandemic accentuated a slowdown in every economic space, and the real estate sector was no different. Project delays, deferment of big-ticket purchases, stagnation of property prices, and scarce funding for developers induced slackening of demand.
- The situation was further aggravated by the associated lockdown and migration of workforces involved in the sector to their natives. **The work-from-home model** had an **impact on the demand for office space** requirements by the corporates.

- Notwithstanding the current impediments, such as rising interest rates on home loans and an increase in property prices, the sector has witnessed **resilient growth in the current year**, with housing sales and the launch of new houses in Q2 of FY23 surpassing the pre-pandemic level of Q2 of FY20.
- According to JLL's 2022 **Global Real Estate Transparency Index**, India's **real estate market transparency** is among the **top ten** most improved markets globally.

Figure X.11: Top Transparency Improvers in Global Real Estate Transparency Index between 2020 and 2022



Source: JLL, LaSalle 2022

• IT-BPM Industry:

- Covid-19 has accelerated the pace of digital transformation across most of India's end user industries, with companies witnessing a rise in investment, more complex technology convergence use-cases, and the prioritisation of enterprise-scale data and cloud strategy.
- According to **NASSCOM's report**, India's IT-BPM industry has been exceptionally resilient during the pandemic, driven by increased technology spending, accelerated technology adoption, and digital transformation.
- **Growth in exports** was seen across all the major markets, with the **USA, Europe (excl. UK), and the UK continues to be the major markets**. Many firms are now focusing on new markets, more prominently the Middle East and Latin America leading to market diversification which will increase the IT-BPM sector's resilience in the coming years.

Figure X.12: Geographic distribution of IT-BPM exports (excluding hardware)

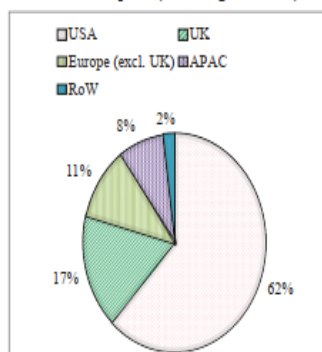
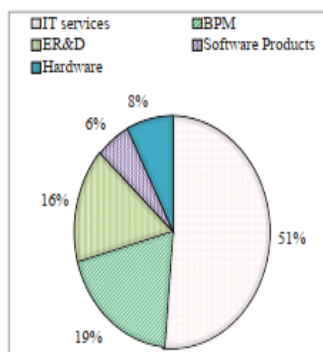


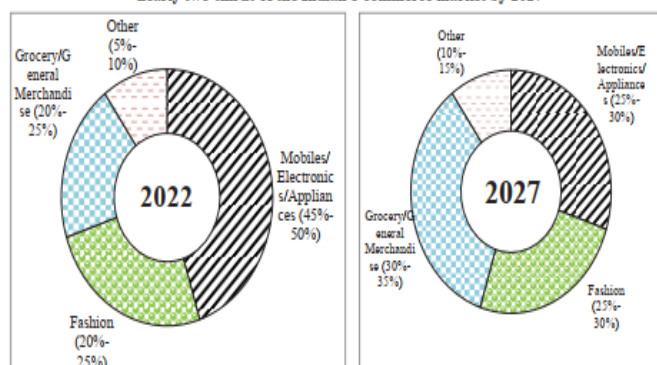
Figure X.13: Segment-wise break-up of Revenues in FY22



• E-Commerce:

- On the same lines as the **IT-BPM sector**, the **E-Commerce sector** also witnessed a renewed push and a sharp increase in penetration in the aftermath of the pandemic. **Lockdowns and mobility restrictions** disrupted consumer behaviour and gave an impetus to online shopping.
- The Government's push to **boost the digital economy**, growing **internet penetration**, rise in **smartphone adoption**, innovation in **mobile technologies**, and increased **adoption of digital payments** further accelerated the adoption and growth of e-commerce.
- The expansion of e-commerce to newer segments like grocery, fresh-to-home fruits and vegetables, and general merchandise has contributed to the expansion of the customer base beyond traditional buyers.
- There has also been an increase in the **adoption of digital solutions** by Micro, Small and Medium Enterprises (**MSMEs**) like e-commerce and e-procurement, realising the prospects of increased revenues and margins, improved market reach, access to new markets, and customer acquisition.
- The E-commerce platform has not only empowered small businesses by removing geographical barriers and providing a large customer base but also allowed them to deal directly with manufacturers and suppliers, thus reducing the cost of procurement.
- Further, there has been a phenomenal **geographical expansion** with the **growth of e-commerce business in rural India** driven by increased smartphone penetration, internet adoption, and increased purchasing power of rural customers.
- The **Government E-Marketplace (GeM)** has also witnessed tremendous growth in Gross Merchandise Value (GMV) and is catching up with E-commerce giants like Amazon and Flipkart.
- GeM attained an annual procurement of ₹1 lakh crore within FY22, representing a 160 per cent growth compared to last FY. GeM has taken a host of steps to onboard products of Self-Help Groups (SHGs), tribal communities, artisans, weavers, and MSMEs.
- 57 per cent of the total business on GeM has come through the MSME units, and female entrepreneurs have contributed over 6 per cent.
- **Initiatives taken by the Government for the promotion of e-Commerce**, including the Digital India program, Unified Payment Interface (UPI), GeM, etc., have been major contributory factors to the growth of E-commerce in recent years.
- The **recent initiative** of the launch of **Open Network for Digital Commerce (ONDC)** is also playing a significant role in **democratising digital payments**, enabling interoperability, and bringing down transaction costs.

Figure X.14: Fashion, grocery, and general merchandise to capture nearly two-thirds of the Indian e-commerce market by 2027



• Digital Financial Services:

- Digital financial services enabled by emerging technologies and innovative solutions are accelerating financial inclusion, democratising access, and spurring the personalisation of products.
- With a strong foundation provided by the **Jan Dhan-Aadhaar-Mobile (JAM) trinity**, UPI, and other regulatory frameworks, the pandemic has aided acceleration in digital adoption and provided a fillip to digital financial services solutions by banks, NBFCs, insurers as well as fintech.
- The pandemic provided the opportunity for fintech companies to reach the underserved and provide cost-effective financial services to those at the bottom of the pyramid.
- While globally, the technological solutions cushioned the reverberations of the pandemic, India took the lead with the fintech adoption rate of 87 per cent, substantially higher than the world average of 64 per cent as per the latest Global FinTech Adoption Index.
- Over the last few years, the number of **neobanking platforms** and global investments in the neo-banking segment has also risen consistently.
- **Neobanks** operate entirely online, with no physical presence apart from office space in the offline world.
- **The introduction of CBDC** will also significantly boost digital financial services. Issuance of CBDC in India offers several benefits, which inter alia, include reduction in operational costs involved in physical cash management, fostering financial inclusion, bringing resilience, efficiency, and innovation in the payments system, boosting innovation in cross-border payments space, and providing public with uses that any private virtual currencies can provide, without the associated risks.
- RBI has also recently launched **pilots of CBDC in both the Wholesale and Retail segments**. **Digital Rupee -Wholesale-** the pilot in the wholesale segment was launched on 1st November 2022.
- **The pilot in the retail segment**, known as **Digital Rupee-Retail** kicked off on 1st December 2022, within a closed user group comprising participating customers and merchants.

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EXTERNAL SECTOR: WATCHFUL AND HOPEFUL

Introduction

- **Two global shocks** in the new millennium – one an **economic shock** and the other, a **health shock** – have had very contrasting repercussions on the global economy. Following the global financial crisis in 2007-08 as the inflationary pressures were muted, interest rates were extremely low for long years.
- Now, the Covid-19 pandemic is another shock to global growth performance, with economic growth down to a negative of 3.8 per cent in 2020. The following two years saw inflation rates rise to multi-decade highs, fuelled by global commodity and food price spikes. The situation has been further amplified by the Russia-Ukraine conflict.
- To stem the situation, monetary authorities in advanced economies, especially the US Federal Reserve (US Fed), are accelerating the pace of monetary policy normalisation.
- It triggered **capital flight** from many emerging and frontier market economies, bringing to a halt the rebound of net capital flows to developing countries observed since the last quarter of 2020.
- The **US dollar** appreciated sharply against currencies of Emerging Market Economies (EMEs).
- **Global growth** is forecast to slow from 6.0 per cent in 2021 to 3.2 per cent in 2022 and 2.7 per cent in 2023 according to the International Monetary Fund (IMF). This is the weakest growth profile since 2001 except for the global financial crisis and the acute phase of the pandemic.

Trade Helping India Reap the Benefits of Globalised World:

- Over time, the trade openness of countries across the globe has been increasing as measured by trade as a proportion of GDP.
 - For India as well, the share of trade as a percentage of GDP has been steadily increasing, being above 40 per cent since 2005 (except 2020 being the pandemic year). The ratio stands at 46 per cent in 2021 and 50 per cent for H1 of 2022.

Global Scenario:

- The **global merchandise trade** in value terms rose year-on-year (YoY), by 22.2 per cent in **2021**, reversing the deceleration observed in the previous three years.
 - However, the **global trade outlook** turned **grimmer** in the **second half (H2) of 2022** on the back of a confluence of **adverse factors** including the increasing likelihood of a recession in the major economies and the tapering demand for consumer durables; aggressive monetary policy tightening by several central banks; disorderly financial conditions; continued supply-chain disruptions and elevated freight charges.
 - **Trade growth is likely to slow** in the closing months of 2022 and into 2023, according to the **WTO Goods Trade Barometer** released in November 2022.
 - As regards the future trade projections, **according to the WTO**, world trade is expected to **lose momentum** in H2-2022 and remain subdued in 2023. The organisation forecasts **global trade to grow in 2023 by just 1 per cent**.
 - There is a **high degree of uncertainty** associated with the forecast due to **shifting monetary policy** in advanced economies and the **unpredictable nature of the Russia-Ukraine conflict**.
 - The United Nations Conference on Trade and Development (**UNCTAD**), in December **2022** has also noted that the **ongoing trade slowdown is expected to worsen for 2023**.

India's growing and diversifying trade:

- International trade has been an important pillar of the resilience of India's external sector. Trade as a percentage of GDP for India was in the range of 12-15 per cent in the 1980s; 16-25 per cent in the 1990s and 25-50 per cent in the 2000s.

Table XL1: Key aspects of India's trade (Calendar year-wise)

	2019	2020	2021
Export performance (in per cent)			
Share in World Merchandise Exports	1.7	1.6	1.8
Share in World Commercial Services Exports	3.5	4.0	4.0
Share in World Merchandise Plus Services Exports	2.1	2.1	2.2
Import Performance (in per cent)			
Share in World Merchandise Imports	2.5	2.1	2.5
Share in World Commercial Services Imports	3.0	3.2	3.5
Share in World Merchandise Plus Services Imports	2.6	2.3	2.7
India's rank in world trade			
Merchandise Exports	18	21	
Merchandise Imports	10	14	
Services Exports	8	7	
Services Imports	10	10	

Trends in Merchandise Trade:

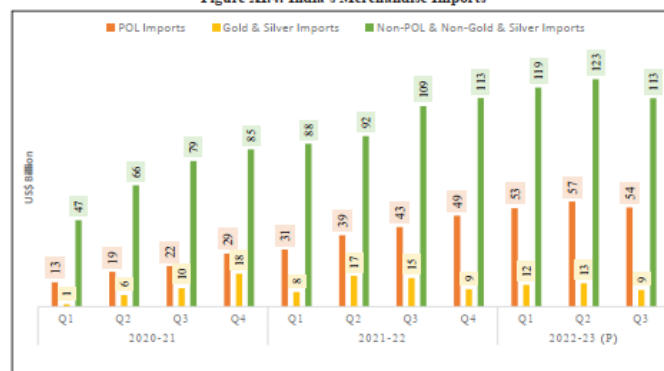
- India achieved an all-time high annual merchandise export of US\$ 422.0 billion in FY22. However, the global economy has started facing formidable headwinds and the ripple effect of the global trade slowdown has started reflecting in India's merchandise export growth, wherein moderation in pace is observed in 2022. Merchandise exports were US\$ 332.8 billion over April-December 2022 against US\$ 305.0 billion during the period April-December 2021.

Bright spots in India's Trade performance:

- Significant strides in exports were registered in drugs and pharmaceutical, electronic goods, engineering goods and organic and inorganic chemicals sectors in FY22. These sectors have sustained their growth momentum despite the global headwinds in H1FY23.
 - As the pandemic ebbed, India witnessed a revival in domestic demand resulting in strong import growth. Merchandise imports for the period April-December 2022 were US\$ 551.7 billion as against US\$ 441.5 billion during the period April-December 2021.
 - Among major import commodities, petroleum crude & products imports increased by 45.6 per cent in April-December 2022 compared to April-December 2021 and continue to be the highest imported commodity.
 - Energy demand may be pushing India's imports for fuel including coal and Petroleum, Oil & Lubricants (POL).

- Other principal imports included electronic goods; coal, coke & briquettes; machinery electrical & non-electrical, and organic & inorganic chemicals.

Figure XL4: India's Merchandise Imports



- The merchandise trade deficit for April-December 2022 was estimated at US\$ 218.9 billion as against US\$ 136.5 billion in April-December 2021.
- The USA remained the top export destination in April-November, 2022 followed by UAE and the Netherlands. The Netherlands has displaced China from the 3rd spot as India's exporting partner. India has diversified its export destinations over time.
- Trade in Services:
 - India maintained its dominance in the world services trade in FY22. Despite pandemic induced global restrictions and weak tourism revenues, India's services exports stood at US\$ 254.5 billion in FY22 recording a growth of 23.5 per cent over FY21.
 - Services imports rose by 25.1 per cent between FY22 and FY21 to reach US\$ 147.0 billion.
 - While merchandise exports are witnessing some slowdown in the second half of 2022, India's service exports have been robust. Since India offers low-cost knowledge-based services, the demand for them has not fallen even amid a global economic slowdown and a negative outlook for the near future.

Foreign Trade Policy:

- India's Foreign Trade Policy (FTP) has, conventionally, been formulated for five years at a time. The focus of the FTP has been to provide a framework of rules and procedures for exports and imports and a set of incentives for promoting exports. The latest FTP for 2015-2020 in vogue at present.

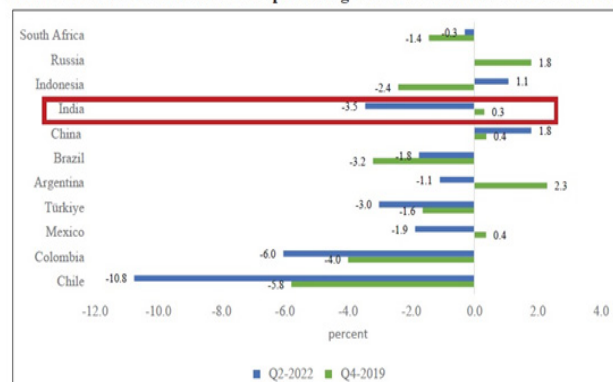
- To provide **policy stability** during the pandemic period, the **five year FTP 2015-20** was **extended** from 2020 to 2022. The policy has been further extended **till March 2023** on account of volatile global economic and geopolitical situations and currency fluctuations.
- In the year 2022, India signed **Free Trade Agreements (FTAs)** with **UAE** and with **Australia**. This **aims** to provide **greater market access** with a reduction in tariff and non-tariff barriers on goods and services and make the **exporters competitive**.
- The **Export Preparedness Index** has also been **introduced** to **evaluate States' potentials and capacities**. It will **guide** all stakeholders towards **strengthening the export ecosystem**.
- **International Trade Settlement in Indian Rupees:**
 - In **July 2022**, the Reserve Bank of India (**RBI**) issued a circular **permitting** an additional arrangement for **invoicing, payment, and settlement** of **exports/imports** in Indian Rupees (**INR**) to promote the growth of global trade with emphasis on **exports** from India and to **support the increasing interest** in the global trading community in **INR as an international currency**.
 - The framework involves **invoicing of exports and imports in INR**, market-determined exchange rates between the currencies of the trading partner countries, and **settlement through special Rupee Vostro accounts** opened with authorised dealer banks in India.
 - It also **reduces** the need for holding **foreign exchange reserves** and **dependence** on foreign currency, making Indian economy **less vulnerable** to external shocks.
 - One of the **prerequisites** for the **emergence** of an **international currency** is that the said **currency** needs to be increasingly **used for trade invoicing**.
- Some of the **factors** leading to the achievement of this **target** were **putting in place of targets** by the Government.
- Some of the **specific schemes** of the Government which have and are **facilitating and encouraging exports** are as follows:
 - **Focus on Agricultural Products:** India's agricultural exports achieved the highest ever export in FY22 reaching US\$ 37.8 billion and it continued to perform well in FY23 with exports of US\$ 26.8 billion during April- November 2022 backed by an effective agriculture export policy.
 - **Interest Equalisation Scheme:** This Scheme was formulated to give benefit in the interest rates being charged by the banks to the exporters on their pre- and post-shipment rupee export credits.
 - **Remission of Duties and Taxes on Exported Products (RoDTEP) scheme:** The scheme seeks remission of Central, State and Local duties/taxes/levies at different stages at the Central, State, and local level, which are incurred in the process of manufacturing and distribution of exported products.
 - **Export Credit Guarantee:** The Export Credit Guarantee Corporation (ECGC) supports Indian exporters and banks by providing export credit insurance services. ECGC provides insurance cover on the export consignment to protect exporters from the consequences of the payment risks.
 - **Krishi Udan Scheme:** Krishi Udan Scheme was launched in August 2020 on international and national routes to assist farmers in transporting agricultural products so that it improves their value realisation.
 - **Trade Infrastructure for Export Scheme:** The Scheme provides financial assistance in the form of grant-in-aid to Central/State Government owned agencies for setting up or for up-gradation of export infrastructure as per the guidelines of the Scheme.

Initiatives to enhance trade:

- The commendable performance of **India's exports**, standing at **US\$ 422.0 billion** in **FY22**, **exceeding the target of US\$ 400 billion**, has been the culmination of efforts from all quarters and across stakeholders.

- **Districts as Export Hubs – One District One Product Initiative:** The Districts as Export Hubs-ODOP initiative is aimed at targeting export promotion, manufacturing, and employment generation at the grassroots level. It seeks to select, brand, and promote products/services from each district of the country for enabling holistic socioeconomic growth across all regions, attract investment in the district to boost manufacturing and exports.

XI.8: Current account balance as percentage of GDP: India vs Select Countries



Source: OECD Economic Outlook 112 Database

India's Global Trade Engagements:

- India has always stood for an open, equitable, predictable, non-discriminatory, and rule based international trading system.
- The **economic rationale for FTAs** was the **diversification and expansion of India's exports** to its trading partners, providing a level playing field vis-à-vis the competing countries having preferential access in our trading partners, as well as gain easier access to raw materials and intermediate products, at lower costs, for stimulating value-added domestic manufacturing.
- India has so far concluded **13 FTAs and 6 Preferential Trade Agreements (PTAs)**. The **most recent** in the list are the **India-UAE Comprehensive Economic Partnership Agreement (CEPA)** which was signed in 2022 and the **India-Australia Economic Cooperation and Trade Agreement (Ind-Aus ECTA)**, which was signed in 2022.

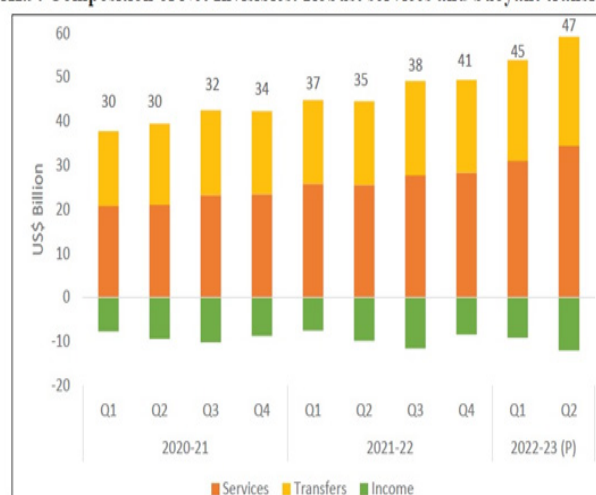
Balance of Payments in Challenging Times:

- **Current Account Balance:**
 - India's **external sector** has been facing considerable **global headwinds** reflecting the **geopolitical developments**.
 - For the period April- September 2022 (**H1FY23**), India recorded a Current Account Deficit (**CAD**) of **3.3 per cent of GDP** on the back of an **increase in the merchandise trade deficit**, as compared with 0.2 per cent in H1FY22.
 - However, a **comparison with the position of the Current Account Balance (CAB) for selected countries** shows that India's CAD is **modest and within manageable limits**.

Invisibles:

- **Net services receipts increased** from US\$ 51.4 billion in H1FY22 to US\$ 65.5 billion in H1FY23, primarily on account of robust **computer and business services receipts**. Similarly, the **net private transfer receipts**, mainly representing **remittances by Indians employed overseas**.
- A sharp rise in crude oil prices and the **depreciation of the INR** seem to have **boosted remittance flows** into India.
- **Net services exports and remittances** contributed to the **surplus on the invisible account**, which **cushioned the merchandise trade deficit**.

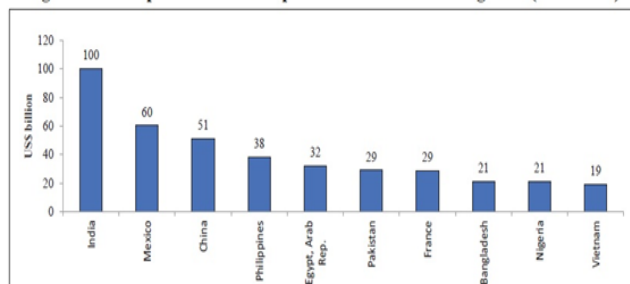
XI.9: Composition of Net Invisibles: Robust services and buoyant transfers



Source: RBI P: Provisional

- **Remittances are the second largest major source of external financing** after service export, which contribute to narrowing the CAD and has always been a stable constituent of the BoP. **India has the largest emigrant population and is the top remittance recipient country** with remittances anticipated to reach a milestone of US\$100 billion in 2022 according to the **World Bank**.

Figure XI.10 Top Remittance recipients of the World during 2022 (Estimated)



Source: World Bank

- As of end-November 2022, India was the **sixth largest foreign exchange reserves holder** in the world according to data compiled by the IMF.
- As seen from the graph, the **import coverage of foreign currency reserves** has declined since the **pre-pandemic levels** in most emerging market economies; however, that of India has increased from 95% in Q4 2019 to **96.5% in Q3 2022**.

Capital Account Balance:

- **Foreign investment**, consisting of Foreign Direct Investment (FDI) and foreign portfolio investment (FPI), is the **largest component** of the capital account.
- On a BoP basis, the **net capital inflows declined** to US\$ 29.0 billion in H1FY23 from US\$ 65.0 billion in H1FY22 **primarily driven by the FPI outflow** of US\$ 14.6 billion in Q1FY23.
- During **April-September 2022**, gross FDI inflows were US\$ 39.3 billion as compared to US\$ 42.5 billion a year ago. **Computer Software and Hardware** attracted the **highest share of FDI equity inflow** (23.4 per cent) followed by **Services** (15.4 per cent) and **Trading** (12.2 per cent).
- In terms of FDI inflow, **Singapore was the top investing country** with a **37.0 per cent share**, followed by Mauritius (12.1 per cent), UAE (11.0 per cent), and the USA (10.0 per cent).
- Repercussions of the **Russia-Ukraine conflict** and **aggressive monetary policy tightening by the US Fed** escalated global financial market volatility leading to **net outflow by FPIs** in Q1FY23.
- Furthermore, with **more repayments** in comparison to fresh disbursements, **external commercial borrowings (ECBs)** to India recorded **net outflows** of US\$ 3.0 billion in H1FY23 as against net inflows of US\$ 5.0 billion a year ago.

Balance of Payments and Foreign Exchange Reserves:

- India's **foreign exchange reserves** stood at US\$ 532.7 billion as of **end-September 2022**, covering **8.8 months of imports**. The reserves augmented to US\$ 562.7 billion as of **end-December 2022** covering **9.3 months of imports**.

Figure XI.15 Adequacy of India's Forex Reserves (as a percentage of Annual Imports): A Cross-country perspective

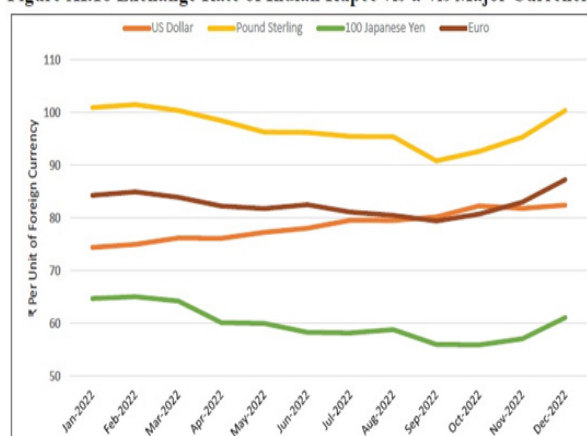


Source: IMF (forex reserves) and WTO (for imports data)

Exchange Rates Moving in Tandem with Global Developments:

- The **exchange rate of the Indian Rupee** is **market-determined** as the RBI's intervention in the foreign exchange market is mainly to contain **instances of excessive volatility**. On a financial year basis, i.e., from April to December 2022, the **INR has depreciated against US\$ by 8.3 per cent**.
- It is not that the INR has weakened, but it is the **US dollar that has strengthened**. Several **other currencies depreciated even more value against the US dollar than the INR**.
- The **INR appreciated against select major currencies** barring the US dollar.

Figure XI.16 Exchange Rate of Indian Rupee vis-à-vis Major Currencies



Source: RBI

Note: The exchange rate for Japanese Yen is in Rupees per 100 Yen.

- **Cross-country comparisons of exchange rate movements** are often made on an inflation adjusted basis or what is called in **real effective terms**, viz. the **Real Effective Exchange Rate (REER)**. On a financial year basis, i.e., between April 2022 and December 2022, the INR depreciated 3.4 per cent and 4.0 per cent measured in terms of 6-currency and 40-currency trade weighted indices, respectively. Thus, even in real terms, the INR witnessed modest depreciation in the face of global spill overs.

International Investment Position: A Reflection of India's Financial Soundness:

- The international investment position (IIP) is a **statistical statement** that shows at a point in time the value and composition of (a) financial assets of residents of an economy that are claims on non-residents and gold bullion held as reserve assets, and (b) liabilities of residents of an economy to non-residents. The difference between an economy's external financial assets and liabilities is the economy's net IIP, which may be positive or negative.
- The Net IIP position determines whether a country is a **net creditor or debtor nation** by measuring the **difference in its external assets and liabilities**. These statistics serve as an indicator of a country's financial condition and soundness.
- The Net IIP, along with the BoP transactions, reflects the domestic economy's set of international accounts.
- **International liabilities** at US\$ 1,237.1 billion as of end-September 2022 were lower by US\$ 41.6 billion (3.2 per cent) as compared to the level as of end-March 2022. This fall was attributed primarily to **direct investment (net) outflows**.

Safe and Sound External Debt Situation:

- **India's external debt**, at US\$ 610.5 billion as of end-September 2022, **grew by 1.3 per cent** (US\$ 7.6 billion) over US\$ 602.9 billion as of end-September 2021. However, **external debt as a ratio to GDP fell** to 19.2 per cent as of end-September 2022 from 20.3 per cent a year ago.
- The literature documents that the **optimal threshold** for India's external debt is around **23-24 per cent of GDP**.

Outlook for the External Sector: Cautious Amidst Global Headwinds:

- **Slowing global demand** is weighing on **India's merchandise exports**. The empirical literature documents that **global growth** exerts a strong statistically and economically significant impact on **India's real exports**, though the impact has reduced over the years. As noted earlier, **global growth** is forecast to **slow down** in 2022 and 2023 as per **IMF estimates**.
- This is the **weakest growth profile since 2001** except for the **global financial crisis** and the acute phase of the Covid-19 pandemic.
- Thus, the **export outlook** may remain flat in the coming year if global growth does not pick up in 2023, as indicated by many forecasts.
- In such cases, **product basket and destination diversification** which India is taking through **FTAs** would be useful to enhance trade opportunities.
- From a **cross-country perspective** too, **India's external sector** has fared relatively **better** and hence positioned relatively stronger to face the evolving adverse global scenario as evidenced by the **Indian rupee outperforming most Emerging Market Economies (EME) currencies**, comfortable import cover and moderate CAD.



PHYSICAL AND DIGITAL INFRASTRUCTURE: LIFTING POTENTIAL GROWTH

Introduction

This chapter deals with the recent and past experiences of the government in **transforming and inter-locking the potential of physical, regulatory and digital infrastructure.**

In this pursuit, the chapter looks to answer the following:

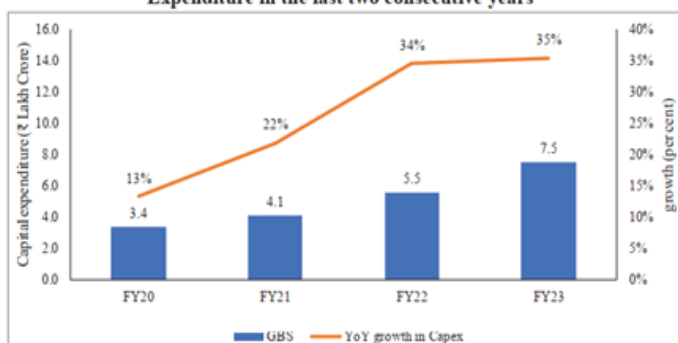
- How have the various infrastructural sectors fared after the Covid-19 shock?
- How has the government leveraged digital technologies in the service of the public?
- How far has the government been able to determine the role of co-ordination and efficiency in infrastructure projects and what is the government's vision towards infrastructure development?
- The chapter also covers the government's plans to place India among the top three global economies and inch closer to the status of a developed nation by the 100th year of its Independence.

GOVERNMENT'S VISION AND APPROACHES TO INFRASTRUCTURE DEVELOPMENT IN INDIA

Increase in infrastructure investment

- The outlay (target) for capital expenditure in 2022-23 (BE) was increased sharply by **35.4 per cent** from ₹ 5.5 lakh crore in the previous year (2021-22) to ₹ 7.5 lakh crore.
- This push has happened at a time of crisis when the **capital expenditure by the private sector has been subdued.**
- This has helped support economic growth as capital assets boost economic efficiency and potential growth. It could also **crowd in private investment.**

Figure XII.2: Central Government has sharply increased Capital Expenditure in the last two consecutive years*



Public-Private Partnerships (PPPs)

- PPPs are vital instruments in channelling the strength of private sector in critical areas of infrastructure. It helps to address **infrastructure gap and improve efficiency** in infrastructure service delivery.
- The Public Private Partnership Appraisal Committee (PPPAC), the apex body for appraisal of PPP projects in the **Central Sector** has **streamlined appraisal mechanism** to ensure speedy appraisal of projects.
 - PPPAC is chaired by Secretary, Department of Economic Affairs (DEA).
- **Viability Gap Funding (VGF) scheme (2006):** It was launched by DEA, to provide financial assistance to financially unviable but **socially/economically desirable** PPP projects.
 - Under this, **economic sector projects** may get **up to 40%** of Capex as VGF grant.
 - Social sectors may get **up to 80%** of the Capex.
- **India Infrastructure Project Development Fund Scheme' (IIPDF):** Notified in **Nov 2022** to develop quality PPP projects by providing necessary **funding support to the project-sponsoring authorities**, both in the Central and State Governments.

National Infrastructure Pipeline (NIP)

- NIP was launched in view of country's requirement of continued stepping up of **infrastructure investment** to sustain a high rate of growth, which in turn is a **pre-requisite for achieving wide ranging social objectives.**
- It is launched with a **projected infrastructure investment** of around **₹111 lakh crore** during **FY20-25** to provide high quality infrastructure across the country.
- It also envisages improving project preparation and **attracting domestic and foreign investment** in infrastructure.
- It includes infrastructure projects covering **greenfield and brownfield investments.** The NIP currently has 8,964 projects.

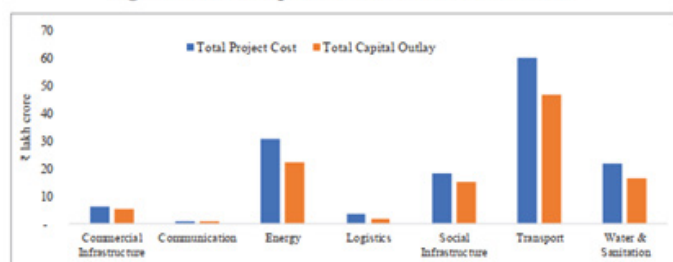
- The **transport sector** constituted more than half of the projects.
- NIP is hosted on the **Invest India Grid (IIG) platform**.
 - IIG acts as a **centralised portal** to track and review project progress across all **economic and social infrastructure** sub-sectors.
- **Project Monitoring Group (PMG)**: For resolution of issues related to large-scale projects. PMG is also involved in the **fast-tracking of approvals/clearances** for projects with an anticipated investment of ₹500 crore and above.
 - Now, it has been proposed to **integrate NIP and PMG portals**.

Figure XII.3: Status of Projects under NIP



Source: Department of Economic Affairs.
Note: Data as of 13 January 2023

Figure XII.4: Transportation sector dominates the NIP



Source: Department of Economic Affairs.

National Monetisation Pipeline (Launched: 2021)

- It is based on the principle of **'asset creation through monetisation'**.
- **Aim**: To unlock value in brownfield projects by engaging the private sector, transferring to them revenue rights and not ownership in the projects, and using the funds **generated for new infrastructure creation across the country**.
- The estimated aggregate monetisation potential under **NMP is ₹6.0 lakh crore** through core assets of the Central Government, over a four-year period, **from FY20-25**.
- Against the monetisation **target of ₹0.9 lakh crore in FY22, ₹0.97 lakh crore** have been achieved during the period under roads, power, coal and mines.

- The **cumulative investment potential** over the years of transactions completed is estimated at **₹9.0 lakh crore**.
 - **NMP's 2nd year, i.e., FY23**, target envisaged is **₹1.6 lakh crore** (27 per cent of overall NMP Target) under **Core-Asset Monetisation**.

National Logistics Policy: Reducing the Cost of Logistics

Logistics Cost	As a %age of GDP
In India	14-18
Global Benchmark	8

- **Targets for achieving the vision of the NLP are**:
 - to **reduce the cost of logistics** in India to be comparable to global benchmarks by 2030;
 - to improve the **Logistics Performance Index ranking** - endeavour is to be among the **top 25 countries** by 2030, and
 - to create a **data driven decision support mechanism** for an efficient logistics ecosystem.
- **Key dimensions to be addressed to improve logistics**:
 - ensuring efficiency of the **clearance process** by border control agencies, including customs;
 - improving the **quality of trade and transport-related infrastructure**;
 - easing of arranging **competitively priced shipments**;
 - enhancing the **competence and quality of logistics services**;
 - providing for **tracking and tracing of consignments** and ensuring **timeliness of shipments** in reaching destinations.

- The Policy will be implemented through a **Comprehensive Logistics Action Plan (CLAP)**.

Gol's Initiatives to improve the logistics ecosystem

- **Infrastructure initiatives**
 - Ude Desh ka Aam Nagrik (UDAN)
 - Bharatmala
 - Sagarmala
 - Parvatamala

- National Rail Plan
- **Process reforms**
 - GST
 - e-Sanchit
 - Single Window Interface for Trade (SWIFT)
 - Indian Customs Electronic Data Interchange Gateway (ICEGATE)
 - Turant Customs

Logistics Ease across Different States

India's LEADS 2022 Index: It is based on a stakeholders' survey and uses the World Bank's Logistics Performance Index (LPI) methodology.

It considered the PM GatiShakti NMP and current developments in the logistics sector in the wake of the COVID-19 pandemic.

It allotted three performance categories, namely,

- **Achievers:** Score of 90% or more
- **Fast Movers:** Scores between 80 to 90%
- **Aspirers:** Scores below 80%

Achievers	Fast Movers	Aspirers
Uttar Pradesh	Kerala	Goa
Tamil Nadu	Sikkim	Bihar
Uttarakhand	Madhya Pradesh	Chhattisgarh
Telangana	Tripura	A&N Islands
Punjab	Puducherry	Mizoram
Odisha	Rajasthan	J&K
Karnataka		Arunachal Pradesh
Himachal Pradesh		Ladakh
Assam		Lakshadweep
Delhi		Nagaland
Chandigarh		
Haryana		

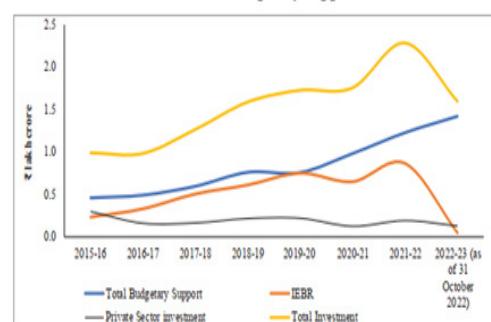
- The projects pertaining to **seven engines (roads, railways, airports, ports, mass transport, waterways, and logistic infrastructure)** in the NIP will be aligned with PM GatiShakti framework.

DEVELOPMENTS IN PHYSICAL INFRASTRUCTURE SECTORS

Road transport

- Roads **supplement the other modes of transport** through last-mile connectivity to the far-flung regions of the country.
- There has been an **increase in the construction of National Highways (NHs)/roads** over time, with **10,457 km** of roads constructed in **FY22** as compared to **6,061 km** in **FY16**.
- **Total budgetary support** for investment in the sector has been increasing rapidly in the last four years.
- In line with the **vision of monetisation of public sector assets**, NHAI launched its InvIT in FY22 to facilitate **monetisation** of roads and also to attract foreign and domestic institutional investors to invest in the roads sector.

Figure XII.6: Tremendous increase in total budgetary support for investment in the road sector



Source: Ministry of Road Transport and Highways

PM GatiShakti (2021): A Master Plan for Integrated Project Planning

- **Aim:** To **break departmental silos** and bring in more holistic and integrated planning and execution of projects to address the issues of multi-modal and last-mile connectivity.

Railways: expansion and modernisation, a continuous process

Period	Passenger traffic
Pre-Covid (2019-20)	809 crore
2020-21	125 crore
2021-22	351.9 crore
Up to Nov 2022	418.4 crore

- The Indian railways, called **India's lifeline**, had a huge role to play in national integration and regional development.
- With over **68,031 route kms**, it is the **fourth largest network** in the world under single management.
- In the case of **revenue-earning**, freight traffic was sustained by IR despite the Covid-19 shock.
- The **capital expenditure (Capex) on infrastructure** in railways has seen a **continuous increase** in the last four years, up by around **29 per cent** compared to the previous year.
- During the last eight years (2014-22), **30,446 Route Kilometres (RKM)** have been electrified compared to an electrification of **4,698 RKM** during the previous eight-year period, a more than six-fold increase.



- **UDAN Scheme:** Under this, the government has approved a budget of ₹4500 crore for **revival of existing unserved/ underserved airports/airstrips** of the State governments, Airports Authority of India (AAI), public sector undertakings and civil enclaves.
 - It focuses on the connectivity between the **Tier-2 and 3 cities**.
 - It has considerably enhanced **regional connectivity**.
- The government has also accorded 'in-principle' approval for the setting up of **21 greenfield airports** across the country.

Capacity of Major Ports	
Year	Million Tonnes Per Annum (MTPA)
End of March 2014	871.5
End of March 2022	1534.9

Ports: Handling Higher Capacity with Governance Reforms

- Most of the international trade is handled through ports.
 - Around **90%** of international trade cargo by volume
 - Around **79.9%** by value
- To enhance their efficiency, the government is focusing on **improving port governance**, addressing **low-capacity utilisation**, modernising berths, and creating new channels for port connectivity.
- For **streamlining the port compliances** and for reducing the **Turn Around Time for (TAT) for vessels**, long strides have been taken at the major ports towards the digitisation of key EXIM processes.
- The **Port Community System (PCS 1x)** has digitised processes such as e-Invoice, e-Payment and Electronic Delivery Order (e-DO) for the physical release of cargo by custodians, generating electronic Bill of Lading (e-BL) and Letter of Credit (LC).
- The **Radio Frequency Identification Device (RFID) solution** has been implemented at all major ports.

Civil Aviation: Revival backed by domestic demand

- In FY21, there was a considerable decline in the **air-traffic** (a decline of 54%) as well as **passenger traffic handled** (a decline of 66%).
 - **FY22 saw a recovery**, mainly led by the domestic sector.
- The current financial year has further shown a rebound, with both passenger and cargo movement **close to the pre-Covid-19 levels**.
- **Civil aviation sector in India has great potential:**
 - Growing demand from the middle class
 - Growth in population and tourism
 - Higher disposable incomes
 - Favourable demographics
 - Greater penetration of aviation infrastructure

Inland water transport: tapping the potential of navigable waterways

- Inland water transport holds **great untapped potential** as a means for the transportation of goods and passengers.
- Total navigable length of waterways in India: **~14,850 kms**
- Under the **National Waterways Act 2016**, **106 new waterways** have been declared as **National Waterways (NWs)**, taking the total number of NWs in the country to **111**.
- **26 NWs viable for cargo movement** have been prioritised.
- To promote the use of inland waterways, **waterway usage charges** levied by the **Inland Waterways Authority of India (IWAI)** on vessels moving on NWs were waived in July 2020, initially for a period of three years.
- The cargo movement on NWs achieved an all-time high during FY22, recording **30.1% growth** compared to the previous year.

Box XII.3: Inland Vessels Act 2021

The Inland Vessels Act of 1917, which had undergone several amendments, had provisions for the restrictive movement of mechanically propelled vessels and non-uniform standards and regulations across different states. The Inland Vessels Act 2021, which replaced the erstwhile Act, aims to bring uniformity in the application of the law relating to inland waterways and navigation within the country. Some salient features of the Act include:

- ✓ State governments may declare by notification any inland water area as a "Zone" depending on the maximum significant wave height criteria as prescribed in the Act. Any mechanically propelled vessel would have to obtain a certificate, which would indicate the zone in which the vessel is to be operated.
- ✓ A central database of inland vessels would be maintained by the government.
- ✓ The standards for qualification, training, training institutes, examination, and grant of certificate of competency would be prescribed by the Central Government.
- ✓ Standards for prevention of environmental pollution.
- ✓ Constitution of a Development Fund by the State Government to be utilised for meeting emergency preparedness, containment of pollution, removal of unidentified wrecks or obstruction, boosting development works of inland water navigation, etc.

Overall, the new Act would lead to uniformity of rules across states ensuring unhindered and safe movement of vessels within and across states. This is likely to promote inland water transport as a potential mode for large-scale movement of cargo as well as passengers across the country owing to its relative cost effectiveness.

Electricity: Installed Capacity Growth Driven by Renewables

- The total installed power capacity of utilities and captive power plants was up by **4.7 per cent**.
- Share in total installed capacity in utilities
 - Thermal energy (59.1%)
 - Renewable energy (27.5%)
 - Hydro energy (11.7%)

Between FY22 and FY21

- Total electricity generated increased to **17.2 lakh GWh from 15.9 lakh GWh**
- Maximum rise in electricity generation was recorded in **renewable energy resources**

- India is steadfast in its commitments towards non-fossil fuel-based energy resources.

Gol's commitments towards non-fossil fuel-based energy resources

- India has put in place a **target of achieving 50 per cent cumulative installed capacity** for generating electric power from **non-fossil fuel-based energy resources by 2030**.
- **Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM)**: To **reduce the carbon footprint** of the farm sector and to provide **energy and water security, de-dieselise the farm sector** and generate **additional income** for farmers by producing **solar power**.
- **Solar Park Scheme**: To facilitate **necessary infrastructure** like land, power evacuation facilities, road connectivity, water facility, etc. along with all statutory clearances.
- **Indian Railways**, a major user of electricity in the country, has announced its intention to **achieve net zero carbon emission by 2030**.
- Incentives for renewable power generation include **Hydropower Purchase Obligation (HPO)** within **Non-Solar Renewable Purchase Obligation (RPO)**.

Table XII.2: All India Installed Capacity Mode-Wise (GW)

	Hydro	Thermal	Nuclear	Renewables	Total
2020-21	46.3	307.4	6.8	100.1	460.7
2021-22@	46.9	312.2	6.8	116.4	482.2
Growth (in per cent)	1.1	1.6	0	16.2	4.7

Table XII.3: All India Gross Electricity Generation Mode-Wise (GWh)

	Hydro	Thermal	Nuclear	Renewables	Total
2020-21	1.5	12.5	0.4	1.5	15.9
2021-22@	1.5	13.4	0.4	1.7	17.2
Growth (in per cent)	0.9	7.3	9.5	16.2	7.6

Developments in Digital Infrastructure

- In recent years, the **role of digital infrastructure** in socio-economic development of the country has assumed **an increased importance**, especially during the Covid-19 period.

- In the coming years, the availability and spread of digital infrastructure will contribute significantly to economic growth. Recognising this,

Telecommunications: Accelerating provision of affordable services

- Today, in India, a majority of people have a mobile connection. This was due to a cumulative effort of **telecom players** who widened their network bandwidth, **government's enabling environment** and consumers' outreach for smartphones.
- Today, the **total telephone subscriber base** in India stands at **117 crore** (Nov 2022).
 - Out of this, **more than 97%** of the total subscribers are connected wirelessly.
 - 83.7 crore have internet connections (June 2022).
- **Overall tele-density** in India stood at **84.8%**, with wide differences across states. (**55.4% in Bihar to 270.6% in Delhi**)
- The **tele-density in rural areas** continues to be at **much lower levels** compared to urban areas. However, the **YoY change in internet subscribers is greater in rural** than in urban areas.
- **Digital India programme (2015)** aims to transform India into a **digitally empowered society and knowledge economy**.
- **Comprehensive Telecom Development Plan (CTDP) for North-Eastern Region:** Under it, mobile connectivity on **2G** is to be provided by setting up 2004 towers in the uncovered villages.
 - For highspeed internet access to the NER, **Universal Service Obligation Fund (USOF)** signed an Agreement with **BSNL**.
- **Comprehensive Telecom Development Plan for Islands:** To connect country's islands to the mainland.
 - **Chennai-Andaman and Nicobar Island Submarine Cable System (CANI-SMCP) project**
 - **Kochi to Lakshadweep Islands (KLI) project**
- **Launch of 5G services:** 5G could impact consumers directly through **higher data transfer speeds and lower latency**. 5G use cases in education, health, worker safety, smart agriculture etc., are now being deployed across the country.
- **Indian Telegraph Right of Way (Amendment) Rules, 2022:** Through it, the government has brought in **procedural reforms** in Wireless Licensing to promote **innovation, manufacturing and export**.
- **National Frequency Allocation Plan 2022 (NFAP)** provides a broad regulatory framework, identifying which frequency bands are available for cellular mobile services, Wi-fi, sound and television broadcasting, radio navigation for aircraft and ships, and other wireless communications.
- **Reforms in satellite-based services:** Limiting the multiplicity of charges at different stages of rolling out satellite-based services.
- **GatiShakti Sanchar portal (2022):** Streamline the process of **Right of Way (RoW) applications** and permissions across the country to realise the government's vision for **national digital connectivity**.

Lessening the Rural-Urban Digital Divide

- Earlier, access to digital services was perceived as a prerogative of urban households. **Digital divide** in 2014 can be seen from tele density (number of subscribers per 100 inhabitants) in **rural and urban areas** which was **44.01 and 145.46** respectively.
- The **200% increase in rural internet subscriptions** between **2015 and 2021 vis-à-vis 158% in urban areas**, reflects the increased impetus the government is putting to bring rural and urban digital connectivity to the same level.
- This has been a **result of dedicated digital drives** across rural areas through ambitious government schemes, like the flagship **BharatNet Project Scheme, Telecom Development Plan, Aspirational District Scheme**, initiatives in North Eastern Region through **Comprehensive Telecom Development Plan (CTDP)** and initiatives towards areas affected by Left Wing Extremism (LWE) etc.
- A project for the **saturation of 4G mobile services in uncovered villages** across the country has been approved.
- During the COVID-19, when majority of the workforce **reverse-migrated to rural areas**, **agriculture** as well as the **world's largest employment scheme MNREGA** supported the domestic economy.
- Government Schemes like **Production Linked Incentive (PLI)** for **telecom and networking products** will promote domestic **affordable mobile manufacturing** as well as network installation.

Radio

Radio continues to be the most affordable and popular medium of mass communication in India because of its accessibility, wide coverage, variety of programmes, mobility and vernacularity.

It broadcasts in 23 languages, 179 dialects from 479 stations across the country, reaching nearly 92% of the area and 99.2% of the total population of the country.

Growth Story of Digital Public Infrastructure

- The journey of DPI dates back to 2009, when **Aadhaar was first launched** and it since then has taken the country quite far.
- Three growth drivers that acted as catalysts for DPI growth:
 - **Favourable demographics**
 - **Vast expansion of the middle-class**
 - **Digital behaviour patterns.**
- **Initiatives to bring government to the doorsteps of the citizens**
 - **MyScheme:** An e-Marketplace for schemes where users can look for **suitable schemes** based on their eligibility.
 - **Unified Mobile Application for New-Age Governance (UMANG):** Enables citizens to access e-Government services.
- **Open Network for Digital Commerce (ONDC):** It is being developed as a **counter to the current duopoly** in the Indian e-commerce market which is largely dictated by Amazon and Flipkart.
 - It is to be based on **open-sourced methodology**, using **open specifications** and **open network protocols** independent of any specific platform.
- **'OpenForge' platform:** To improve the **productivity of human capital** by promoting open **collaborative software development** of e-governance applications.
- **National AI portal:** A joint initiative by the **MeitY, National e-Governance Division (NeGD) and NASSCOM**. It is launched to strengthen the AI ecosystem in the country by pooling together and highlighting the latest developments.
- **Bhashini (National Language Translation Mission) (2022):** It aims at nurturing Indian language technologies and solutions as a public good.
 - **Digital India Bhashini portal:** A public digital platform on which **260 open-source API-based AI models** are available for speech-to-text conversion, machine translation, and text-to-speech conversion in 11 Indian languages and English for various purposes.
- **Web 3.0:** It is based on the concept of creating a **totally decentralized ecosystem**. This new technological dimension believes in leveraging the **power of A.I., machine learning, and the latest technologies** like blockchain to solve the problems of the present-day internet/online ecosystem.
- **Open Credit Enablement Network (OCEN):** It is being hailed as a major **shift in how lending and borrowing will be conducted** in the future.
- **Introduction of GST, with its end-to-end digitisation of all processes** have improved governance and formalisation of the economy.
- **Account Aggregator (AA):** A type of RBI regulated entity that enables individuals to **share their financial data** quickly and securely, **with their consent**, with any regulated third-party financial institution of their choice.
- **Stand-up India scheme (2016):** India has more than 84,000 recognized start-ups.
- **Mission 'Drone Shakti':** Under it, the **drone start-ups** and **Drone-as-a-Service (DrAAS)** are being promoted. Almost 90 % of the airspace has now been opened up as a green zone for flying drones up to 400 feet.
 - **A PLI scheme for drones and drone import policy have been notified.**
- As our digital space widens to bring in newer services, the **need for appropriate regulations** also becomes paramount. Therefore, **techno-smart regulations** are the future for digital societies.

- It is a system that powers multiple bank accounts into a **single mobile application** (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.
- It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience.
- The number of banks that became part of the real-time payment system increased from **35 in December 2017 to more than 380 in December 2022**.
- On average, **between FY19-22**, growth in UPI-based transactions in value and volume terms have been **121 per cent and 115 per cent, respectively**.
- NPCI, through its **international arm NPCIL**, is pushing for acceptance of RuPay/UPI powered apps, cross-border remittance and UPI-Like deployment in international markets such as **Singapore, UAE, France, the Netherlands** among others.

Period	Share of UPI in India's total digital transactions
FY19	17%
FY20	27%
FY22	52%

CONCLUSION

- India could effectively steer through the setback due to pandemic, and persisting geo-political conflicts owing to its dedicated support to infrastructure creation through increased capex and strong macroeconomic fundamentals.
- NIP provided a forward-looking roadmap of investible projects to help sustain the investment drive, while PM GatiShakti has helped accelerate infrastructure development.
- The reforms being undertaken in energy and power sector will help fast-track India's progress in the next 25 years.
- Though, with the advent of new technologies, India is witnessing new regulatory challenges, the government is committed to keep pace with the digital landscape developments including those related to legislations and frameworks.
- The synergy between physical and digital infrastructure will be one of the defining features of India's future growth story.

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