

India Economic Pulse

Economic indicators and
policy measures

September 2023



Building a better
working world

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Executive summary



Dear Reader,

We are pleased to present the September 2023 edition of India Economic Pulse, analyzing high-frequency economic indicators. The issue highlights the following key aspects:

Global economy

The global economy is projected to grow at 3% in 2023 against the April estimate of 2.8%. Despite the resilience, moderating but above target inflation, tight financial conditions, geo-political challenges, and declining trade all point to the challenged environment. The recent downgrade of US sovereign debt on account of high debt to GDP, increase in interest rates and lack of political consensus on spending cuts vs. tax increases is suggestive of the challenge that other economies with high public debt to GDP ratios could face in the future.

Demand growth and investments in real estate and infra drive Indian economic growth

The Indian economy grew at 7.8% in Q1 of FY 24 propelled by domestic demand, investments in infrastructure and real estate sectors, strength of the service sector and the overall positive sentiment. PMIs are at a 13 year high. E-way bills generated, growth in passenger traffic and household credit exhibiting sustained double-digit growth bodes well. The growth in passenger vehicle sales has, however, been moderated. Rural demand is also increasing with higher tractor, fertilizer and two-wheeler sales, though there has been an increase in people demanding work under MNREGA from June 2023 onwards.

Demand for electricity in August 2023 was up 16% vis-à-vis August 2022. With short term wholesale power prices also increasing sharply, electricity supply would be an area that would require the close attention of policy makers.

Infrastructure and real estate sectors are doing well as reflected in the growth of IIP for Infra, cement and steel consumption and prioritizing spending towards infrastructure development by the Government. Even though credit creation for manufacturing continues to be muted, gross fixed capital formation as a percentage of GDP has increased.

Weakness in the global economy has put pressure on the external sector and some private investment indicators suggest caution

Growth in manufacturing continues to lag the overall economy. Merchandise exports and non-oil non-gold imports remained in contraction territory in June. Services exports posted subdued growth (10% from April to July 2023 against 33% in the previous year). Volume of freight traffic moved over rail and air has been largely stagnant. FDI inflows, VC and PE funds flowing into the economy credit growth from banks to the manufacturing sector have all declined in the current year vis-à-vis the previous year.

The Rupee has been largely stable vis-à-vis the dollar and foreign exchange reserves are at comfortable levels.



Tax collections on track

GST collections have outpaced the GDP growth so far. Direct tax collections for the period April to July 2023 declined by 1.1% vis-à-vis the corresponding period in the previous year, mainly due to lower corporate tax collections. However, the advance tax collections in the first half of the current fiscal are indicative of a strong corporate performance buoyed by a strong economy.

While consumer inflation rose, WPI fell.

Inflation has increased to 7.4% in July 2023 due to a spike in vegetable prices but is expected to moderate with fresh Mandi arrivals. Agricultural commodity prices, however, are vulnerable to supply shocks due to geo-political and adverse weather events. The WPI in the meantime has decreased by 1.7% in the last year. RBI has therefore restrained from increasing interest rates. There may be a need to address supply side issues in agriculture to address consumer inflation and avoid subjecting the entire economy to high interest rates to combat consumer inflation.

AI and decarbonization investment trends

Digitization and decarbonization both continue to show progress in India, though the fall in e-two-wheeler sales in June underlines the importance of government subsidies in promoting decarbonization. This edition also carries an analysis of private investment trends for AI and the government's budgetary support for energy transition. This analysis points to the strong position of the United States and the wide differences in public spending relating to energy across the country.

Successful G20 Summit

The declaration stamps India's leadership role on the global stage and how the world powers are actively supporting the same. The establishment of the India-Middle East-Europe Economic Corridor will be a game changer for trade and connectivity, and the Global Biofuels Alliance will give a substantial boost to cleaner fuels. These and other announcements are expected to open a lot of opportunities for the Indian economy.

Outlook

There are several positive factors for the Indian economy like optimism, continuing demand, etc. While, healthy balance sheets of banks and corporates, supply chain normalization, business optimism and robust government capital expenditure are favorable for a renewal of the capex cycle, however the capex cycle needs to take off.

Most agencies expect the Indian economy to grow at 6% to 7%.



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Global economic outlook



World Economic Outlook (IMF, July 2023)

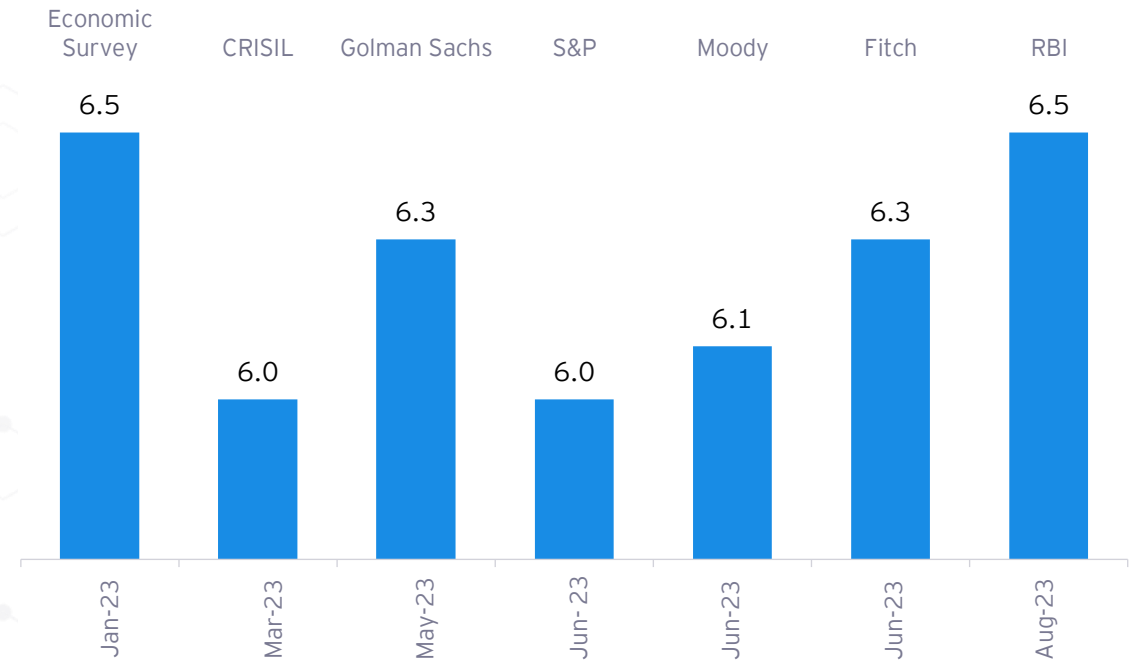
India continues to be the fastest growing economy

Global economic outlook

World Economic Outlook Projections (%)

Region/country/market	Estimates		Projections	
	2022	2023	2023	2024
World	3.5	3.0	3.0	3.0
Advanced economies	2.7	1.5	1.4	1.4
US	2.1	1.8	1.0	1.0
Euro Area	3.5	0.9	1.5	1.5
Japan	1.0	1.4	1.0	1.0
Emerging markets/ developing economies	4.0	4.0	4.1	4.1
China	3.0	5.2	4.5	4.5
India	7.2	6.1	6.3	6.3
Brazil	2.9	2.1	1.2	1.2
Russia	-2.1	1.5	1.3	1.3

India's GDP forecast for 2023-24 (%)



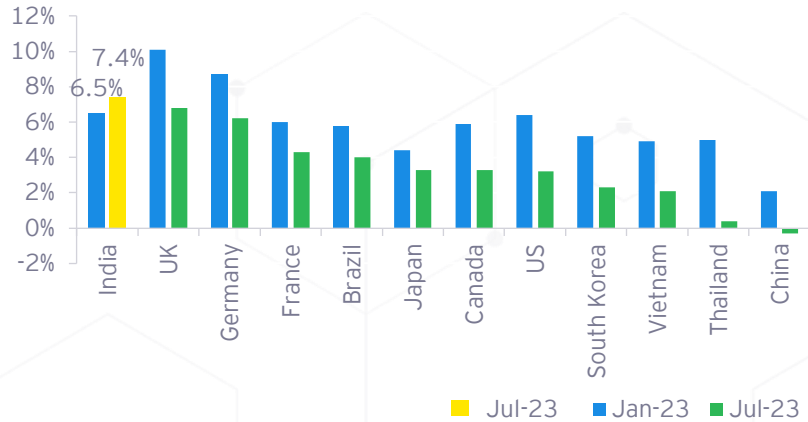
Note: For India, data and forecasts are presented on a fiscal year basis, with FY 2022/23 (starting in April 2022); FY 2023/24 starting in April 2023

- ▶ Global growth projections have been revised upwards from 2.8% (projected in April by IMF) to 3.0%. The upward revisions have been made for all the economies listed in the table except China (for which the IMF has not made any changes in growth projections). This reflects the resilience of the global economy (driven by services).
- ▶ However, the outlook for the global economy continues to be challenging, with moderating but higher than target inflation, tight financial conditions, simmering geo-political conflicts and geo-economic fragmentation.
- ▶ Recent downgrade of US sovereign debt has brought into focus the high public debt to GDP ratios, increased interest rates and slow growth
- ▶ Outlook for the Indian economy continues to be positive, with most agencies projecting economic growth to range from 6 to 6.5%

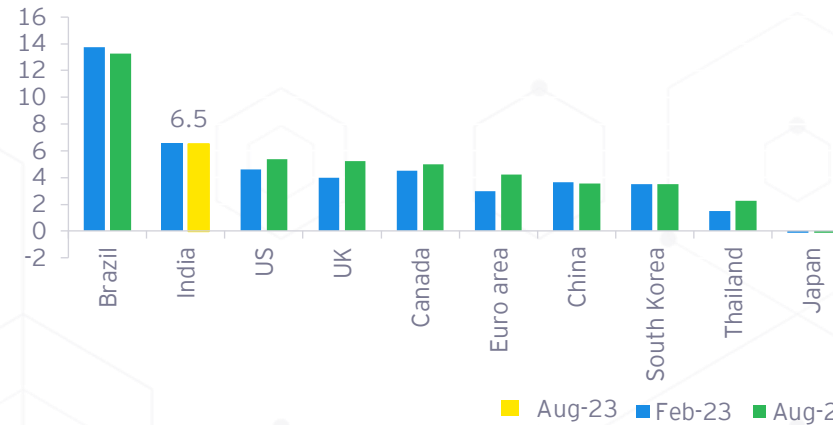
Source: World Economic Outlook, July 2023, IMF, Various agencies



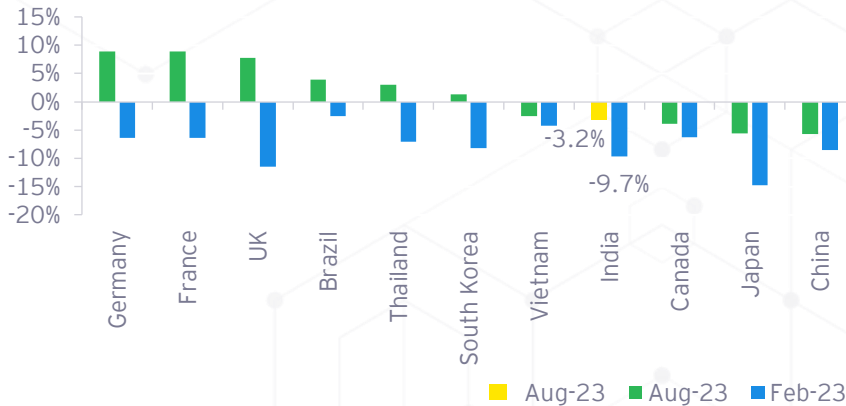
Consumer inflation rate (%)



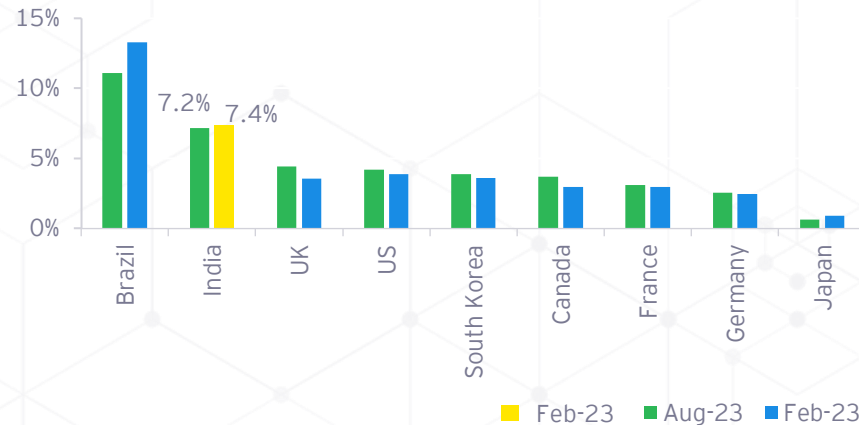
Central bank policy rate (%)



Currency performance vis-à-vis US\$ (last 12 months)



Yields on G-secs (10 year)*



Key findings

- ▶ Headline inflation has edged down in most Advanced Economies (AEs) in the recent months, however, continues to be higher than the central bank target.
- ▶ In July and August, central banks of major AEs such as Canada, UK and US hiked their policy rates by 25 bps to further align inflation to the target. These countries have also witnessed hardening in G Sec yields.
- ▶ India has, however, experienced an increase in consumer inflation mainly on account of vegetables and agricultural products, though the WPI is in negative territory.
- ▶ In early August, concerns about the US banking sector and economic slowdown in China have led to the dollar appreciating.
- ▶ Bond yields have firmed up across most economies on expectations that tighter monetary policy conditions would prevail for a longer period. Additionally, Indian currency has noted a larger depreciation in the last year vis-à-vis other key economies.

Source: FT, Bloomberg, Google finance: as of 28th August 2023, Bank For International Settlements central bank policy rate as of 21st August 2023
 For February as of 23rd February 2023; Bank For International Settlements as of February 2023
 *Real yields have been computed by reducing inflation from the nominal yields
 Inflation as percentage annual change as of July 2023; Japan as of June 2023

PMIs point toward confidence in the Indian economy



Manufacturing PMI	Jan-23	Jul-23
India	55.4	57.7
Thailand	54.5	50.7
Japan	48.9	49.6
Australia	50	49.6
Canada	51	49.6
South Korea	48.5	49.4
China	49.2	49.2
United States	46.9	49
Vietnam	47.4	48.7
Brazil	47.5	47.8
UK	47	45.3
France	50.5	45.1
Germany	47.3	38.8

Services PMI	Jan-23	Jul-23
India	57.2	62.3
China	52.9	54.1
Japan	52.3	53.8
Germany	50.7	52.3
United States	46.8	52.3
UK	48.7	51.5
Brazil	50.7	50.2
Australia	48.6	47.9
France	49.4	47.1

Key findings

- ▶ For both services and manufacturing, outlook in India continues to be optimistic.
- ▶ Services activity shows robustness in practically all major economies as evidenced by their PMIs amidst a post-pandemic shift in spending from goods to services.
- ▶ However, manufacturing PMIs have deteriorated, particularly in the Euro zone.
- ▶ Services PMI for India continued to remain robust, indicating demand resilience. Output and new business recorded the strongest increases in over 13 years.
- ▶ India's manufacturing continues to remain strong vis-à-vis its global peers which are experiencing weakness in demand conditions.
- ▶ Manufacturing activity in the US remains in the contractionary zone in July, albeit improving from June (49 vis-à-vis 46.3 in June) as new order inflows continued to fall.

Note: The Purchasing Managers' Index (PMI) as a leading indicator helps gauge the economic trend through key variables of business activity such as output, new orders, production, input prices, hiring activity etc. A reading above 50 indicating an overall increase/ expansion compared to the previous month, and below 50 an overall decrease/ contraction.
 Source: World Economic Outlook 2022; S&P IHS Markit, Trading Economics, Secondary research, As of August 2023

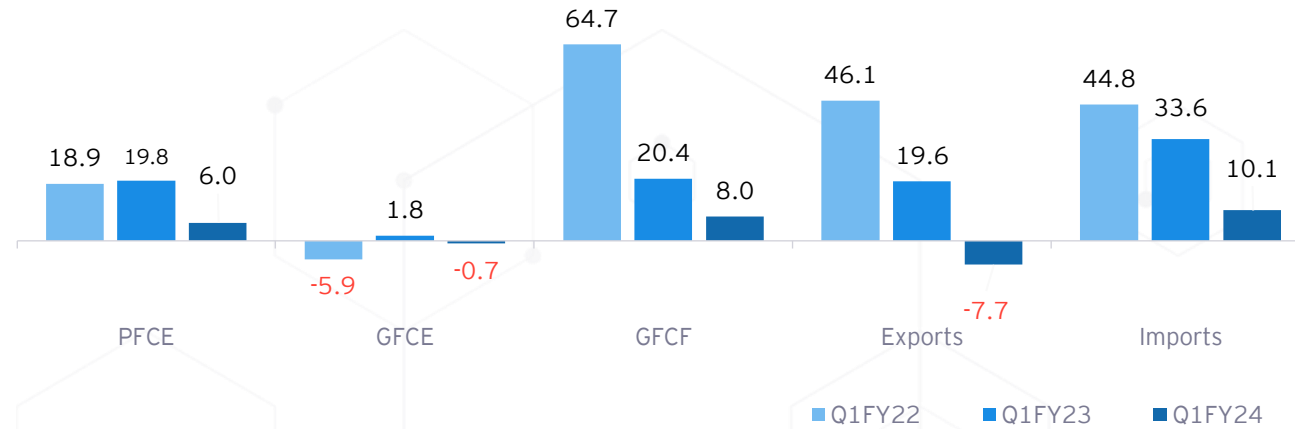
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Key economic and fiscal indicators

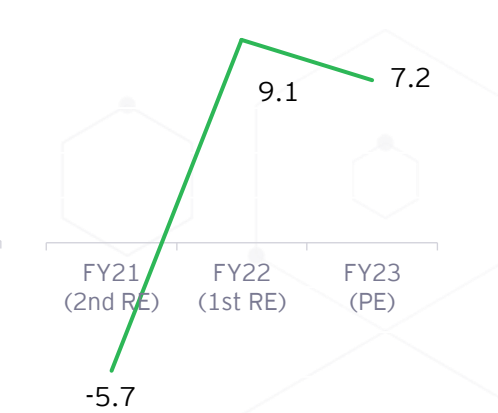


Indian economic growth stays strong and optimistic

Annual estimates of expenditure on real GDP growth (%)

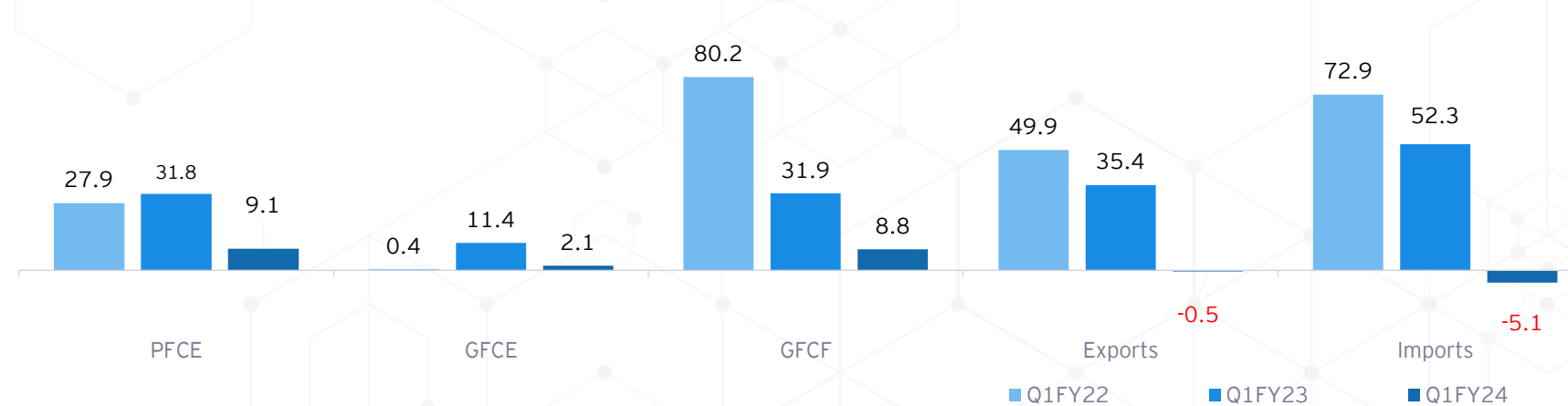


Annual GDP growth (%)



PFCE: Private Final Consumption Expenditure; GFCE: Government Final Consumption Expenditure; GFCF: Gross Fixed Capital Formation;

Annual estimates of expenditure on nominal GDP growth (%)



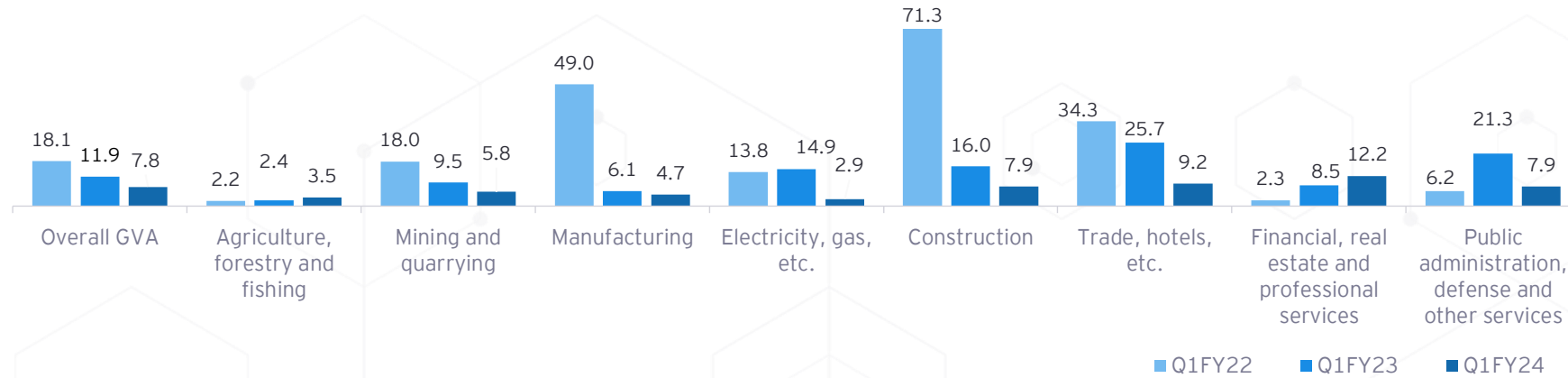
Note: High growth in Q1FY22 is reflective of high base effect due to COVID impact in previous year
Source: MOSPI

Key findings

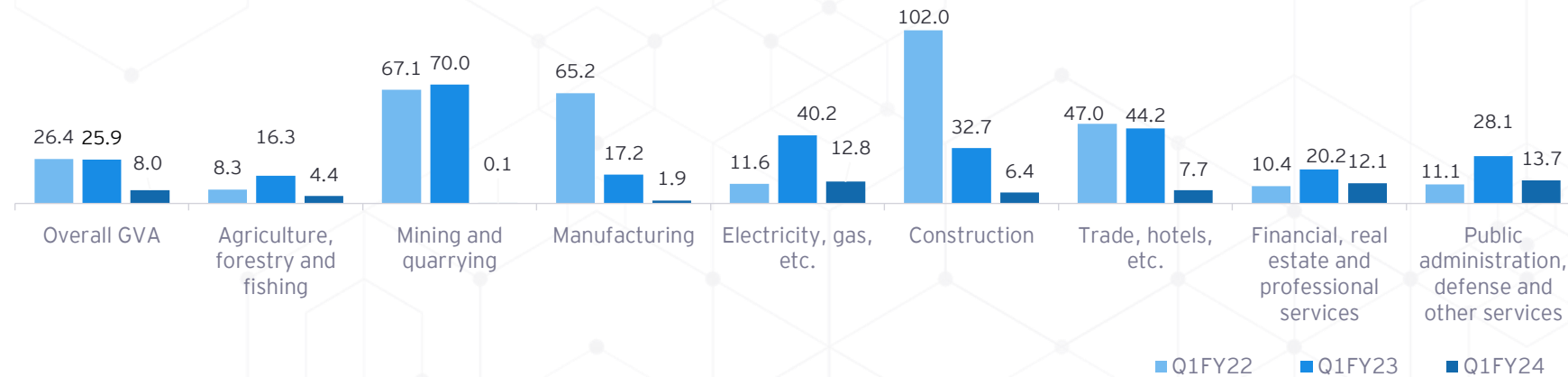
- ▶ The real Q1 FY24 GDP grew at 7.8% against the RBI estimate of 8%.
- ▶ The nominal growth rate was 8%, reflecting a low-price deflator of 0.2%.
- ▶ Private Final Consumption expenditure grew from 59.2 of the GDP in Q1 FY 23 to 59.7% Q1 FY24 (in nominal terms) reflecting the strength of the underlying domestic demand.
- ▶ Gross Fixed Capital Formation grew from 29.1% in Q1 FY 23 to 29.3% in Q1 FY 24.
- ▶ Real export growth was negative at 7.7%. This contraction has occurred after nine quarters of growth. With import growth at 10.1% in this quarter, the contribution of net exports to real growth was negative at 4.6%, which is its worst quarterly performance since 2012-13. Fall in merchandise exports is driven by the fall in the global merchandise trade.
- ▶ A shift in government spending towards infrastructure has resulted in a 0.7% contraction in final consumption expenditure.



Annual real gross value added (GVA) growth (%): major sectors



Annual nominal gross value added (GVA) growth (%): major sectors



Key findings

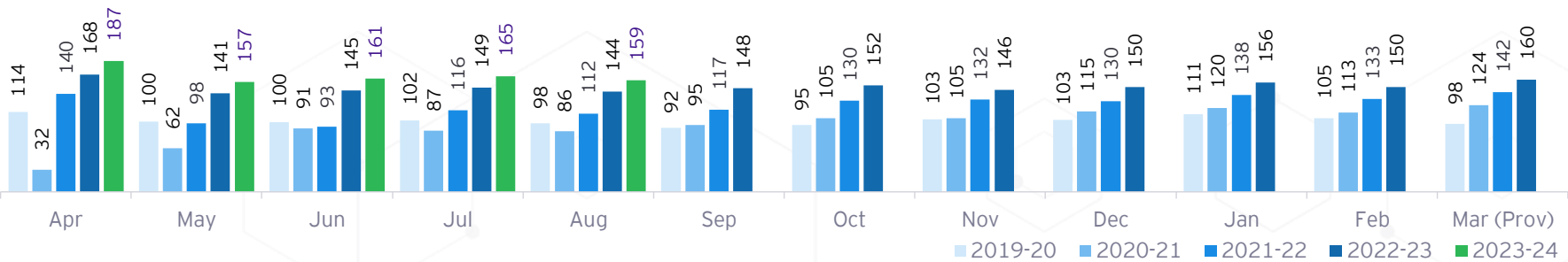
- ▶ The services sector continue to do very well and drive the growth of the Indian economy.
- ▶ The financial, real estate and professional services grew at 12.2% in Q1 of FY 24 over Q1 of FY 23. Growth in real estate is also reflected in the growth in cement and steel sectors.
- ▶ The trade, hotels, transport, and communication sector grew by 9.2% in real terms and 7.7% in nominal terms, which means prices decreased.
- ▶ The relatively low real growth of the manufacturing sector at 4.7% (and only 1.2% in nominal terms) may also be attributed to the contraction in export demand.
- ▶ Electricity and gas sector grew at 2.9% in real terms. However, in nominal terms, it has recorded a growth of 12.8%

Note: High growth in Q1FY22 is reflective of high base effect due to COVID impact in previous year
Source: MOSPI

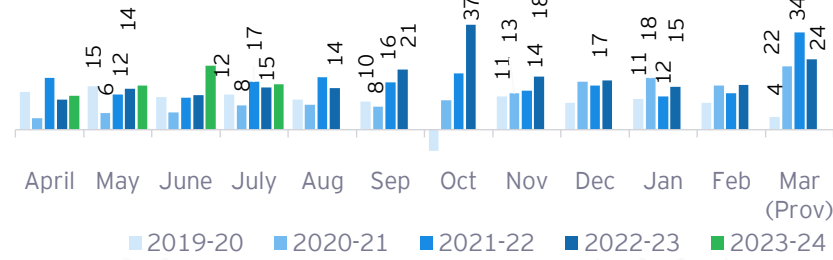
Trends in union government's indirect tax collections



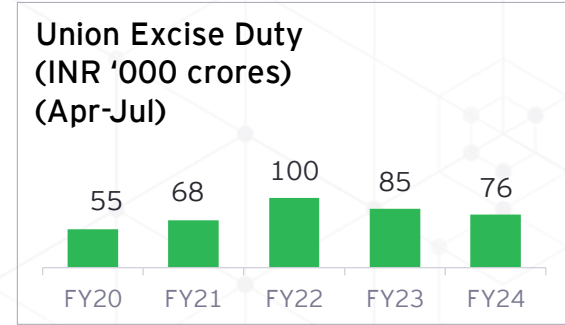
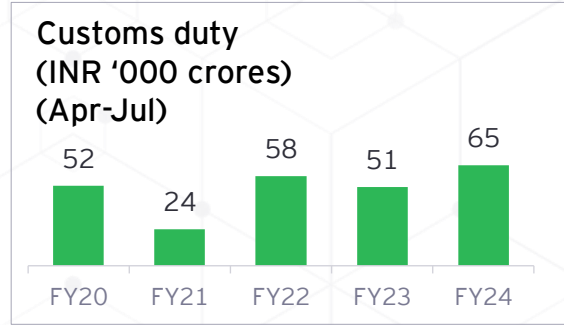
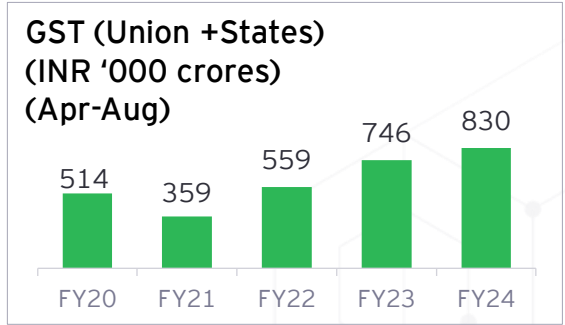
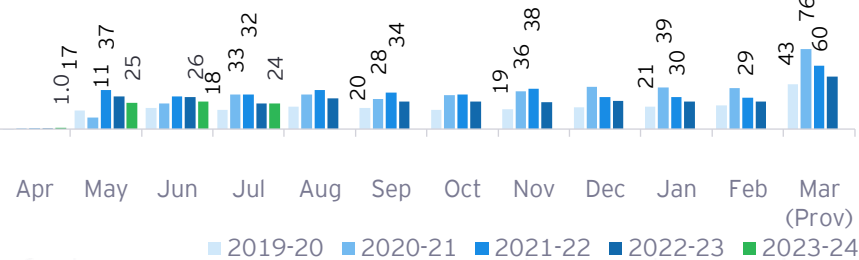
GST Collections (Union + States) (INR '000 crores)



Customs (INR '000 crores)



Union excise duty (INR '000 crores)



Key findings

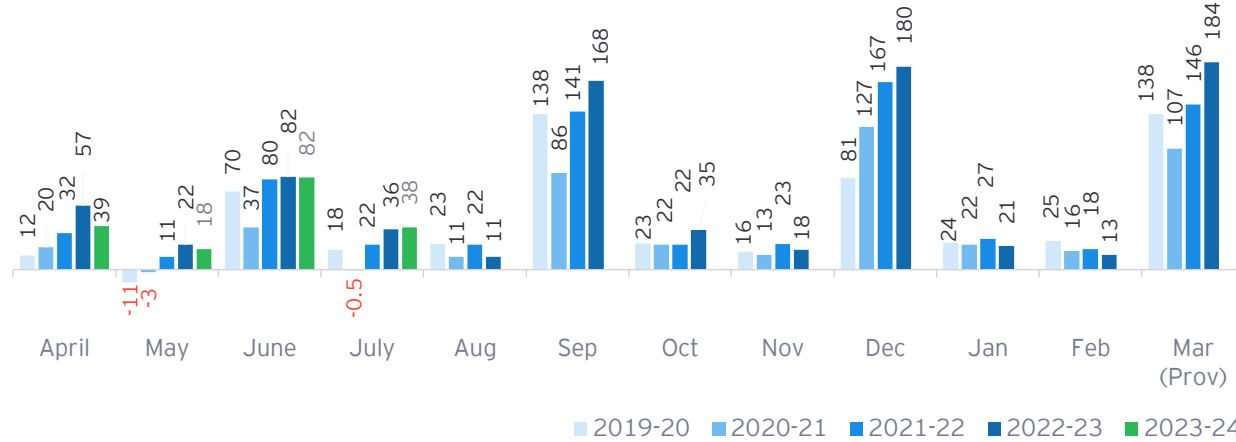
- ▶ GST revenues for the month of August 2023 are 11% higher than that in the same month last year.
- ▶ This month's revenue from imports increased by 3% and revenue from domestic transactions increased by 14% compared to last year's same month.
- ▶ Customs duty collections during April - July FY24 increased by 27.5% as against the same period in FY23.
- ▶ On the other hand, union excise duty declined by 10.6% during April-July 2023 as against the same period previous year. The decline could be partially attributed to the slashing of windfall tax on crude oil in May 2023.

Source: Controller General of Accounts; GST Council/ PIB

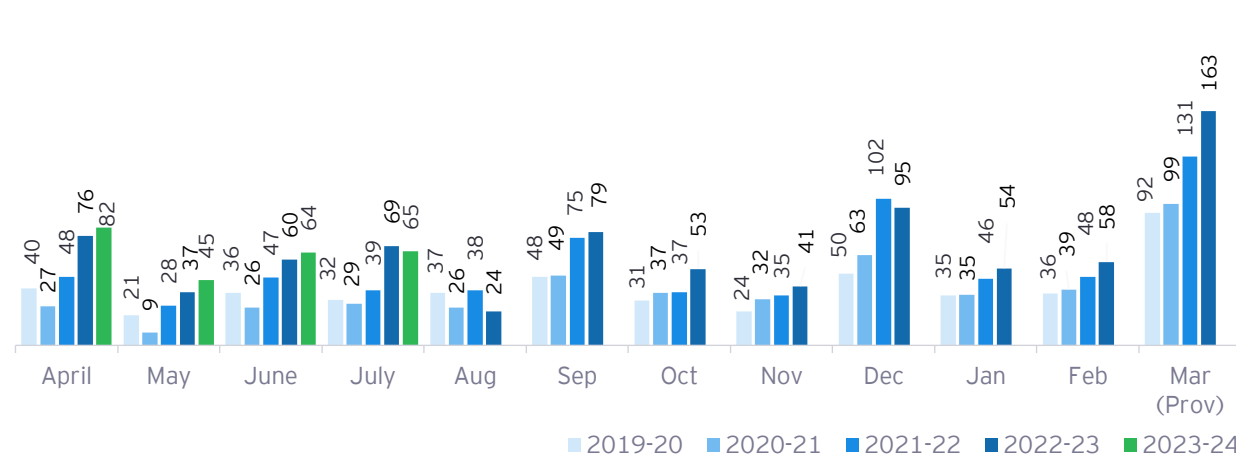


Trends in the union government's direct tax collections

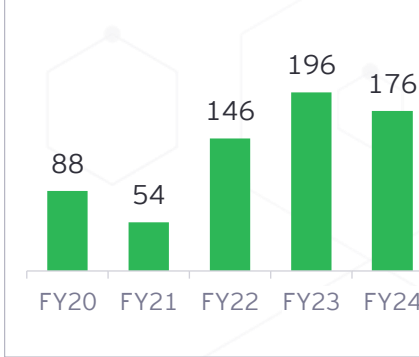
Net corporate tax collection (INR '000 crores)



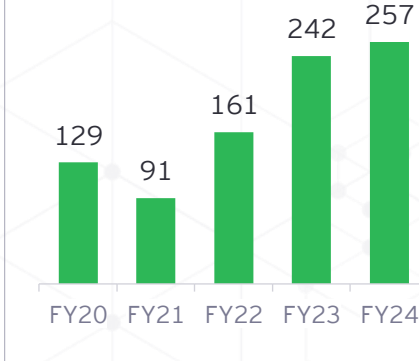
Net personal tax collection (INR '000 crores)



Corporation tax (CIT) (INR '000 crores) (Apr - Jul)



Personal tax (PIT) (INR '000 crores) (Apr-Jul)

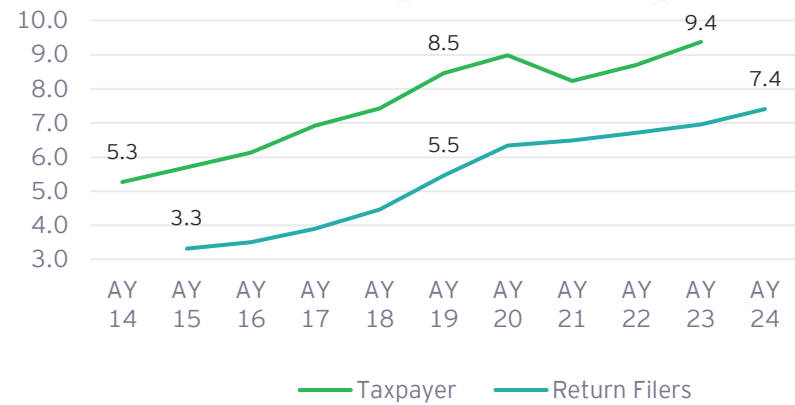


Key findings

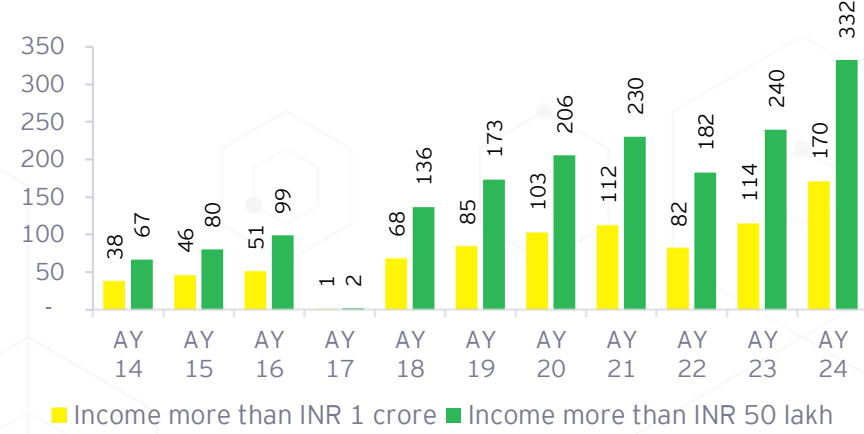
- ▶ Gross Tax Revenue (GTR) witnessed only a slight increase of 2.8% in the period April-July for FY24 vis-à-vis the same period in FY23.
- ▶ GTR buoyancy For April-June FY24 was only 0.4.
- ▶ The total direct tax collections witnessed a decline of 1.1% during the first four months of this fiscal.
- ▶ CIT registered a negative growth of 10.2% partially on account of continuing fall in effective tax rates (from 29.5% in FY18 to 22.2% in FY21)
- ▶ Increase in personal tax collection could be attributed to a sustained increase in stock indices resulting in higher capital gains income and expanded scope and application of withholding taxes, besides the tax administrative measures to improve compliance.



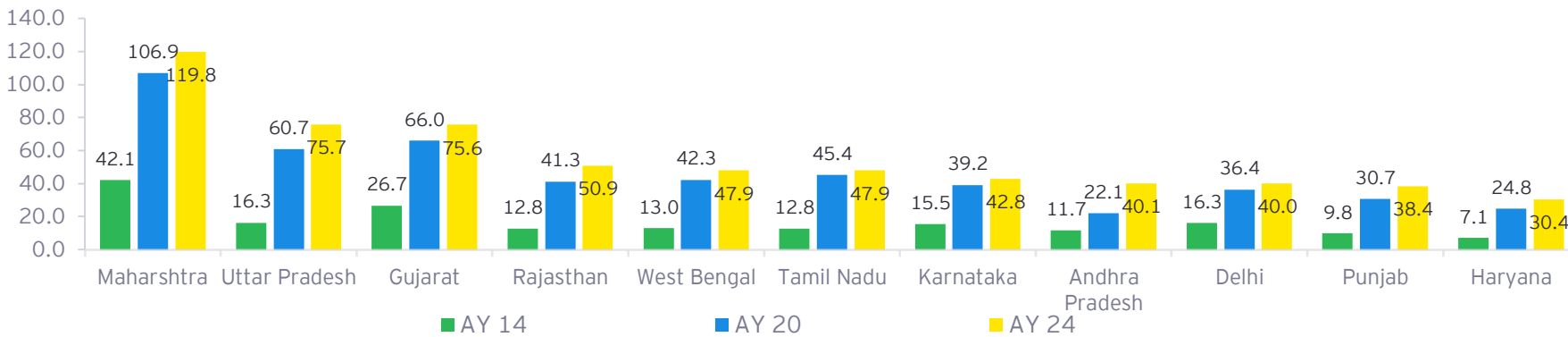
Number of Taxpayers* and Income tax Return filers - All categories** (in crores)



Number of high income individuals (in '000s)



State wise number of returns filed for top 11 states - All categories of taxpayers (in lakh)



Key findings

- ▶ The number of taxpayers and income tax return (ITR) filers has seen a consistent rise in the past decade.
- ▶ The rise could be attributed to government's focus on widening the tax base, plugging tax leakages and simplification of compliance processes. Some initiatives include:
 - ▶ New e-pay tax payment platform TIN 2.0 available on the e-filing portal has enabled more user-friendly options.
 - ▶ Many ITR filers exercised the option of pre-filled returns.
- ▶ Last five years have also seen a rise in high-income individuals, driven by factors such as rising economic activities, a boom in stock markets and in the start-up sector, growth in high-paying jobs and the tax administrative measures.

Notes: *A "Taxpayer" is a person who either has filed a return of income for the relevant Assessment Year (AY) or in whose case tax has been deducted at source in the relevant financial year but the taxpayer has not filed the return of income.

**Categories of taxpayers include "Artificial Juridical Person", "Association of Persons", "Body of Individuals", "Company", "Firm", "Government", "Hindu Un-divided Family", "Individual",

Source: <https://www.incometax.gov.in/iec/foportal/statistics-data>

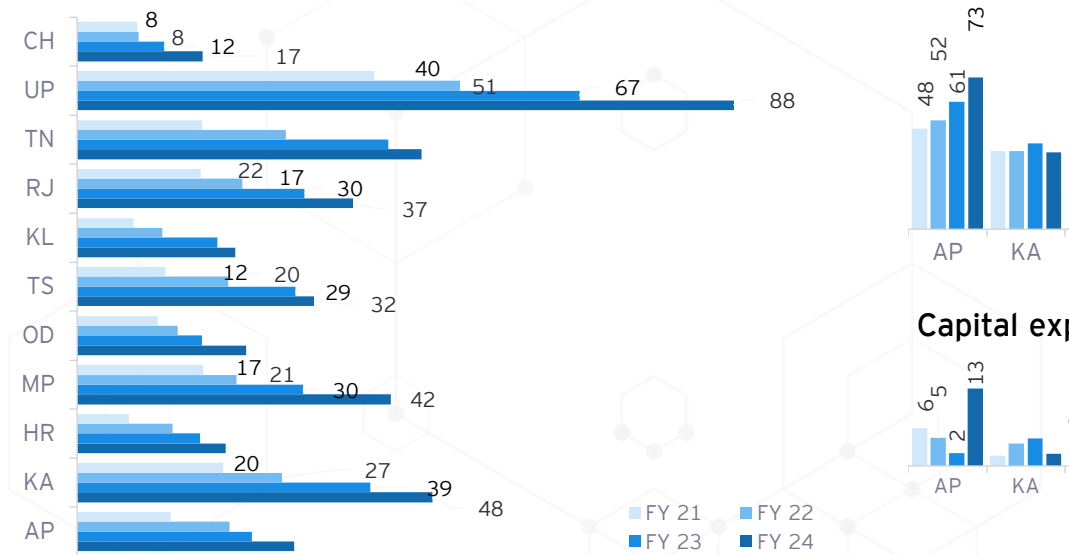
#	Particulars	Budget estimate (BE) (2023-24) (INR crores)	Actuals (April 2023 - July 2023) (INR crores)	Actuals (April 2022 - July 2022) (INR crores)	Actuals as % of BE FY 24 (April -July)	Actuals as % of BE FY 23 (April -July)	Average Actuals as % of BE(April -July) (FY18 - FY22)
1	Tax revenues (net of states' share)	23,30,631	5,82,585	6,66,212	25.0%	34.4%	24.3%
2	Non-tax revenues	3,01,650	1,78,804	89,583	59.3%	33.2%	25.8%
3	Revenue receipts (1+2)	26,32,281	7,61,389	7,55,795	28.9%	34.3%	24.4%
4	Other receipts	84,000	13,718	30,119	16.3%	38.0%	15.4%
5	Total non-debt receipts (3+4)	27,16,281	7,75,107	7,85,914	28.5%	34.4%	23.6%
6	Revenue expenditure other than interest	24,22,753	7,63,732	6,34,205	31.5%	28.1%	34.5%
7	Interest	10,79,971	2,99,889	2,83,870	27.8%	30.2%	29.1%
8	Capital expenditure	10,00,373	3,17,079	2,08,670	31.7%	27.8%	29.4%
9	Total expenditure (6+7+8)	45,03,097	13,80,700	11,26,745	30.7%	28.6%	32.5%
10	Fiscal Deficit (9-5)	17,86,816	6,05,593	3,40,831	33.9%	20.5%	61.8%

Key findings

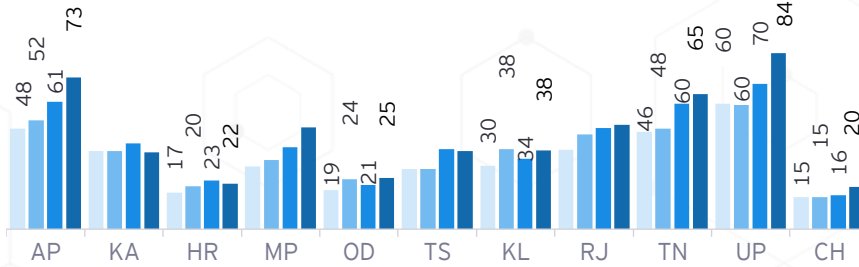
- Fiscal deficit in April-July FY24 stood at 33.9% of the full year target, as against 20.5% in FY23 for the same period.
- Higher fiscal deficit could be due to higher revenue spending by 17% on y-o-y basis and sustained hike in capital spending by 34.2%.
- Overall revenue receipts in the first four months of this fiscal stood at INR7.6 lakh crore or 29% of the full year target.
- The net tax revenue (net of states' share) for the first four months of the current fiscal is also lower than that in the same period in the previous year by 12.6% due to:
 - Lower growth in GTR and significantly higher assignment of state's share during this period as against last year.
- In the Union Budget presented this year, government projected to bring down the fiscal deficit to 5.9% of the gross domestic product (GDP) in the current FY24. However, the inflation deflator in Q1 of FY 24 was low at 0.2%. If this trend were to continue, then achievement of fiscal deficit target may be a challenge.

Tax revenue and expenditure for major states for the period (April'23 - Jun'23)

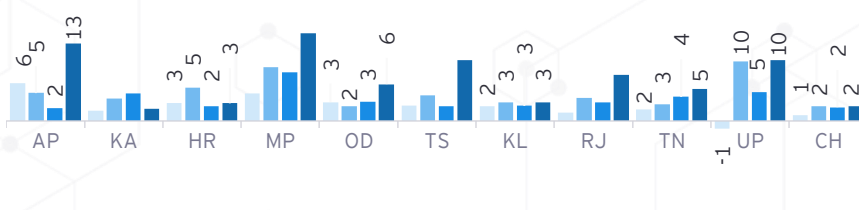
Tax revenue (INR '000 crores)



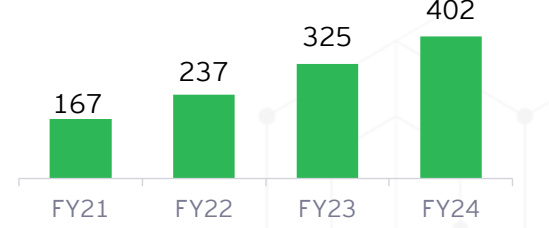
Revenue expenditure (INR '000 crores)



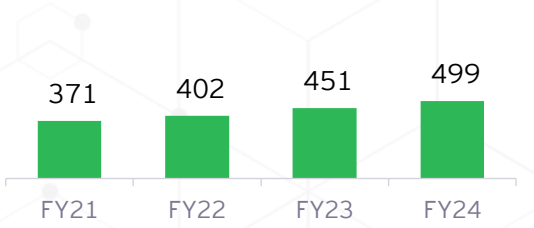
Capital expenditure (INR '000 crores)



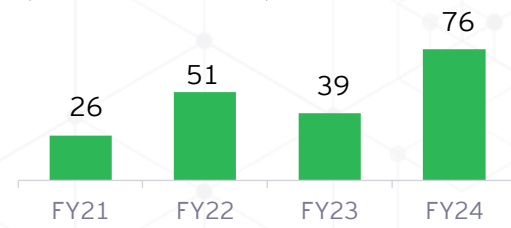
Tax revenue (INR '000 crores)



Revenue expenditure (INR '000 crores)



Capital expenditure (INR '000 crores)



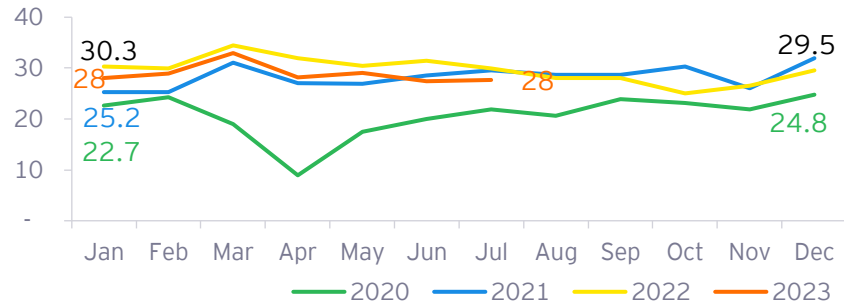
Key findings

- Overall, in the eleven selected states for which the latest data is available, tax revenues for FY24 (Apr-Jul) have increased by 23.7% vis-à-vis the same period in FY23.
- During FY24 (Apr-Jul), revenue and capital expenditure by the states saw a rise of 10.6% and 94.9% respectively vis-à-vis the same period last year.
- This reflects that state governments are also focusing on increasing capital expenditure.
- At the individual state level, Uttar Pradesh witnessed the highest increase in tax revenues (buoyed by robust GST tax collections and excise duty collections). The State's revenue expenditure in FY24 (Apr-Jul) has also been the highest.

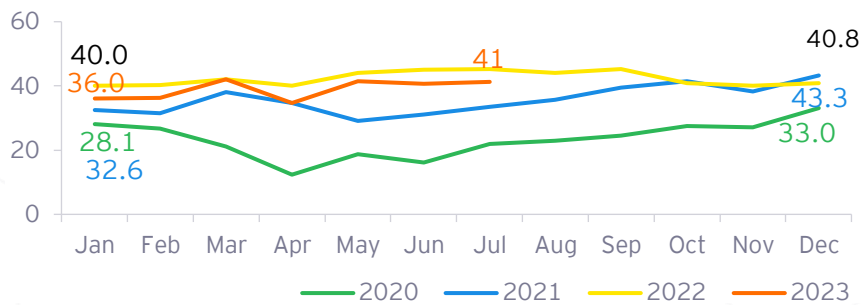
CH: Chhattisgarh; ; AP: Andhra Pradesh; HR: Haryana; KA: Karnataka; KL: Kerala; MP: Madhya Pradesh; OR: Odisha; RJ: Rajasthan; TN: Tamil Nadu; TS: Telangana; UP: Uttar Pradesh; UP: Uttar Pradesh; CH: Chattisgarh

Source: Controller and Auditor General; State Accounts

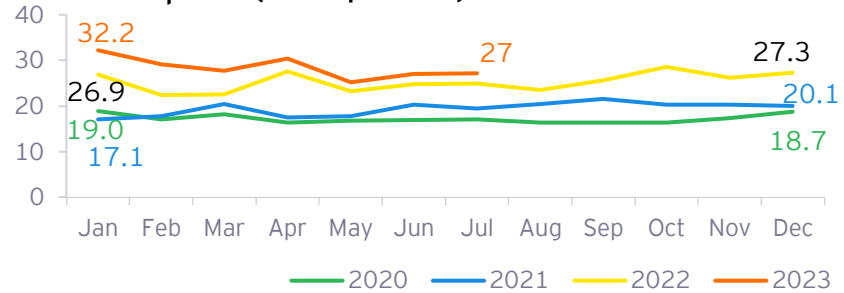
Non- oil merchandise exports (in US\$ billion)



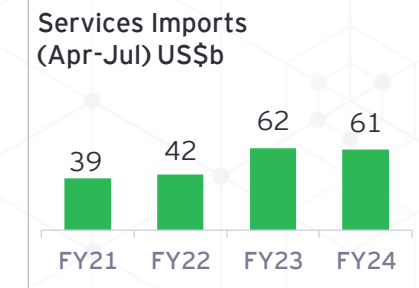
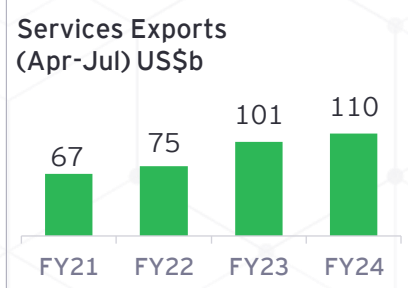
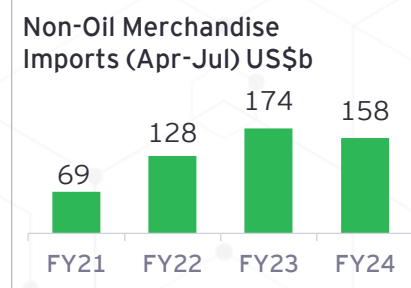
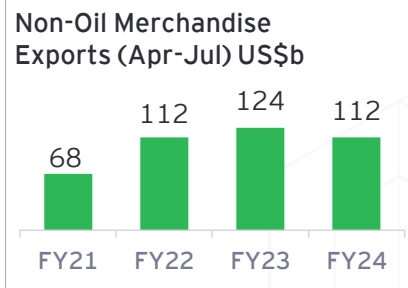
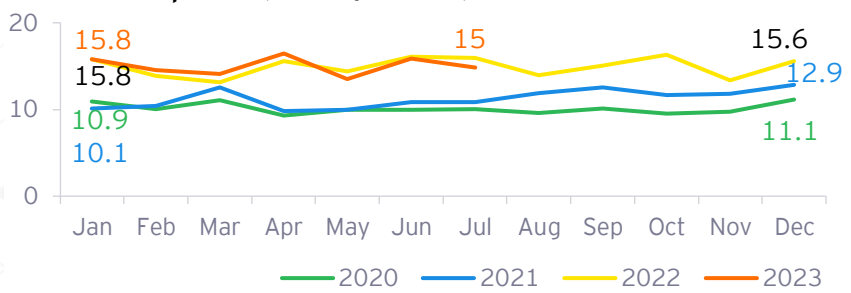
Non- oil merchandise imports (in US\$ billion)



Service exports (in US\$ billion)



Service imports (in US\$ billion)

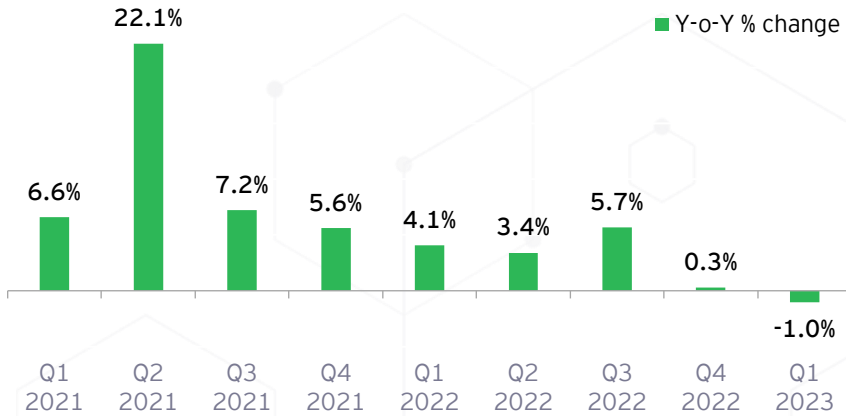


Key findings

- ▶ India's non-oil merchandise exports continue to remain weak, registering contraction for the eighth consecutive month. In July 2023, exports contracted by 7% vis-à-vis July 2022. The decline was broadly based on most sub-sectors. This weakness reflects a slowdown in global merchandise trade (See following slide).
- ▶ From April to July, non-oil merchandise exports and imports have contracted by close to 10% and 9% respectively over the same period last year.
- ▶ On the other hand, services exports have continued to show resilience, recording an increase of 9% vis-à-vis the same period in the previous year. They are expected to provide a cushion to net external demand in the near term.
- ▶ On the trade front, India has recently announced licensing requirements for electronic products, such as laptops and tablets, with effect from November 2023. The export of non-basmati white rice continues to remain restricted.

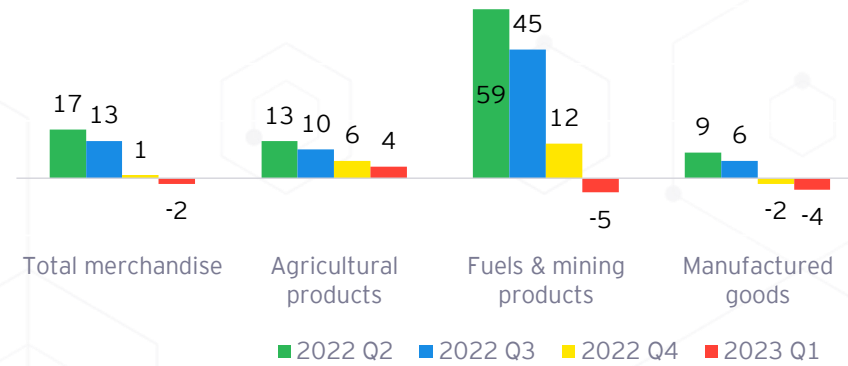


World merchandise trade volume, 2021Q1-2023Q1



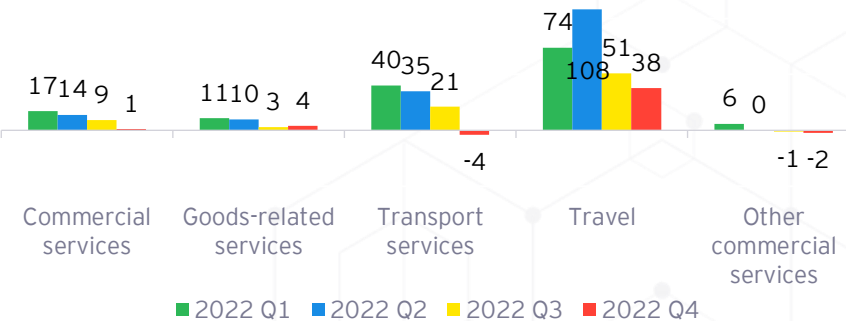
Growth in world merchandise trade by sector, 2022 Q2-2023 Q1

(Year-on-year percentage change in US\$ values)



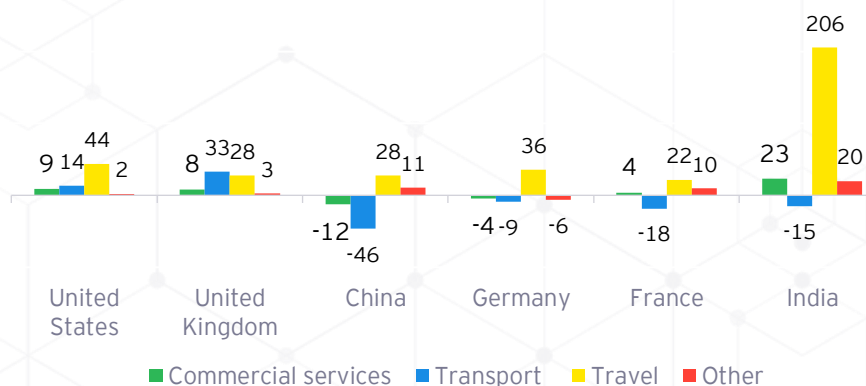
World commercial services exports by category, 2022Q1-2022Q4

(Year-on-year percentage change in US\$ values)



Commercial services exports of selected economies, Jan-April 2023

(Year-on-year percentage change in US\$ values)

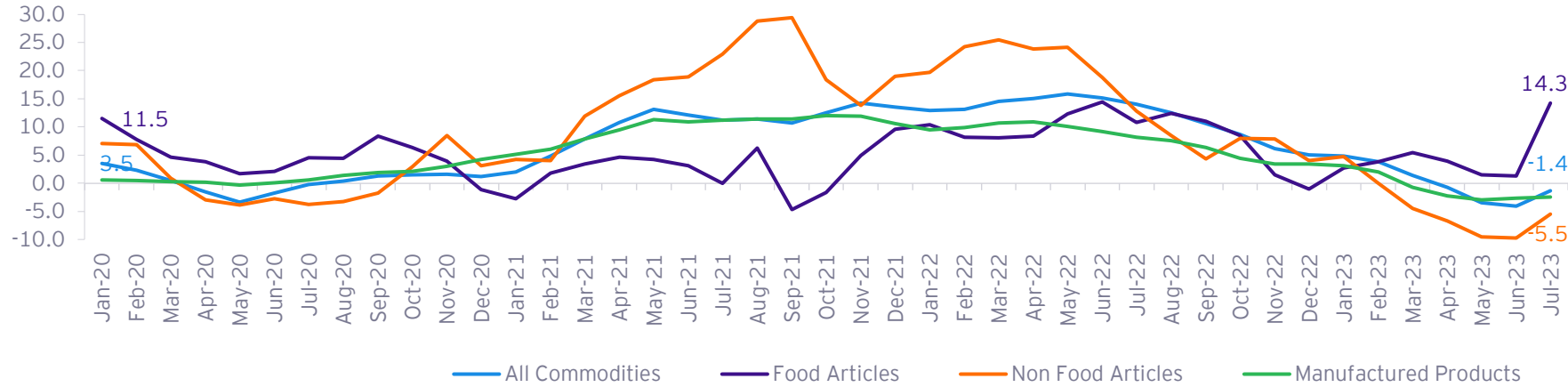


Key findings

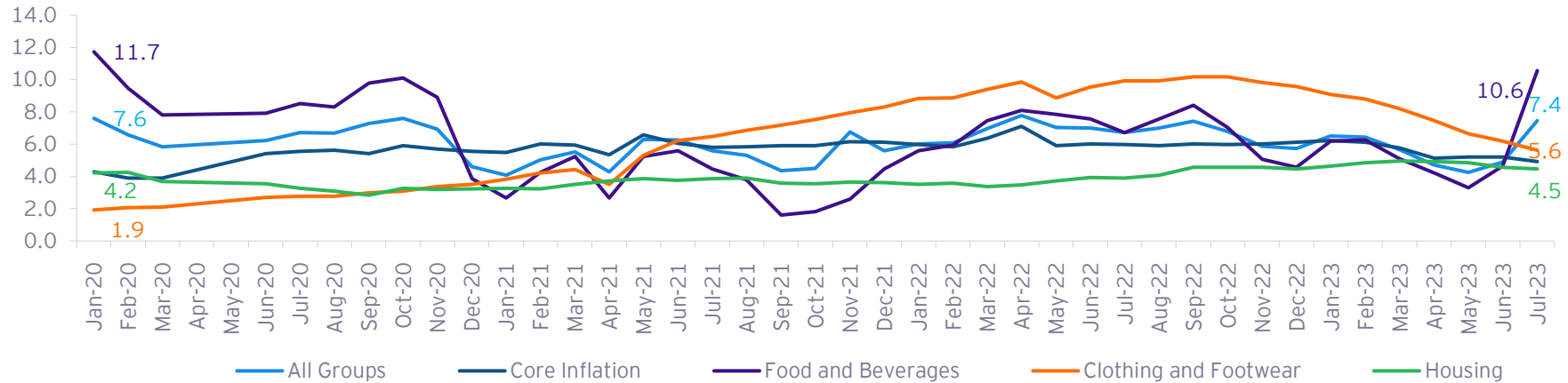
- ▶ World merchandise trade volume has slowed down from Q4 of calendar year 2022, followed by a negative growth in Q1 of the current calendar year.
- ▶ Manufactured goods have witnessed a decline since Q4 of 2022
- ▶ Decline in the value of trade in fuel and mining products in the first quarter of the current year is attributed to a fall in commodity prices for mineral
- ▶ Commercial services trade experienced negative growth or no growth by the end of 2022, except for travel which was recovering from COVID-19.
- ▶ India's strength in service outsourcing is reflected in the highest growth recorded amongst major economies for the period Jan to April 2023.



WPI inflation (%)



CPI inflation (%)



Key findings

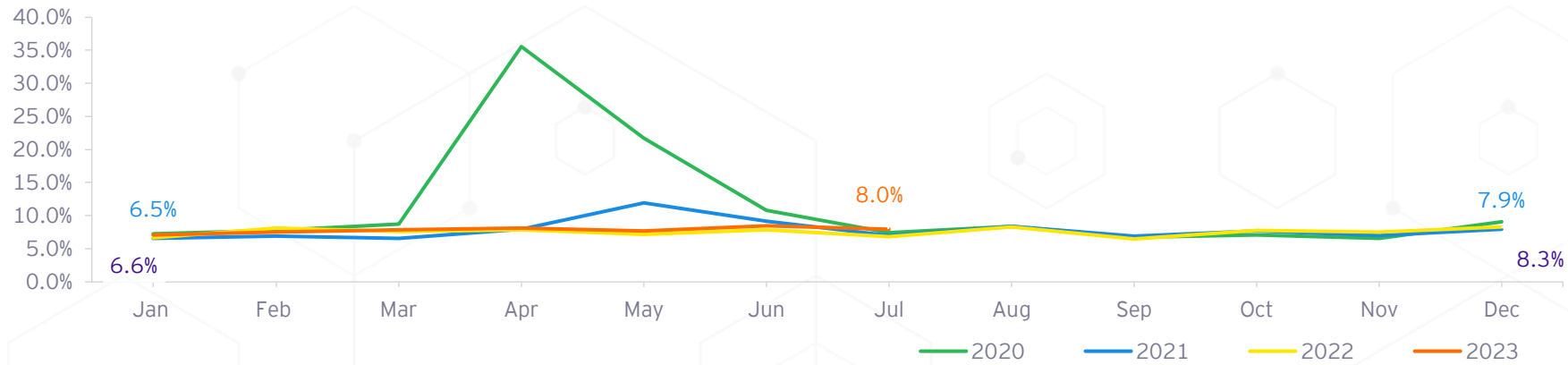
- ▶ Wholesale Price Inflation (WPI) continued to remain in the deflationary zone in July at -1.4% driven by base effect and fall in commodity prices vis-à-vis the previous year. It stood at 14.1% in July 2022.
- ▶ However, the pace of deceleration in WPI has eased in July (-1.4%) vis-à-vis June (-4.1%) due to a spike in vegetable prices. WPI inflation for food articles was at a multi-year high in July at 14.3%.
- ▶ After noting moderation in May, Consumer Price Inflation (CPI) accelerated to a 15-month high in July 2023 at 7.4% driven by a surge in vegetable prices due to supply shock.
- ▶ The supply shock is expected to extend to August, driving inflation estimates for Q2FY24 to 6.2%.
- ▶ Core inflation, however, softened to 4.9% in July from 5.2% in June, led by a broad-based reduction in most sub-groups.
- ▶ Given the recent uptick in inflationary pressure, RBI has revised upwards its projections of CPI to 6.2% for 2023-24

Source: Office of Economic Advisor, Ministry of Commerce and Industry; MoSPI; as of August 2023
Core inflation is calculated by excluding food & beverages and fuel & light from the overall index

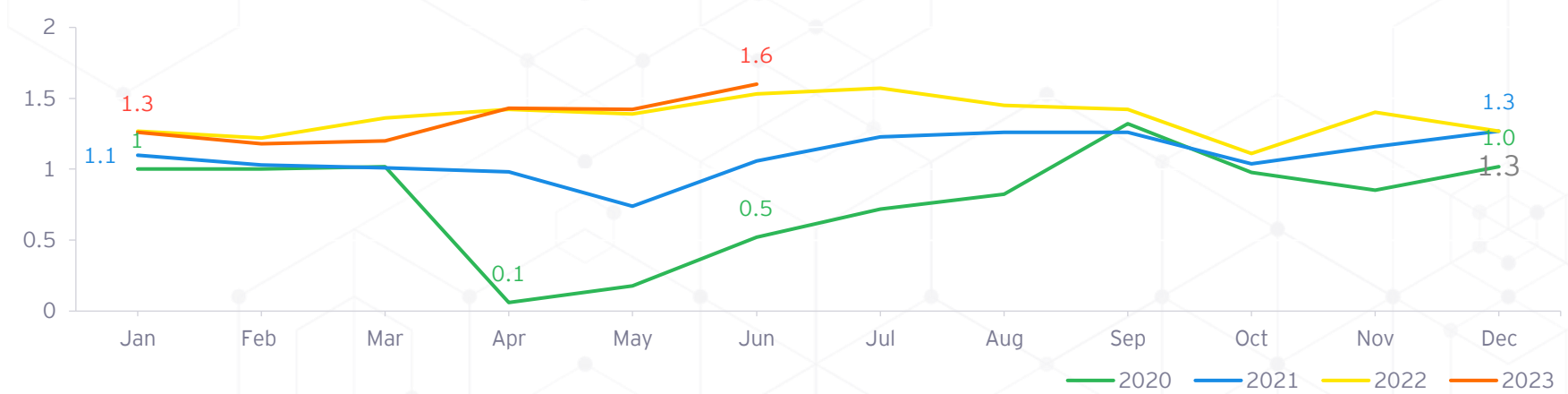




Indian unemployment Rate (%)



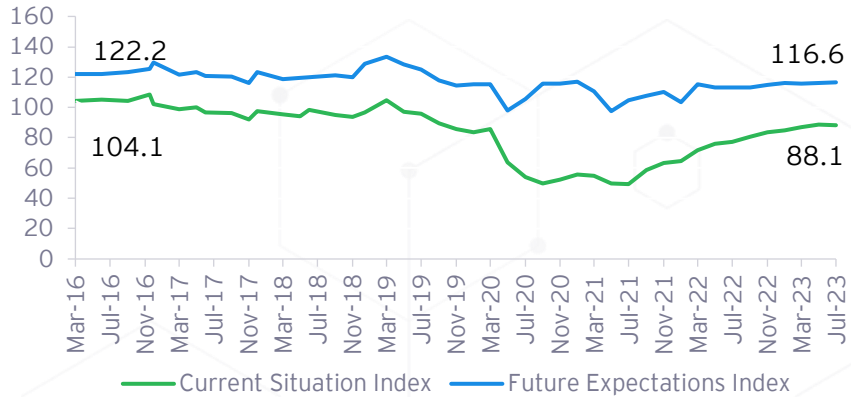
Net New EPF subscribers (in millions)



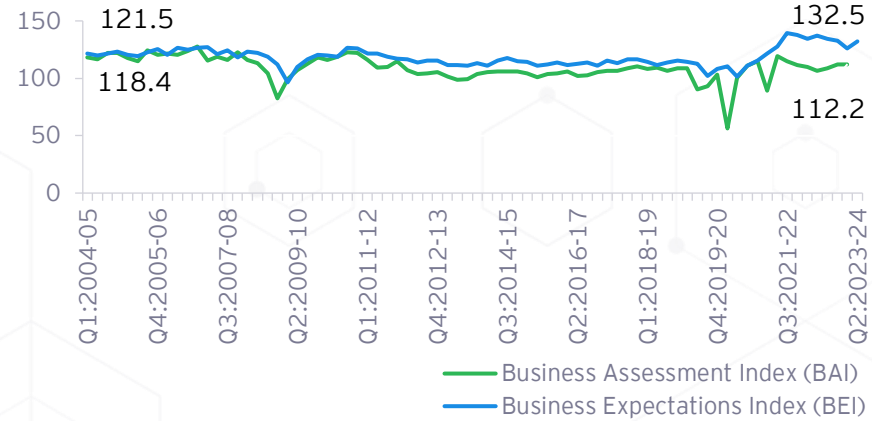
Key findings

- ▶ Unemployment rate in India noted a month-on-month reduction in July to 8% from 8.5% in June.
- ▶ Increase in net EPF subscribers has also noted a strong increase in June with 1.6 million new subscriber additions.
- ▶ This represents an increasing rate of formal job creation in the economy.

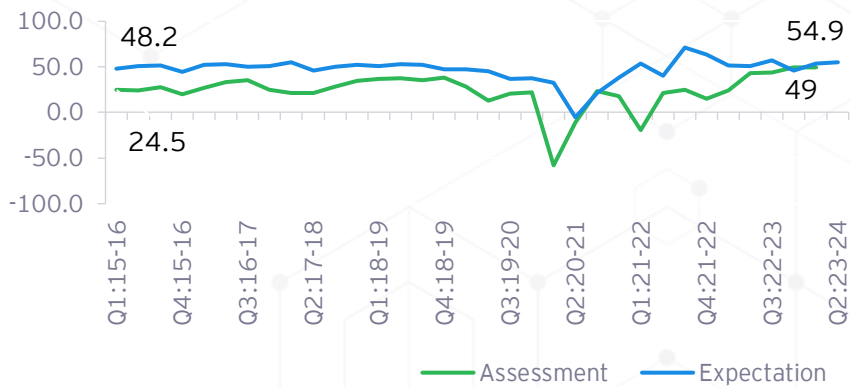
Consumer confidence indices



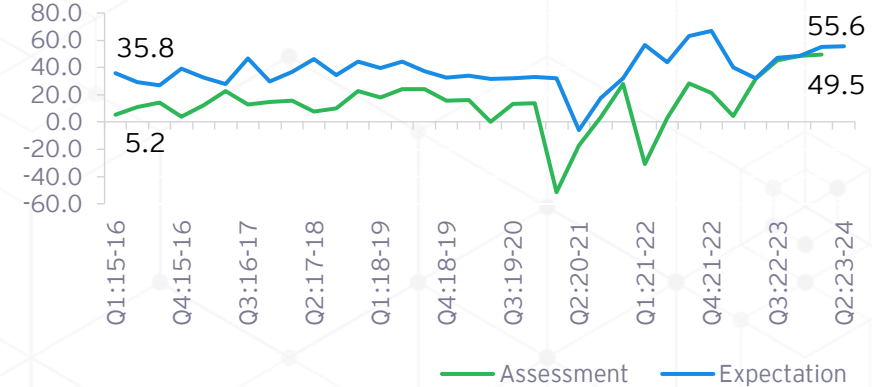
Business sentiment



Turnover of services companies (Net response %)



Turnover of infrastructure companies (Net response %)



Key findings

- ▶ In July 2023, consumers were more pessimistic about the general economy and employment, causing a 0.4-point decline in the Current Situation Index (CSI) from May.
- ▶ Meanwhile, the household outlook for the year ahead remained in the positive zone and improved marginally over the last survey on account of optimistic income expectations and lower pessimism on price levels vis-à-vis May 2023.
- ▶ While the current business assessment index showed no change over the previous round, it continues to remain in the optimistic zone. The future business outlook for Q2:2023-24 improved to 132.5, from 126.4 in the previous quarter driven by an optimism of future demand conditions.
- ▶ Both services and infrastructure companies are optimistic about their turnover for Q2 2023-24.

Source: RBI

Note: Net Response (NR) is the difference between the percentage of respondents reporting optimism and those reporting pessimism. It ranges between -100 to 100. Positive value indicates expansion/optimism and negative value indicates contraction/pessimism.

Data as of August 2023

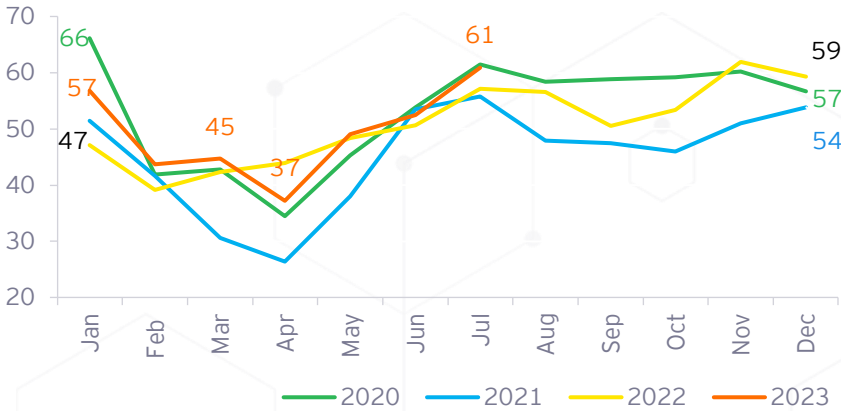
4

Sectoral indicators

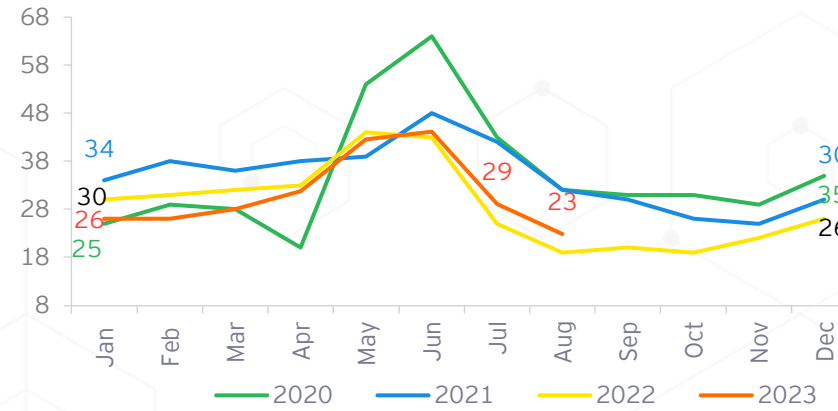




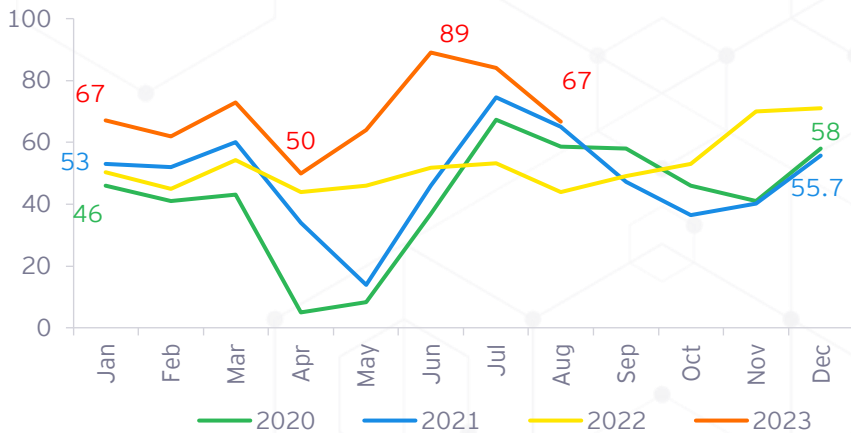
Fertilizer sales (lakh MT)



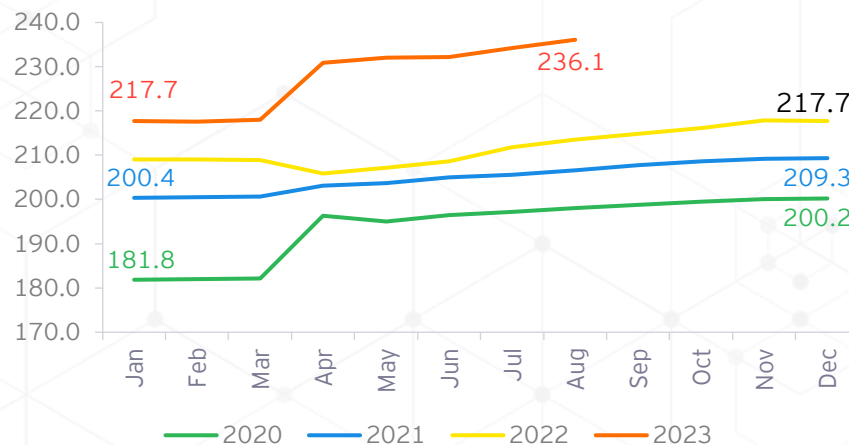
Persons work demand under MGNREGA (in millions)



Tractor registration (no. of units in '000)



Average Wage paid per day per Person (INR.) (Nominal)

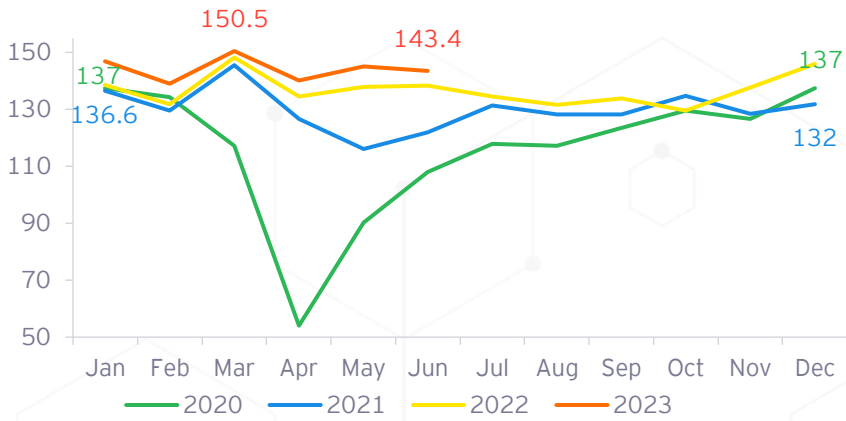


Key findings

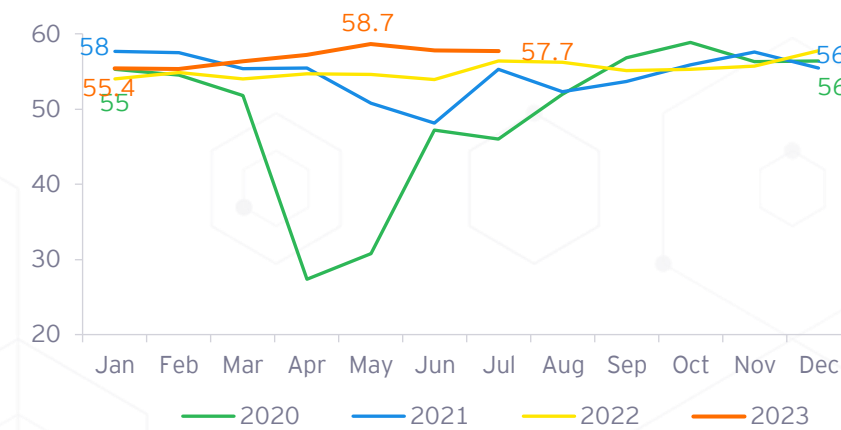
- Fertilizer sales have been rising sequentially since April. The sales were higher by 7% in July 2023 vis-à-vis July 2022. The aggregate growth from Jan to July 2023 is 5% higher than the same period in 2022. However, it is still marginally lower than sales recorded in the same period in 2020.
- The person work demand is 3% and 18% lower in Jan to Aug 2023 vis-à-vis the same period in 2022 and 2021. However, in the months of July and August 2023, demand for work under MNREGA is higher than in the corresponding months in 2022.
- Tractor registrations have recorded vigorous growth in recent months with a 51% increase in August 2023 over August 2022. The registrations have been much higher than in 2022, i.e., 41% in Jan to Aug 2023 vis-à-vis the same period in 2022.
- Average wages paid recorded an 11% increase in August 2023 over August 2022.

Source: Ministry of Road Transport and Highways, Ministry of Agriculture & Department of Fertilizers, MNREGA, MOSPI, RBI
 Note: Fertilizer sales comprises of Urea, DAP, MOP and Complexes

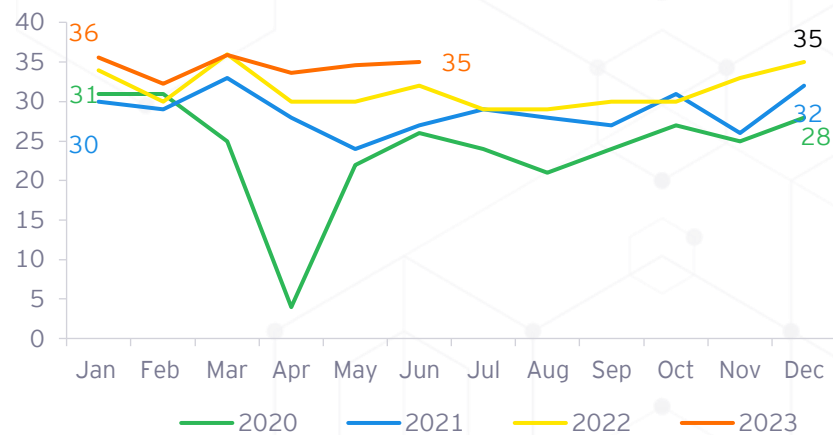
General index of industrial production



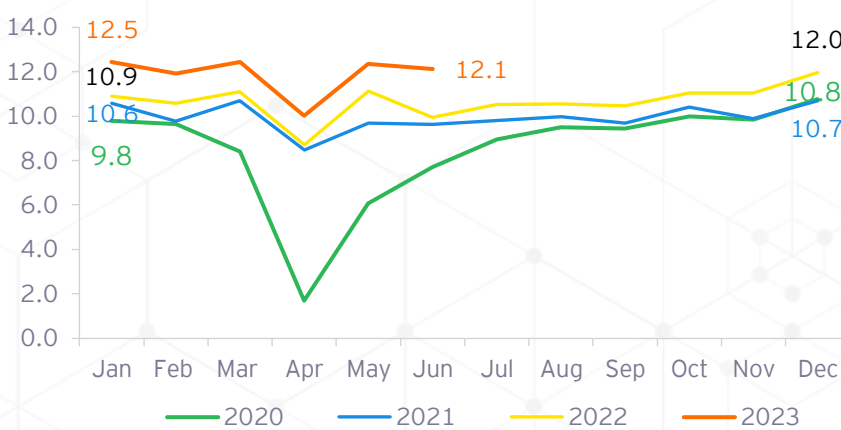
Manufacturing PMI



Cement production (million tons)



Crude steel production (million tons)



Key findings

- ▶ The overall index of industrial production was higher by 4% in June 2023 over June 2022.
- ▶ The manufacturing PMI remained in the expansionary territory in 2023 with July at 57.7 due to new solid order growth.
- ▶ Among the construction sector indicators, cement production increased by 9% in June 2023 over June 2022, and is higher by 8% in Jan to Jun 2023 vis-à-vis Jan to June 2022.
- ▶ Steel production is higher by 22% in June 2023 vis-à-vis June 2022. It has also been higher by 14% this calendar year till June vis-à-vis the same period in 2022.

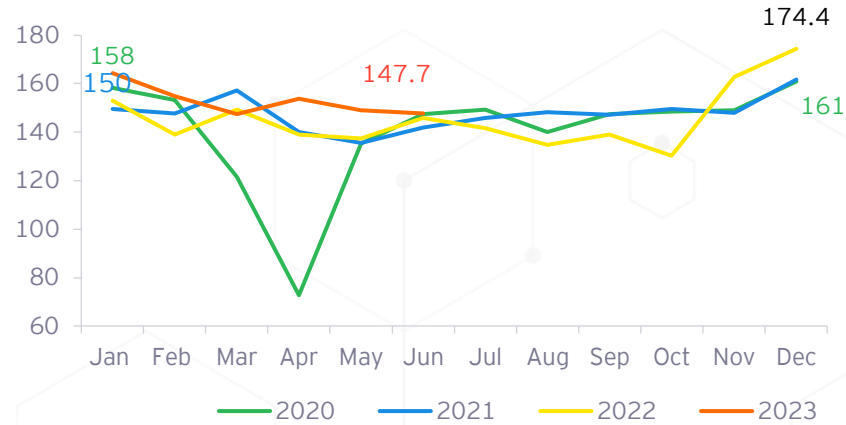
Note: PMI >50 indicates expansion, <50 indicates contraction
 Source: IHS Markit, DPIIT, RBI; IIP Base: 2011-12=100



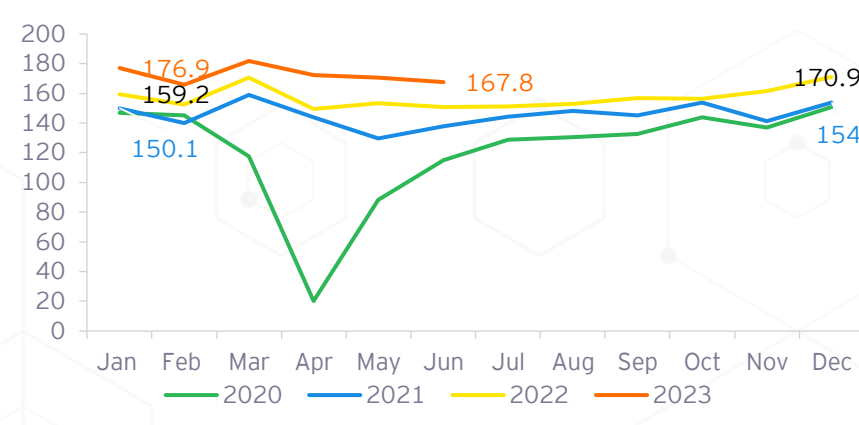
Manufacturing indices for consumer non-durables, consumer durables, infrastructure and capital goods



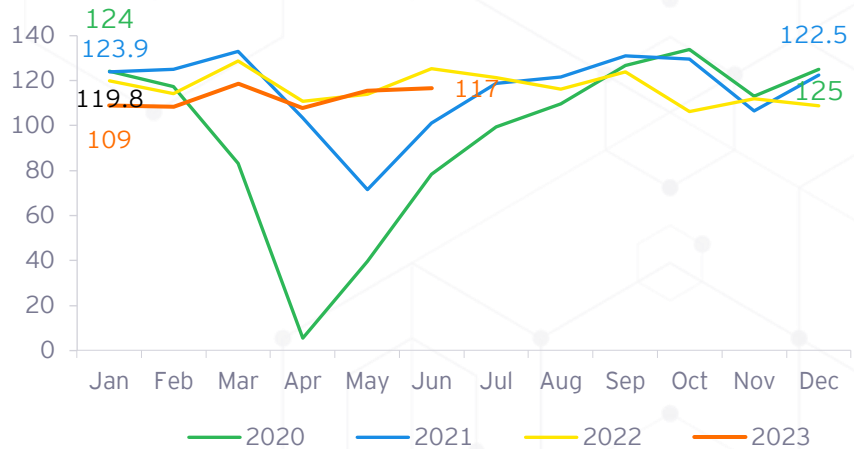
IIP consumer non-durables



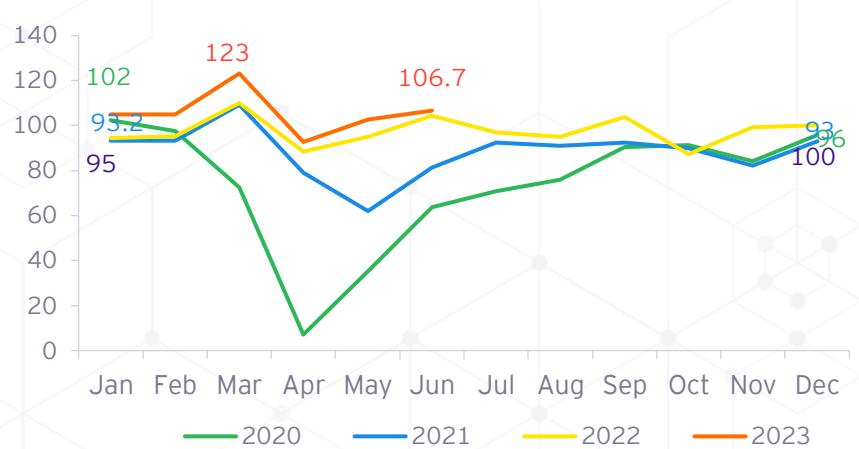
IIP infrastructure/construction goods



IIP consumer durables



IIP capital goods



Key findings

- ▶ Capital and infrastructure goods have grown strongly due to increased cement and steel production, showing the strength of the construction, infrastructure and real estate sectors. The growth will continue due to Government spending on infrastructure and a strong real estate sector.
- ▶ IIP for capital and infrastructure goods increased by 2% and 11% respectively in June 2023 over the previous period. However, the pace of increase has noted a moderation in March.
- ▶ The IIP for consumer durables and non-durables has remained close to levels noted in 2022, with a few months recording a contraction over the previous year.
- ▶ IIP for consumer non-durables recovered in April and May before marginally falling in June 2023.
- ▶ Production of consumer durables had noted a slow start in 2023 and continues to remain weak, i.e., below levels recorded in 2022. The weakness is noted in the near term with the index being 7% lower in June 2023 over June 2022.

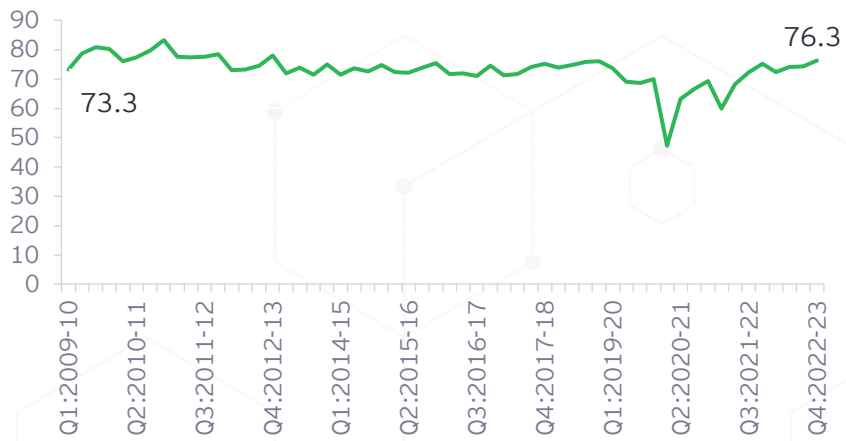
Source: MOSPI
IIP Base: 2011-12=100



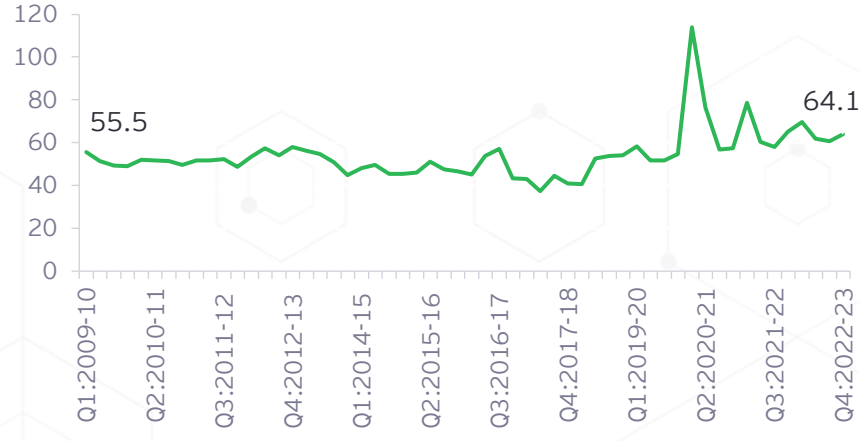
Capacity utilization and inventory survey numbers



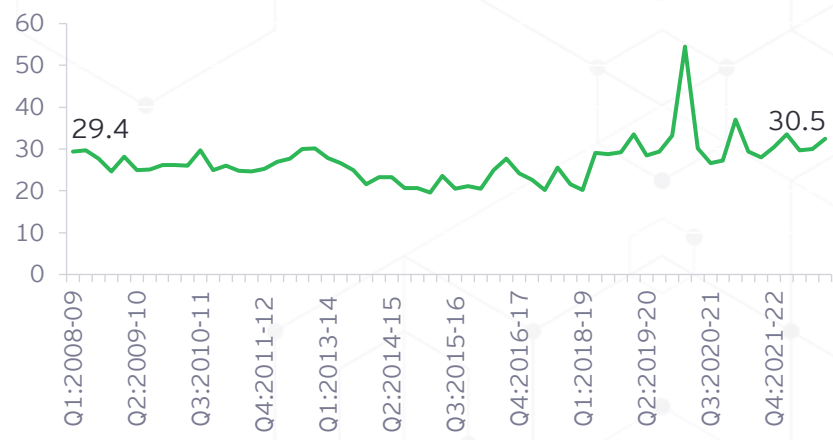
Capacity utilization (%)



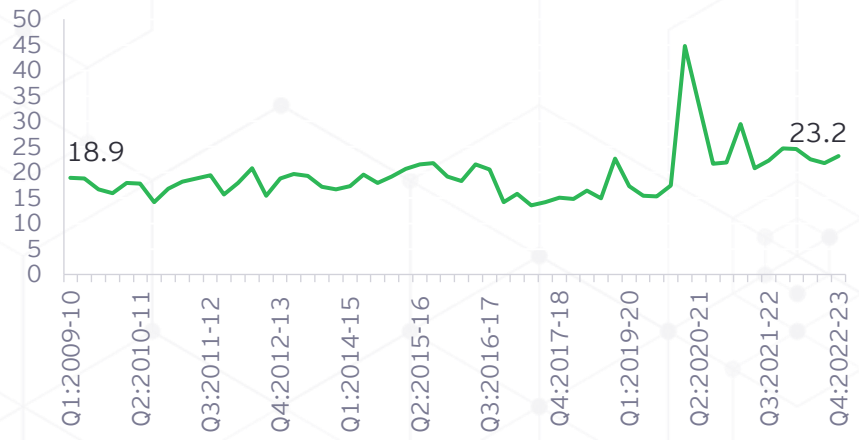
Total inventory to sales ratio (%)



Raw material inventory to sales ratio (%)



Finished goods inventory to sales ratio (%)



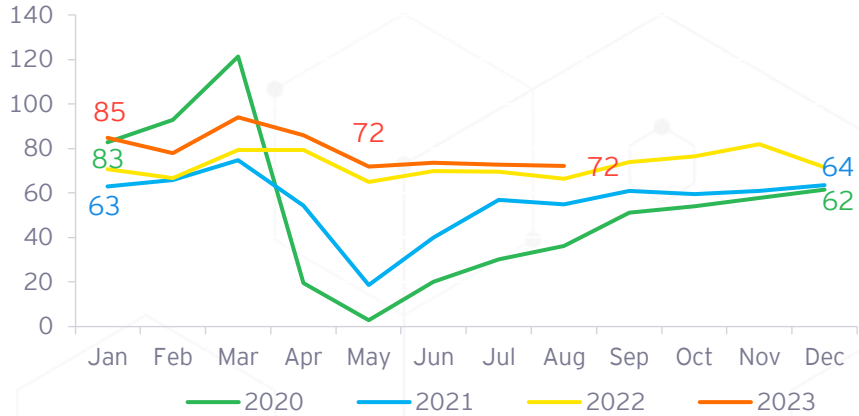
Key findings

- ▶ Capacity utilization in the manufacturing sector improved to 76.3% in Q4 2022-23 from 74.3% recorded in the previous quarter.
- ▶ According to the RBI, the seasonally adjusted CU for Q3:2022-23, remained constant at 74.1% in Q4:2022-23.
- ▶ A capex cycle could occur if capacity utilization rises due to healthy bank and corporate balance sheets, normalized supply chains, business optimism, and government investments in infrastructure and manufacturing.
- ▶ Both raw material and finished goods inventory increased marginally in Q4 2022-23 over the previous quarter.

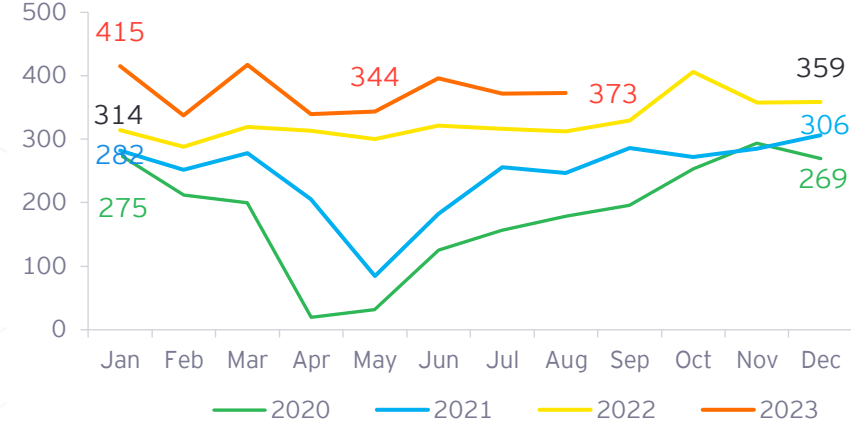
Source: RBI; as of 10th August 2023



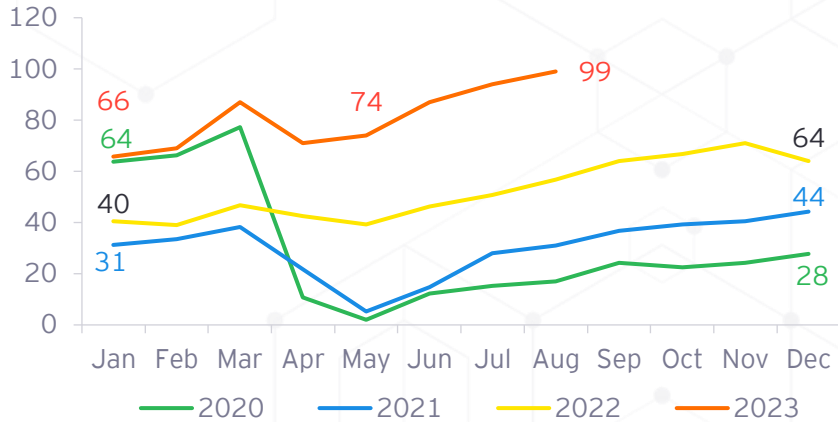
Commercial vehicles (in '000s)



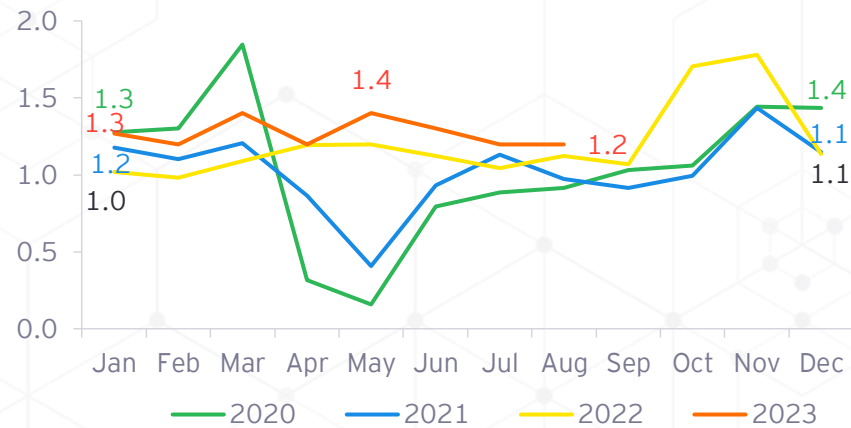
Passenger vehicles (in '000s)



Three-wheelers (in '000s)



Two-wheelers (in millions)



Key findings

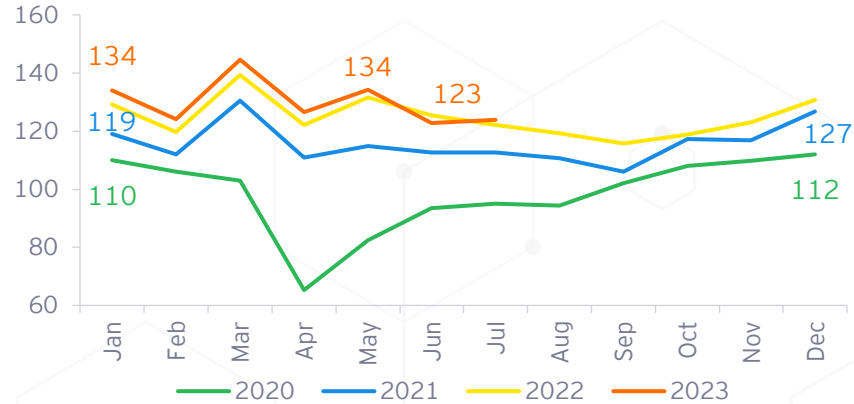
- ▶ Vehicle registration trends across different segments have continued to show strength.
- ▶ Despite a slight decrease in recent times, the demand for commercial and passenger vehicles remains high compared to the previous year.
- ▶ Commercial and passenger vehicle registrations noted 12% and 20% growth respectively in the period from Jan to August vis-à-vis the same period in 2022.
- ▶ Three-wheeler and two-wheeler registrations have shown a 78% and 16% increase in this calendar year till August over the same period in 2022.
- ▶ Growth in demand for three wheelers is attributed to availability of electric three wheelers and their deployment for making deliveries by E-commerce players.

Note: CV include all Heavy, Medium vehicles and light goods vehicles. PV represents Motors Cars data. 2w and 3W include both transport and non-transport. Telangana and Lakshadweep vehicle registrations are not covered under Vahan database.
Source: Vahan Database.

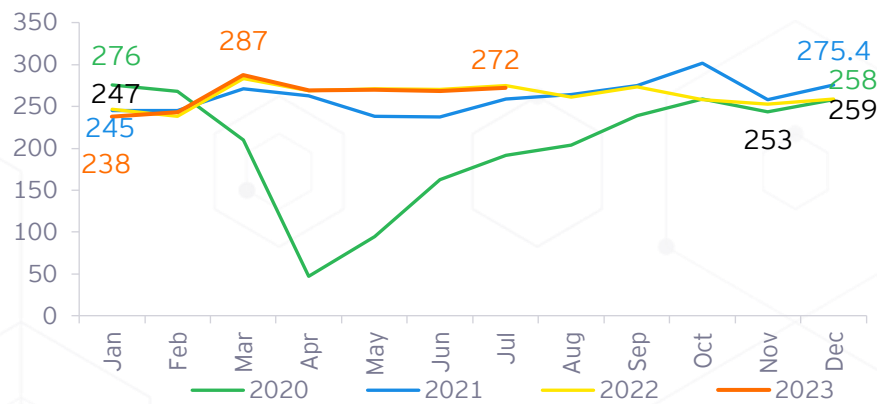




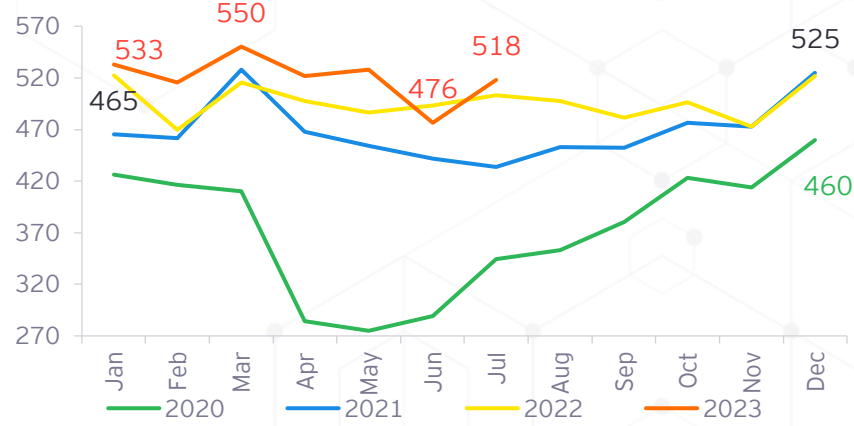
Railways freight (million tons)



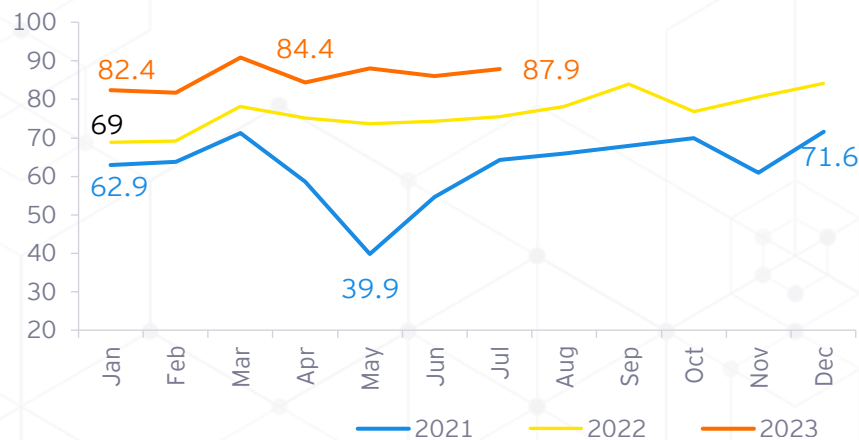
Air Freight ('000 tons)



JNPT container traffic ('000 TEUs)



E-way bills generated (volume in million)



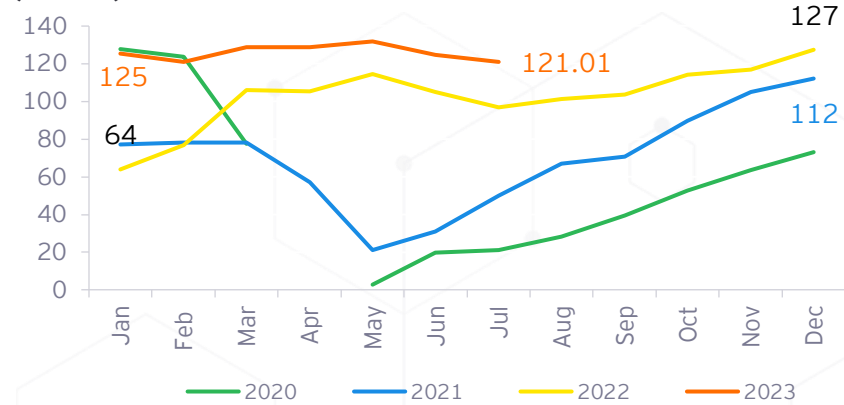
Key findings

- ▶ Freight transportation levels have mostly stayed the same as 2022, with a few months showing a decrease compared to last year.
- ▶ Air freight growth remains sluggish, with July 2023 recording a 1% contraction over its 2022 levels. The total air freight transported in Jan to July period remains below that transported during the same period last year.
- ▶ Railway freight increased by 2% in the period from Jan to July 2023 vis-à-vis the same period in 2022. There was a modest sequential growth recorded in July (123 million tons) over June.
- ▶ Similarly, shipping freight represented by JNPT container traffic is up by 4% from Jan to July vis-à-vis the same period the previous year. It reached a four-year high in March 2023 at 550 TEUs and subsequently moderated to 518 TEUs in July.
- ▶ E-way bills recorded a multi-year peak in March 2023 at 90.9 million before moderating slightly to 87.9 in July. E-way bill volumes from Jan to July 2023 were up 17% vis-à-vis the same period in 2022.

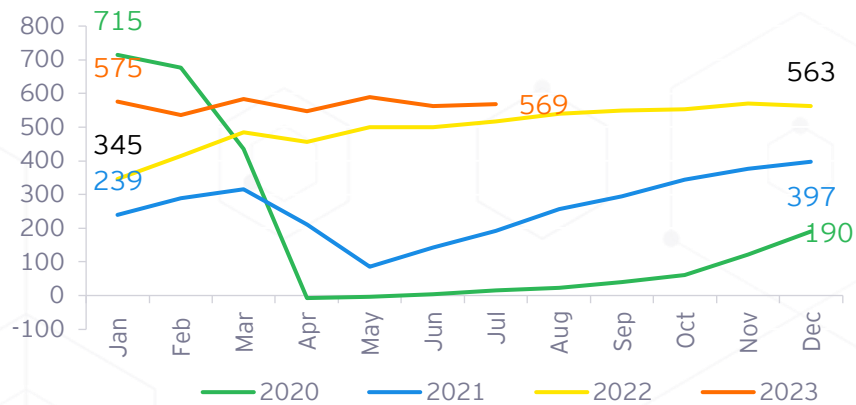
Source: Ministry of Civil Aviation, Ministry of Railways, JNPT Terminal, GSTIN Network
 Note: JNPT data is available from August 2019-20.



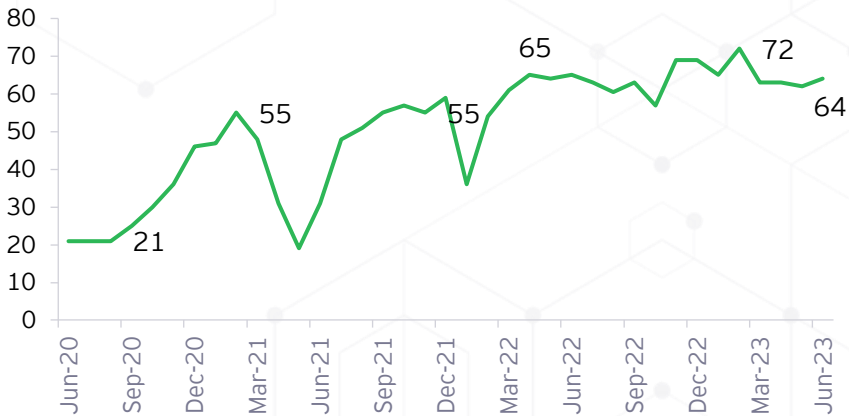
Passengers carried by domestic airlines (in lacs)



No. of railway passengers (in millions)



Occupancy (%) in hotels sector



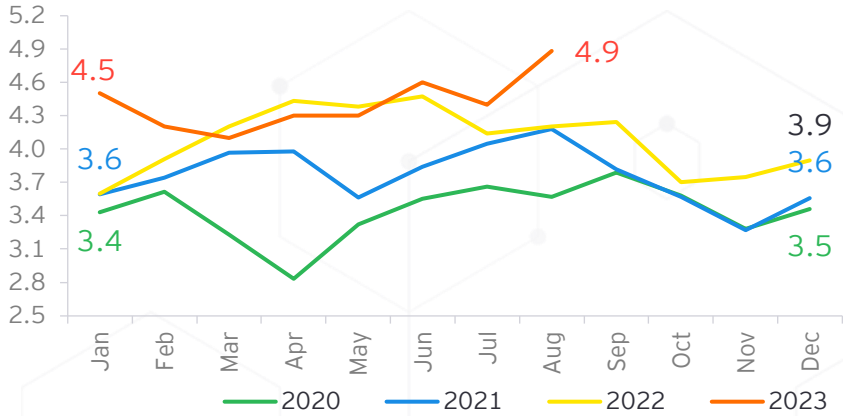
Key findings

- ▶ Both domestic air and railway passenger traffic noted robust growth in 2023 and the strength has continued in the near term.
- ▶ July 2023 saw a 25% increase in domestic air passenger traffic compared to July 2022. The increase from Jan to July 2023 is 32% higher compared to the same period in 2022.
- ▶ Passenger traffic in railways also registered an increase of 10% in July 2023 over July 2022.
- ▶ Hotel occupancy has moderated slightly, recording 64% in June, lower than the peak recorded in Feb at 72%.

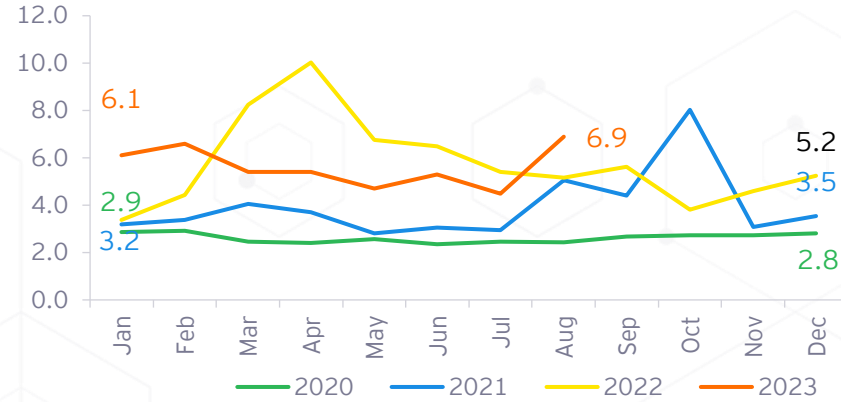




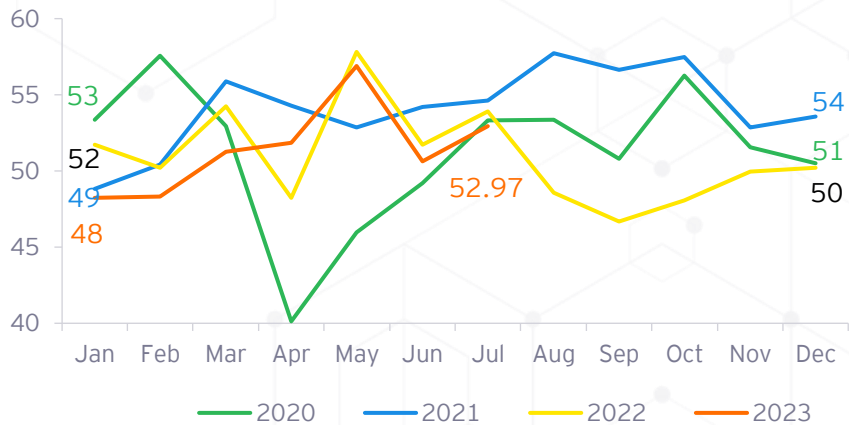
Average daily power consumption (billion units)



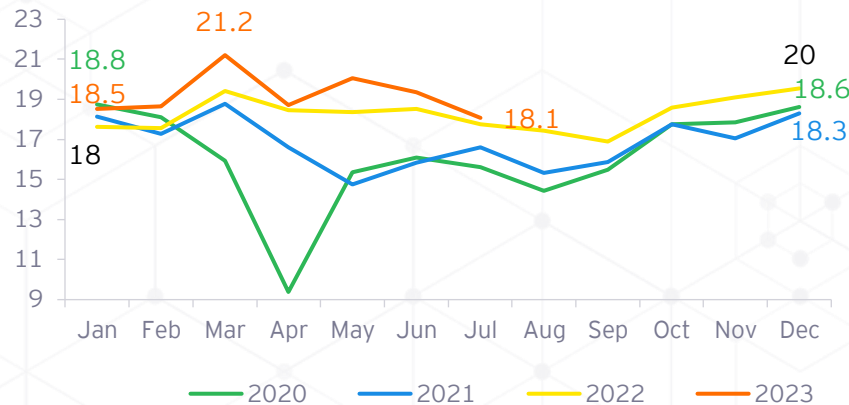
Power market clearing price (Rs 'per KWh)



Consumption of natural gas ('00 MMSCM)



Consumption of petroleum products ('000 metric tons)



Key findings

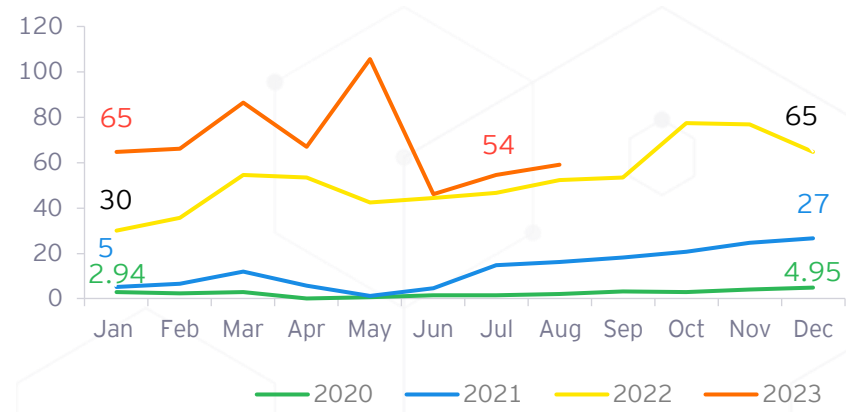
- ▶ Power consumption was 6% higher during the period from Jan to August 2023 vis-à-vis the same period in 2022. Consumption in August 2023 was 16% higher than August 2022, at a record level of 4.9 billion units.
- ▶ India recorded an all-time peak demand of 236 GW on 31 Aug 2023 against the CEA forecast for this summer of 229 GW.
- ▶ Power market clearing prices also edged up in August by 33% over August 2022.
- ▶ High level of power demand and attendant increase in prices reflects a tight demand-supply situation.
- ▶ Consumption of natural gas has remained lower in 2023 than levels in the previous two years. Consumption in July 2023 was 2% lower than July 2022.
- ▶ Consumption of petroleum products is 5% higher during the period from January to July 2023 vis-à-vis the corresponding period in 2022.

Note: Power consumption for August'23 data is average of daily data available as on 31st August 2023. Market Clearing Monthly Prices are simple average of non-zero prices in (No of days in a month*24*4) no of 15 minutes time block of respective month.

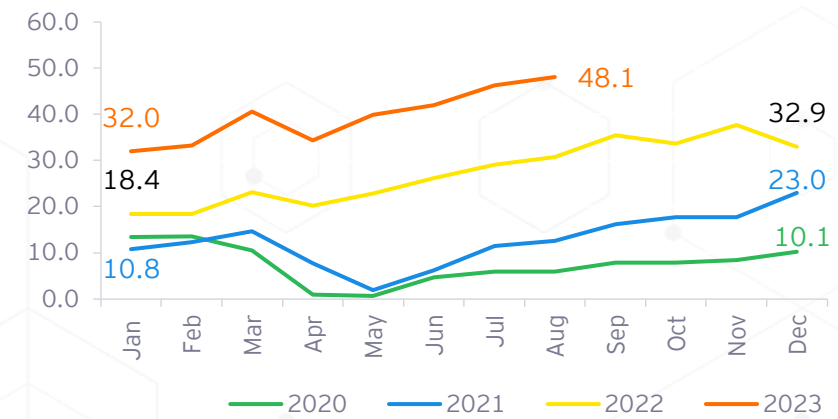
Source: Ministry of Petroleum, Coal & Power and Indian Energy Exchange. MMSCM stand for Million Standard Cubic Metre.



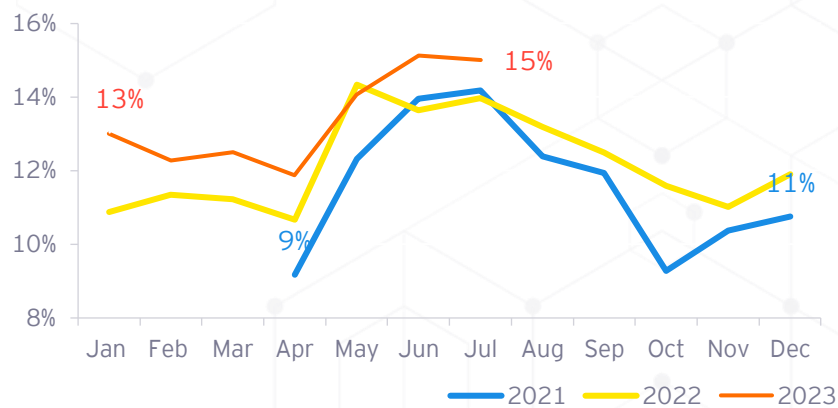
Registration of e-two-wheelers (In 000's)



Registration of e-rickshaw vehicles (In 000's)



Renewable energy generation as % of the total power generation



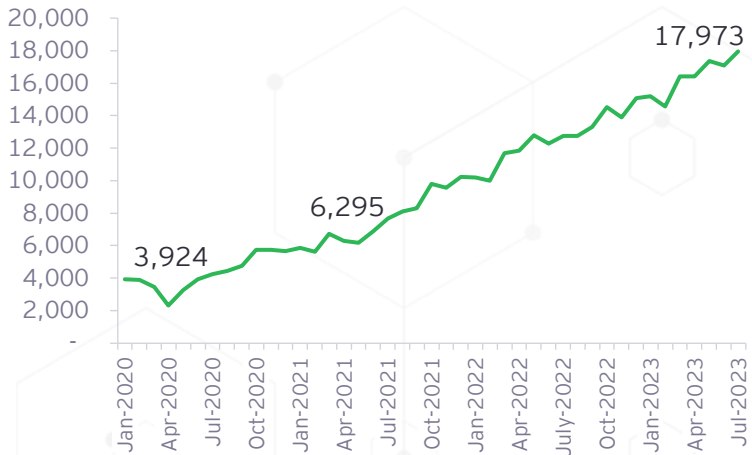
Key findings

- ▶ Key indicators show an increased role in renewable power in India's energy transition.
- ▶ Renewable energy to total power generation ratio has reached a multi year high of 15% in June and July 2023.
- ▶ Registration of e-two-wheelers noted a sharp decline in June 2023 after a peak of 105,000 registrations in May. This drop has coincided with the subsidy cuts under FAME- II for electric two wheelers from June.
- ▶ Registrations of e-rickshaw has recorded robust growth in 2023, reflecting the increased electrification of the transport fleet. During the period Jan to August 2023, it has increased by 67% over the same period last year.

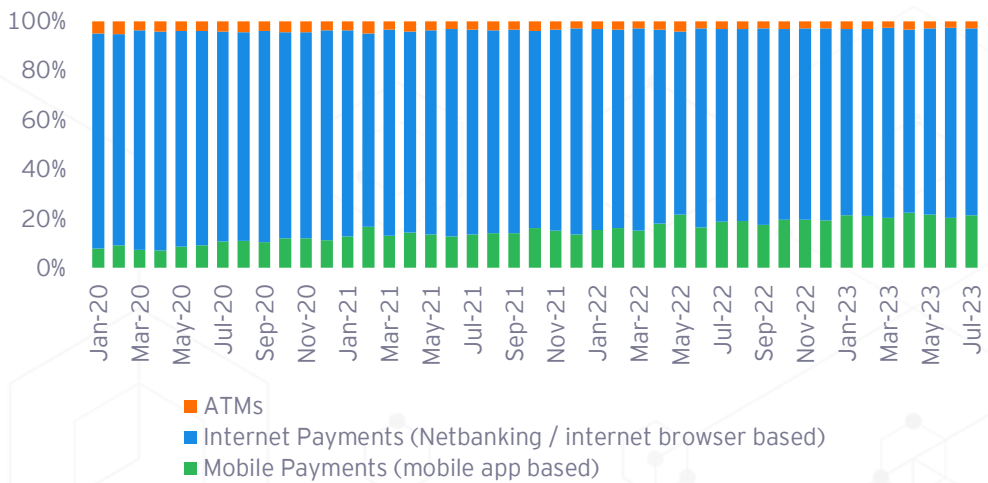
Source: India Energy Exchange Press Release, CEA Dashboard, Vahan Dashboard
 Note: e-2W include transport, non-transport and invalid carriage data. Telangana and Lakshadweep vehicle registrations are not covered under Vahan database.



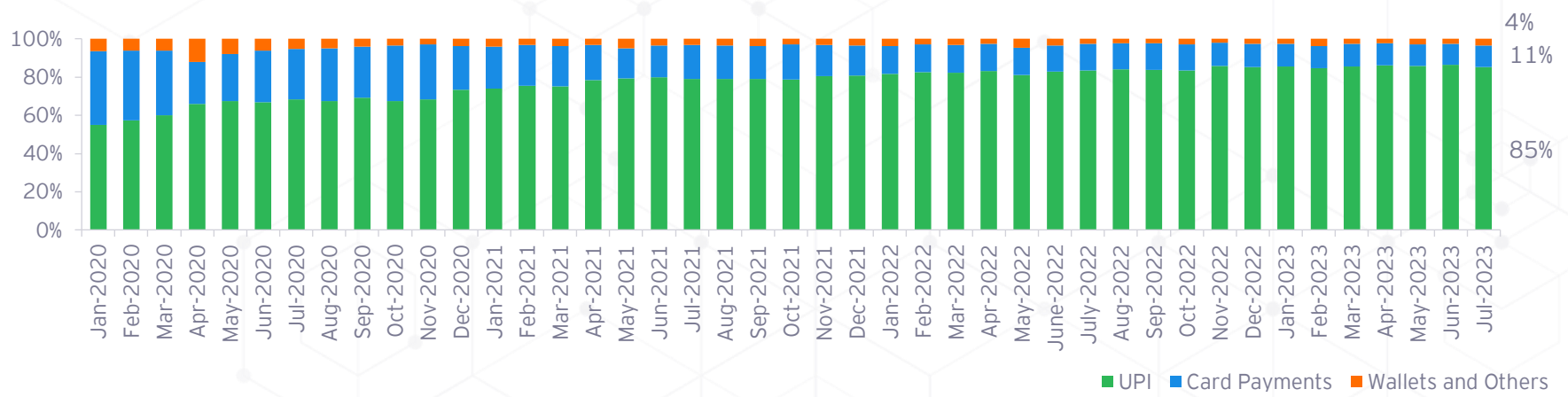
Total digital retail payments (in INR billion)



Share of different payment channels (by value)



Share of different segments in total digital retail payments (by value)



Key findings

- ▶ The rise in internet and mobile payment channels vis-à-vis ATMs underscores the rapid uptake of digitalization in the financial sector.
- ▶ This can also be noted in the total value of digital retail payments that reached an all-time high of INR17.9 lakh crores in July 2023.
- ▶ The pandemic induced shift towards UPI appears to have stabilized, as noted in the market shares of different digital retail payment tools.
- ▶ On an absolute basis, payments through UPI have grown by over 44% in July 2023, vis-à-vis July 2022.
- ▶ While card payments are losing market share to UPI, they are, however, still growing on an absolute basis. In July 2023, they increased by 10% over July 2022.
- ▶ In September 2022, the RBI launched UPI Lite to accelerate UPI payments, especially in areas with weak internet/telecom connectivity.
- ▶ To further facilitate digital transactions, four banks have initiated offering UPI interoperability on RBI's CBDC app.

Note: Others include ECS, AEPS, APBS and BHIM
Source: TRAI, RBI



5

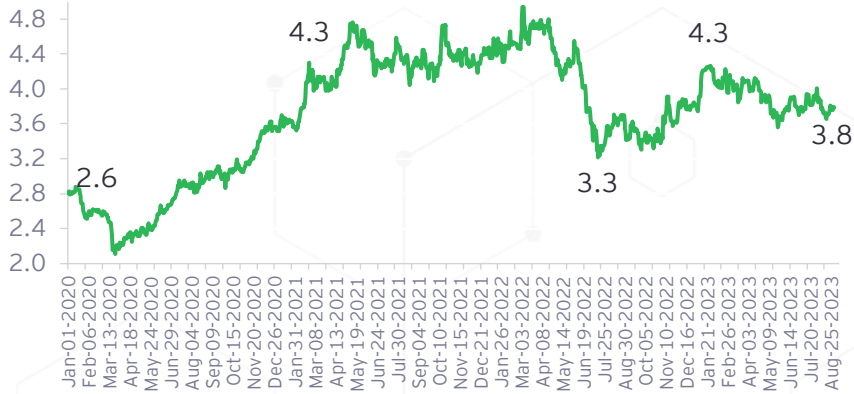
Commodities: markets and investments



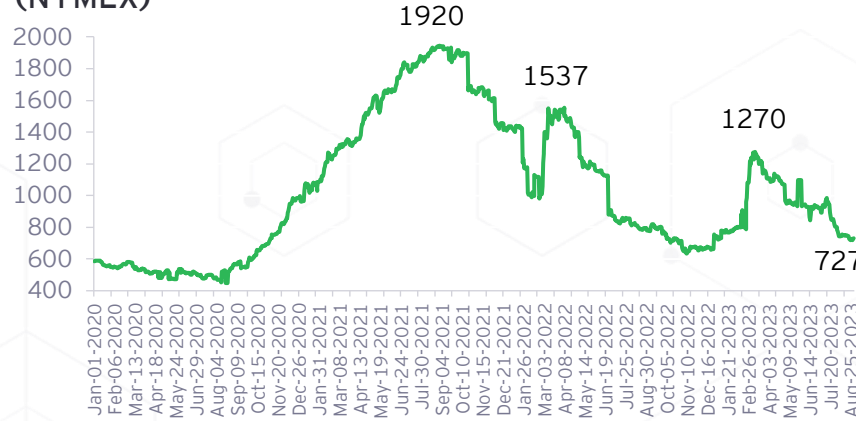
Trends in commodity prices (metal)



High grade copper prices (US\$ per lb) (COMEX)



Hot rolled coil steel prices (US\$ per ton) (NYMEX)



Aluminum price per MT (in US\$) (Cash- LME)



Nickel per MT price (in '000 US\$) (Cash-LME)



Key findings

- ▶ Prices of key metal commodities have moderated from the peaks witnessed in Feb 2022. The current decrease in prices can also be attributed to slowing demand in China and monetary policy tightening globally.
- ▶ Steel prices have declined close to 53% from their peak in 2022.
- ▶ Aluminum and nickel prices have also noted a steep decline from their peak in 2022 by 40% and 55%, respectively.
- ▶ On the other hand, copper prices have declined by only 23% from their peak in 2022 to US\$3.8 per lb. Lower decline is attributed to increased usage of copper as the world electrifies and decarbonizes.
- ▶ There is downside risk to prices of metals as global demand remains weak, though geopolitical events could also trigger price increase.

Note: Data as on 31st August 2023; 2. Copper Prices- High Grade, Chicago Mercantile Exchange , Steel Prices- Domestic Hot Rolled Coil, Source: CapitalIQ, MCX

Trends in commodity prices (energy and gold)

Commodity and input price trends

Crude oil - Brent price (US\$ per bbl) (NYMEX)



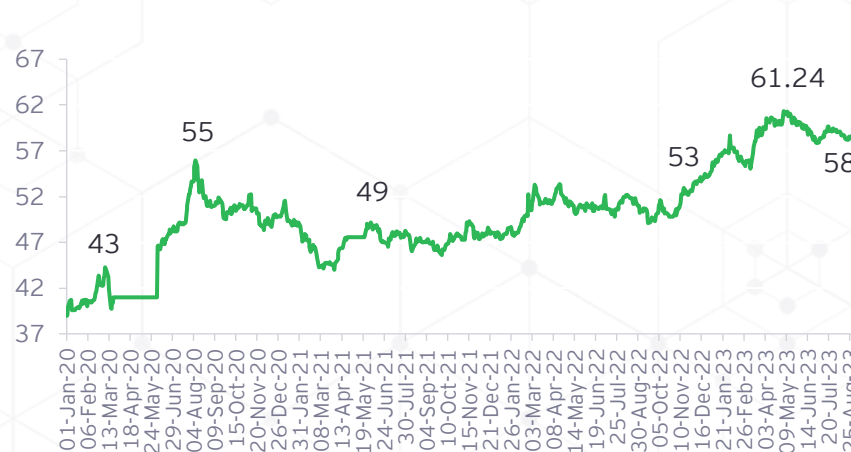
Coal price per ton (in US\$) (Newcastle- ICE)



Natural gas per mm BTU (in US\$) (Henry Hub)



Gold price per 10 grams (in '000 INR)



Key findings

- ▶ Prices of energy commodities have declined, though by different extent.
- ▶ In July, the average crude oil price per barrel increased by \$5 from the previous month to \$80. This was caused by supply cuts from OPEC+ and a decrease in US crude oil stocks. August saw crude oil prices rising further to US\$85 per barrel.
- ▶ Thermal coal prices have declined by 66% vis-à-vis their peaks in 2022. The fall is attributed as global demand remains weak amid rising supply.
- ▶ A similar trend is noted in natural gas prices, which have been moderated to pre-conflict levels.
- ▶ Gold prices have firmed by 22% between Jan to August 2023. The demand for gold rose in July, however it pared gains in August as the US dollar strengthened.

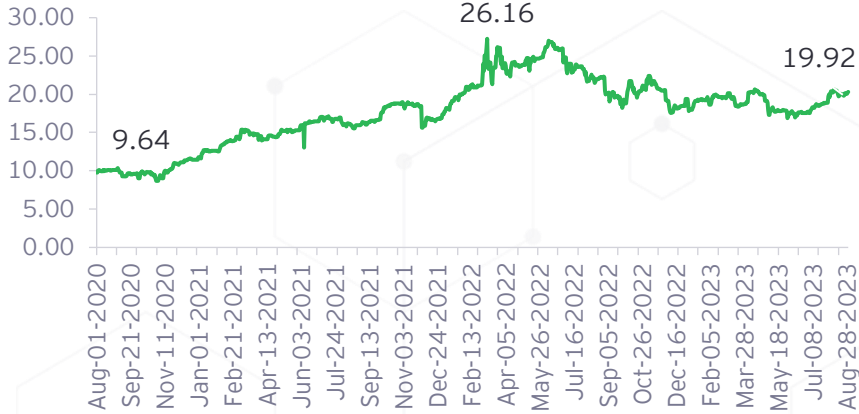
Note: Data as on 31st August 2023; 2. Copper Prices- High Grade, Chicago Mercantile Exchange; Steel Prices- Domestic Hot Rolled Coil; Crude oil and Natural gas price, NYMEX
Source: CapitalIQ, MCX



Trends in commodity prices (agriculture)

Commodity and input price trends

Corn Feed per MT (in INR) (BSE)



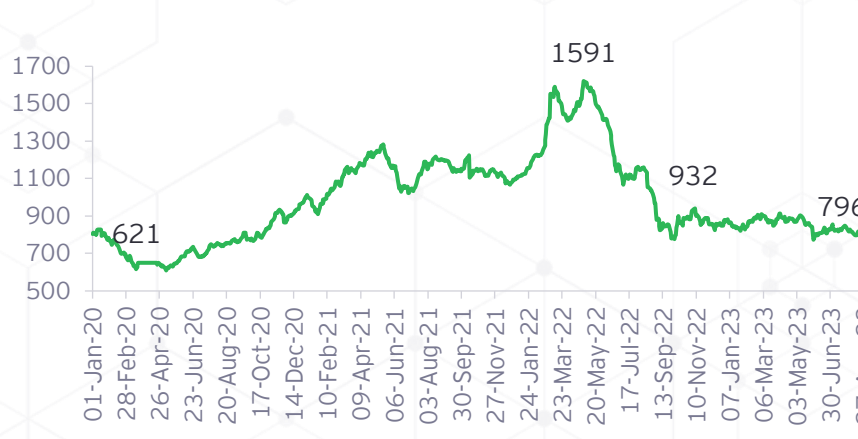
Wheat Price per MT (In US\$) (LIFFE)



Sugar - White per MT (In US\$) (LIFFE)



Palm (CPO) oil per 10 kg (in INR)



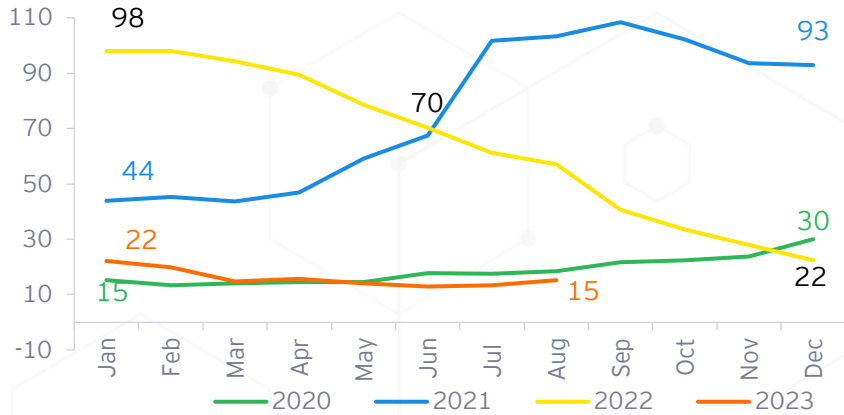
Key findings

- ▶ Prices of agricultural commodities have remained steady or gone up a bit in the last three months.
- ▶ Prices of corn feed have declined by 25% from the peak noted in 2022. The average prices in August are, however, higher by 9% than in July.
- ▶ Wheat prices have softened 16% since January. Russia withdrew from the Black Sea Grain deal last month, which could create some upward pressure on international wheat prices in the near term.
- ▶ International Sugar prices have continued to surge, rising by 44% between Jan and August this year. The spike over the last few years reflects lower output due to adverse weather events in key producing nations, export controls and usage of sugarcane for ethanol. It may be noted that sugar prices in India have however remained range bound.
- ▶ Meanwhile, palm oil prices have continued to ease, marking an 8% decrease from Jan 2023.

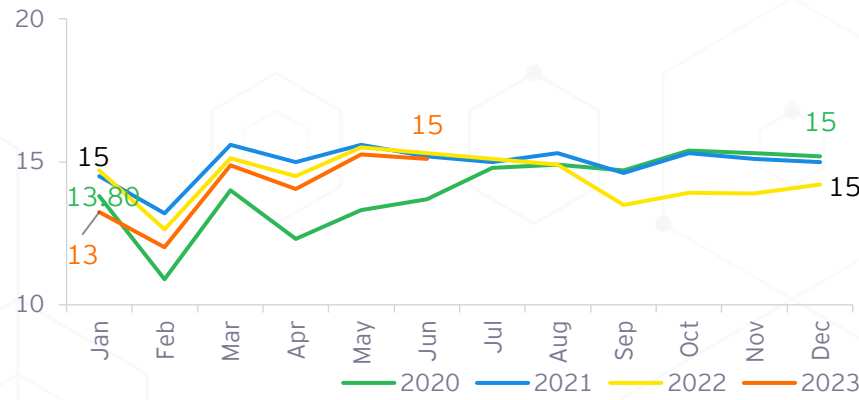
Global container freight transportation volumes and rates



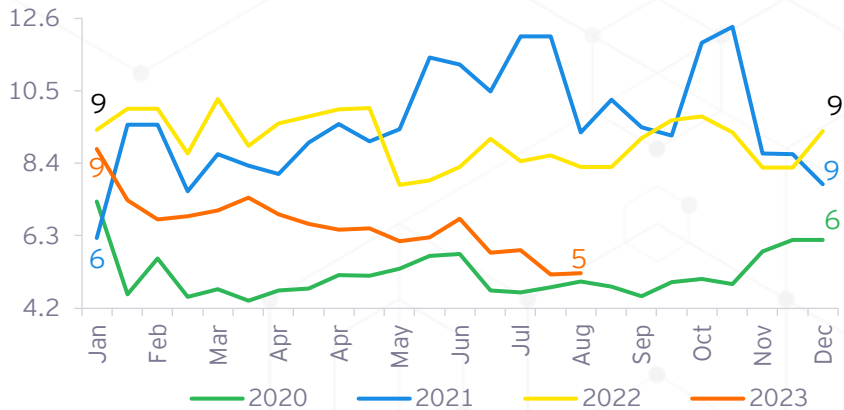
Global container freight index (in '00 US\$)



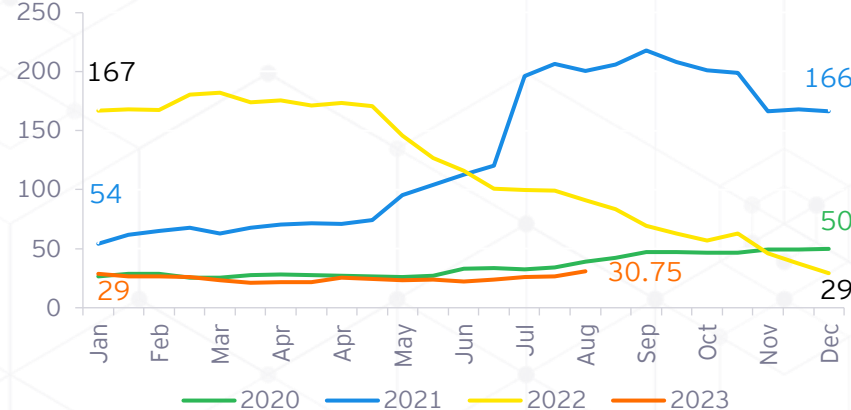
Global container traffic volume (million TEU's)



Container freight prices – North America East Coast to China/East Asia (in '00s US\$)



Container freight prices – China/East Asia to North America East Coast (in '00s US\$)



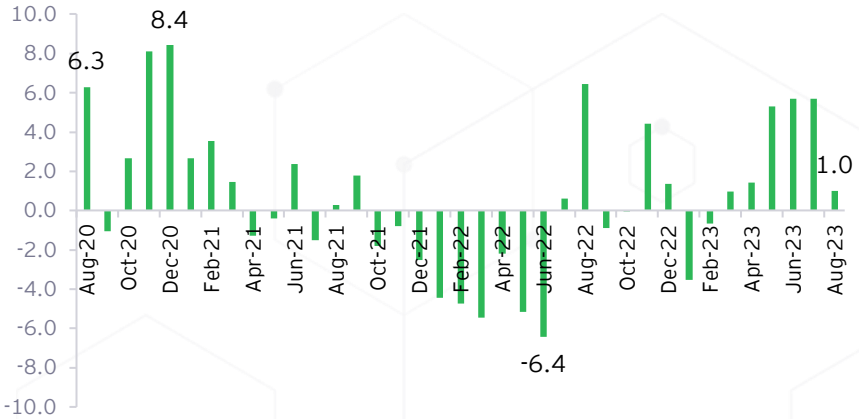
Key findings

- ▶ The lower trade volumes and container freight prices collaborate the data on weakness in global trade.
- ▶ Global container traffic volumes in 2023 have trended lower than levels noted in 2022 and 2021.
- ▶ The global container freight index has noted a significant decline to about US\$1,530 in August 2023, from a peak of US\$10,800 in September 2021. However, they have been increasing marginally since the last two months.
- ▶ Similarly, there has been a sharp decline in container freight prices from China/ East Asia to the North America East Coast from a peak of US\$16,705 to US\$2,171 in April 2023. Freight prices have since risen to US\$3,075 in August.

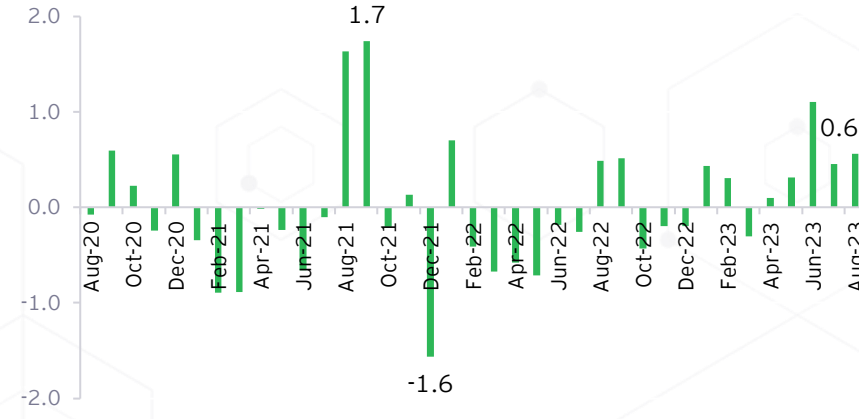
Note: Container freight index and freight prices as of 31st August 2023
Source: FBX: Global Container Freight Index, Container Statistics



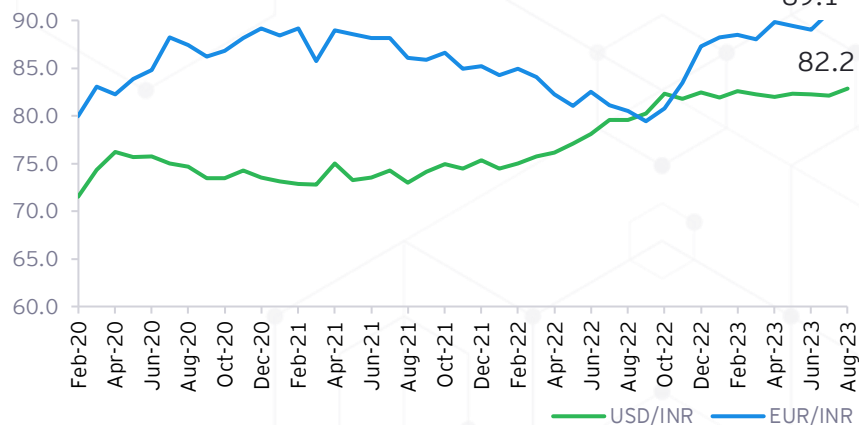
FPI Investments - Equity (in US\$b)



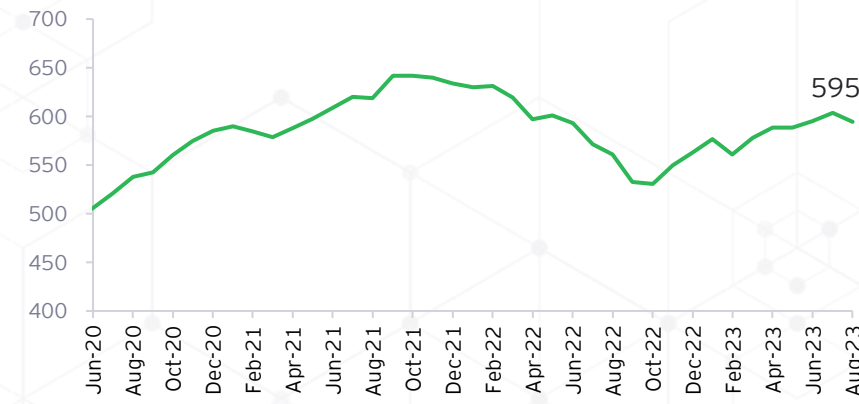
FPI Investments - Debt (in US\$b)



Exchange rates



India foreign exchange reserves (in US\$b)



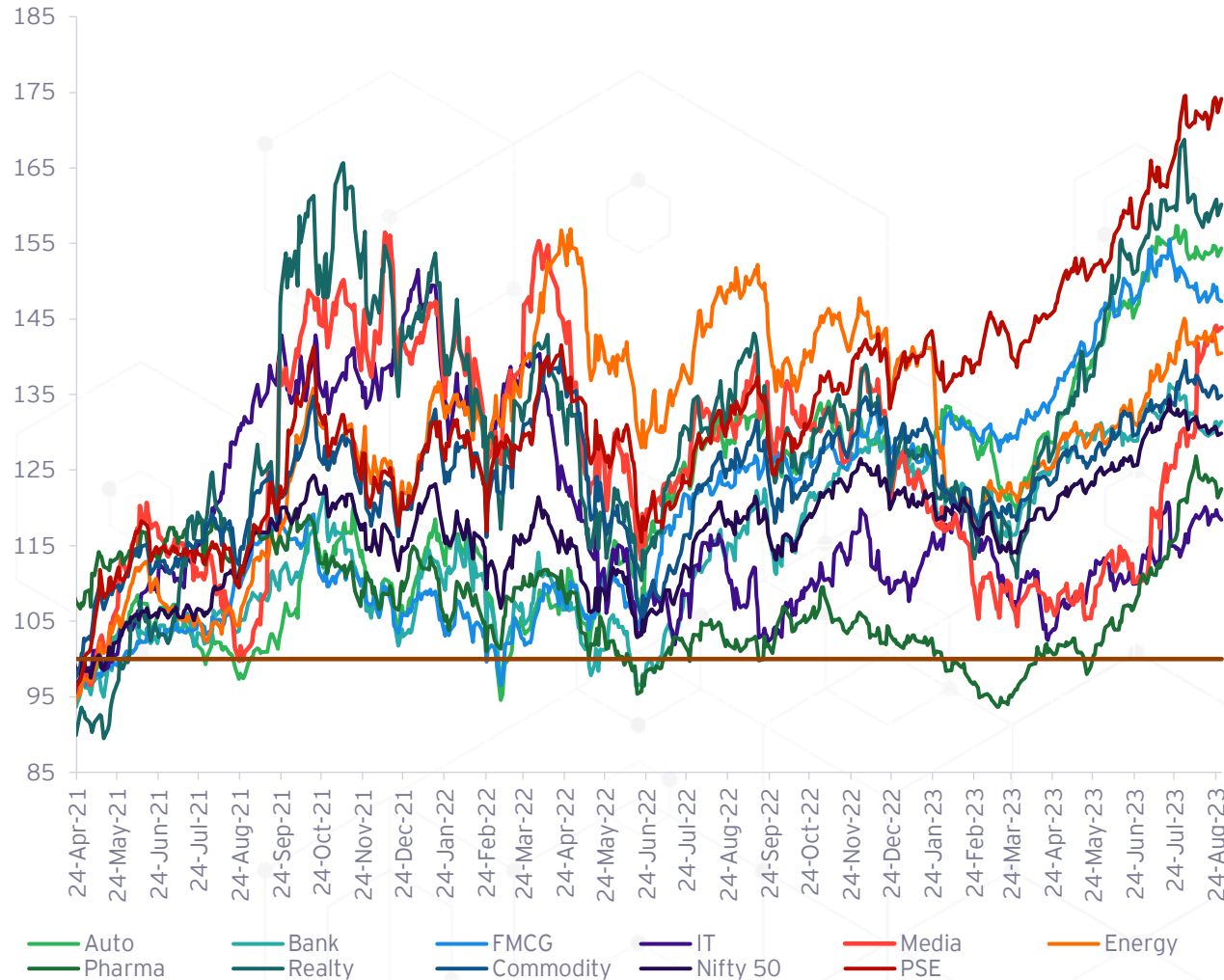
Key findings

- ▶ Foreign portfolio investors were net buyers in August 2023 with close to US\$1b inflow through the equity market and US\$0.6b through the debt route. The equity inflows, however, are lower than the average of US\$5.6b recorded in May, June, and July 2023.
- ▶ Since October 2022, the Dollar-Rupee exchange rate has fluctuated between INR81 and INR83. However, in the same period, rupee depreciated sharply against the Euro, largely due to the strengthening of Euro against US Dollar.
- ▶ Forex reserves declined in the aftermath of the conflict in Europe from US\$630b to US\$531b in October 2022. They then rose steadily to US\$604b in July 2023, before declining marginally to US\$595b in August 2023.

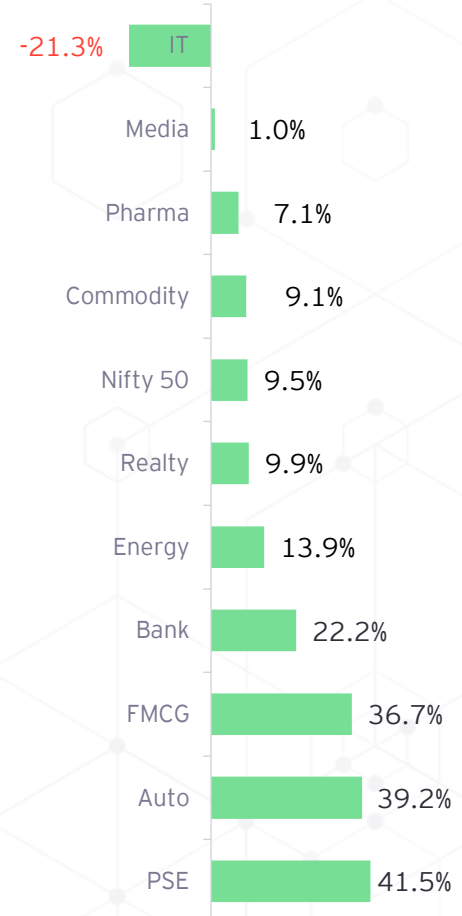
Source: DBIE, RBI, FBIL, NSDL
Data as of 31st August 2023



NSE indices (% change YTD)



NSE Indices (% change YTD)



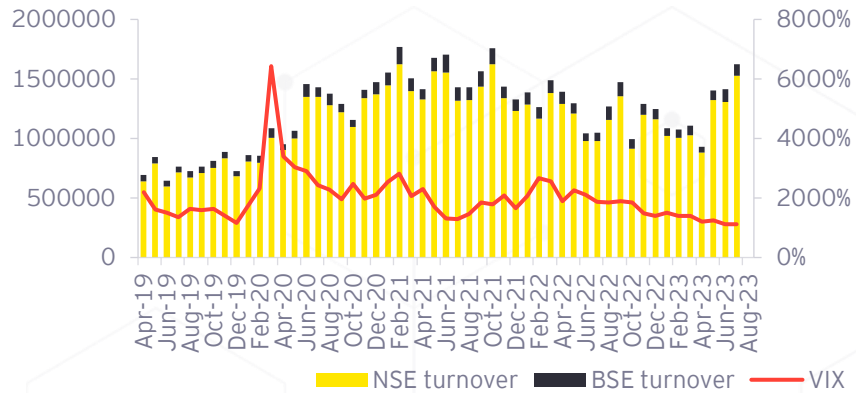
Key findings

- ▶ After a slow start in 2023, the Indian stock market has picked strength with Nifty 50 up by 9.5% year to date.
- ▶ The increase has been broad based driven by sectors which have noted high consumer demand (and inflationary pressure) such as FMCG and auto.
- ▶ Bank index is also showing resilience as banks' balance sheets continue to improve with lower NPAs, with a 22% increase in bank index since Jan 2023.
- ▶ Meanwhile, the IT sectoral index has continued to remain weak, recording a significant decline of 21%. The weakness continues as economic conditions in key global markets remain subdued. It is in line with global trends, where large IT players have announced layoffs and the PE/VC investments (a large portion of which is invested in the IT sector) have declined due to slowdown in advanced economies.

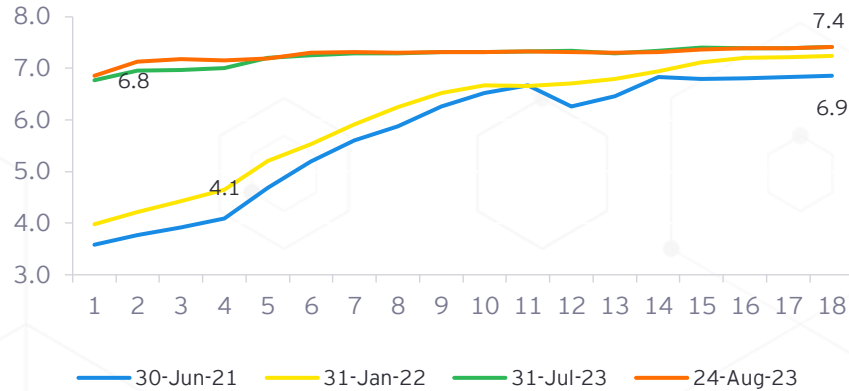
Source: NSE, Bloomberg Quint
 Data available as on 29th Aug 2023
 Base for calculating % change is 3rd January 2022

India Economic Pulse

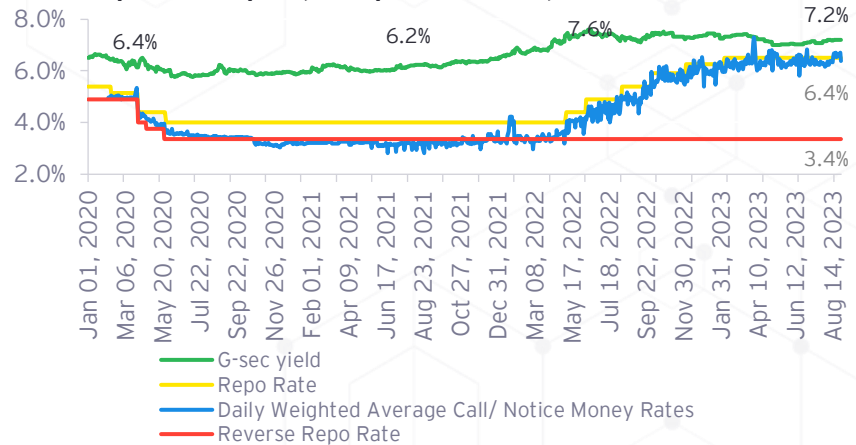
Stock market turnover (in INR cr) and volatility



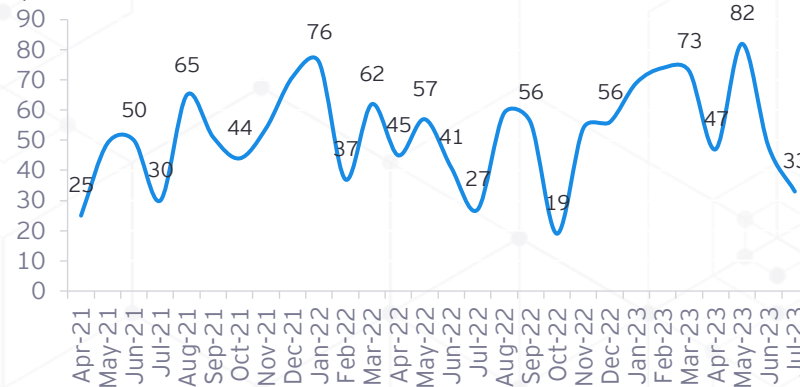
India sovereign yield curve (Annualized)



G-Sec yield (10yr), policy rate and spread



Corporate Bond Spread over G-sec AAA - (bps) -1Yr



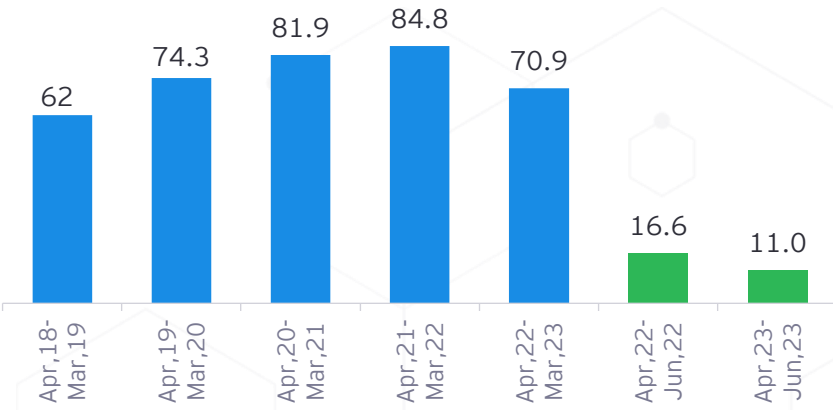
Key findings

- ▶ In the financial sector, stock market turnover improved from May onwards after noting lower volumes at the start of the year. In August, NSE recorded one of the highest turnovers of over 1,684 thousand crores.
- ▶ Stock market volatility, as indicated by VIX, has continued to note a reduction, decreasing to 12 points in August from 15 points in Jan 2023. However, there was a marginal increase in volatility noted in August over July.
- ▶ India's sovereign yield curve has been flattish with little difference between short term and long-term yields. However, it is not inverted.
- ▶ The yield on 10-year G-sec increased has remained range bound in the 7% to 7.2% range.

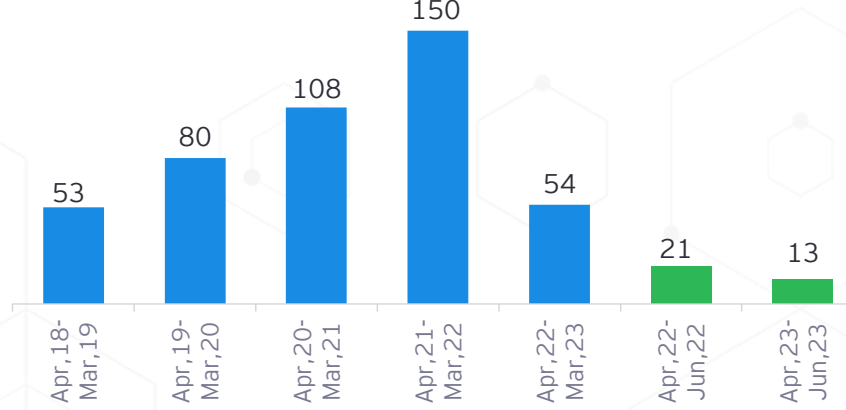
Source: NSE, BSE, CCIL and FBIL. Data available as on 31st August 2023
 VIX is a volatility index based on the NIFTY Index Option prices. It indicates the expected market volatility over the next 30 calendar day



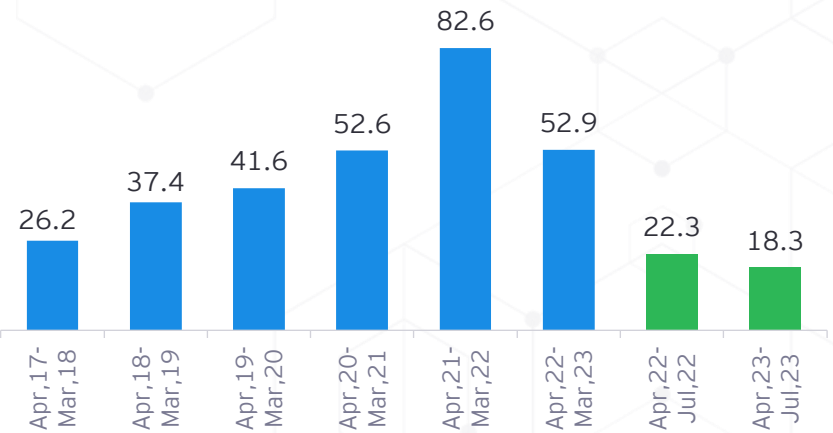
Gross FDI inflows in India (US\$b)



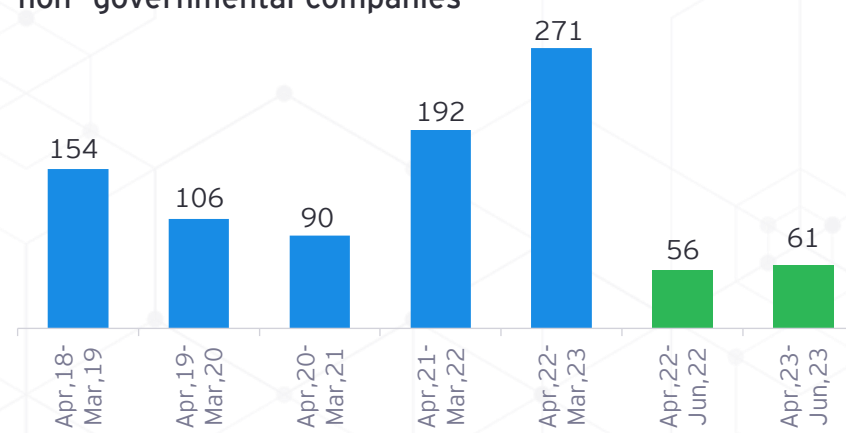
Capital issues by non-governmental companies ('000 crores)



PE/VC investments (US\$b)



No. of capital issues by non-governmental companies

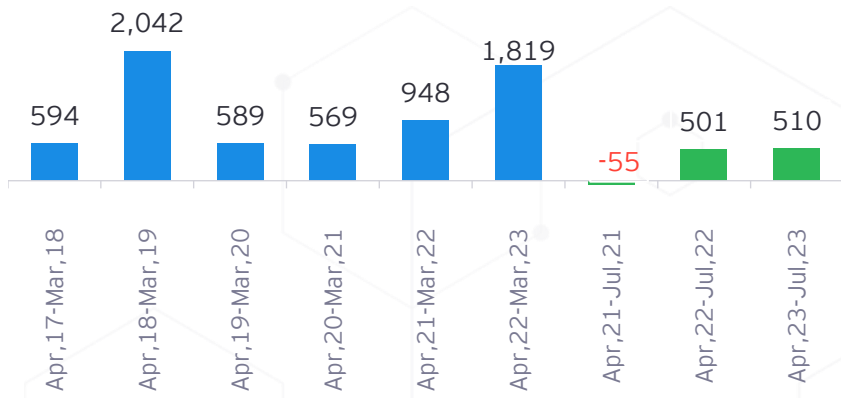


Key findings

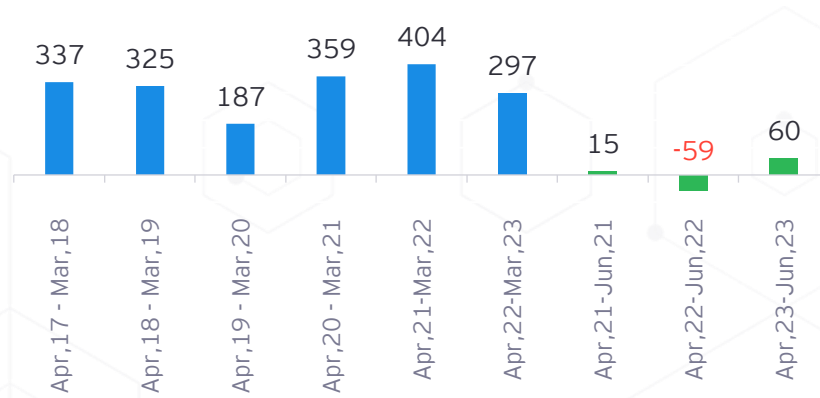
- ▶ There has been a decline in all the fund-raising indicators, i.e., Gross FDI inflows, PE/VC Investments and money raised by non-governmental companies.
- ▶ Gross FDI inflows decreased by 34% in Q1FY24 vis-à-vis Q1FY23.
- ▶ PE/VC funding has also recorded a substantial decline of 18% during the period of April to July 2023 vis-à-vis the corresponding period in 2022.
- ▶ This moderation can be attributed to an increase in interest rates globally and a slowdown in tech sector investments.



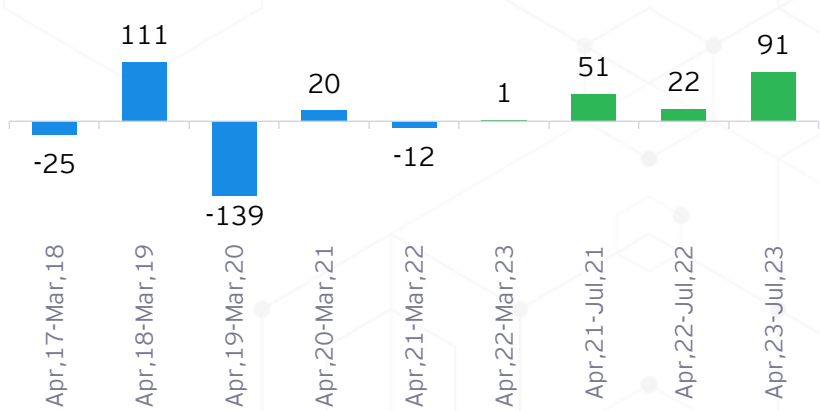
Flow of gross non food credit of scheduled commercial banks (INR '000 crores)



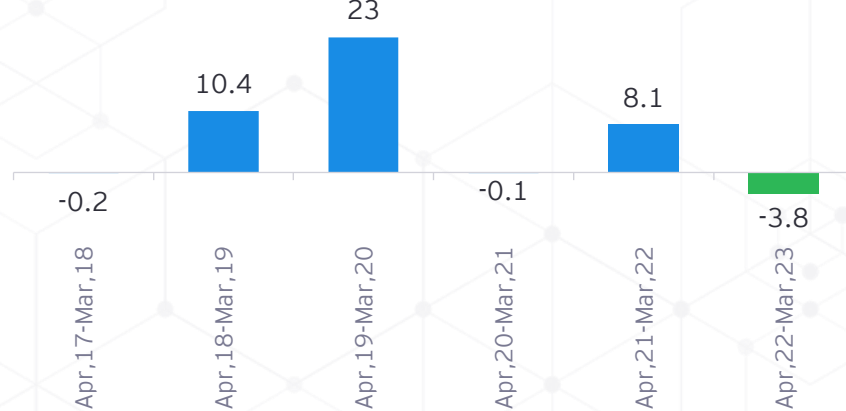
Change in outstanding corporate bonds listed on NSE and BSE (INR '000 Crores)



Change in outstanding commercial paper (INR '000 crores)



Change in external commercial borrowings (in US\$ billion)



Key findings

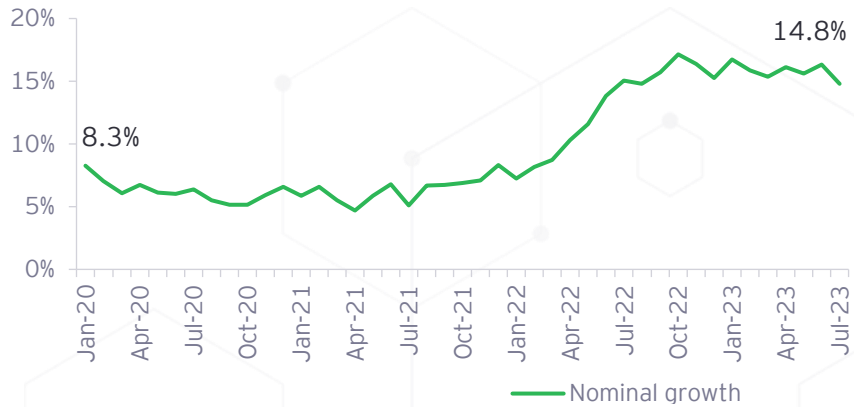
- ▶ Flow of additional bank credit from scheduled commercial banks for the period April to July 2023 is at the same levels as in the corresponding period of the previous year.
- ▶ However, outstanding corporate bonds have increased by INR60 crores after noting a decline in the previous fiscal during the same period.
- ▶ Similarly, a strong increase has been recorded in the flow of credit through outstanding commercial paper in the period Apr to Jul 2023 vis-à-vis the same period in the previous two fiscal years.
- ▶ External commercial borrowings recorded outflows of US\$5.6 billion between Apr to December 2022, amid rising global interest rates and higher uptake of domestic credit.

Source: RBI, SEBI
 Note: Outstanding commercial paper as of 31st July
 Note: March 2017 and 2018, use old reporting format for non food credit

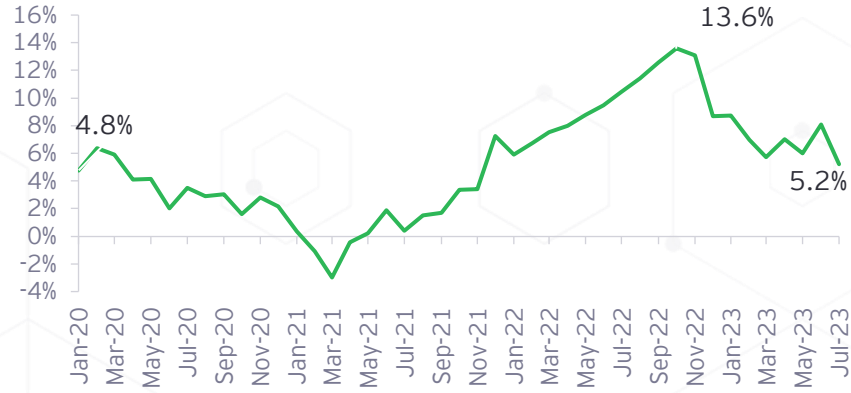




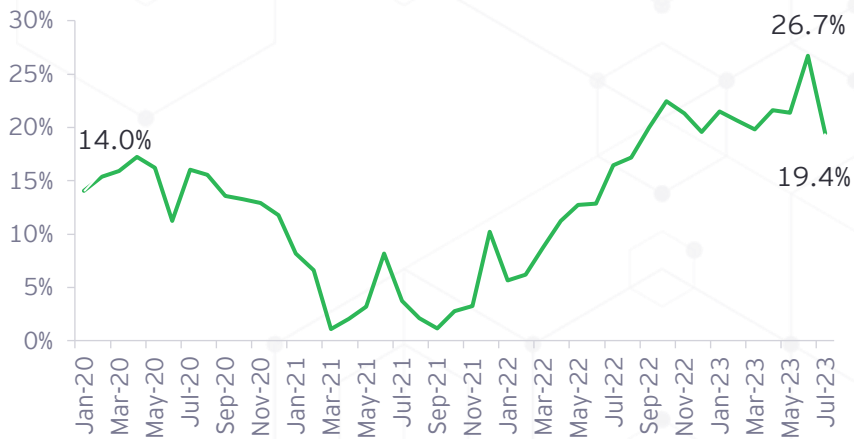
Growth rate of non food credit of scheduled commercial banks



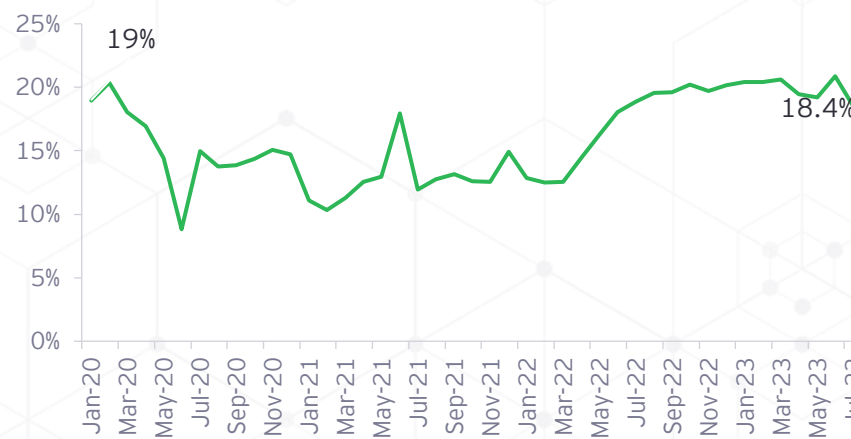
Growth rate of bank credit to industry



Growth rate of bank credit to service sector



Growth rate of bank credit to personal loans



Key findings

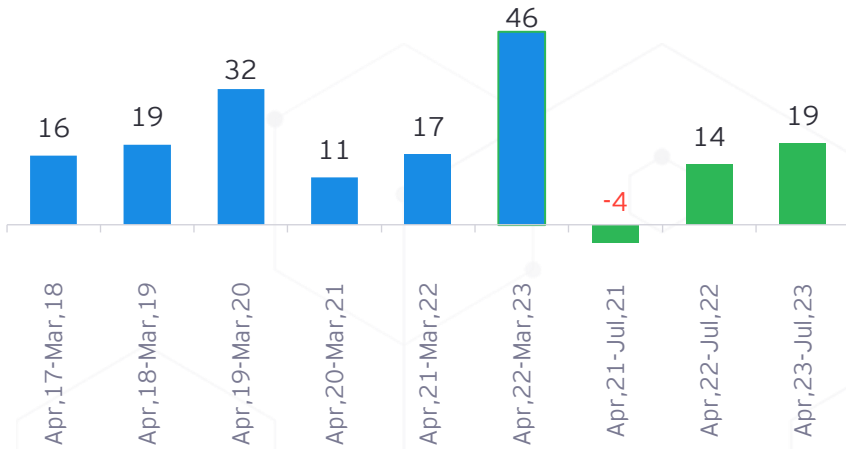
- ▶ Growth in the flow of credit in July has moderated for all sectors vis-à-vis the previous year.
- ▶ The growth in non-food credit was 14.8% in July 2023 vis-à-vis 15.1% a year ago.
- ▶ The credit to industry grew by 5.2% in July 2023 compared to 10.5% in July 2022. The growth rate has been moderating since October 2022.
- ▶ Among major industries, credit growth to basic metal and metal products and textiles accelerated. While credit to chemicals, food processing and infrastructure contracted.
- ▶ Credit flow to services and personal loans sector continues to remain strong with growth of over 19% and 18% in July 2023, respectively. This points towards resilience in consumer demand and services economy, as also shown by the GDP data.

Source: RBI
 Growth rates have been computed based on the change over 12 month period
 Apr and May 2020 inflation based on Jan-Mar 2020 average

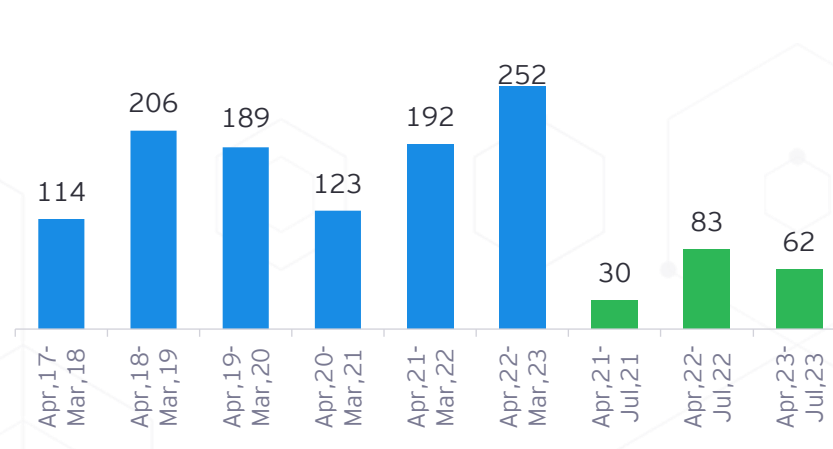
Change in gross personal loans advanced by banks



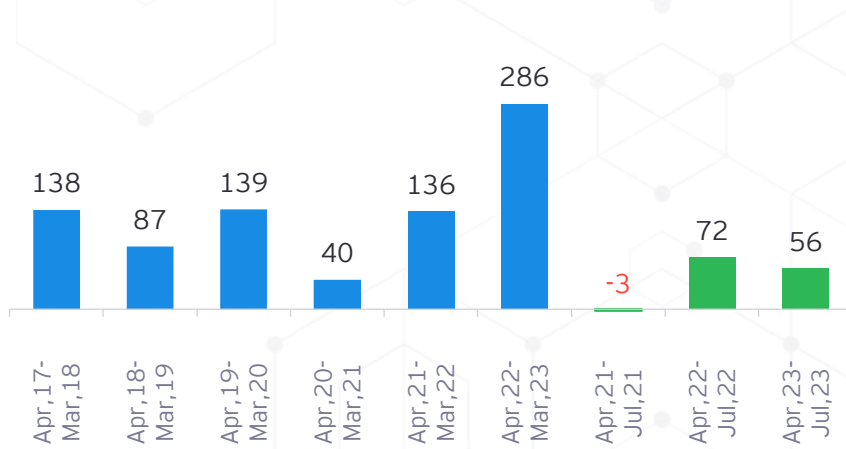
Credit card debt (in INR '000 crores)



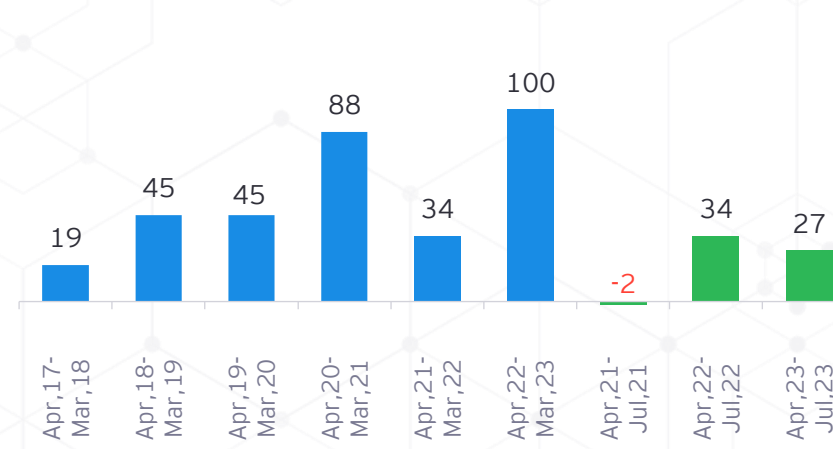
Housing loans (in INR '000 crores)



Other personal loans (in INR. '000 crores)



Vehicle loans (in INR '000 crores)



Key findings

- ▶ All categories of personal loan shows robustness, indicating resilient domestic consumer demand.
- ▶ Credit inflow to personal loans recorded an 18.4% increase in July 2023 vis-à-vis July 2022, driven by housing and vehicle loans.
- ▶ Additional credit card loans advanced by banks during Apr to July 2023 were higher by 35% vis-à-vis the same period in 2022. This reflects the formalization of the economy and robustness in consumer spending.
- ▶ Loans taken by consumers for housing and vehicles in Q1FY24 are lower than Q1FY23.
- ▶ Additional housing and vehicle loans outstanding are lower by 25% and 21% in Q1FY24 vis-à-vis Q1FY23.

Source: RBI
Other personal loans include consumer durables, advances to individuals and FDs, education, other personal loans

6

Government's policy thrust areas



Interest rate

- ▶ The Monetary Policy Committee, convened from August 8 to 10, unanimously chose to maintain the policy repo rate at its current level of 6.5%, marking the third consecutive occasion of such a decision.
- ▶ The monetary policy committee decided to focus on withdrawal of accommodative stance without hurting growth to achieve the inflation target band of 2% to 6%.
 - ▶ The surge in food inflation, primarily driven by the increased prices of tomatoes, is expected to contribute to an upward push on headline inflation in the short run. However, it is anticipated that this inflationary effect will ease as new supplies enter the market. Core inflation remained steady in June. RBI has revised the consumer price inflation projection upwards to 5.4% for FY24, with Q2 projections at 6.2%, Q3 at 5.7% and Q4 at 5.2%.
 - ▶ RBI resorted to incremental cash reserve ratio as a solution for tightening the liquidity to tame the short-term spikes in inflation.
 - ▶ The uneven temporal and spatial distribution of monsoon rainfalls requires careful monitoring, as it would be critical for inflation dynamics.
 - ▶ Real GDP growth for FY24 is projected at 6.5%.
 - ▶ According to the RBI, domestic economic activity is holding up well supported by domestic demand despite the drag from weak external demand.
 - ▶ Urban households are optimistic of improved economic conditions one-year ahead and the level of optimism remains stable. Maintaining growth in the agricultural sector is crucial for sustaining rural consumption demand.
 - ▶ Sustained growth in construction related indicators such as cement and steel consumption.
 - ▶ Merchandise exports and imports, including non-oil, non-gold imports, contracted in the recent months.
 - ▶ Healthy balance sheets for banks and corporations, the normalization of supply chains, optimism in the business sector, and robust government capital expenditure are favorable for the renewal of the capex cycle.
 - ▶ Headwinds from weak global demand, volatility in global financial markets, geopolitical tensions and geoeconomic fragmentation dim the economic outlook.

Key legislative highlights

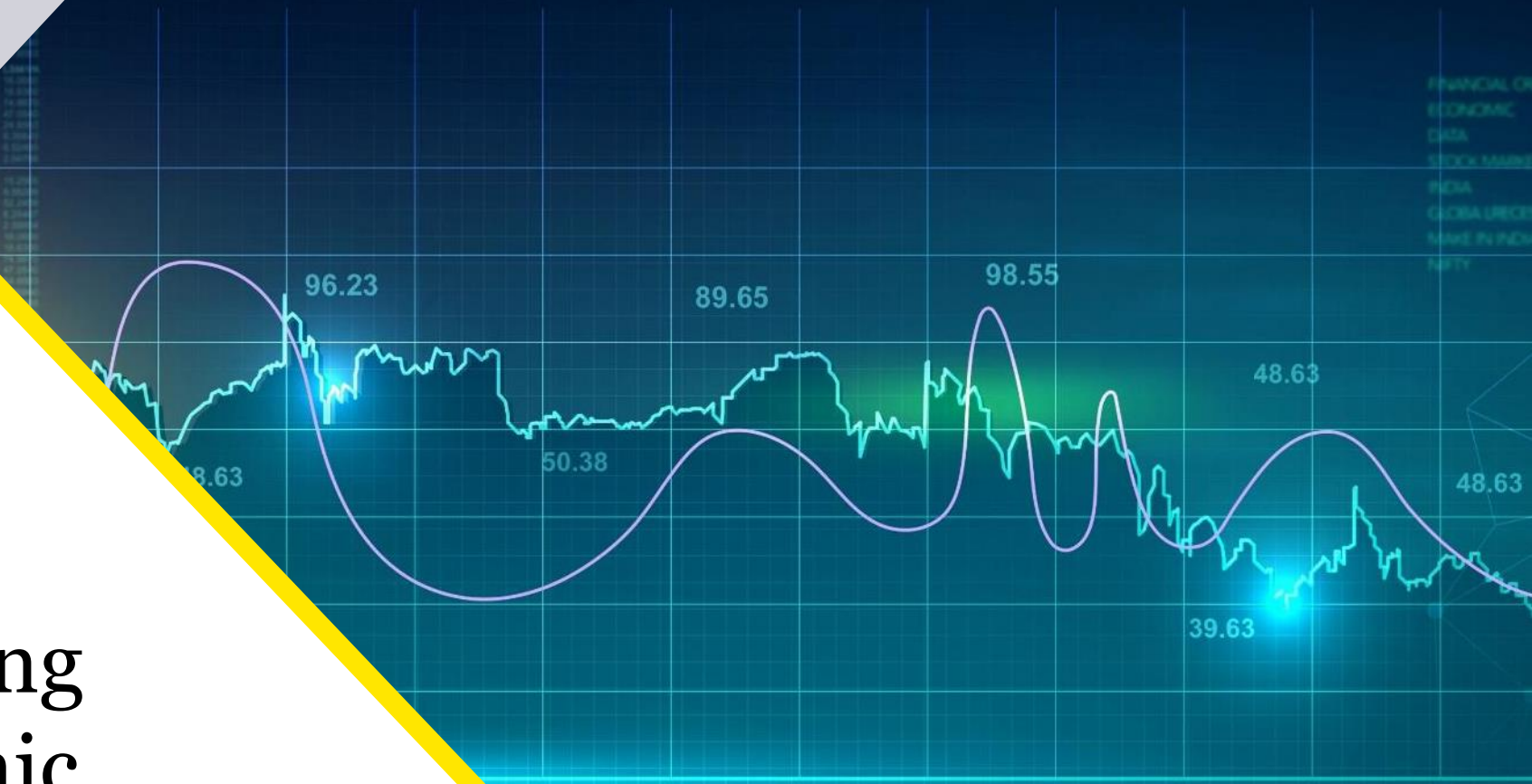
- ▶ During the monsoon session of the Parliament 23 bills and amendments were tabled and passed by both Houses. Some of the new laws may impact business and economic interests.
- ▶ Digital Personal Data Protection Bill, 2023 seeks to regulate the processing of digital personal data in a manner that recognises the right of individuals as well as provides the legal framework for the same. It facilitates the establishment of the Data Protection Board of India which will eventually notify the norms for processing personal data.
 - ▶ The Act will affect all business sectors and services where any individual customer/user data is collected, processed, held etc. at any stage. Organisations will have to audit their data practices/pipelines and eventually make necessary investments to ensure regulatory compliance.
- ▶ Forest (Conservation) Amendment Bill, 2023 seeks to streamline the approval process and clarifies the applicability on different land types.
 - ▶ The act will allow certain non-forest activities such as eco-tourism or running zoos in land notified as forest.
- ▶ The Mines and Minerals (Development and Regulation) Amendment Bill, 2023 seeks to introduce exploration licenses and delists some minerals from the atomic mineral list
 - ▶ The Act will allow private entities to mine six out of 12 atomic minerals (namely Lithium, Beryllium, Niobium, Titanium, Tantalum, and Zirconium). It introduces exploration licenses extending Private Sector allowances for deep-seated and critical minerals (Gold, Silver, Copper, Zinc, Lead and Nickel). The Act increases the areas in which the activities are permitted and empowers the central government to auction mining leases and composite licenses.
- ▶ The Offshore Areas Mineral (Development and Regulation) Amendment Bill, 2023 seeks to introduce auction as a transparent method of allocation of operating rights in offshore areas.
 - ▶ The Act grants the Government regulatory powers, reduces the minimum area (under operating right) and limits the maximum area of acquisition (under acquisition). It also provisions for the establishment of the Offshore Areas Mineral Trust. The key change would be the shift from discretionary allocations to transparent auctions.

Highlights: Enacted Bills/Amendments

- ▶ The Mediation Bill, 2023, seeks to promote and facilitate mediation through the establishment of a statutory framework in the India.
 - ▶ The Act outlines setting up of the Mediation Council of India, seeks to enable appointment of qualified mediators, establishes procedures and provides for the enforcement of mediated settlement arguments. The act seeks to lessen the burden on the courts through the focus on the alternative dispute resolution mechanisms, thus allowing for faster resolution of commercial disputes.
- ▶ The Central Goods and Services Tax (Amendment) Bill, 2023 seeks to amend the existing taxation system (CGST Act) to introduce a levy of 28% tax on online gaming, casinos, horse race clubs. The definition of supply is further extended to include the supply of services by a casino, racecourse, or gambling house.
 - ▶ The Act will impact the online gaming industry and will also establish the obligation of offshore entities to register for GST within India. This will help regulate the online gaming industry, facilitate compliance, increase transparency and protect consumers.
- ▶ The Jan Vishwas Bill, 2023, seeks to decriminalize 183 offences in 42 Central Acts across labor, environment, taxation, etc., and is aimed at improving the Ease of Doing Business and reducing the burden on the criminal justice system.
 - ▶ The Act decriminalizes minor, technical or procedural defaults which do have a significant impact on public interest. The Act introduces compounding of offences which allows for an offender to settle the case by paying a fine and not having to go to court. The Act also provisions for the revision of the fines and penalties every three years. The Act improves both the ease of living and the ease of doing business.

7

Revealing
economic
insights

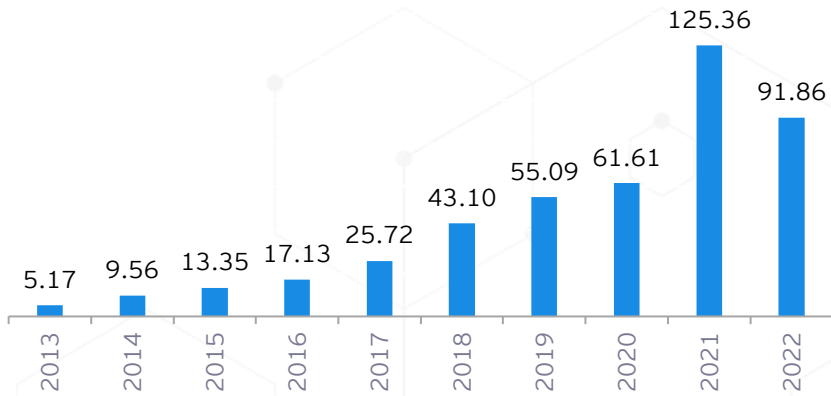




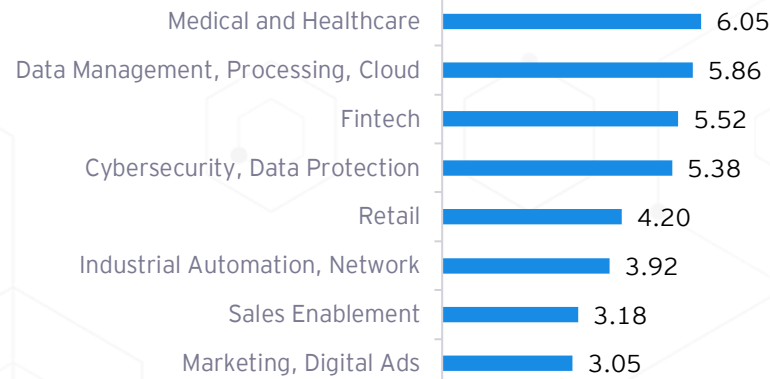
Investment trends in AI



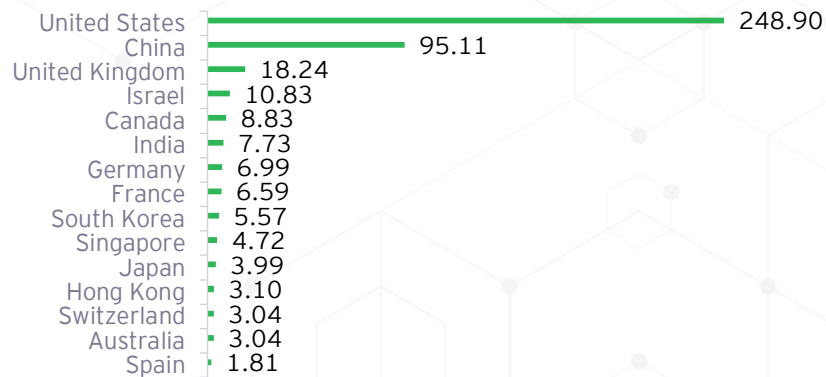
Global AI Private Investment (in US\$ billion)



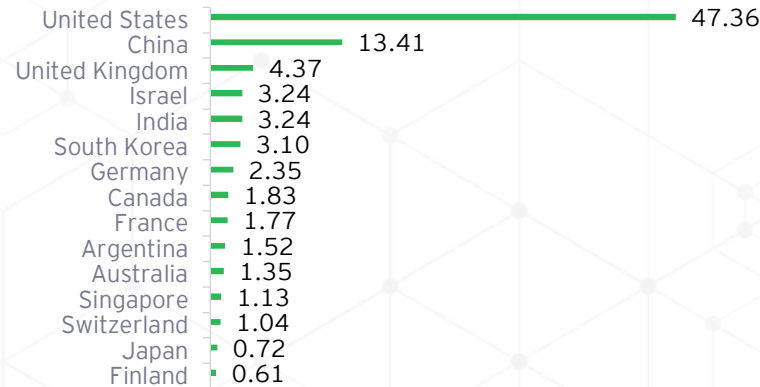
Private Investment in AI by Focus Area, 2022 (in US\$ billion)



Total Private Investment in AI by Geographic Area 2013-22 (in US\$ billion)



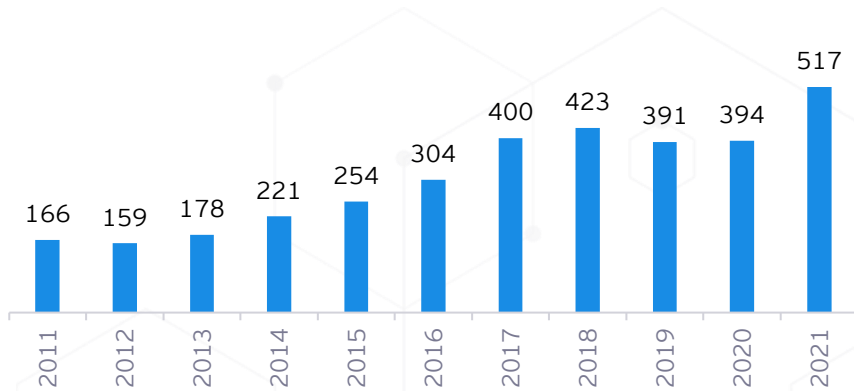
Private Investment in AI by Geographic Area, 2022 (in US\$ billion)



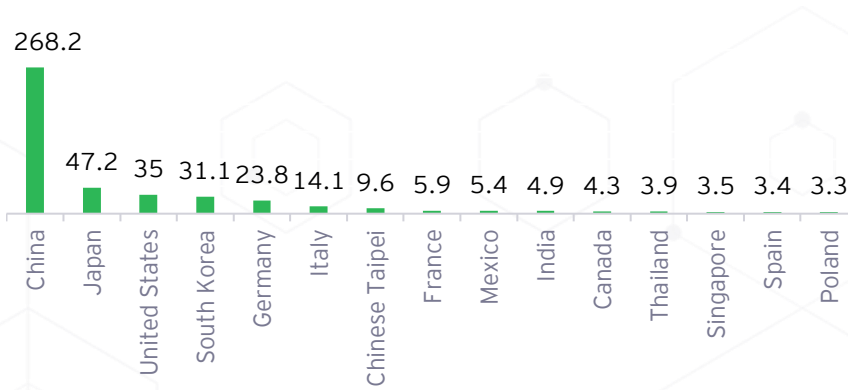
Key findings

- ▶ There is a sharp and continuous increase in Global AI private investments. While investments decreased in 2022, they were 18 times than those in 2013.
- ▶ The US saw the greatest influx of investments, accounting for more than 50% of private AI investments, with its investments being 3.5 times greater than those of China, which came in second, and nearly 11 times greater than the investments of the UK, which took the third spot.
- ▶ Israel, Canada and India follow China and the UK. Investment levels seem to be not only impacted by economic size but also strength of higher education system and IT capabilities.
- ▶ Countries such as India, South Korea and Argentina are now witnessing a sharper acceleration in investments.
- ▶ The AI investments have a widespread focus covering healthcare, retail, FinTech, advertisement suggesting very widespread impact.

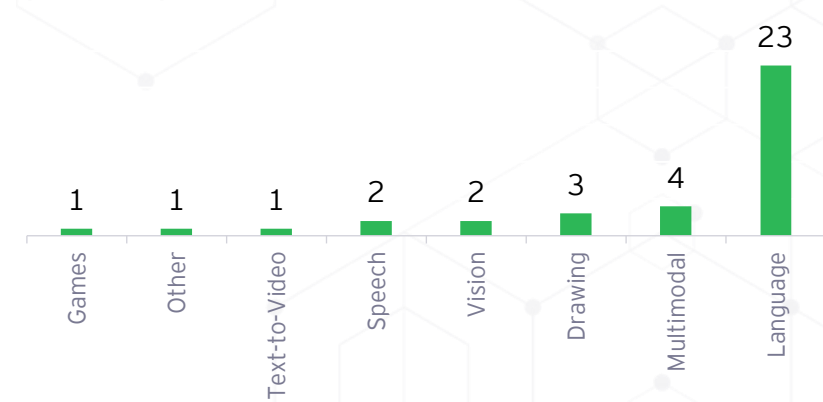
Number of industrial robots installed in the world (in thousands)



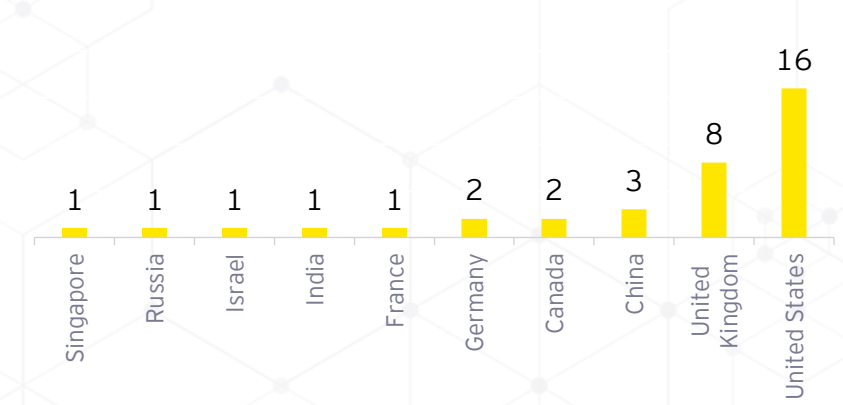
Number of industrial robots installed by country, 2021 (in thousands)



Number of significant machine learning systems by domain, 2022



Number of significant machine learning systems by country, 2022@



Key findings

- ▶ In 2021, there was a significant resurgence in global robot installations. The 517,000 industrial robots set up marked a 31.3% rise from 2020 and an impressive 211.5% increase since 2011.
- ▶ China leads the race of industrial robot installations. In 2021, it installed 5.7 times the numbers installed in second ranked Japan's 7.7 times than the third placed United States.
- ▶ US leads the world in release of significant machine learning systems, though closely followed by UK and ahead of China.
- ▶ In 2022, language AI systems were dominant, about six times more numerous than the second most common type: multimodal systems.
- ▶ This and the previous slide points to the uneven investments, development and deployment of AI.

Source : "The AI Index 2023 Annual Report," AI Index Steering Committee, Institute for Human-Centered AI, Stanford University, Stanford, CA, April 2023
 industrial robots are defined as an "automatically controlled, reprogrammable, multipurpose manipulator, programmable in three or more axes, which can be either fixed in place or mobile for use in industrial automation applications
 @ This table showcases the Machine Learning Systems attributed to researchers from particular country. A researcher is considered to have belonged to the country in which their institution was headquartered.

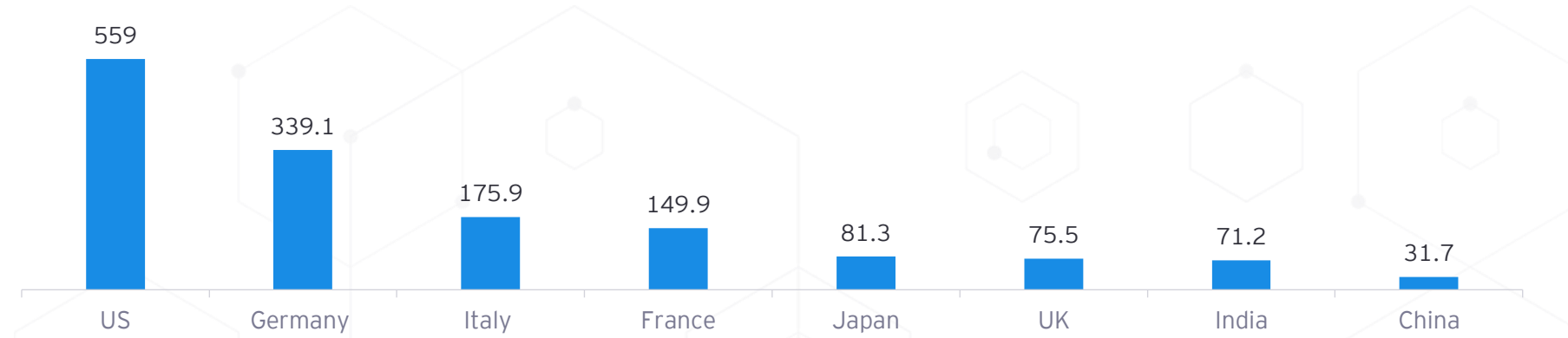


Energy spend across countries

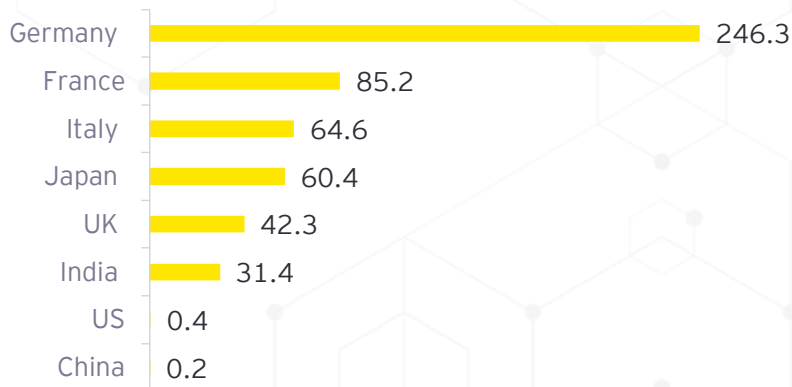
Government Energy Spending by Category

Government energy spending tracker

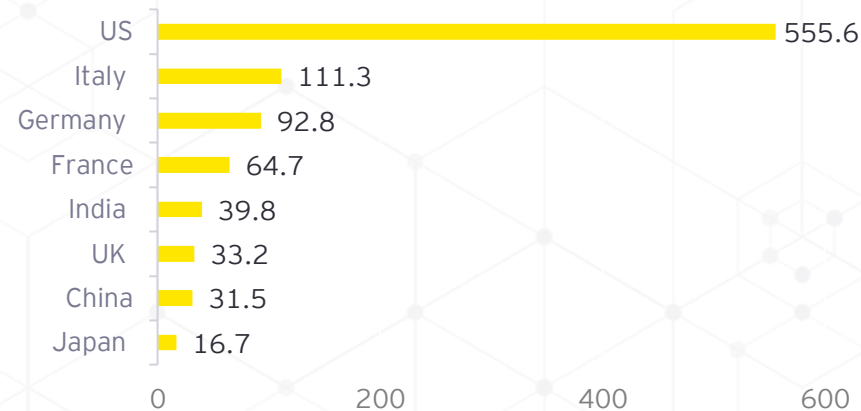
Total government energy spending commitment announced from Q2 2020 till June 2023 (US\$b)



Energy affordability (US\$b)



Clean energy investment support (US\$b)

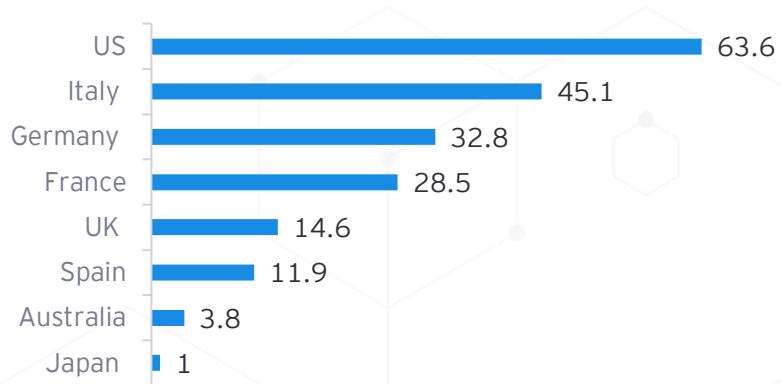


Key findings

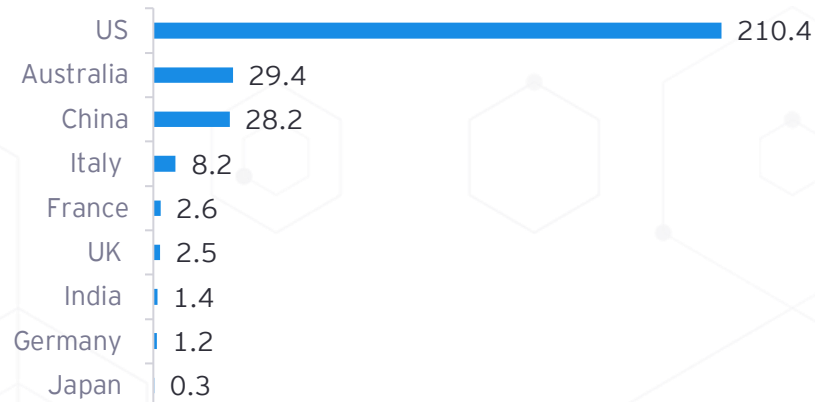
- ▶ Governments have been committing significant investments in energy, focusing both on energy affordability and as well as clean energy comprising mass transit, low-carbon electricity, and clean vehicle incentives.
- ▶ However, the commitment between the two varies significantly across governments.
- ▶ The EU leads global government affordability aid with two-thirds share, grappling with soaring energy prices. Emerging economies also upped consumer support, offsetting energy firms' losses from stable prices. Consequently, emerging economies allocated more to affordability (US\$140 billion) than clean energy (US\$90 billion) since 2020.



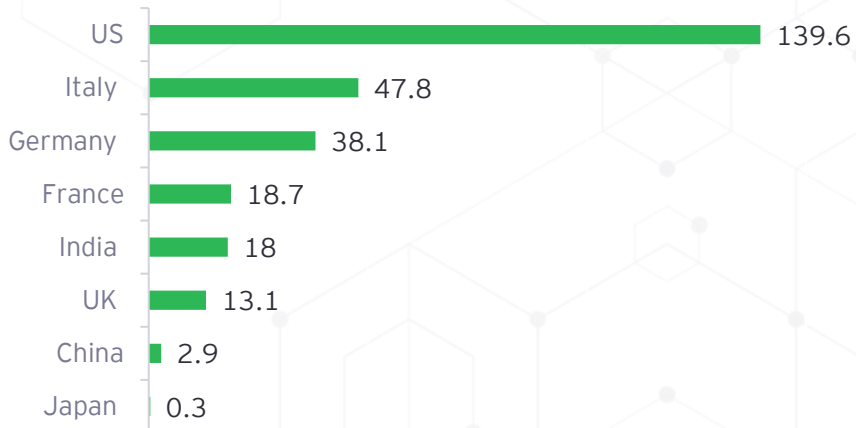
Energy efficient buildings and industry (in US\$b)



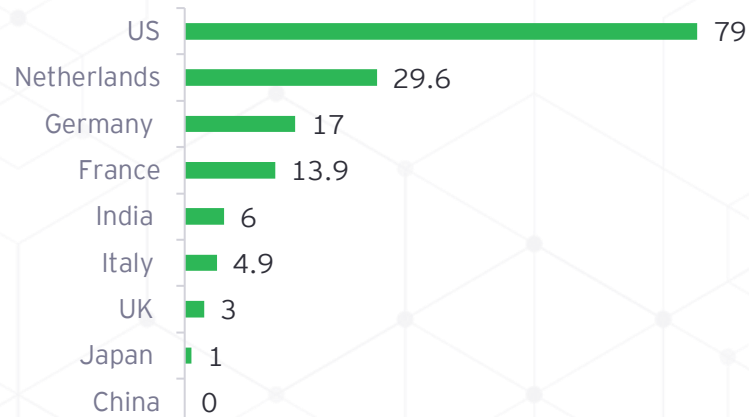
Low-Carbon Electricity (in US\$b)



Low-carbon and efficient transport (in US\$b)



Fuels and technology innovation (in US\$b)



Key findings

- ▶ Advanced economies dominate spending, representing 93% of clean energy investment support
- ▶ US leads the world in committing government resources to all forms of clean energy primarily through the Inflation Reduction Act and dwarfs the rest of the world.
- ▶ Support through government spending varies across countries. India, for example, provides significant budgetary support for low carbon and efficient transport, while China and Australia have committed budgetary support for low carbon electricity.

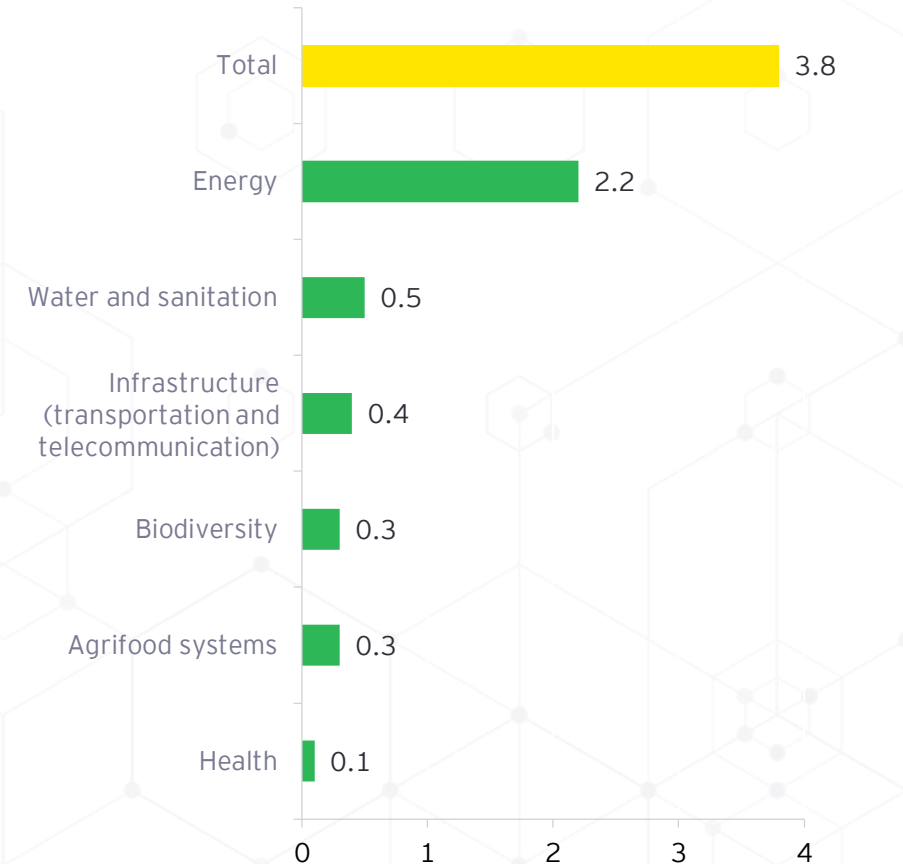


Global shift of focus toward Sustainable Development Goals (SDGs)

International private investment in SDGs: change in number of projects 2021-22 and 2015-2022

Particulars	2021-22	2015-22
Infrastructure (Transport infrastructure, power generation and distribution (except renewables), telecommunication)	+26%	+16%
Renewable energy (Installation for renewable energy generation, all sources)	+8%	+21%
WASH (Provision of water and sanitation to industry and households)	+20%	+13%
Agrifood systems (Agricultural production and processes; fertilizers, pesticides and other chemicals; R&D; technology)	+6%	-19%
Health and education (Hospital facilities, school buildings and other infrastructure for service delivery)	+8%	+11%

Key SDG sectors: estimated annual investment gap in developing countries, capital expenditure, 2023-30 (Trillions of dollars)



Key findings

- ▶ The number of international investment projects announced in developing countries in sectors relevant to the SDGs increased substantially in 2022.
- ▶ In 2022, the combined value of SDG-relevant greenfield investment and international project finance in developing countries reached \$471 billion, up from \$290 billion in 2015.
- ▶ The number of international investment projects (2022 vs. 2021) in infrastructure (which comprises transport infrastructure, power generation and distribution) and telecommunication saw the highest growth (26%), followed by the water, sanitation and hygiene (WASH) sector (20%).
- ▶ It is estimated that there is an annual investment gap of \$2.5 trillion in developing countries (2030 vs. 2023).
- ▶ On an annual basis, the current investment gap is 60% to 70% higher than the gap estimated in 2014.
- ▶ If the SDGs are to be achieved by 2030, more than \$30 trillion of new investment is necessary over the next eight years.

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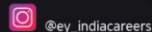
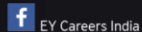
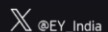
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