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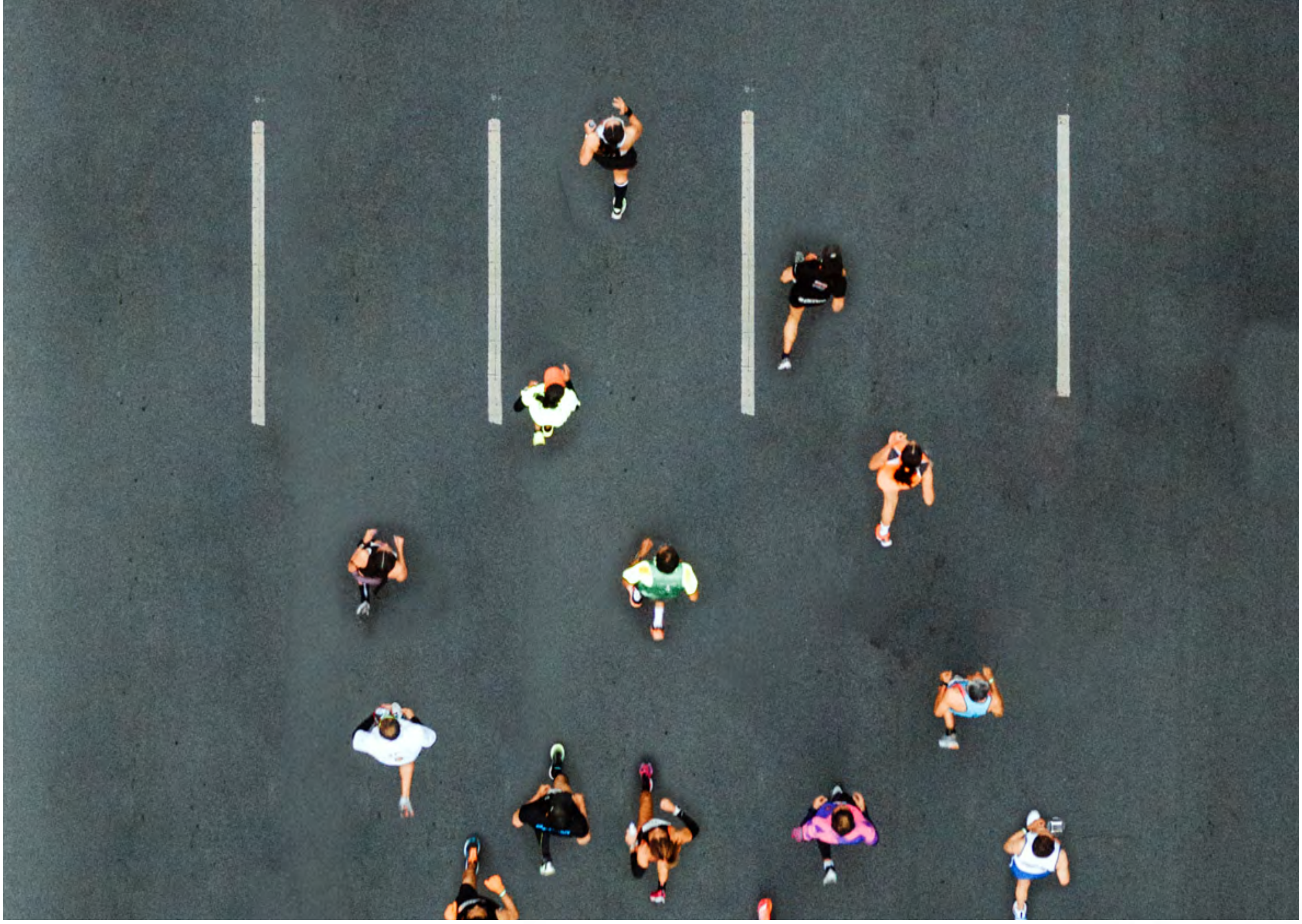
Growth marathon

Emerging sectors, investments, efficiency gains priming India's medium-term pace

March 2024



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India's economic growth has been resilient against global headwinds for three fiscals now.

Policy and regulatory support and prudence have helped, as has the gradual reinvigoration of the private sector.

We see India continuing to grow well this decade piggybacking significant investments in the emerging sectors, continuation of major investments by the government and efficiency gains stemming from advances in digitalisation and physical connectivity.

For the next fiscal specifically, we expect India's gross domestic product (GDP) growth to moderate to 6.8% after a better-than-expected 7.6% expansion this fiscal, given that high interest rates and lower fiscal impulse (from reduction in fiscal deficit to 5.1% of GDP) would temper demand and the net tax impact would normalise.

Additionally, uneven economic growth of key trading partners and escalation of geopolitical uncertainties can be a drag on exports.

But there will be support from other flanks.

Continued disinflation will prop the purchasing power of consumers. Healthy rabi sowing and good kharif output (assuming another spell of normal monsoon is ahead) will bolster agricultural incomes.

Further, a gradual pick-up in private capital expenditure (capex) will make investment growth more broad-based. The government has also provided budgetary support to rural incomes and infrastructure spending.

India will thus retain its tag of the fastest-growing large economy.

Between fiscals 2025 and 2031, the size of the Indian economy will inch closer to the $7 trillion mark, based on CRISIL's expectation of average annual growth of 6.7%.

At that point, India will become the third-largest economy in the world.

A corollary would be the rise in per capita income that would place India in the upper middle-income category.

On this growth path, while capital will continue to play a dominant role, productivity gains will be largely supportive as well. This will come from synergising physical and digital connectivity and the continuing push to economic and process reforms.

India will be firing on both cylinders — manufacturing and services — which lends credence to the argument of being on a sturdier growth path.

After a sluggish decade, manufacturing will pick up pace on improving competitiveness, increasing investments, global opportunities from supply-chain diversification, the green-transition imperative and domestic policy push.

Services will continue to have a larger footprint, though.

Over the past three fiscals, capex in the country has been driven by the household sector and the infrastructure buildout bankrolled by the central and state governments.

Going forward, the industrial sector is expected to pick up pace, with investments flowing towards both conventional and emerging sectors, even as infrastructure capex maintains momentum.

Overall capex is seen growing 9-11% annually over the next four fiscals, with a good mix of the industrial and infrastructure segments.

There are three enablers here.

First is the financial flexibility of India Inc to pursue expansion. Enhanced profitability and strategic deleveraging have led to healthier balance sheets.

Second, revenue growth of India Inc, projected at 9-10% next fiscal, will remain healthy for the fourth consecutive fiscal. This augurs well for utilisation of existing capacities.

Third, next fiscal is likely to see benign commodity prices.

Emerging sectors such as electric vehicles (EVs), semiconductors and electronics will dominate investments, driven by market dynamics and global supply-chain diversification.

With an expected Rs 5-7 lakh crore capex, these sectors will likely contribute 20% to the overall industrial investment in the next four fiscals.

Investment intent is strong in most emerging sectors, which are in the nascent stages. Their development would trigger large-scale capex, leading to higher value addition in domestic manufacturing.

The government has played a crucial role in triggering industrial capex across conventional and emerging sectors through the Production Linked Incentive (PLI) scheme.

With incentives worth Rs 1.82 lakh crore offered across 14 sectors, PLI focuses on improving India's attractiveness as a global manufacturing hub and narrowing the gap with major destinations.

In terms of financing, the domestic banking sector is primed for capex in the conventional sectors. This follows a meaningful decline in gross non-performing assets (NPAs) of the industrial sectors and decadal-best capital levels.

The evolution of funding patterns for the emerging sectors remains a monitorable in two ways:

First, many of the companies setting up plants in India are international majors. Hence, their dependency on the Indian banking system may tend to be low.

Second, Indian companies participating in the capex of these emerging sectors are part of large corporate groups with the ability to raise funds from both international and domestic markets at competitive rates. This could lead to stronger flow of funds through alternative channels such as foreign direct investment (FDI) and the corporate bond market.

The challenges ahead could stem from geopolitics, uneven global economic growth, climate change and technological disruptions.

Domestic structural and cyclical levers will come in handy for India to face some of these. But continuous reforms, enhanced global competitiveness and moving up the value chain will be necessary to ensure growth remains strong beyond this decade.

I am sure you will enjoy going through the insightful report.

Contents

At 6.8%, India to stay the fastest-growing large economy; emerging sectors in spotlight

The next seven fiscals will see the Indian economy crossing the $5 trillion mark and inching closer to $7 trillion

Fiscal 2025 will see growth moderating

After a better-than-expected 7.6% this fiscal, India's real GDP growth will likely moderate to 6.8% in fiscal 2025.

The transmission of the rate hikes effected by the Monetary Policy Committee (MPC) of the Reserve Bank of India (RBI) between May 2022 and February 2023 still continues and is likely to weigh on demand next fiscal. On the other hand, regulatory actions to tame unsecured lending will have a bearing on credit growth.

A lower fiscal deficit will mean the fiscal impulse to growth will be curtailed. But the nature of spending will provide some support to the investment cycle and rural incomes.

We also expect a normalisation of the net tax impact on GDP witnessed this fiscal.

Uneven economic growth for key trade partners and an escalation of the ongoing Red Sea crisis can be a drag on exports.

That said, some factors will continue to underpin growth next fiscal. Continued disinflation will support the purchasing power of consumers. This assumes a spell of normal monsoon in calendar 2024, which can lift agricultural growth on a low base. And a gradual pick-up in private sector capex will make investment growth more broad-based.

Net-net, amid the interplay of these factors, India will retain its position as the fastest-growing large economy.

Interestingly, the next seven fiscals (2025-2031) will see the Indian economy crossing the $5 trillion mark and inching closer to $7 trillion. A projected average expansion of 6.7% in this period will make India the third-largest economy in the world and lift per capita income to the upper middle-income category by 2031.

To be sure, there will be near- and medium-term challenges posed by geopolitics, slowing potential growth from an uneven global recovery, climate change and technological disruptions.

We believe the Indian economy will take support from domestic structural reforms and cyclical levers and can retain — perhaps even improve — its growth prospects.

This can be done by continuing to build infrastructure — both digital and physical — and undertaking growth-enhancing reforms aimed at improving the ease of doing business. Amid global risks, this can also allow India to grasp opportunities from diversifying global supply chains.

Crucially, the near term will be characterised by fiscal consolidation, with the gradually receding role of government capex, and expectations of the baton being taken up by the private sector.

Some of this has begun. For instance, the emerging sectors that we identify as growing faster than the others — electronics, EVs and energy transition-intensive — accounted for 16% of incremental capex in fiscals 2023 and 2024.

This trend is expected to continue over the next few years, supported by policy push, global value-chain shifts, the green-transition imperative, leaner balance sheets and availability of finance. Conventional capex (in sectors such as oil and gas, petroleum, and iron and steel) will continue, but will be at a slower pace than the capex in the emerging sectors.

An assessment of investment trends across ~20 sectors that represent more than 70% of the total industrial investment in the country indicates private capex will rise to Rs 6.5 lakh crore annually on average between fiscals 2024 and 2028 from Rs 3.9 lakh crore in the preceding five years. With Rs 5-7 lakh crore of incremental capex, the three above-mentioned emerging sectors will likely contribute 20% to the overall industrial investment over the next four fiscals.

Growth to moderate next fiscal

- GDP growth will decelerate to 6.8%
- Inflation and policy rates have peaked, and rate cuts could begin in June 2024 at the earliest
- Broad-basing of private investments will continue even as the government tones down its fast and furious spending on infrastructure. Emerging sectors will drive capex over the medium term
- Budgetary support to rural India will also help prop up income and demand in the hinterland
- Monsoon and global developments, including on crude oil and logistics, will be monitorable as extraordinary swings in these can impact both growth and inflation

CRISIL's macro outlook for fiscal 2025

Macro parameter	FY24E	FY25F	Rationale for outlook
Real GDP growth (y-o-y %)	7.6%^	6.8%	High interest rates and lower fiscal impulse (from reduction in fiscal deficit to 5.1% of GDP) will temper domestic demand. Net indirect tax impact on GDP is expected to normalise next fiscal. Uneven growth in key trade partners will restrict healthy export recovery. But budgetary support to capex and rural incomes will support growth
CPI inflation (y-o-y %)	5.5	4.5	Soft commodity prices and healthier farm output should help moderate inflation. A non-inflationary budget that focuses on asset creation rather than direct cash support bodes well for core inflation and hence monetary policy
Fiscal deficit* (% of GDP)	5.8	5.1	Continued pursuit of fiscal consolidation aided by moderation in revenue spending and robust tax collections will reduce the fiscal deficit and lead to lower government borrowings from the market
10-year government security (G-sec) yield (fiscal-end, %)	7.0	6.8	Lower gross market borrowings will reduce the pressure on yields. Lower inflation and expected rate cuts by the MPC will create downside pressure on yields. India's inclusion in the JP Morgan Emerging Market Bond Index is favourable for capital flows into government debt
Current account balance (% of GDP)	-1.0	-1.0	Softer crude oil prices and moderation in domestic growth will keep trade deficit in check despite tepid exports of goods. Alongside, robust services trade surplus and healthy remittances will keep the current account deficit (CAD) in check
Exchange rate (fiscal-end, Rs/$)	83.0	83.5	Narrower CAD and healthy foreign portfolio flows into debt amid a favourable domestic macro environment will support the rupee

^National Statistical Office (NSO) second advance estimate; *FY24 and FY25 numbers are government's revised and budget estimates
Note: E - estimate, F - forecast
Source: CRISIL

India's capital formation story has begun to unfold

Dr V Anantha Nageswaran
Chief Economic Advisor to the Government of India

The Indian government's economic growth strategy rests on two pillars: growth through infrastructure buildout, and inclusion through empowerment.

The emphasis on the first pillar was already evident during the Atal Bihari Vajpayee-led government between 1998 and 2004.

The present government took it to another level during its tenure, based on a combination of conviction, circumstances and sound economic logic.

In the second decade, balance-sheet troubles of the Indian corporate and financial sectors hampered private sector capital formation. It came to a head in 2018 when a big non-banking financial intermediary collapsed.

Animal spirits were low in the private sector and economic growth slowed. The government took a conscious decision to ramp up public investment for several reasons.

One, it would boost economic activity as investment generates business for suppliers and for manufacturers of infrastructure goods, such as cement and steel.

In other words, its multiplier effect on the economy is manifold than a straightforward fiscal stimulus that either involved government consumption spending or boosting consumption spending by households.

Two, the employment generation effect of public investment is higher and longer lasting than the aforementioned stimulus avenues.

Three, banks were in a risk-averse mode as they were dealing with legacy bad debts. The government sector was the only one to which they could have lent comfortably. So, the government stepped in to sustain economic activity. In the process, it nurtured conditions for a recovery of banks' financial strength.

Four, public investment spending filled an important gap in the Indian economy that has remained for several decades. India has been a supply-constrained economy. A large part of the reason for India's inadequate industrialisation was deficient infrastructure, which also raised operating and logistics costs for Indian businesses.

Manufacturing growth was affected. Indian products were not cost-competitive in the export markets. Inflationary pressures in the economy were quick to build as supply often failed to cope with rising demand after a few years.

The present government's public investment spending addressed all these issues and has successfully done so to a significant degree in the past six fiscals.

Five, the public investment spending was meant to provide space and time for the corporate sector to regain its financial health and then take over the mantle of sustaining capital formation from the government.

This is now beginning to unfold, despite the delay caused by the pandemic that had its dampening effect on investment spending for at least two fiscals.

Six, public investment in infrastructure boosted the potential non-inflationary growth rate of the Indian economy for the medium to long term.

The results are there for all to see.

Overall, public sector spending on capital investment rose from Rs 7.9 lakh crore in fiscal 2017 to a budgeted Rs 18.6 lakh crore in fiscal 2024. Not only in terms of outlays but also in terms of actual completion of infrastructure projects, the results are visible on the ground, such as total length of highways built, airports constructed, and power generation capacity added.

Largely on the strength of this prudent application of fiscal stimulus towards public investment with its apparent long-term economic benefits and due to its effective tackling of the Covid-19 pandemic, the Indian economy has regained its vitality and dynamism and is on track to register four consecutive years of real economic growth rate of 7% or more next fiscal.

The private sector's net financial surplus, which was negative throughout the second decade, turned positive in fiscal 2021 and remained so in the next two years as well. In other words, the government's public investment succeeded in restoring the financial health of the private corporate sector.

With real interest rates at reasonable levels and capacity utilisation rates at or near historical highs in several sectors, the pre-conditions for a revival of private capital formation in India were in place. Private data sources reveal that after two years of decline in fiscals 2020 and 2021, capital formation by non-financial private sector staged an impressive rebound in the next two years.

From Rs 4.55 lakh crore in fiscal 2019, it declined to Rs 3.72 lakh crore in fiscal 2021 and since then has recovered to Rs 5.86 lakh crore last fiscal. This is based on bottom-up data for more than 3,300 private sector companies (listed and unlisted). Data for the first six months of the current fiscal reveals the trend continued.

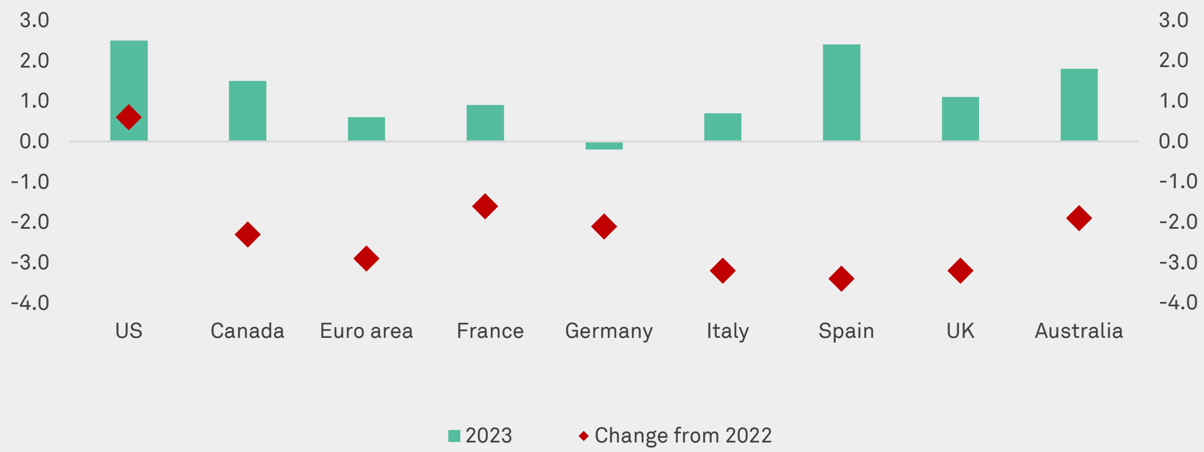
The private sector can do more as the growth potential of the Indian economy is tremendous for the next two decades. With a supportive and nurturing policy environment and a long-term perspective on the part of Indian businesses, capital formation in India can rise to near East Asian levels.

This will translate the latent growth potential into actual growth achievement on the ground, generate employment and incomes and transform the lives of crores of Indians in the process.

US economy bucks global trend

Paul Gruenwald
Global Chief Economist
S&P Global Ratings

Major advanced economies - GDP growth



Source: S&P Global Ratings Economics, government websites

The United States (US) appears to have emerged virtually unscathed from a round of steep policy rate hikes. GDP in 2023 rose by 0.6 percentage points from 2022, making the US an outlier among major advanced economies. Indeed, for the countries in our sample, real GDP growth rates declined by over 2.5 percentage points last year (see chart above).

This US outperformance is a mystery of sorts. Policy rate hikes are intended to tighten financial conditions, slow demand, and, therefore, slow GDP growth, all else (being) constant. Is the outperformance another case of US exceptionalism? Or are there factors that explain why its growth has held up, at least for now?

We looked at five possible explanations.

Starting position

Based on our analysis, the US wasn't in a more favourable starting position than its peers when the rate hike cycle began in early 2022. Given the similarity of the Covid-19 shock across the US and its peers and the similarity of the subsequent recovery paths, it is difficult to argue that the US output gap was materially different from its peers. Alternative measures such as the non-accelerating inflation rate of unemployment gap and capacity utilisation also do not suggest a different starting position for the US in early 2022.

Geography

In our assessment, geography was a factor in the US economy's outperformance relative to its peers in recent years. We believe geography gave the US an advantage over Europe in two ways. First, the terms of trade and confidence shocks affected the US less because of its longer distance from the conflict. Second, though this has more to do with geology than geography, the US was willing and able to deploy its endowment of natural gas in response to higher energy prices resulting from the conflict.

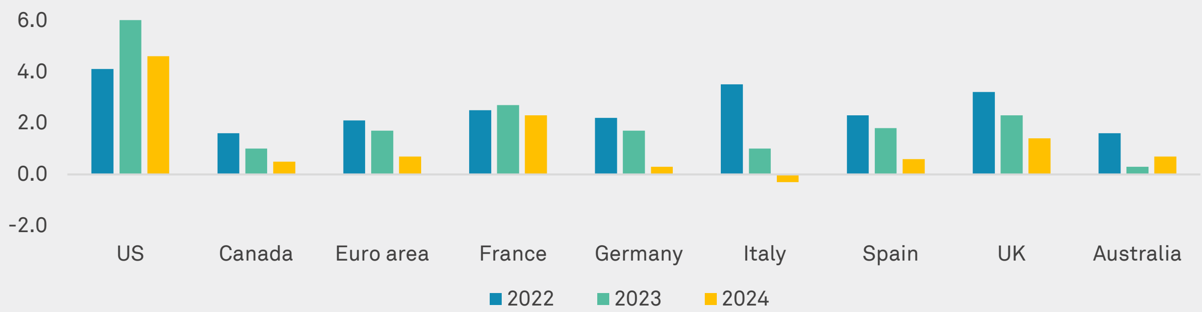
Monetary policy transmission

Slower transmission of policy rate increases to market rates is a positive for the US growth, though this benefit is transitory. This slow passthrough in the US is because of a larger prevalence of fixed interest rates, most notably in mortgages. As a result, the potential loss to after-interest payment disposable income is more muted, supporting growth. At the other extreme, a recent study from the Organisation for Economic Co-operation and Development shows Australia and the Baltic and Scandinavian economies as having among the highest shares of floating mortgage rates.

Fiscal policy

Many economies loosened their fiscal policy to counter the economic effects of the pandemic. When looking at cyclically adjusted data at the general government level, the US is the clear outlier among advanced economies (see chart). The US not only had the largest primary deficit in 2022 but also the greatest impulse (increase in deficit) in 2023. Indeed, all others in our sample saw fiscal consolidation last year — led by Italy — with the exception of a slightly wider deficit in France.

Major advanced economies - cyclically adjusted general government primary fiscal deficits



Source: IMF, Fiscal Monitor, October 2023

Productivity

The recent increase in labour productivity is a clear positive for the US. Labour productivity growth took off during the second half of the year, rising around 4% on-year —equal to wage growth — and therefore holding unit labour costs flat. In contrast, in Europe, productivity growth was fractionally negative and, as a result, unit labour costs rose in line with wages. This US outperformance likely stemmed from a pick-up in investment and a multi-decade high rate of small business formation, where productivity gains have historically been concentrated.

US outperformance drivers a mixed bag

Overall, while a full victory lap may not be justified, there are fundamental reasons the US economy has outperformed its peers since early 2022 — namely, a combination of resilience, policy, lags, and luck. Growth should eventually slow as monetary policy tightening bites, but some degree of exceptionalism suggests the relative outperformance will continue. We plan to analyse these issues more fully in our upcoming credit conditions forecasting round.

Ties that bind

India's relationship in terms of exports to the US remains strong, accounting for ~17% of its total merchandise exports.

Last fiscal, gems & jewellery, pharmaceuticals, smartphones and shrimp comprised ~30% of the total merchandise exports to the US

Further, as much as ~60% of the information technology services (mostly software) exports is to North America (~$111 billion in fiscal 2023 and an estimated ~$115 billion in fiscal 2024).

An upside to US growth is, therefore, positive for both merchandise and services exports.

— CRISIL MI&A Research

These are excerpts from an S&P article:
https://www.spglobal.com/ratings/en/research/articles/240228-economic-research-the-u-s-economy-bucks-the-global-trend-13018734

Growth: Tempered demand, normalising impact of net taxes to moderate growth

We expect India's GDP growth to moderate to 6.8% next fiscal from 7.6% this fiscal as higher interest rates and lower fiscal impulse (because of the need to reduce the fiscal deficit to 5.1% of GDP) temper demand and the net tax impact normalises. In fiscal 2022, India had grown 9.7% and in fiscal 2023, 7%.

Global soft landing: Prospects for India's goods exports will be shaped by the interplay of two opposing developments: Uneven growth in our key export destinations and a projected bounce-back in global goods trade volume in calendar 2024 after a poor showing in calendar 2023 as per the World Trade Organization (WTO).

India's growth is seen easing to **6.8%**, but it will remain the fastest-growing large economy

Persisting tensions in the Middle East pose a risk to global trade flows. In particular, the Red Sea, a critical passage for global shipments, has been made vulnerable by a spate of attacks recently. Prolonged and intense instability along this route can add a downside to our growth forecast.

Peak impact of past interest rate hikes: The transmission of past rate hikes by the MPC is still playing out amid tight liquidity conditions, which suggests a further rise in market lending rates in the near term. This will moderate domestic demand.

The RBI's move to increase risk weights on the consumer credit exposure of banks and non-banking financial companies (NBFCs) is also expected to mildly affect overall credit growth next fiscal.

CRISIL Ratings estimates Rs 30-35 lakh crore of debt will be needed to fund capex by the private sector alone.

While the infrastructure and corporate sectors are expected to be funded predominantly by banks and the corporate bond market, capex for the emerging sectors driven by multinationals and large Indian companies is expected to be funded by the domestic and international corporate bond markets.

Lower fiscal impulse to overall growth: Investment was the primary driver of growth in this fiscal, supported by government infrastructure spending. But some of that support could wane next fiscal. A lower fiscal deficit tones down the fiscal impulse to overall growth. The interim budget for next fiscal accelerates the path to fiscal consolidation by targeting slower capex growth of 17.7% next fiscal, compared with 21.5% this fiscal. A pick-up in private capex is critical to keep the investment momentum going.

Normalising domestic services growth: As Covid-19 festered, consumption of services, particularly the contact-intensive ones, suffered. And as the pandemic retreated, pent-up demand for services fuelled growth, which is now normalising. The second advance estimates of GDP for the current fiscal reflect this trend, with growth in services GDP slowing to 7.5% from 10% in fiscal 2023. This is seen in the trade, hotel, transport and communication segments, which suffered the most during the pandemic and rebounded sharply thereafter.

Inflation: Consumer price inflation to moderate to 4.5% amid risks to food inflation

For next fiscal, we expect inflation to decline further to 4.5% on average. Assuming a normal southwest monsoon and healthy agricultural output, food inflation should trend down. Weather risks, however, remain a large unknown. We expect core inflation to stay benign but could see some statistical uptick given the low base of the current fiscal. Geopolitical disruption in the Middle East could add some pressure on inflation.

Headline Consumer Price Index (CPI) inflation softened to an estimated 5.5% this fiscal from 6.7% in fiscal 2023. While non-food CPI softened ~250 basis points (bps), food inflation rose ~40 bps. The trajectory of inflation was largely driven by food prices this fiscal. Despite the easing in January, overall food inflation remains elevated. On the positive side, rabi sowing has picked up and exceeded last year's level, which augurs well for food inflation going forward.

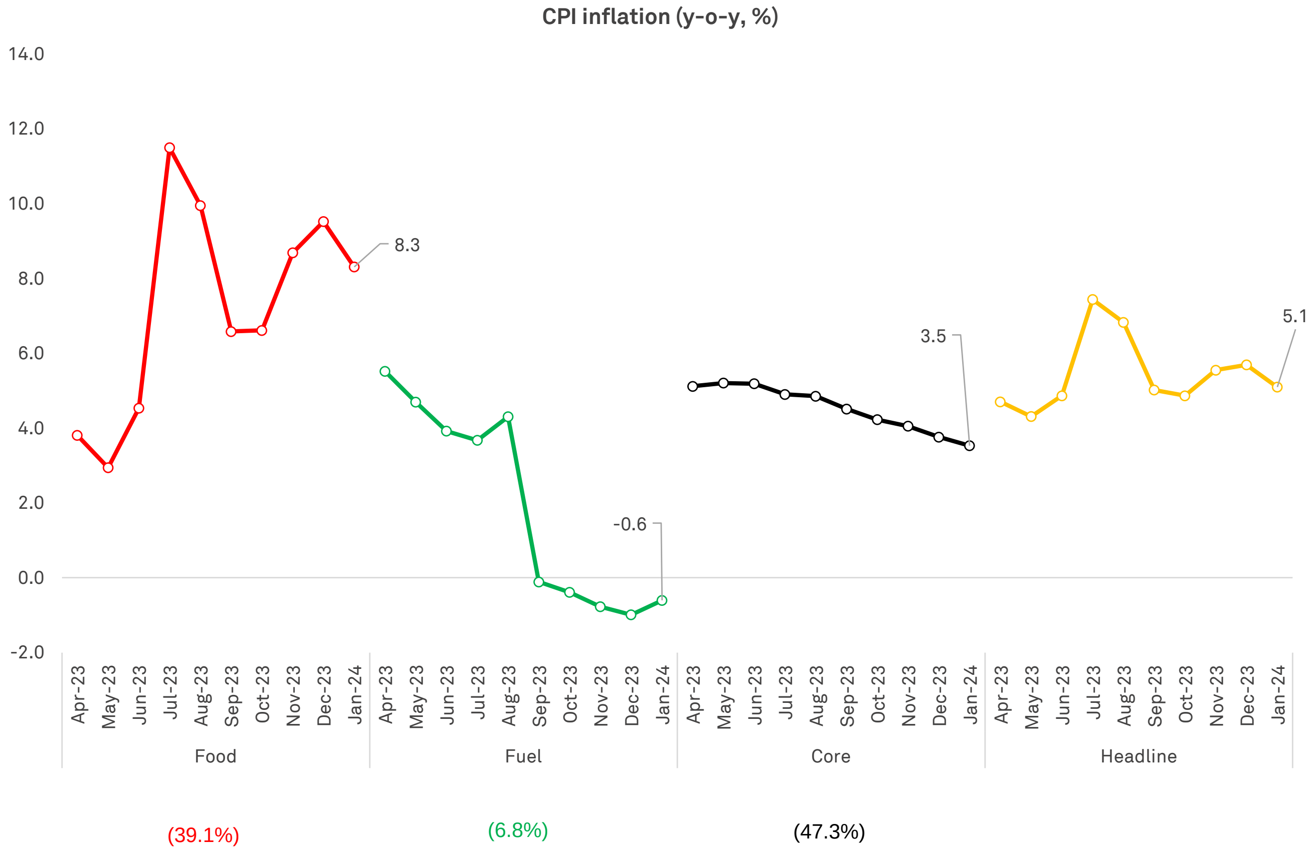
Inflation to moderate next fiscal, but food inflation risk remains

	Weights (%)	FY21	FY22	FY23	FY24 (April-January)	FY25F
Headline	100	6.2	5.5	6.7	5.4	4.5
Food and beverages	45.9	7.3	4.2	6.7	6.9	4.7
Fuel	6.8	2.7	11.3	10.3	1.9	2.5
Core	47.3	5.5	6	6.1	4.5	4.5

Note: F - forecast
Source: NSO, CEIC, CRISIL

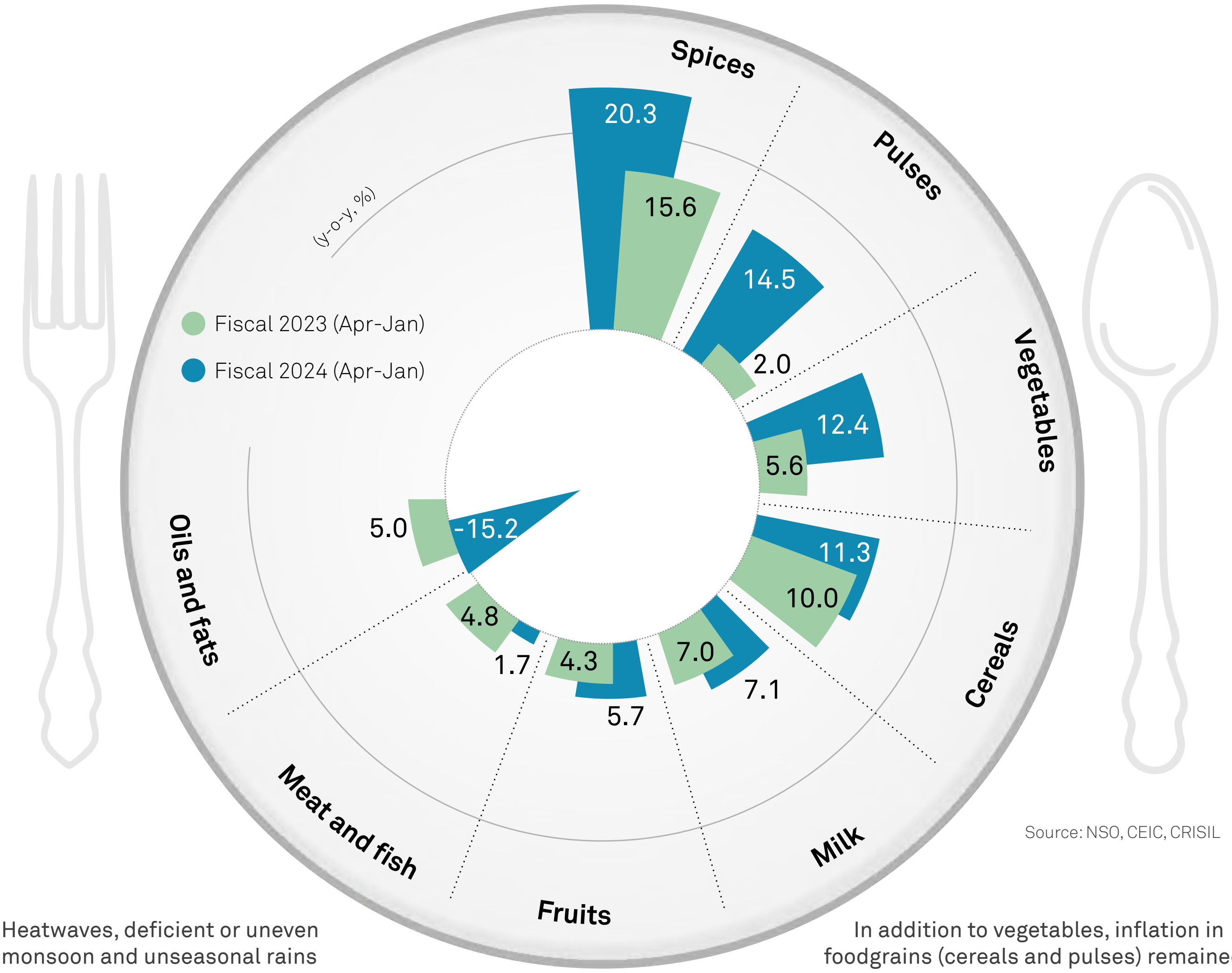
Food inflation: Food inflation (excluding beverages) has a 39% share in the CPI basket. Hence, swings in food inflation can significantly move headline inflation. Unpredictable weather shocks remain the biggest risk to the inflation outlook, though government intervention, as in the past, to increase food supplies in the market could partially cushion the adverse impact.

Swings in food prices moved CPI inflation, while non-food inflation has consistently softened



Note: Figures in brackets are weights in headline CPI; food excludes beverages
Source: NSO, CEIC, CRISIL

Inflation rose in most key food categories



Source: NSO, CEIC, CRISIL

Heatwaves, deficient or uneven monsoon and unseasonal rains have been impacting food prices in India over the past few years. This fiscal, uneven distribution of monsoon led to prices of vegetables skyrocketing and foodgrain inflation rising significantly.

India experienced two vegetable price shocks in July-August and November this fiscal, led by flare-ups in prices of tomatoes and onions, respectively.

While typically short-lived and dissipating as fresh crops enter the market, such price shocks can significantly push up headline inflation as seen this fiscal. Vegetable prices are highly volatile as the existing demand-supply mismatch is being exacerbated by climate disruptions[1]. Weather disruptions have become frequent and their recurrence next fiscal could again affect vegetable crops and result in a price shock.

In addition to vegetables, inflation in foodgrains (cereals and pulses) remained persistently high at 12% until January, driven by double-digit inflation in cereals and pulses. To increase domestic supplies, the government banned exports, facilitated imports, imposed stock limits and released buffer stock. Yet inflation remained high because kharif output was weak as erratic weather curbed the production of foodgrains, especially pulses. Meanwhile, lower rabi output for wheat last fiscal, too, showed up in higher inflation. Pulses are particularly dependent on monsoon as only ~20%[2] of their cultivated area is under irrigation. Hence, crop damage from this fiscal and climate risks could keep foodgrain inflation from softening significantly.

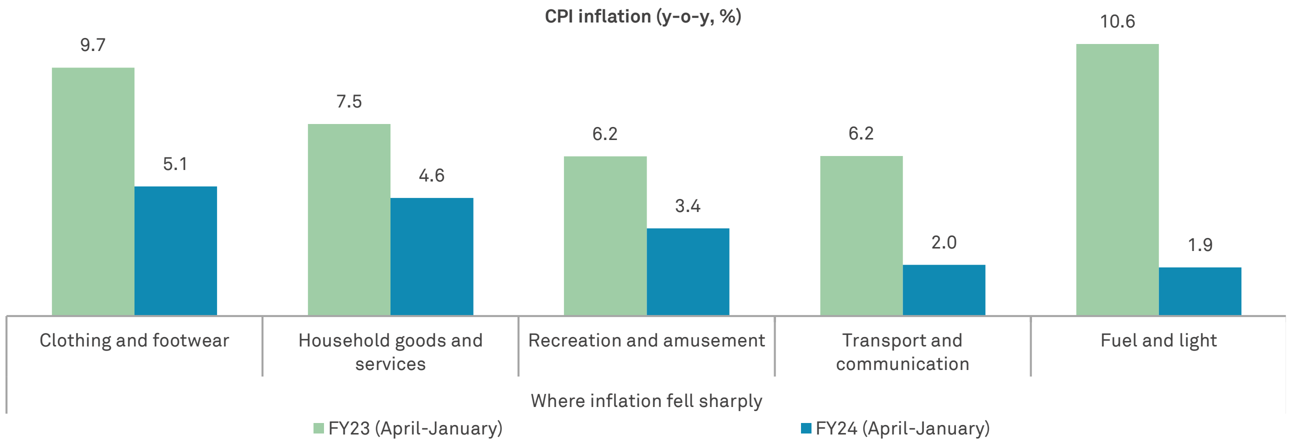
Elevated food inflation will mean a higher inflation burden on the poor as food occupies a larger share in their consumption basket, compared with their richer counterparts[3] — this has been the case for the past two fiscals.

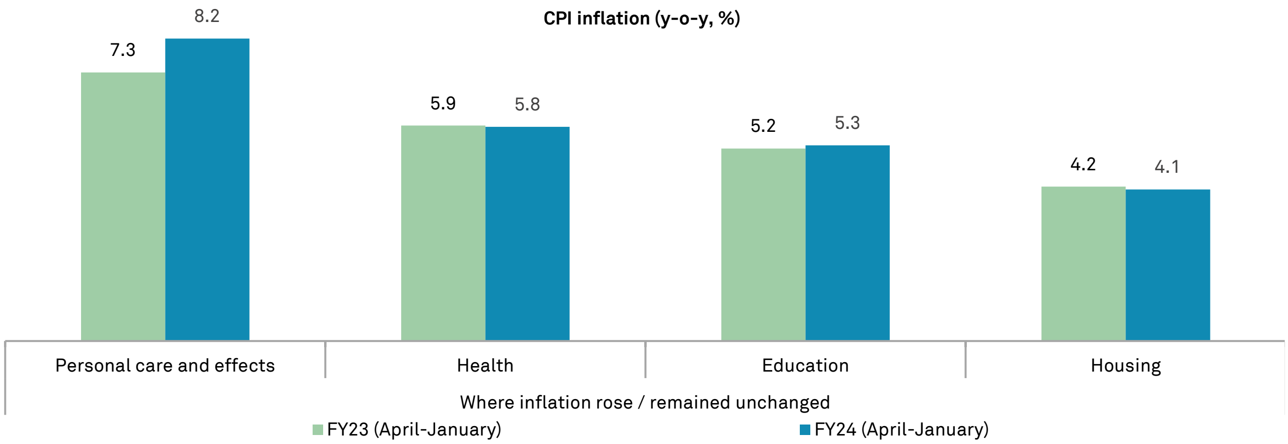
[1] For details, refer to CRISIL Insight: Not on TOP of it, 2023
[2] As of 2020. https://dpd.gov.in/Procceding_Pulses_March_2021_Part-I.pdf
[3] For details, refer to CRISIL Quickonomics: Same inflation, different burdens by income, 2021

Non-food inflation: Non-food inflation was on a downward trajectory this fiscal. While a high base played a role in the softening of non-food inflation, other factors such as easing input costs and government support also brought down fuel and core inflation. Next fiscal, we expect non-food inflation to have a limited upside due to the following factors:

- Crude and commodity prices to remain rangebound: CRISIL MI&A Research expects Brent crude oil prices to remain in the $80-85 per barrel range next fiscal. The International Monetary Fund (IMF) expects non-fuel commodity prices to remain broadly unchanged in 2024, softening 0.9% compared with 2023. Together, these should help keep input costs in check. That said, any escalation in the Middle East conflict and continuing disruptions along the Red Sea trade route could lift global commodity prices and lead to higher input and logistics costs for producers, which would, in turn, impact retail prices.
- Domestic demand to moderate: The RBI has raised policy rates by 250 bps in the current interest rate cycle, but transmission to bank lending rates is still ongoing. The lagged impact of these rate hikes is expected to moderate domestic demand, which will keep core inflation in check. Core inflation is typically sticky, and assuming there are no significant shocks, it should remain rangebound.

How inflation in major non-food categories moved in fiscal 2024



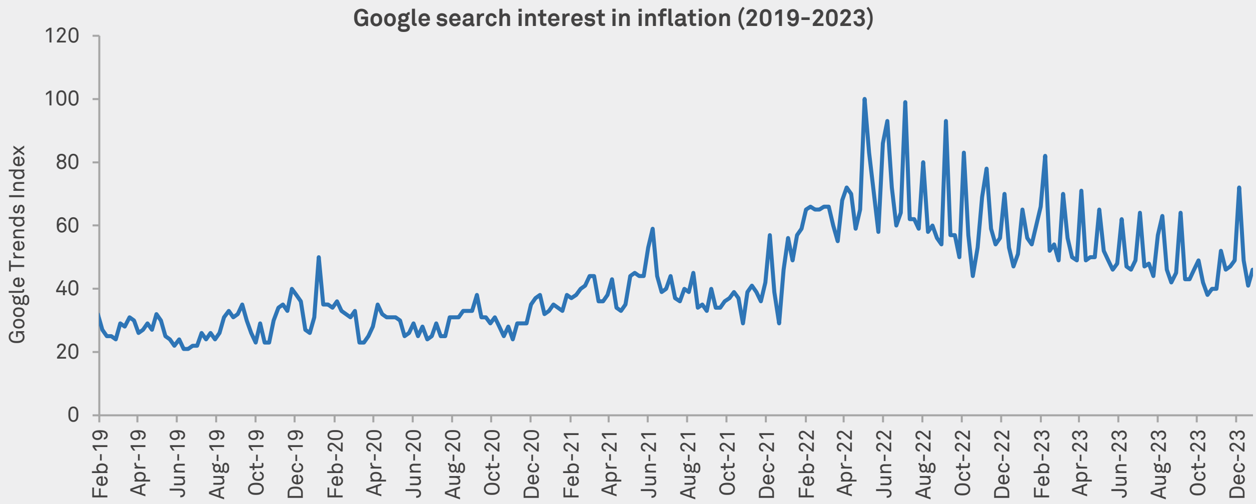


Source: NSO, CEIC, CRISIL

An unlikely gauge of price angst

Inflation expectation is a critical factor in guiding monetary policy. Expectations of economic agents about future prices can impact their pricing and buying decisions in the present, thereby affecting the actual inflation rate. In a recent note[4], we highlighted that the Google Trends Index for the term "inflation", which captures search interest in inflation, is strongly correlated with inflation expectations of households based on the RBI's survey[5]. Hence, the Google Trends Index for inflation can be used to track inflation anxiety in the economy.

Inflation anxiety remains elevated above 2019-2021 levels



Source: Google Trends (https://www.google.com/trends)

Inflation anxiety has been easing in calendar 2023, as indicated by the Google Trends data. However, as of the third quarter of fiscal 2023, it remained elevated above 2019-2021 levels, when headline inflation and food inflation were relatively under control. Volatile vegetable prices, elevated foodgrain inflation and weather worries are keeping inflation concerns on the boil. The repeated flare-ups are a reminder that as long as food prices remain high and volatile, they will continue to influence headline inflation and consequently, monetary policy.

Interest rates: Policy rate cuts to commence next fiscal

The MPC held policy rates steady through fiscal 2024. Slowing inflation, a smaller fiscal deficit and an imminent turn in the US Federal Reserve's policy rates will lay the ground for the MPC to start cutting rates next fiscal. But we believe more clarity on the path of disinflation could push this decision at least to June 2024, if not later. While consumer price inflation has remained in the RBI's tolerance band of 2-6% since August, it is still away from its 4% target, and that keeps the MPC on its toes.

The transmission of past rate hikes, liquidity tightening and recent regulatory actions by the RBI are expected to curb bank and non-banking credit growth, which could moderate domestic demand next fiscal, especially in the urban areas.

As the government pursues fiscal consolidation, the 10-year G-sec yield is also expected to soften from March 2024

[4]CRISIL Quickonomics: An unlikely gauge of price angst, 2024
[5]Inflation expectations survey of households. It is typically conducted on a bi-monthly basis

levels. We expect the yield to average 6.8% by March 2025, compared with 7% in March 2024. Other than lower gross borrowings, policy rate cuts by the MPC, lower domestic inflation and benign global oil prices will pull down yields. India's inclusion in the JP Morgan Emerging Market Bond Index from mid-2024 will contribute to a drop in yields. This has already led to a surge in foreign inflows in the Indian debt market to their highest level since 2017.

External sector markers healthy

While the slackening in merchandise exports has moderated in recent months and exports have grown in the past two months, the moot question is whether this trend could be sustained given the headwinds in the form of uneven global growth and heightened geopolitical uncertainties.

1. **Factors that will support India's external balance:** The expected improvement in global trade volume to 3.3%[6] in 2024 from 0.8% in 2023 suggests that headwinds for India's goods exports will remain moderate. At the same time, some softening in the Indian economy next fiscal will keep imports under check. Overall, this means the merchandise trade balance is likely to remain stable. Moreover, the services trade surplus and remittances remain healthy.
2. **Unsupportive factors:** Uneven global growth means maintaining the current improvement in exports would be a challenging task next fiscal. The share of India's exports to the European Union (EU) and the US combined rose to 34.0% in fiscal 2023 from 30.2% in fiscal 2018. On the other hand, Asia-Pacific (APAC) is expected to be relatively resilient (S&P Global, November 2023[7]), but the share of our exports to these economies declined to 26.5% from 33.4%.
3. **Risks:** Another near-term challenge for India's exports is the Red Sea crisis, which has affected a major route for shipping a variety of domestic goods, including steel, engineering, textiles, vehicles, agricultural, petroleum, cereals and chemicals, to Europe, the US east coast, the Middle East and Africa. While the impact has been contained so far, it could further hurt exports and hence the trade deficit if not resolved soon.

As a result, in the base case, we project India's CAD at 1% of GDP in fiscals 2024 and 2025.

External vulnerability seen low

Indicator		FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24F	FY25F
External liabilities	CAD (% of GDP)	2.7	4.3	4.8	1.7	1.3	1.1	0.6	1.8	2.1	0.9	-0.9	1.2	2.0	1.0	1.0
	External debt (% of GDP)	18.6	21.1	22.4	23.9	23.8	23.4	19.9	20.1	19.8	20.6	21.2	20.0	18.9	18.6#	
	- Short-term external debt (% of GDP)	3.9	4.3	5.3	4.9	4.2	4.0	3.8	3.9	4.0	3.8	3.8	3.9	3.8	3.1#	
Adequacy of forex reserves	Months of import cover	9.4	7.6	7.2	7.7	8.7	11.2	11.5	10.4	9.4	11.4	18.0	12.4	9.6	11.0*	
	Reserves/(short-term debt + CAD)	2.7	1.9	1.6	2.5	3.0	3.4	3.6	2.8	2.5	3.6	7.5	3.8	3.0	5.3#	
Domestic macro-economic health	GDP growth (% y-o-y)	8.5	5.2	5.5	6.4	7.4	8.0	8.3	6.8	6.5	3.9	-5.8	9.7%	7%	7.6%	6.8%
	CPI inflation (% y-o-y)	10.4	8.4	9.9	9.4	5.9	4.9	4.5	3.6	3.4	4.8	6.2	5.5	6.7	5.5	4.5
	General government deficit (% of GDP)	8.6	8.3	7.5	7.0	7.1	7.4	6.7	6.6	7.8^	13.4^	9.7^	10^	8.9^	8.1^	7.6
	General government gross debt (% of GDP)	66.0	68.3	67.7	67.4	66.8	68.8	70.04	71.54	76.5^	90.7^	85.3^	83.5^	84.95^	85.06^	84.5^

High Low Neutral

Vulnerability

Note: F — CRISIL forecast; general government includes central and state governments
#As at end-September 2023; *using January 2024 data; ^estimates by S&P Global (December 11, 2023)
Source: RBI, NSO, Ministry of Commerce, S&P Global, CRISIL

[6] WTO Global Trade Outlook and Statistics (Update: October 2023)
[7] S&P Global, November 2023, 'Global Macro Update: 2024 Is All About The Landing'.

Nuances of a decadal march

Between fiscals 2025 and 2031, India's growth is expected to average 6.7%

Fiscal 2031 is when India would become an upper middle-income country

As we begin the countdown to the next decade, the Indian economy is expected to achieve some key milestones:

1. Over a seven-year period (fiscals 2025-2031), we expect India to sustain average GDP growth of 6.7%
   - This, over a similar growth rate seen in the past decade (pre-pandemic), is expected to compound the gains for the economy
2. The economy is expected to expand to $6.7 trillion by fiscal 2031 from $3.6 trillion this fiscal
   - That would mark a growth of 1.9 times in the next seven fiscals
3. Fiscal 2031 will mark the year when India enters the upper middle-income[8] country club with per capita income rising to ~$4,500. Such a shift augurs well for consumption
   - India's close peers that are currently in this club include Indonesia, South Africa, Thailand and Brazil

~$7 trillion now in sight

The Indian economy will close this fiscal at $3.6 trillion.

It is interesting to note that the pandemic years did not materially deflect the economy's march towards $5 trillion (and subsequently $7 trillion) for the following two reasons:

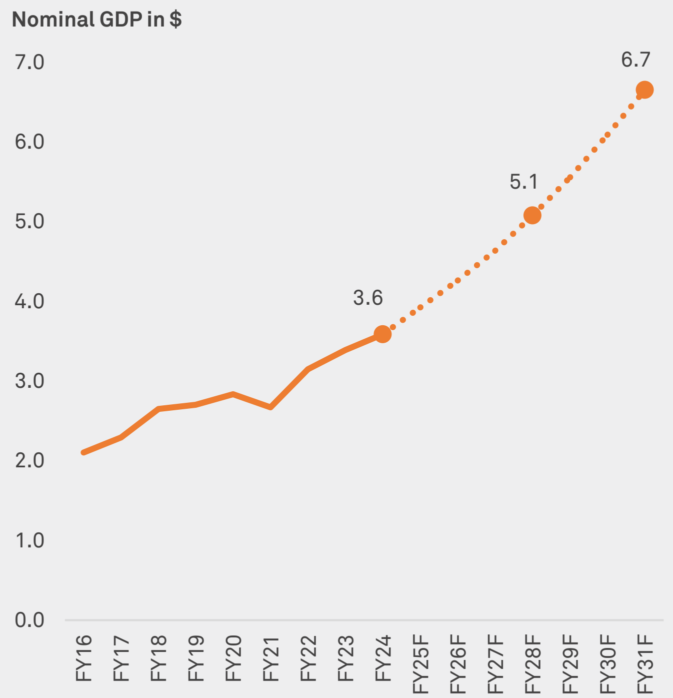
- Nominal GDP was only 2.8% below its pre-pandemic trend level in fiscal 2024 (the pre-pandemic trend level is the forecast value of nominal GDP for fiscal 2024 in the absence of the pandemic)
- A slower pace of rupee weakening. The rupee weakened 4% on average over fiscals 2021-2024, compared with 4.3% in the pre-pandemic decade

This forecast is based on India's improved growth premium, investor confidence and inclusion in global bond indexes, which will help keep the balance of payment comfortable and moderate the pace of currency depreciation.

S&P Global estimates[9] suggest that just the inclusion of India's bonds in major bond indexes could attract an initial inflow of $20-40 billion, which could increase to $180 billion over the next decade.

At $6.7 trillion, the economy is expected to be 1.9 times larger in seven years.

Tracing the ascend



Source: NSO, RBI, CRISIL

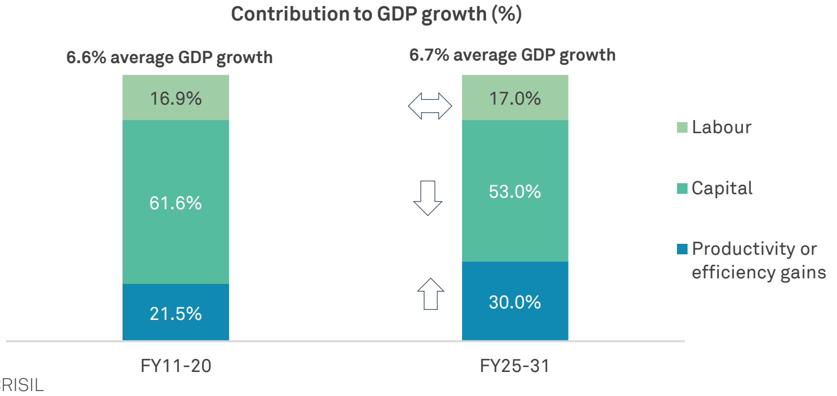
[8]As per the World Bank definition, lower middle-income countries are those with per capita income of ~$1,000 to ~$4,000 and upper middle-income countries are those with per capita income of above $4,000 to ~$12,000. https://www.worldbank.org/en/country/mic/overview#:~:text=They%20are%20defined%20as%20lower,62%25%20of%20the%20world's%20poor.
[9]S&P Global, 'Look Forward: India's Moment, Volume 3', August 2023

Building blocks for the growth marathon

Even as the economy is expected to grow at a similar pace as the pre-pandemic decade, the nature of growth is expected to change.

What will differ is the role played by the three factors of production — capital, labour and productivity — in driving growth. We assess this using Robert Solow's growth accounting framework that enables us to capture the individual contribution of these three factors.

Contribution of efficiency to growth expected to increase



Source: CRISIL

Growth accounting

The growth model developed by Robert Solow[10] measures 'multi-factor productivity' through total factor productivity (TFP), which is the 'residual' derived after removing the contribution of capital and labour from GDP. We have estimated TFP growth for India through a Cobb-Douglas accounting framework.

Our estimates

Capital to remain the dominant growth driver

- Capital will continue to be the biggest contributor to growth. As the government pursues fiscal consolidation, its role in boosting overall capex will partly diminish compared with the past few years. Nevertheless, we expect the private sector to gradually play a larger role than in the recent past. The share of private investments in total fixed investment fell to almost 37% in fiscal 2023 from a peak of 41% in fiscal 2016. The ratio is set to increase again. Sectors under the PLI scheme and emerging sectors are expected to see increased private sector capex (for details, see 'PLI: 33% spent, remaining Rs 2.0-2.2 lakh crore to be invested over next four fiscals' on page 51).

Contribution of productivity to improve

- Productivity (or efficiency gains, known as TFP) is expected to contribute more to growth compared with the pre-pandemic period. Better physical infrastructure is beginning to improve connectivity and lower logistics costs for industries, while digital infrastructure is ushering in efficiency gains by serving as a platform for innovation and efficient payment systems
- All these are expected to reduce bottlenecks and improve the competitiveness of the domestic industry. India's ease of doing business ranking has improved over the past decade. But there is scope and opportunity for catching up with peers that rank much higher. Some of the ongoing developments can help accelerate the improvement (for details, see 'Towards a balanced growth path' on page 35)

Labour will contribute the least

- Labour's contribution to growth is likely to remain the lowest, not because India lacks people in the working-age group (15-64 years). While this cohort represents 68% of the total population, inadequate quality and skilling of the workforce hold back its potential (for details, see 'Labour, the laggard' on page 25)

What could bring greater gains?

Faster pace of fundamental reforms

To create an upside to the growth outlook, India needs to push reforms with a significantly long-lasting impact on its business environment. This includes streamlining land acquisition, skilling and training the labour force, increasing agricultural productivity and promoting exports.

- India continues to lag on land acquisition reforms, which remain a significant impediment causing delays, disruptions and cost escalations for businesses and infrastructure expansion. Reforms are needed to facilitate more efficient and quick land acquisition and transparency in land records
- Complex labour norms and inflexibility in hiring are the other headwinds faced by firms. While a few states have shown some flexibility, the slow pace of labour reforms at the all-India level has discouraged the private sector from setting up large manufacturing units and boosting employment in a big way. Labour norms need to be simplified and unified across states to make it easier for firms to employ workers
- Additionally, focus should be on measures for improving the quality of education and skilling and training the workforce, especially in the lower-income segments, to increase labour productivity
- Low agricultural productivity is another concern, driven by low levels of mechanisation and a large exposure to weather vagaries. Agricultural reforms to connect farmers directly to consumers could facilitate efficient price discovery and better returns for farm produce

[10] Aug 1957, Solow, R.M., 'Technical change and the aggregate production function.' The Review of Economics and Statistics, MIT Press

Capital, the growth driver

Government capex to continue playing a dominant role, but private capex to pick up steam

Strong pick-up in the industrial sectors and healthy momentum in the infrastructure segments to drive growth

The investment calculus

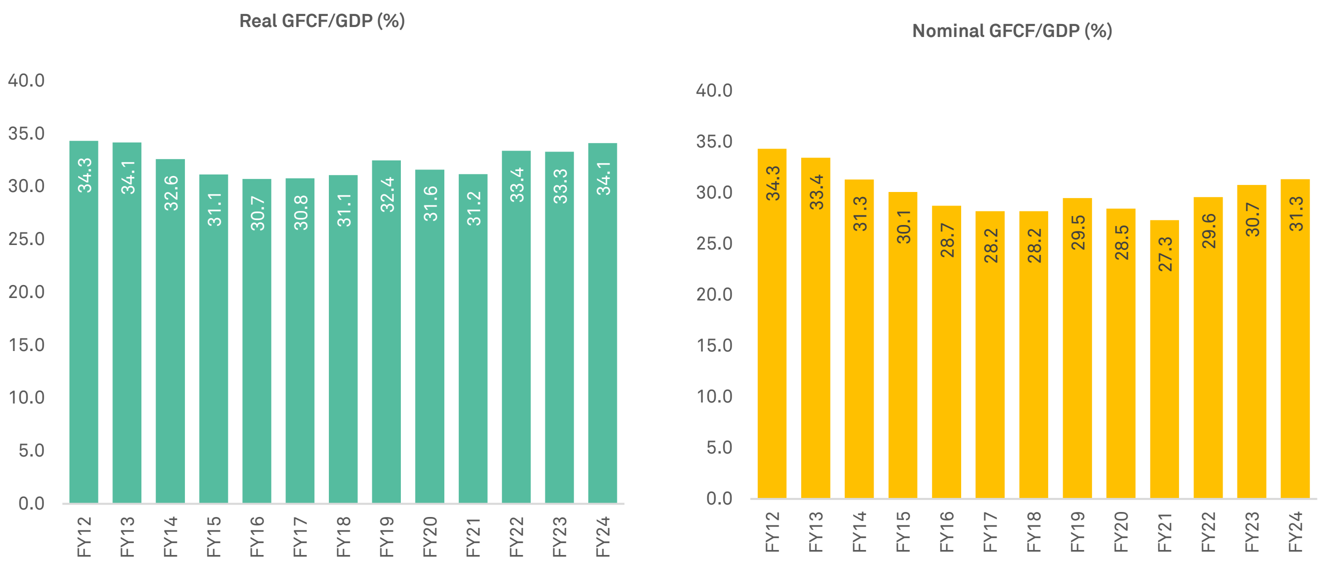
- Capital is expected to be the dominant growth driver for the Indian economy in the medium term
- While the government has supported the initial revival in the investment cycle, the private sector seems poised to take the lead going forward
- Incremental thrust to investments will come from emerging sectors such as electronics, EVs and energy transition

The Indian economy has seen a consistent improvement in investments in the post-pandemic period as the government decided to focus on infrastructure build-up via budgetary spend.

The share of investments or gross fixed capital formation (GFCF) is estimated to have risen to 34.1% in real terms in fiscal 2024 from 33.3% in the previous fiscal. Such a continuous and sharp increase improves the capital stock, or the productive capacity of the economy.

It is important to note that the GFCF/GDP ratio has also risen in nominal terms, to 31.3% from 30.7% in fiscal 2023. However, we focus on investments in real terms as they capture the productive capacity in the economy better than nominal GFCF/GDP, which is influenced by price movements.

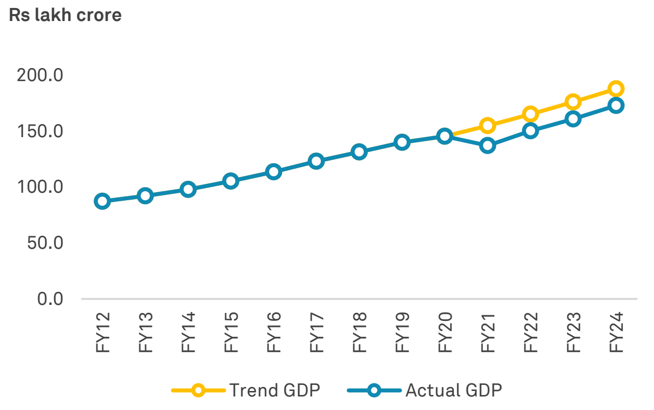
Investments continue to rise



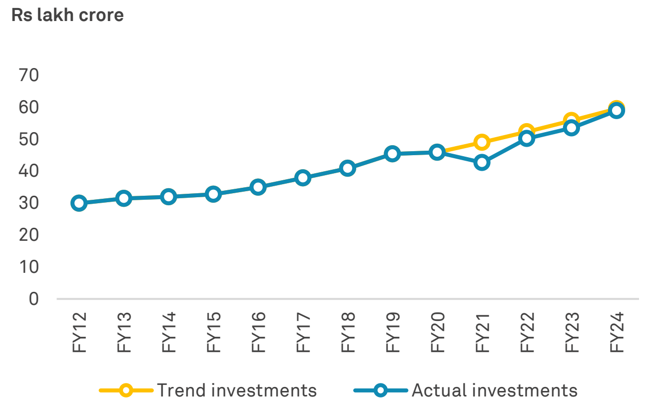
Source: NSO, CRISIL, CEIC

The robustness of investments is also evident from the fact that they have caught up with the pre-pandemic trend even as overall GDP trails the trend.

Path of GDP



Path of investments/GFCF



Source: NSO, CRISIL, CEIC

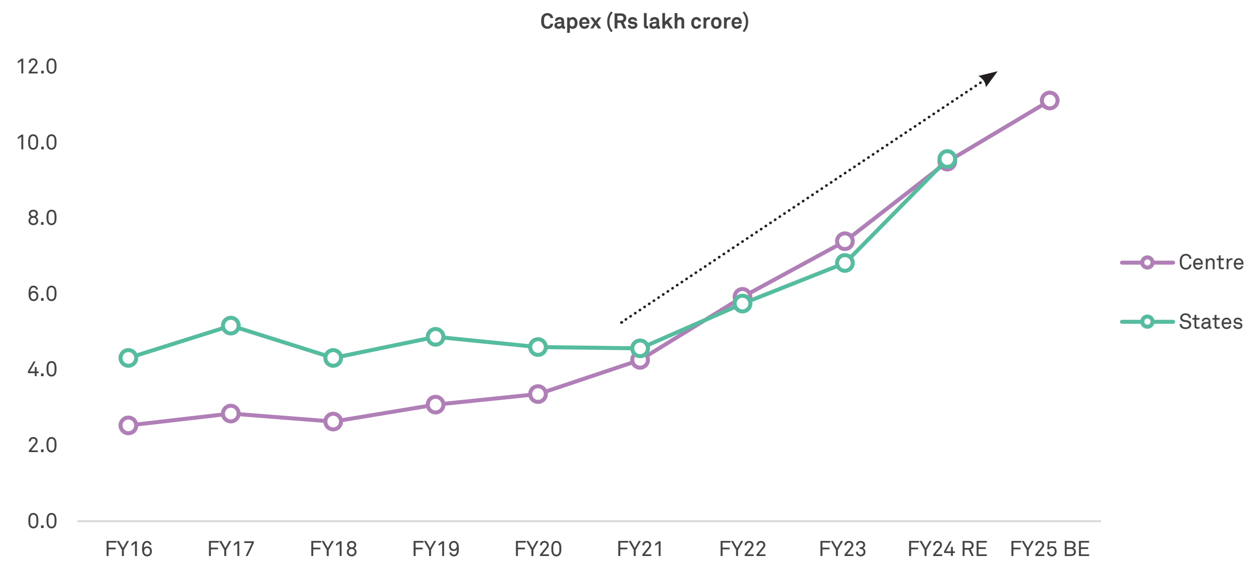
Government has played a key role in investment revival

While the detailed institution-wise break-up of investment data becomes available with a lag of two years, the government's capex trend over the past few fiscals suggests that the Centre and the states alike have played a crucial role in reviving the investment cycle post-pandemic.

After remaining flattish in the five fiscals preceding the pandemic year (fiscal 2021), government capex through the budget picked up. For instance, the Centre's capex through the budget rose almost fourfold from Rs 2.5 lakh crore in fiscal 2016 to Rs 9.6 lakh crore in fiscal 2024. For the states, it rose 2.2 times.

Looked another way, from an average 1.7% of GDP in the pre-pandemic five years (fiscal 2016 to 2020), the Centre's capex has risen continuously, almost doubling to 3.4% of GDP budgeted for next fiscal. This highlights the central government's lower reliance on capex of public sector undertakings, i.e., internal and extra budgetary resources.

Remarkable spurt in government budgetary capex



Note: Data for states is not available for fiscal 2025
Source: CEIC, RBI, CRISIL

It is also worth highlighting that as states prioritised revenue expenditure related to health during the pandemic years, the Centre took on the baton and its capex surpassed that of states. This was not the case in the past. Before the pandemic, states used to undertake the majority of government expenditure. Their share in general government capex fell from 62% on average between fiscals 2016 and 2020 to 49.5% between fiscals 2021 and 2024.

Where has the government invested?

The government's capex has largely been towards infrastructure creation to improve physical connectivity and thereby reduce logistics cost and improve competitiveness. The focus of spending has been on areas such as rural roads, highways, airports and railways. CRISIL MI&A Consulting expects aggregate infrastructure capex to double by 2030 from ~Rs 67 lakh crore during fiscals 2017-2023 to ~Rs 143 lakh crore during fiscals 2024-2030.

Infrastructure spending push has been complemented by policy push

National Infrastructure Pipeline

To ensure focused infrastructure development till fiscal 2025

'Core' infrastructure, i.e. roads, railways, airports, ports, urban infrastructure, irrigation, warehouses and telecom, to drive this

PM Gati Shakti Master Plan

Focus on coordination between different infrastructure departments to ensure cohesion and efficiency

Ministry of Road Transport and Highways, Ministry of Railways, and Ministry of Petroleum and Natural Gas reported time savings in operations using Gati Shakti (PIB, 2023)

National Logistics Policy

Focus on improving logistics and soft infrastructure by setting up a Unified Logistics Integrated Platform

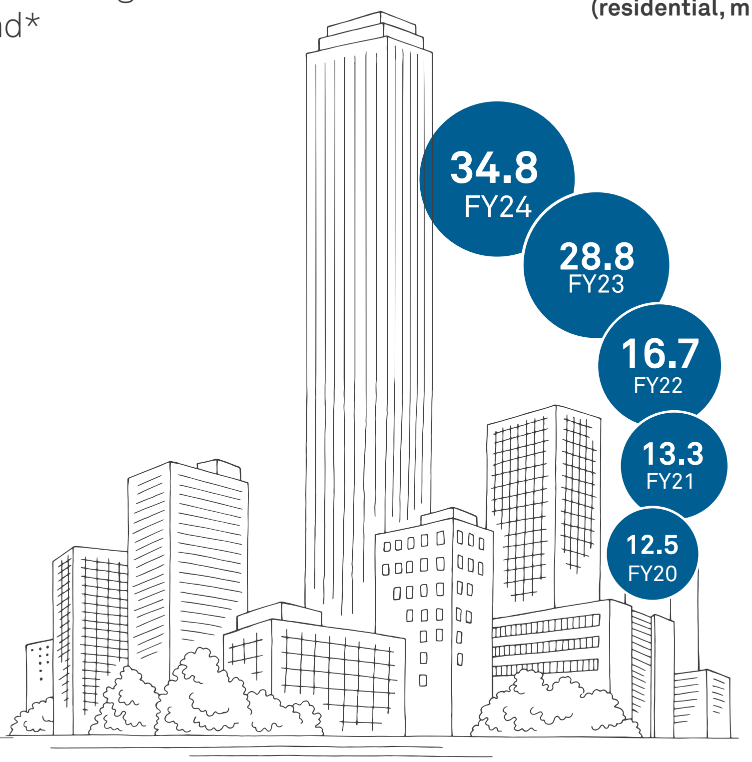
Integrated 35 logistics portals/digital systems with ~700 industry players registered as of January 2024 (Ministry of Finance)

Source: CRISIL

Household investments — with a share of nearly 40% in GFCF — also likely played an important role in driving investments, as evident from the robust growth in housing sales in the past two years. Spending on housing is the leading contributor to household investments in India. Housing sales have grown despite the RBI's rate hikes, which have pushed up home loan rates.

Robust housing demand*

Sales booked during H1 (residential, million square feet)



*Represents housing sales by 11 key real estate players in the country
Source: CRISIL MI&A Research

Private corporate sector expected to take the lead

While government and household investments have shown signs of strength, an uncertain global environment, geopolitical issues and lopsided domestic consumption demand have meant that capex by the private corporate sector is yet to become broad-based.

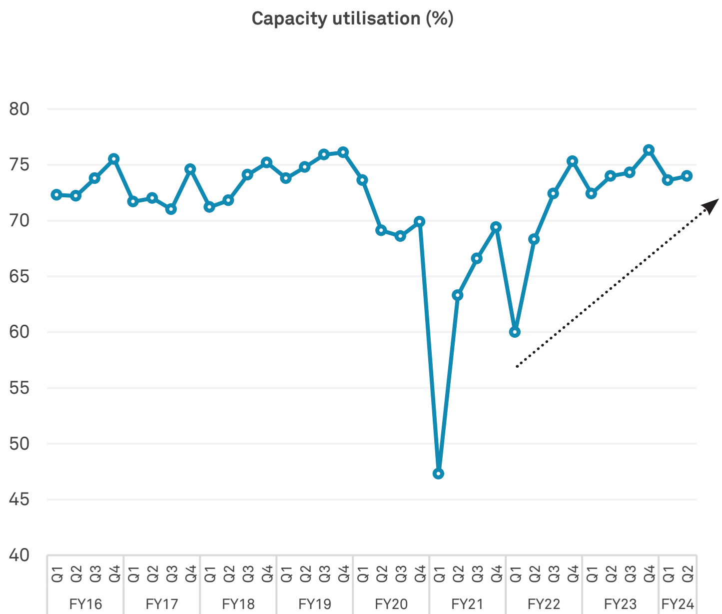
This is not to say private investment is weak. Indeed, sectors linked to enhanced public spending in infrastructure and the government's PLI scheme are witnessing healthy capex.

But as the government shifts focus to fiscal consolidation in the road ahead, private sector investments are expected to take the lead in keeping the overall investment momentum going.

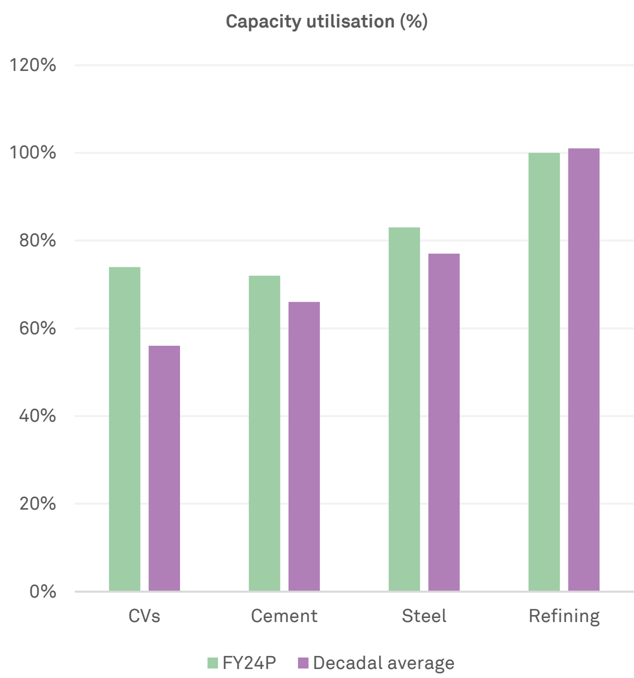
Support to private sector investments will come from the following:

(1) **Rising capacity utilisation in the economy:** Thanks to healthy economic activity underscored by the 7% plus growth in fiscals 2023 and 2024, the manufacturing sector's capacity utilisation, which had seen a dip during the pandemic, has long recovered to the pre-pandemic levels. In fact, in certain quarters, it has surpassed those levels. The improvement in capacity utilisation rates is premised on growth in sectors such as commercial vehicles (CVs), steel and cement, which are linked to, and benefiting from, the government's infrastructure spending. To be sure, these are also underpinned by robust real estate growth.

Capacity utilisation trending up...



...led by infrastructure-linked sectors



Source: OBICUS, RBI, CRISIL MI&A Research

(2) **Deleveraged corporate balance sheets:** Corporate balance sheets are healthy. India Inc has been deleveraging, as evidenced by the lowering of gearing, which is defined as the ratio of a company's debt to its net worth. According to a CRISIL Ratings[11] analysis of 43 sectors (which represent around 75% of debt in the non-financial space), as many as 37 sectors have strong to very strong balance sheets, thanks to low gearing ratios.

Global evidence[12] suggests investment growth tends to slow down during deleveraging episodes and bounces back after the trough of a typical deleveraging episode.

[11]Ratings Round-Up, "Outlook positive, but downside risks loom", October 2023
[12]Falling Long-Term Growth Prospects: Trends, Expectations, and Policies, World Bank, March 2023

This bodes well for the broad-based investment cycle revival by India Inc.

(3) **Financial sector's enhanced ability to lubricate the economy:** The RBI's rate hike cycle is over, and interest rates are expected to decline starting next fiscal. This would also be true globally. Together, this would mean lower cost of borrowing for corporates, both domestically and abroad. More importantly, the domestic banking system is healthy. Thanks to capital raised in the last few years and substantial capital infusion by the government (in public sector banks), banks now have stronger balance sheets and capital ratios, i.e., they have adequate buffers and are well placed for growth over the medium term. At the same time, asset quality trends for banks are benign, with gross NPAs expected to further trend downwards to ~3% by March 2024.

(4) **Industrial policy push, new-age opportunities and strategic investments** (for details, see 'Capital investments to fire on both cylinders' on page 43)

(5) **Opportunity to latch on to the supply-chain diversification:** India Inc could become a beneficiary of the supply-chain diversification trend, which has gained traction since the US and China engaged in tariff wars in 2018-2019. According to a recent World Bank study[13], China's share in US imports fell from 21.6% in 2017 to 16.3% in 2022, while US imports from the rest of the world rose, implying that importers are turning to new sources of supply. While India has made some gains because of reshoring, countries such as Vietnam and Taiwan have been even greater beneficiaries. This is because these economies are already deeply integrated into China's supply chains. Still, supply-chain diversification presents India with an opportunity to increase its share in the global value chain. Though it has experienced initial success in mobile phone manufacturing and export, there is untapped potential for further growth. This would also ensure that India continues to attract robust FDI in the near term.

To boost private investment, the government should continuously prioritise institutional reforms such as land and labour policies and strive to enhance the overall ease of doing business. Considering the recent decline in FDI, policies should focus on opportunities that the ongoing supply-chain diversification presents — for example, investing in education or vocational training for a higher-skilled workforce capable of embracing new technologies. In the long run, enhancing institutions and ensuring political stability can help generate and sustain growth and investment, enhancing FDI inflows.

[13]"Is US Trade Policy Reshaping Global Supply Chains?", World Bank, October 2023

Labour, the laggard

Labour's contribution curtailed by inadequate quality, low participation of women and increasing automation

Creation of high-quality jobs, investment in labour-intensive sectors that encourage participation of women in the workforce are a must

- Labour will contribute 17% to India's medium-term growth between fiscals 2025 and 2031, trailing the contributions of capital and efficiency
- Improvement in the quality and quantity of labour employed can create an upside of 50 bps to the projected growth trajectory

This chapter examines the role of labour in India's medium-term growth trajectory. We believe that labour's contribution to growth will remain the lowest over the next seven fiscals — not very different from its contribution during the pre-pandemic decade. This is not because India lacks people in the working age group (15-64 years) — they account for 68% of the population.

Two key issues hold back labour's potential: inadequate quality of labour and low participation in the workforce. To materially increase the contribution of labour and spur faster growth, improvement in both these metrics is required.

Increasing quantity of labour employed can lift average GDP growth by 50 bps

To highlight how increasing participation in the workforce can benefit India, we construct a scenario where the worker population ratio (WPR)[14] grows at a faster rate than our base case. The upside to growth in such a scenario is about 50 bps. That is, if better education (especially skilling and training), along with increased employment opportunities, increases the WPR in the country over the next seven years, it can drive growth up from 6.7% in the base case to 7.2%.

Contribution of labour to growth (fiscal 2025 to 2031) under our two scenarios

Base case Assumes a gradual increase in the WPR to ~45%	Contribution of labour is held back due to inadequate quality of labour, low participation of women and increasing automation	Average GDP growth of 6.7% with contribution of labour at 17%
Scenario Assumes a sharper increase in the WPR to ~50%	Requires creation of high-quality jobs, investment in labour-intensive sectors, encouraging participation of women in the workforce	Average GDP growth increases by 50 bps to 7.2% with contribution of labour at ~23%

Source: CRISIL

[14] WPR is defined as the percentage of individuals employed in the total population

Takeaways from the 2022-23 PLFS

In the absence of data under the comprehensive Employment and Unemployment Survey by the National Sample Survey Organisation (NSSO), the PLFS — which is also detailed and informative — has been publishing the employment trends in the economy since 2017-18. Here, we provide highlights from the latest round of the survey.

- The WPR increased from 35.3% pre-pandemic (2018-19) to 41.1%. The LFPR increased from 37.5% to 42.4%. The unemployment rate declined from 5.8% to 3.2%
- The rise in the WPR over the past five years has been driven by women living in rural areas. The WPR for rural women increased from 19% pre-pandemic to 30%
- The share of workers who are self-employed increased from 52.1% pre-pandemic to 57.3%, while the share of salaried workers declined from 23.8% to 20.9%
- The share of workers employed rose in agriculture (from 42.5% pre-pandemic to 45.8%) and construction (from 12.1% to 13%), which typically entail low-productivity jobs. Meanwhile, the share in manufacturing declined (from 12.1% to 11.4%)
- The average number of hours worked declined from the pre-pandemic level. An employee worked 42.5 hours per week on average in April-June 2023, down from 46.5 hours in April-June 2019

While India's working-age population is projected to increase in size, labour force participation (LFPR) in India has been historically lower than its East and Southeast Asian counterparts. In fact, India's WPR and LFPR[15] declined during the decade preceding the pandemic. But recent data from the Periodic Labour Force Survey (PLFS; refer to the box for details) shows an improvement in the WPR and LFPR in 2022-23[16].

Higher female participation, better skill-matching and job availability can further increase the WPR. The 2019-2020 Economic Survey found that focusing on industries such as computers, electronic and electrical equipment, and telecommunication equipment — whose production processes take place across global value chains and which can be assembled in India — can create jobs[17] .

According to the International Labour Organization (ILO), the nature of economic growth in India has been such that jobs have not been created in sectors that can easily absorb women[18]. Creating jobs in sectors with higher female employment intensity through government action can increase participation of women. Social constraints and inadequate education have also hindered women's participation.

Why women employment is low

Although the latest PLFS data shows an improvement in women's employment and participation in the workforce, they lag behind men in both these metrics. Lower education levels compared with men and social norms are the major factors behind lower employment of women.

I. Education levels

There is a significant gap in the literacy levels of men and women. In 2017-18[19], the NSO found that 18.1% of men in India above the age of 15 were not literate compared with 34.5% of women. The gap persists at higher levels of education as well, with only 8.3% of women educated until at least the graduate level compared with 12.8% of men.

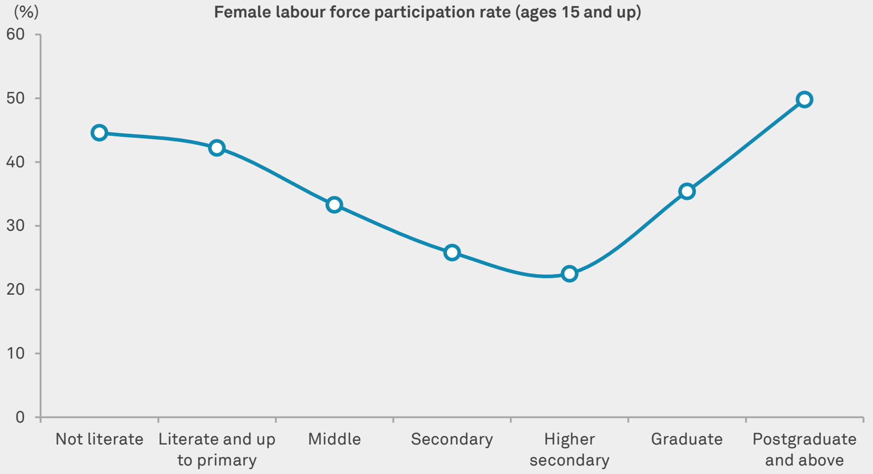
Economic development and female labour force

[15]LFPR is defined as the percentage of individuals in the population who are working or seeking employment
[16]PLFS data is reported on a July-June basis
[17]Economic Survey 2019-2020, Chapter 05: Creating Jobs and Growth by Specializing to Exports in Network Products
[18]ILO: Women's labour force participation in India: Why is it so low?
[19]Data for this survey was collected from July 2017-June 2018

participation typically have a U-shaped relationship. This means that as a country develops and incomes rise, women's participation in the workforce initially drops and then rises at higher levels of development. In her 1994 paper, Claudia Goldin[20] links this relationship to education levels. She found that when women are not educated, the work they can do outside the home is typically manual labour and there is strong social stigma against married women doing manual work outside the home. When education levels of women improve, the option of white-collar work is also available to them, which does not have social stigma attached to it.

A U-shaped relationship between education and female labour force participation is seen in India as well. Among Indian women, those with postgraduate education have the highest participation rate, while those with higher secondary school education have the lowest rate. Therefore, it is imperative to boost higher-level education for women.

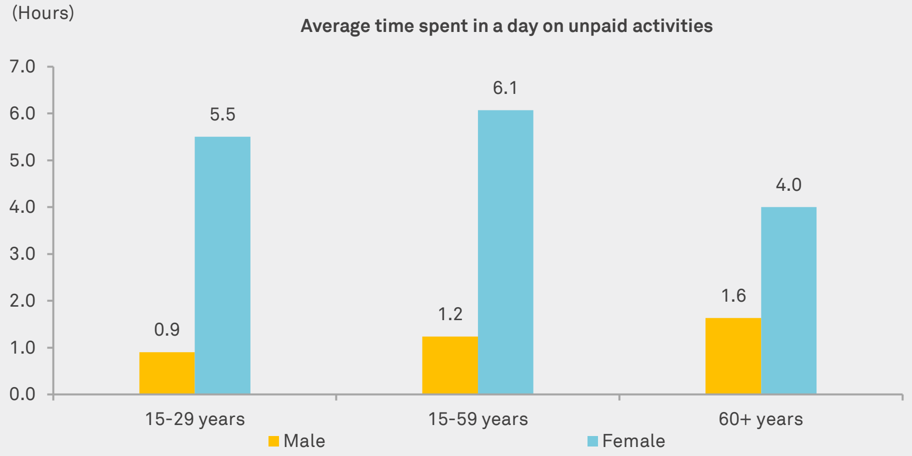
Female labour force participation and education have a U-shaped relationship



Source: PLFS (2022-23)

Women spend far more time on unpaid activities than men

Average time spent in a day on unpaid activities



Source: MoSPI, Time Use Survey 2019, Women and Men in India Report 2022

II. Domestic duties

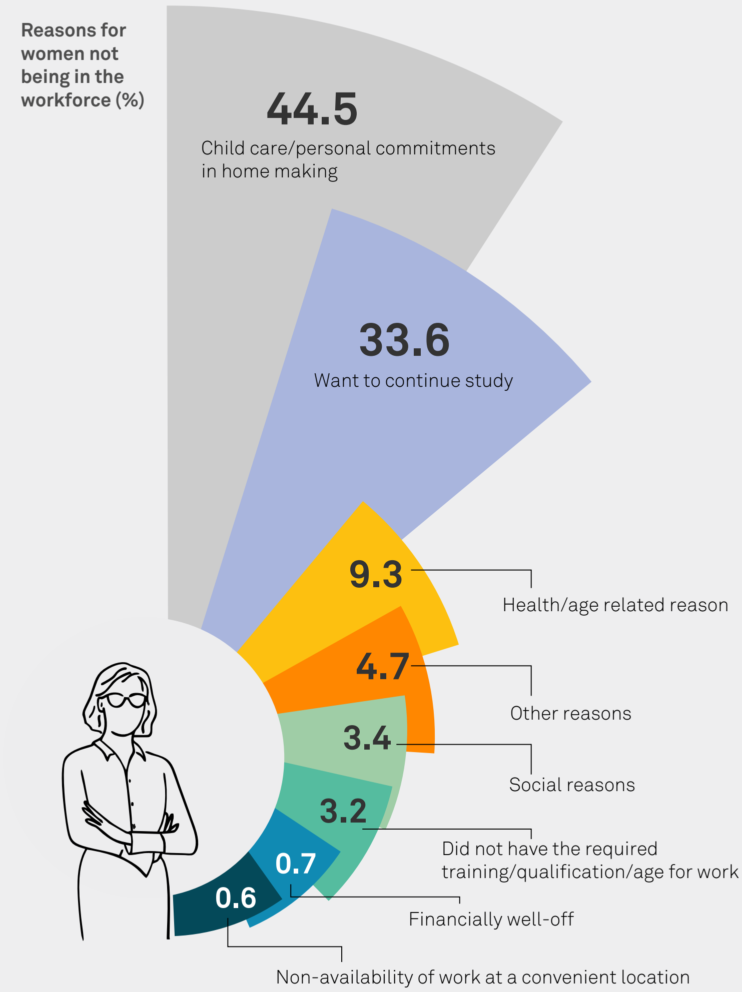
According to the Time Use Survey conducted by the Ministry of Statistics and Programme Implementation (MoSPI) in 2019, between the ages 15 and 59, 92% of women engaged in unpaid household work compared with only 29% of men.

There is also a huge discrepancy in the time spent by men and women on unpaid household work, with women (ages 15-59) spending an average of ~6 hours per day compared with men (ages 15-59) spending ~1 hour.

[20]Goldin C, The U-Shaped Female Labor Force Function in Economic Development and Economic History, 1994

According to the 71st round of the NSS, engagement in domestic activities is a major reason why women drop out of school. Surveyors asked men and women between the ages 15 and 29 why they dropped out of school. "Engaged in domestic activities" was the most common reason given by women. This hinders women's ability to be employed in a white-collar job and limits employment opportunities.

Domestic duties are a major reason behind women not participating in the workforce



Source: PLFS (2021-2022)

Domestic duties are also the main reason cited by women for not participating in the workforce. In the 2021-2022 round of the PLFS, 44.5% of women said they were not in the labour force due to childcare or personal commitments in home making, compared with only 0.8% of men.

The results of these surveys clearly show that social norms where women do the majority of housework and childcare are limiting their ability to participate in the labour force. In its report "Reshaping Norms: A New Way Forward", the World Bank stated that social norms regarding division of household labour can, in part, explain why South Asian countries have wider gender gaps in labour markets than other countries at similar levels of development[21]. Changing social norms is a slow process and policy action from the government will be required to incentivise equality in the division of household labour.

[21]World Bank, Reshaping Norms: A New Way Forward, 2022

What can be done to increase labour's contribution

I. **Improving access and quality of education:** The NSO estimates that more than a fourth of the population (aged 15 and above) was not literate in 2017-2018[22], and only 10.6% of Indians were educated at least up to the graduate level. Additionally, school shutdowns during the pandemic were detrimental to the learning of school children. A 2021 study by Azim Premji University[23] found that 92% of children lost at least one language ability and 82% of children lost at least one mathematics ability compared with the previous year in government schools. Therefore, providing high-quality education to all Indians will be critical.

   The reforms proposed under the New Education Policy (NEP), 2020, for the Indian education system can play an important role. Under the NEP, the government aims to have a 100% gross enrolment ratio (GER) in preschool-to-secondary schools by 2030, which would improve the quality of labour. But there is a long way to go. The GER for higher secondary schools was 57.6% as of academic year 2021-2022. It is important to note that the benefits from education policies implemented in the next couple of years will be fewer, as many children educated today will enter the workforce post 2031. That said, concerted and sustained efforts in this direction can yield higher worker productivity in the long run.

II. **Providing vocational training and skilling:** Vocational training will make the youth more employable in the short run. The Ministry of Skill Development and Entrepreneurship was established in 2014 to tackle the problem of demand-supply mismatch in skilled labour. Skill hubs were attached to the existing educational and training institutes to provide vocational training. In 2022, 2.28 lakh students were enrolled in skill hubs. However, there is a lot more that needs to be done in this area. According to a 2022 report by the World Economic Forum[24], 85% of schools in India have not included vocational courses in their curriculum.

III. **Encouraging participation of women in the workforce:** As per the 2022-23 PLFS, the WPR for women stands at 27% . Although this is a significant improvement from the pre-pandemic level, policy action is required to ensure the increase in women's employment continues. Closing gender gaps in education and increasing the number of women in higher education are important focus areas, as these would equip women to attain high-quality jobs. Furthermore, creating jobs in sectors with higher female intensity, such as childcare and teachers' aid, nursing, primary school education, and garment-related trades[25], and providing training for these jobs could encourage women to join the workforce.

Understanding India's demographic advantage

In 2023, India's population overtook China's by a slight margin, making it the most populous country with 140 crore people. The size of India's population is 4.2 times that of the US, 5-6 times that of peers Brazil and Indonesia, and 12-14 times that of peers the Philippines and Vietnam.

- Around 97 crore are in the working-age group, i.e., between ages 15 and 64. This population is nearly 3 times the total population of the US, 4 times that of Indonesia and 10 times that of Vietnam
- By 2031, India's population is expected to increase by another 9.8 crore to 150 crore. That is, the country will add a population equivalent to today's population of Vietnam. Of these, 8 crore people will be added to the working-age group. This compares with the population size of Germany today
- Given the falling birth rates globally, India's clear advantage is that its population will continue to expand until 2060. Poorer north Indian states such as Uttar Pradesh, Bihar and Jharkhand will see faster expansion in population than other parts of the country. Indeed, fertility rates in several states have already fallen below the replacement levels. The median age has crossed 30 years in south Indian states. Hence, educating and training youth in poorer states and creating jobs to employ them will be critical for reaping the benefits of India's demographic advantage

India has already entered the third stage of demographic transition, with the fertility rate below the replacement level. In fact, India's child population has already peaked, as it has been declining since 2009. Because of this, India's dependency ratio will be at its projected lowest level during 2031-33 and will rise thereafter as the population aged over 65 increases.

According to the United Nations, the period when the dependency ratio is declining is the demographic window of opportunity. Therefore, this decade is crucial for India.

[22]Data for this survey was collected from July 2017-June 2018
[23]Azim Premji University, Loss of Learning during the Pandemic, 2021
[24]World Economic Forum, Education 4.0 India, 2022
[25]ILO, Where women work: Female dominated occupations and sectors, 2023

Productivity set to rise

Physical, digital connectivity and reforms can spawn efficiency gains

Gains already visible in several parts of the economy

Towards more effective use of inputs

This section explains how two factors — labour and capital — can be combined to produce higher growth. Our estimates suggest that over the next seven years, the contribution of productivity to GDP growth will increase.

Historically, India's high-growth periods have mostly coincided with increasing productivity — fiscals 1993 to 1998, 2004 to 2008 and 2014 to 2018. Apart from the support from upturn in global cycles, these years reaped the benefits of efficiency-enhancing measures in preceding periods. These included but were not limited to improving the health of banks, increasing physical connectivity, liberalisation of trade or reduction of tariff barriers, push to financialisation, reducing or simplifying tax structures, and opening up of foreign investments.

What will drive productivity in India this decade?

Physical infrastructure

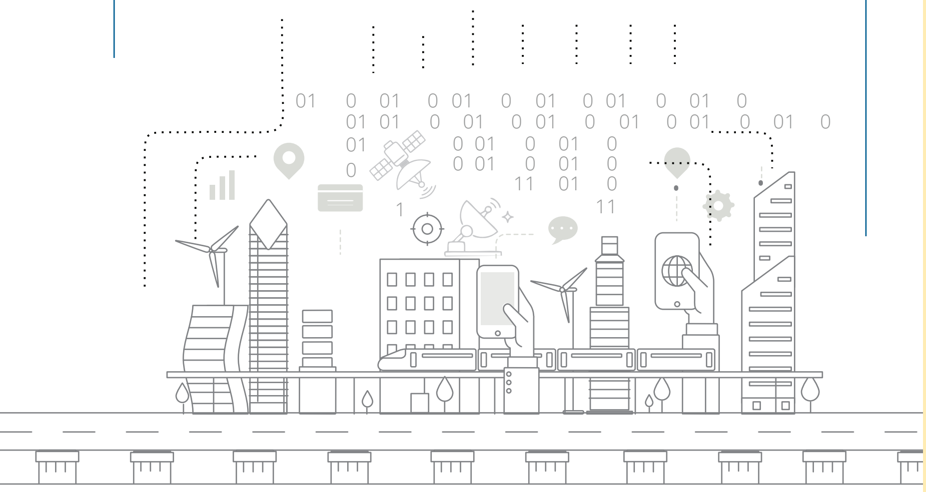
- Improving connectivity and lowering logistics costs via construction and modernisation of highways, ports, airports, railways

Digital infrastructure

- Efficient payment systems
- Government subsidy delivery
- Synergies with physical infrastructure

Reforms and process improvement

Corporate tax rate cuts, Goods and Services Tax (GST) improving tax efficiency and mobilisation, Insolvency and Bankruptcy Code (IBC) aiding the exit of distressed firms, improvement of credit culture, easing of FDI norms, electricity efficiency and accessibility



Source: CRISIL

Productivity improvement enabled the East Asian growth miracles to sustain beyond the initial growth spurts (refer to the box). In India as well, higher investments (increased role of capital) have driven growth spurts in recent years. Going forward, productivity improvement is also expected to drive growth.

High TFP significantly facilitated East Asian economies' transition to high income

Country-wise evidence highlights the relevance of rising productivity in shaping economic growth. The most widely discussed are the East Asian 'tigers' — Singapore, South Korea, Hong Kong and Taiwan — which saw long periods of high growth, enabling the countries to move to high per capita income levels. Work by the IMF (Sarel, 1997) highlights the role of TFP in raising GDP growth in these economies[26].

Rodrik, Grossman and Norman (1995)[27] argue that TFP improvements in the high-growth phase of East Asian economies were shaped by government intervention, focused policies and an educated workforce, as these enabled better use of resources in the economy. The focus was on strategic industries with high capital intensity and

[26] 1997, Sarel, M, 'Growth in East Asia: What we can and cannot infer', IMF Economic Issues
[27] April 1995, Rodrik, R., Grossman, G. and Victor, N., 'Getting Interventions Right: How South Korea and Taiwan Grew Rich', Economic Policy

potential for enhancing supply-chain linkages. In South Korea, the government implemented this by supporting private conglomerates (chaebols); in Taiwan, the government established firms in key industries, such as textiles, plastics, steel and electronics. In both countries, support to these key industries was provided via subsidised credit, tax incentives (including, in some cases, import duty exemptions), and direct public investment.

The external environment for India is currently less conducive for an export-led growth strategy, compared with that for East Asian economies during their high-growth phase. In the current milieu, geopolitical disruptions to global trade, tariff wars between major economies, and competition from return of industrial policies in advanced economies pose challenges to growing exports. However, there are opportunities from friend-shoring and supply-chain diversification.

This underscores the role efficiency can play in India's growth while it caters to the domestic market and constrained pie of external demand. From a low base, India is primed to reap gains from ongoing infrastructure development — both digital and physical — and undertaking growth-enhancing reforms aimed at improving ease of doing business.

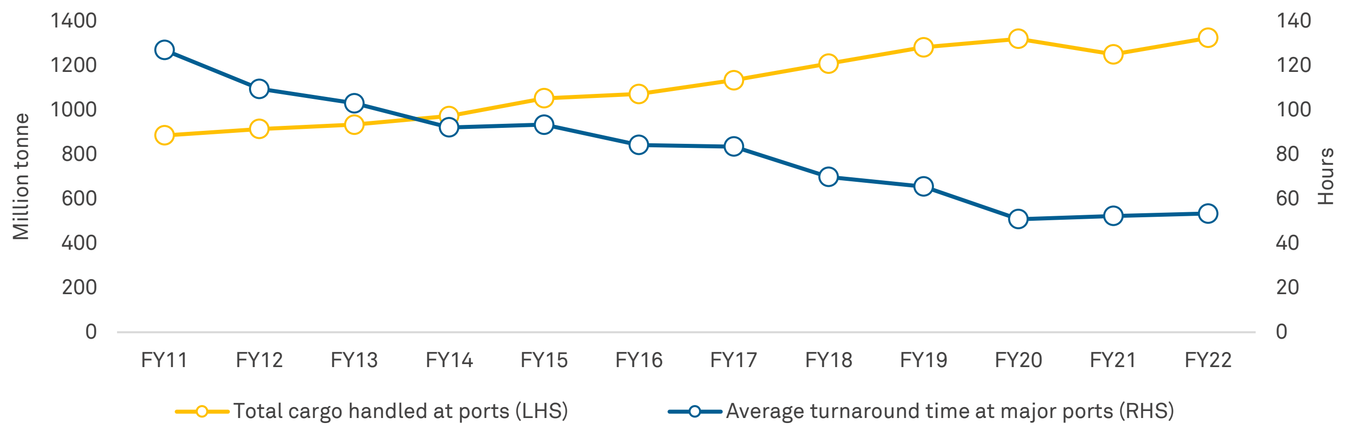
Better physical infrastructure improving logistics efficiency

Key government schemes — the National Infrastructure Pipeline, Pradhan Mantri Gati Shakti National Master Plan and National Logistics Policy — are modernising India's transport infrastructure. They are connecting parts of the economy which were poorly connected so far and bringing down logistics costs for the Indian industry, making it more competitive (for details, see 'Infrastructure spending push has been complemented by policy push' on page 22).

Where the gains are visible:

- **Logistics:** India's rank in the World Bank Logistics Performance Index (LPI) improved to 38 in 2023 from 44 in 2018. This was on account of improved rankings on infrastructure, international shipments, logistics competence and quality and timeliness. A 2023 study by the National Council of Applied Economic Research and the Ministry of Commerce and Industry[28] also notes a cut in logistics cost in fiscal 2022 relative to fiscal 2012
- **Road connectivity:** Road connectivity is improving with widening and lengthening of roads. The pace of national highway construction increased from 12 km/day in fiscal 2015 to 28 km/day in fiscal 2023
- **Decongesting:** Of the choke points identified under the Bharatmala programme, ~32% were decongested as of end-March 2023, with decongestion of an additional 45% ongoing (the Ministry of Road Transport and Highways)
- **Port modernisation:** Between fiscals 2011 and 2022, the average turnaround time at major ports declined nearly 58% (the Ministry of Ports, Shipping and Waterways). This is primarily responsible for India's improved ranking in the World Bank's LPI

Increasing cargo handled, reducing turnaround times



Source: Ministry of Ports, Shipping and Waterways, CRISIL

[28]Dec 2023, Munjal., P and S. Pohit, 'Report on Logistics Cost in India: Assessment and Long-term Framework', National Council of Applied Economic Research. Available at: https://www.ncaer.org/wp-content/uploads/2023/12/NCAER_Report_LogisticsCost2023.pdf

Wide-ranging benefits from digital infrastructure

Where the gains are visible:

Efficient payment systems

Rapidly rising digital payments and resultant efficiencies

- Between fiscals 2018 and 2023, total annual volume of digital payments increased over 7 times to 113.9 billion transactions. Much of this increase was due to Unified Payments Interface (UPI), which has seen a surge in share in total digital payments by volume
- A study[29] on socio-economically weaker populations in Bihar and Uttar Pradesh found more than half the respondents using RuPay cards had replaced cash transactions with the latter, citing time savings (National Bank for Agriculture and Rural Development and Rambhau Mhalgi Prabodhini)
- In the Indian context, mobile payments helped "improve the efficiency of risk-sharing arrangements." A rainfall shock that typically decreases economic activity had a lower impact in districts with high mobile money intensity[30] (IMF Working Paper, 2020)

Government subsidy delivery: Increased transparency and efficiency

- The linkage of Aadhaar with an individual's bank account has enabled the government to transfer social security payments and benefits digitally and check leakages and duplication. This transfer under the 'Direct Benefit Scheme' led to cumulative savings of Rs 2.7 trillion until fiscal 2022 (Interim Budget speech, February 2024)

Innovations from the rise of India's platform economy

- The open-source and interoperable nature of India Stack has enabled the implementation of various digital platforms, such as CoWin, National Health Stack, National Health UPI, Open Credit Enablement Network, and Open Network for Digital Commerce
- India's core digital economy grew 2.4 times faster than the overall economy during fiscals 2014-2019, accounting for 8.5% of gross value added in 2019[31] (RBI Bulletin, 2022)

Synergies between digital and physical infrastructure will improve time and cost efficiency

The concurrent development of physical and digital infrastructure is aiding an improvement in ease of doing business in India.

- As of October 2023, ~98% of toll plazas nationwide could accept toll electronically (CRISIL MI&A Consulting). This has resulted in reduced waiting times — from 734 seconds in 2014 to 47 seconds in 2023 (the Ministry of Road Transport and Highways) — and increased cost savings through lowered energy requirements (CRISIL MI&A Consulting)
- The use of smart technologies is also increasing power distribution efficiency. The Revamped Distribution Sector Scheme, launched in 2021, incentivises the use of advanced metering infrastructure, which can enable sophisticated capabilities, such as time-of-day tariffs and prepaid electricity consumption. This decreased aggregate technical and commercial losses from ~22% in fiscal 2021 to ~16% in fiscal 2022, with a target to reduce losses further to 12-15% by the next fiscal (CRISIL MI&A Consulting)
- Internet of Things (IoT) will be supported by rapid 5G adoption. The former is expected to increase reliability and performance of connected devices

Reforms and process improvement

The government has been gradually moving the needle on reforms over the past decade. Among reforms and those expected to have a larger structural impact are GST, IBC and industrial PLI initiatives.

Key process reforms that can help streamline procedures and bring about transparency include the Real Estate (Regulation and Development) Act, the merger and clean-up of public sector banks to improve their efficiency, fast-tracking clearances and business permits, reducing corporate tax rates, and easing FDI norms.

All these have, to some extent, translated into an improvement in ease of doing business in India. However, much of this remains work-in-progress, leaving scope and opportunities for further improvement.

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[29] Rambhau Mhalgi Prabodhini and NABARD, 'Impact Assessment of RuPay Card on Weaker and Marginalized Sections in Bihar and Uttar Pradesh'. Available at: https://www.nabard.org/auth/writereaddata/tender/1911204419RuPay%20Impact%20Assessment%20Study%20Report.pdf
[30] July 2020, Patnam, M. and Yao, W., 'The Real Effects of Mobile Money: Evidence from a Large-Scale Fintech Expansion', IMF Working Paper No. 20/138. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3721180
[31] December 2022, Gajbhiye, D., Arora, R., Nahar, A., R. Yangdol, and I. Thakur, 'Measuring India's Digital Economy', RBI Bulletin. Available at: https://www.rbi.org.in/Scripts/BS_ViewBulletin.aspx?Id=21471

Where the gains are visible:

- **GST is improving tax efficiency, ushering in formalisation**
  - GST, which subsumed multiple indirect taxes (including excise duty, value-added tax and surcharges), was rolled out nationwide in July 2017 and has improved productivity through various channels
  - GST implementation has not only increased government revenue from indirect taxation but also supported direct tax collections via more accurate reporting of income. The sharp rise in income tax collections in this fiscal was facilitated by the government's formalisation push via measures such as tax deducted at source and third-party digital sources, which led to the creation of a transactions trail
  - GST has eliminated interstate toll posts, thereby easing movement of goods across states, reducing opportunities for corruption and decreasing travel times by more than 30%, according to a report by the Ministry of Information and Broadcasting
- **IBC initiated twin balance sheet clean-up in the economy**
  - The IBC was enacted in 2016 to aid the exit of distressed firms and increase ease of doing business. It has also helped improve credit culture by discouraging wilful default, encouraging settlement prior to the IBC process and facilitating increased recovery of assets
  - In the past seven years, creditors had realised an average of ~32% of admitted claims and ~169% of liquidation value, as compared with the 5-20% average recovery rates of other mechanisms (CRISIL Ratings[32])
  - Streamlining of the IBC is needed (including speedier resolution of cases and additional improvement in recovery rates). A worrying sign is that recovery rates decreased from 43% in March 2019 to 32% in September 2023, driven by considerable delays in the pre-IBC admission stage. The average time taken for resolution increased from 324 to 653 days, almost double the stipulated 330-day threshold (CRISIL Ratings)
- **Bank sector clean-up a culmination of multiple policy steps**
  - Along with the IBC, multiple measures undertaken by the government and the RBI have helped clean up India's banking sector. The banking sector today is in a better position to cater to the economy's financing requirements. The gross NPA ratio reached a low of 3.2% in September 2023, a level last seen in fiscal 2013. Healthier bank balance sheets are now supporting the credit upcycle despite rising interest rates
- **Energy reforms**
  - Over the past several years, the government has focused on improving electrification and availability of electricity to all households. The thrust is now on efficiency, while also ensuring a smoother economic transition towards greener sources of energy
  - With an emphasis on efficiency, the government had launched the Unnat Jyoti by Affordable LEDs for All (UJALA) scheme in fiscal 2015. As of February 2024, 369 million LED bulbs were distributed, leading to energy savings of ~48 billion units (BUs) per year as per government estimates
  - To tackle the high inefficiencies in the distribution sector, the government introduced the Revamped Distribution Sector Scheme in 2021 (for details, see 'Synergies between digital and physical infrastructure will improve time and cost efficiency' on page 32).
  - Installed capacity addition for renewable energy is also progressing at a rapid pace. CRISIL MI&A Consulting projects strong growth in renewable capacity creation (excluding hydro), such that its share in total installed energy capacity will rise to 52% by fiscal 2030 from 13% in fiscal 2023
  - An International Energy Agency (2023)[33] study shows India is now 10% more energy-efficient than the global average, led by increased efficiency in the industrial sector. Economy-wide energy savings (from the adoption of energy efficiency schemes) grew at ~24% on average during fiscals 2017-2023 (Bureau of Energy Efficiency, 2023)

Exports, an alternative measure of efficiency gains

The Economic Complexity Index, developed by Harvard Growth Lab[34], ranks countries based on the degree of 'diversity' and 'complexity' of their exports.

India ranks 42nd among 133 countries (with a score of 0.48), as per the 2021 rankings. While this represents a 10-rank jump from 2011, the score is still lower than South Korea's 1.04 in 1995 (right at the end of its 'miracle') and China's 1.34 in 2019 (at the end of its high-growth phase).

The Lab found that Indian export growth between 2016 and 2021 was driven by moderately 'complex' products. While the country has diversified into 16 novel products since 2006, their volumes have been insufficient.

[32] November 2023, CRISIL Ratings, 'In 7 years, IBC has improved credit culture; room for strengthening remains', Press Release. Available at: https://www.crisilratings.com/en/home/newsroom/press-releases/2023/11/in-7-years-ibs-has-improved-credit-culture-room-for-strengthening-remains.html
[33] February 2023, International Energy Agency, 'LiFE lessons from India.' Available at: https://www.iea.org/reports/life-lessons-from-india
[34] Harvard Growth Lab, 'The Atlas of Economic Complexity'. Available at: https://atlas.cid.harvard.edu/

This aligns with the World Bank's findings[35] that while the share of 'high' and 'medium-high' technologies in India's total merchandise exports increased ~10% between 2012 and 2022 (to ~33% in 2022), 'medium-low' exports still represent the largest share (42% in 2022).

Similarly, our analysis of fiscal 2023 export data[36] at aggregated Harmonised System (HS) chapter levels found that the 10 most 'complex' product categories[37] (as per the Harvard Growth Lab's 2021 Product Complexity Index) make up only ~17% of India's goods and services exports by value. At a more granular HS-4 level, the 10 most 'complex' categories make up only 0.14% of total export share.

If India manages to diversify rapidly into even more 'complex' products (for which it seems to be in a favourable position), growth could be even higher. As of 2021, India ranked first among 133 countries on the Lab's Complexity Outlook Index, which ranks countries based on the number of 'complex' products that require capabilities similar to existing ones.

Thus, the PLI scheme's focus on 'complex' sectors, such as semiconductors and electronic components, is a welcome step. We find that the product complexity scores of most PLI products were higher than the average complexity scores of India's goods and services exports in 2019 (on the eve of the first PLI announcement in March 2020).

However, the challenge will be not just to diversify into new 'complex' products more rapidly, but also to do so at sufficient volumes. Moreover, the PLI does not currently cover the relatively nascent but highly 'complex' sector of photographic and cinematographic instruments.

The World Bank report also found that India continues to have a comparative advantage (albeit declining) in numerous 'low' and 'medium-low' technology exports.

This implies continued potential to increase global market share in these exports. This is especially relevant in the context of the ongoing supply chain de-risking strategy of companies.

[35] October 2023, World Bank, India Development Update
[36] Data from Ministry of Commerce and Industry
[37] 2021 Product Complexity Index values are available from the Harvard Growth Lab at a HS 4-digit level for goods. They are also available for key services. The complexity score for aggregated HS chapters is arrived at by taking a simple average of the 2021 Product Complexity Scores (ranging from -3.37 to 2.31) for all 4-digit 'products' within the chapter

Towards a balanced growth path

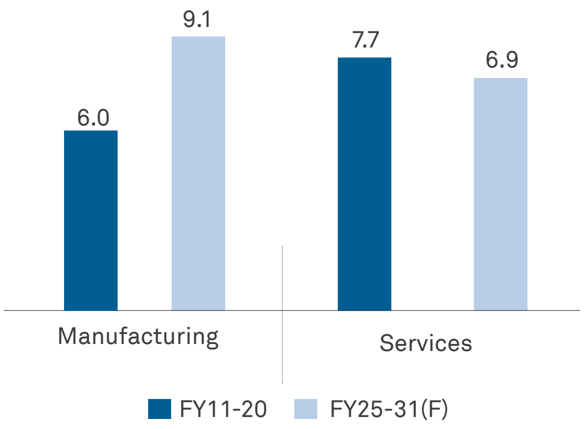
Manufacturing will grow faster than in the recent past, but services will continue to be the primary growth driver

Manufacturing sector to touch 20% of GDP by fiscal 2031

- There is ample opportunity for both manufacturing and services to cater to domestic and global demand. We project manufacturing and services to grow 9.1% and 6.9%, respectively, between fiscals 2025 and 2031
- Despite some growth catch-up by manufacturing, services will remain the dominant driver of India's growth
- The boundaries between manufacturing and services are getting blurred due to the gradual 'servicification' of manufacturing. The focus, therefore, needs to be not on the either-or debate, but on how an optimal combination of the two can deliver balanced growth

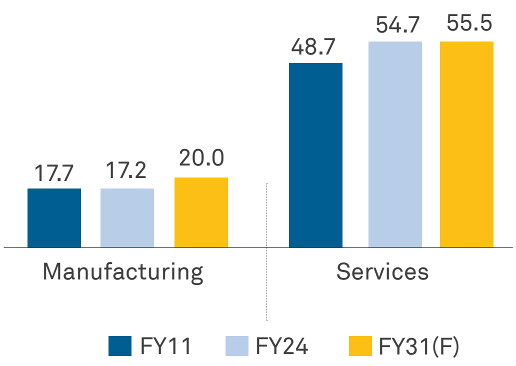
Manufacturing growth to outpace historical trend and services growth

Growth in the medium term



But services to remain the largest growth driver

Share in GDP (%)



Source: NSO, CEIC, CRISIL forecasts

We expect manufacturing growth to average 9.1% per year over the medium term (fiscals 2025-2031), up from 6% average in the pre-pandemic decade (fiscals 2011-2020).

Compared with manufacturing, the services sector is expected to grow at a slower pace over fiscals 2025 to 2031, at an average of 6.9% per year. This growth will also be slower than the 7.7% average recorded during the pre-pandemic decade.

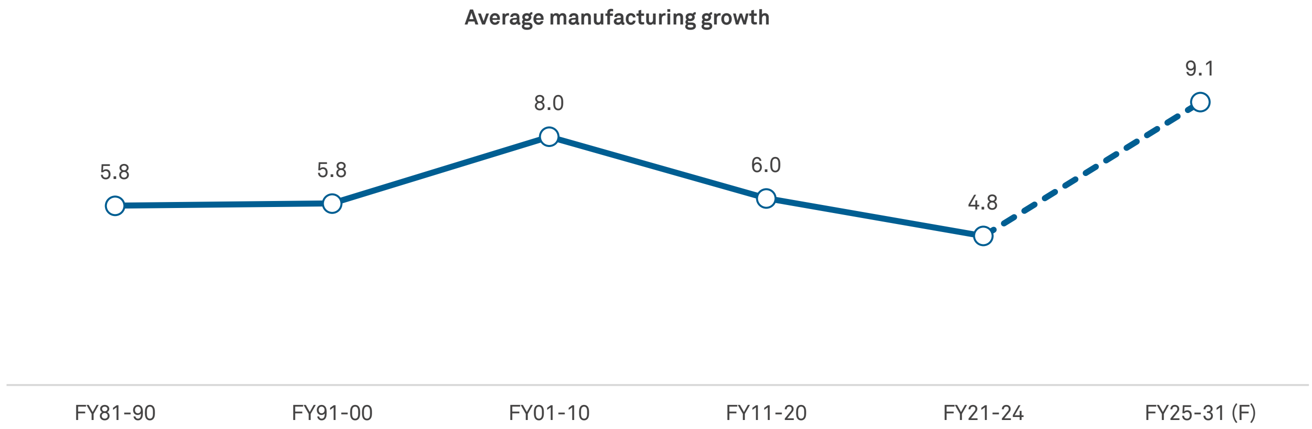
The manufacturing share in GDP is expected to increase to **20%** by fiscal 2031 from **17.2%** this fiscal. The services share is forecast to rise to **~55%** from **54.7%.** In contrast, the agriculture share is projected to fall to **~12%** from 14.5%.

For the manufacturing sector to achieve 25% share in GDP, it needs to grow over 12% between fiscals 2025 and 2031. Over the next seven years, global growth will be relatively tepid and the trade environment restrictive. Therefore, domestic demand will play an important role in supporting manufacturing activity.

Why manufacturing is expected to see a marked rise this time

After a decade of weak growth, manufacturing is expected to do better in the current decade because of the following factors:

Manufacturing growth trajectory to shift this decade



Note: F — CRISIL forecast
Source: NSO, CEIC, CRISIL

1. Competitiveness to improve with logistics

Manufacturing competitiveness has been hindered by inadequate logistics, inflexible labour laws and an opaque land acquisition system. Among these, India seems to be making some headway on logistics (refer to the productivity chapter). We believe the ongoing government capex in infrastructure will further improve transport connectivity (roads, railways and urban infrastructure) and enhance efficiency. This is being complemented with policies geared towards improving and integrating different segments of the logistics ecosystem. All these are expected to reduce bottlenecks in goods trade — a positive for the manufacturing sector.

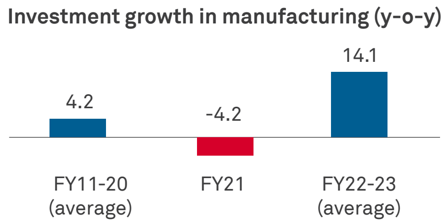
2. Investments in manufacturing picking up

Investments in the manufacturing sector have been concentrated in three areas. One, in sectors that complement the government's infrastructure spending and, therefore, have higher capacity utilisation rates, such as iron and steel. Second, sectors that face the green transition imperative and need to move faster towards achieving Net Zero goals, such as power, battery storage and transport. Third, sectors that are supported by the government's industrial policy and the PLI scheme, such as electronics, mobile manufacturing, automobiles and auto components, and pharmaceutical drugs.

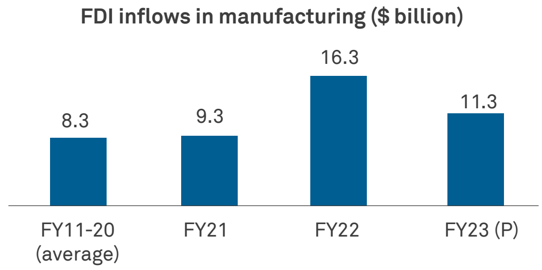
Post the pandemic, manufacturing investments have seen an uptick from domestic and foreign sources.

- Investments in the manufacturing sector rose 14.1% on average during fiscals 2022 and 2023
- FDI in manufacturing rose to an all-time high of $16.2 billion in fiscal 2022. While it moderated to $11.3 billion in fiscal 2023, it remained higher than the average in the past decade

Manufacturing investments on an uptrend in past two fiscals, higher than in past decade



FDI inflows in manufacturing moderate in fiscal 2023, but remain high



Note: P — provisional data
Source: NSO, RBI, CEIC, CRISIL

3. Tailwinds from supply-chain diversification and friend-shoring

Despite a restrictive trade environment, we see some tailwinds from friend-shoring and attractiveness of India's large domestic market.

Shifting supply chains are not a new phenomenon. Firms have historically shifted their bases to countries that offer them cost advantages and market access. Cases of shifting supply chains have, however, increased post the pandemic. Pandemic restrictions highlighted the risks of supply-chain concentration. Thereafter, elevated geopolitical tensions have further highlighted the need to align supply chains to the emerging global order.

In such a scenario, India ranks favourably on friend-shoring (moving production bases to politically aligned economies).

- India is geopolitically friendlier to top export markets. The country's trade linkages with the US and Europe have grown over time and these economies accounted for 34% of its exports in fiscal 2023, compared with 26% a decade ago. Stable geopolitical relations with these economies augur well for investments from these economies
  - The Indian government has stepped up efforts to strengthen economic relations through trade agreements. It signed the Indo-Pacific Economic Framework in 2022 (includes the US and 12 Asian nations) to strengthen supply chains among these economies. Further, free trade agreement negotiations with the United Kingdom (UK), the EU, Canada and Australia are underway
  - Despite these positive developments, the speed with which manufacturing grows will critically hinge on:
    - How quickly its logistics develop
    - Improvement in the ease of doing business
    - Import tariff reduction

Why services will remain the dominant sector

The services sector contributes almost 55% to India's GDP and employs 30% of the workforce. It caters to both the growing domestic demand for services and outsourced IT and IT enabled services. Interestingly, growth in services exports has consistently outpaced growth in manufacturing exports over the past few decades.

India's services sector[38] has been the largest recipient of FDI inflows.

In addition to supportive government policies, several other factors have propelled growth:

- **Large domestic market:** A growing young population and rising per capita income augur well for urbanisation and domestic demand, which, in turn, will benefit the services sector. The sector accounts for ~62% of urban employment as per the PLFS in urban India (July 2022-June 2023). The importance of the sector will only rise as India moves up the per capita income ladder. Trade, hotels, transport and communications, and retail services continue to benefit from high elasticity of demand and effects of urbanisation
- **Services sector inputs to see higher demand as manufacturing sector grows:** Services today find a plug-in into most economic activities, but in different proportions. Of these, the interlinkages between services and industry are significant (for details, see 'Increasing synergies between manufacturing and services' on page 38)
- **Digital platforms increasing opportunities for services:** The rise of the digital platform and gig economy with digitalisation has also increased the scope for growth of the services sector. In particular, the development of Aadhaar, India Stack and payments infrastructure has aided growth of new private sector companies and start-ups in the financial and other services segments

The popularity of cab hailing, food delivery and other personal services platforms has expanded employment opportunities for low- and semi-skilled workforce in the sector, at a time when the manufacturing sector is unable to completely absorb this segment of the workforce.

Both manufacturing and services are needed for absorbing India's growing labour force

According to the World Bank's report, titled At your service, "...the features of manufacturing that were once considered uniquely special for productivity growth might be increasingly shared by some service sectors, especially given the advent of information communication and technology. There is now greater scope for services firms to achieve efficiency gains through scale, labour-augmenting innovation, and backward or forward linkages with other sectors."

India's growing share in global services trade: The services sector's share in India's exports increased to 45% in this fiscal (until January 2024) from 30% a decade ago. If the trend continues, the share of services in India's exports will be on a par with that of goods by the end of this decade. While IT services remain the main type of services exports, the contribution of professional and management consulting has also grown over the past few years. Today, the number of new-age global capability centres (GCCs) is rising steadily across domains such as BFSI, engineering research and development (R&D), and software and internet. As of 2022, India accounted for 55% of the world's functioning GCCs. The number of GCCs in India reached 1,580 as of 2023 and is expected to cross 1,900 by 2025 and 2,400 by 2030[39]. In Tier 1 cities such as Mumbai, Pune and Bengaluru, 18 GCCs were set up in the first half of 2023. Further, Tier 2 and 3 cities such as Ahmedabad, Mysuru, Vadodara, Nashik, Tirunelveli and Coimbatore are emerging as key hubs for expansion of established GCCs[40].

[38] Includes financial, banking, insurance, non-financial/business, outsourcing, R&D, courier, tech testing and analysis, etc
[39] India Brand Equity Foundation (2023). Global Capability Centers (GCCs) in India. Available at: https://www.ibef.org/blogs/global-capability-centres-gccs-in-india
[40] Majumdar, R. and Parmar, B. (2023). Global capability centers follow top tech talent to India's heartland. The Economic Times. Available at: https://economictimes.indiatimes.com/tech/technology/global-companies-flock-to-indias-tier-ii-cities-for-new-capability-centers/articleshow/105791067.cms?from=mdr

Increasing synergies between manufacturing and services

There is growing evidence of increasing use of services in manufacturing, often referred to as “servicification” of manufacturing. Hallward-Driemeier and Nayyar (2018)[41] outlined two types of services that are combined with goods:

- Embodied services that manufacturers require as inputs or enablers during production. These include R&D, marketing, e-commerce, logistics and distribution services
- Embedded services that are bundled with goods at and post the point of sale to enhance customer experience. These include software and maintenance and repair services

This has implications for the industrial policy:

- Any effort to increase efficiency and exports of the manufacturing sector will require an understanding of the ever-growing synergies between manufacturing and services. Choosing manufacturing focus areas without the development of facilitatory services will not yield much benefit[42]
- Increasing the efficiency of embedded and embodied services has the potential to boost efficiency in the manufacturing sector as well
- Arnold et al. (2012)[43] found that the liberalisation of services in India (reforms to increase competition in banking, insurance, transport and telecom) was associated with ~12% and ~13% increase in the productivity of domestic and foreign manufacturing firms, respectively, during 1993-2005. According to Chakrabarty and Chanda (2019), the potential of services in aiding manufacturing catch-up is extremely important from an Indian context, given the higher efficiency in the former and the employment creation potential of the latter[44]
- Manufacturing is more labour intensive than services. The manufacturing sector’s share in India’s GDP was ~17%, but it employed 11% of the workforce in fiscal 2023. In comparison, the services sector’s share in GDP was 55%, but it employed 30% of the workforce
- The bottom line is that instead of a “what to produce” focus that leads to prioritisation of manufacturing over services or vice versa, there should be a recognition of the current-day interdependencies between both, leading to a “how to produce” focus that is not necessarily sector-specific but rather focuses on developing the overall ‘competitiveness, capabilities and connectedness’ required to produce effectively[45]. The Indian industrial policy must, therefore, consider these beneficial synergies between manufacturing and services and focus on creating a faciliatory environment for the simultaneous development of both

[41]Hallward-Driemeier, Mary, and Gaurav Nayyar. 2018. Trouble in the Making? The Future of Manufacturing-Led Development. Washington, DC: World Bank. doi:10.1596/978-1-4648-1174-6. License: Creative Commons Attribution CC BY 3.0 IGO
[42]Chakrabarty, Saunok and Rupa Chanda, 2019. Services Contribution to Manufacturing Exports and Value-Added: Evidence from India and China. Working Paper No. 602, IIM Bangalore ; Hallward-Driemeier and Nayyar (2018)
[43]Arnold, Jens Matthias and Javorcik, Beata Smarzynska and Lipscomb, Molly and Mattoo, Aaditya. January 2012. ‘Services Reform and Manufacturing Performance: Evidence from India,’ World Bank Policy Research Working Paper No. 5948. Available at SSRN: https://ssrn.com/abstract=1988036
[44]Chakrabarty and Chanda (2019)
[45]Hallward-Driemeier and Nayyar (2018)

What rising incomes mean for domestic consumption

India to be an upper middle-income country by fiscal 2031

Consumption patterns, especially discretionary spending, will change once per capita income rises

Private consumption accounts for the largest share of GDP, at ~57%. It helped India stay resilient in periods of slowing global growth, such as in aftermath of the 2008 financial crisis and the Russia-Ukraine conflict.

To be sure, India's large population automatically makes it a large market. Demographically, India has the largest young population among major global economies and is expected to add ~ 70 million to the workforce (15-64 age group) between 2023 and 2030.

From a medium- to long-term perspective, rising working age population and higher per capita incomes are expected to raise the share of discretionary consumption and keep private consumption healthy.

Rising per capita income will support discretionary spending

In microeconomic theory, Engel's law postulates that household consumption patterns change with levels of income. While food accounts for a greater proportion of the consumption basket at low income levels, rising incomes make consumers accommodate other items in their consumption.

At the macroeconomic level, this means that with rising incomes, the share of essential items (e.g., food) will reduce in private consumption, while the share of discretionary items (e.g., consumer durables and automobiles) will rise.

What is most interesting from empirical research is that a consumption boost is observed once an economy reaches the middle-income level. Through a cross-country analysis, an UNCTAD discussion paper by J Mayer in 2013[46] showed that expenditure on durable consumer goods[47] grows faster than per capita income when per capita income is $4,000-35,000.[48]

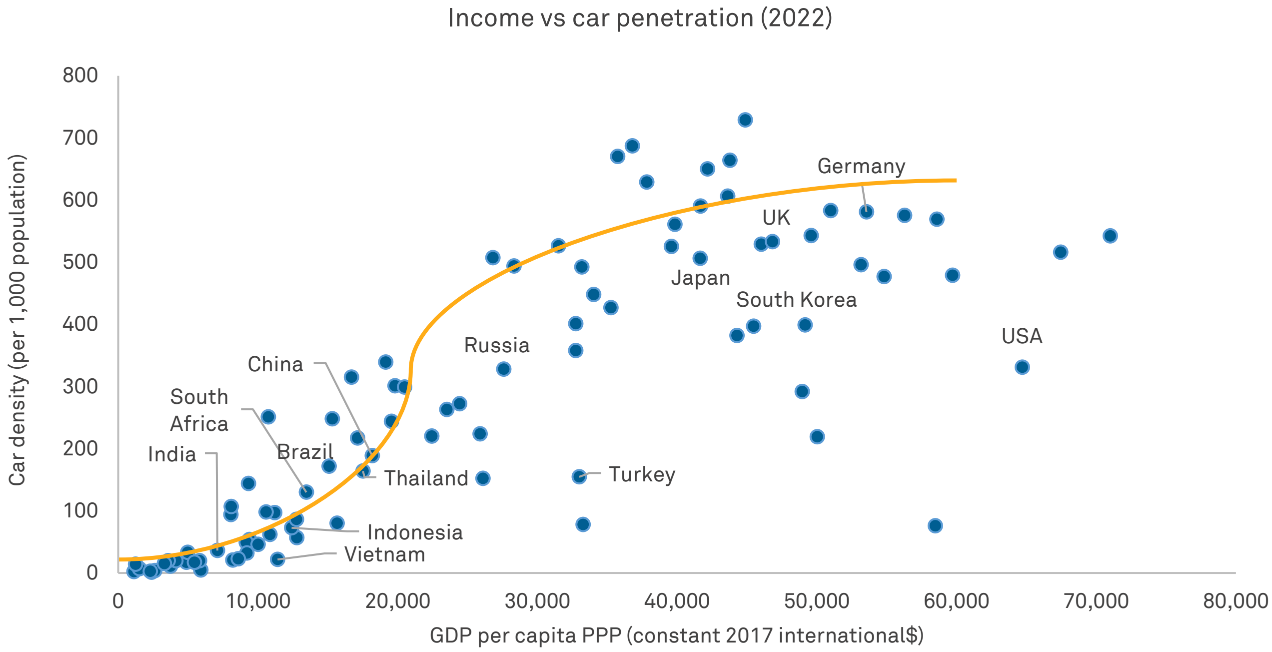
Going by this, India's rise from the lower middle-income level at present to the upper middle-income level by fiscal 2031 will improve the quality of consumption, with increasing demand for discretionary goods.

Take the example of automobile, one of the aspirational durables and closely tracked consumption items. We find that car density in a country rises with per capita income, with most gains in the middle-income segment.

India appears to be at the start of the curve, post which car density may rise steeper than observed previously. This makes us expect a sharp rise in demand for automobiles and other discretionary goods as rising growth increases incomes this decade.

[46]Mayer, J (2013). Towards more balanced growth strategies in developing countries: issues related to market size, trade balances and purchasing power. UNCTAD discussion paper
[47]Measured in US dollar at constant 2011 prices
[48]Per capita income in Mayer (2013) is measured in real international dollar, i.e., evaluated at purchasing power parities, at constant 2005 prices

Elasticity of consumption increases at middle-income levels



Source: S&P Global, World Bank, CRISIL

Some caveats apply, though. Empirical evidence suggests consumption boom primarily comes from a growing middle class. For this, India needs to ensure rising growth percolates to all income segments of the society.

All goals come with challenges

India's resilience must not create recency bias and complacency

Risks remain unclear and varied

Geopolitical risks

- Conflicts: Geopolitical tensions keep uncertainty at elevated levels. So far, these developments have not dented the Indian economy's resilience. But any escalation (Middle East/Red Sea crisis) will be a red herring as logistics costs have started rising and crude oil supplies could come under pressure. This can impact the competitiveness of India's exports and reverse the softening trend of core and fuel inflation and make interest rates stay higher for longer in India
- Elections: More than 60 countries, including the US and India, will have general elections in 2024. This adds a political element to prevailing uncertainties, especially global trade. Many of these countries have a sizeable population and economic influence, and a post-election change in policy agenda could have global ramifications. Our estimates suggest countries holding general elections this year account for 40-45% of total world GDP

Climate change

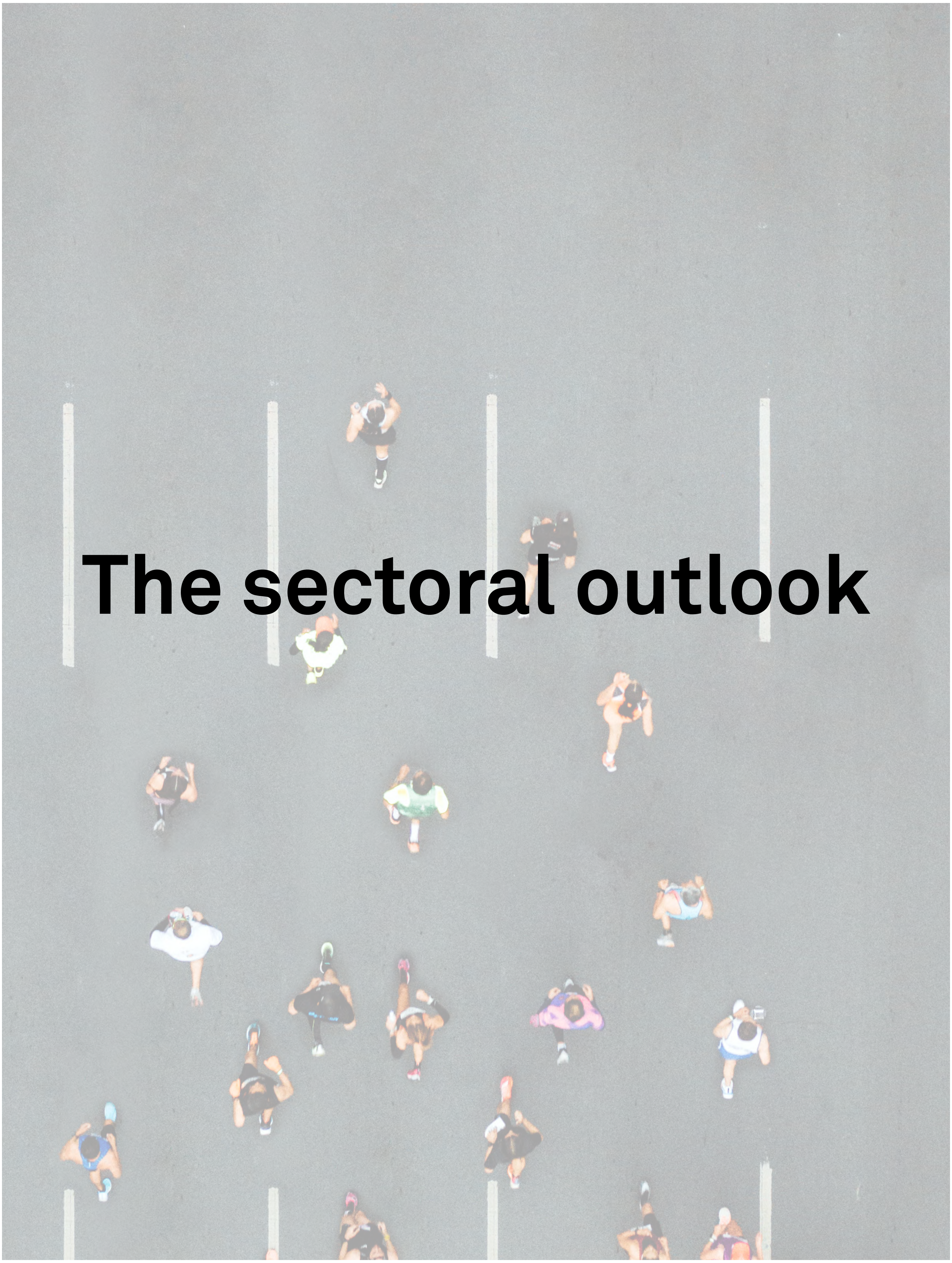
- 2023 was the hottest year on record for the globe. India witnessed the second-hottest year and the driest August in 123 years in 2023, which dragged down agricultural growth to 1.8% this fiscal from 4.0% last fiscal and led to soaring food inflation. The frequency of such extreme weather events is expected to increase with climate change
- We are working with an assumption of normal monsoon in 2024, which could be disrupted by ongoing El Niño conditions and the possibility of extreme weather events
- From a medium- to long-term perspective, changing climate would require accelerated measures to improve resilience and reduce climate risks
- Decarbonising while growing: India is focused on making infrastructure and manufacturing — both carbon-intensive — its key growth engines. Climate change-related action will, therefore, pose a unique challenge to the country. A review document from the Ministry of Finance (January 2024) lists the "trade-off between energy security and economic growth versus energy transition" as a key challenge for the economy

Global indebtedness

- S&P Global estimates global debt-to-GDP at 231% for 2023. High global leverage in a scenario of "higher-for-longer" interest rates and slowing growth creates conditions for distress and financial crises

Complacency risk

- India's resilience in an environment of elevated global risks and shocks since the pandemic was a result of good policy choices. Our past resilience should not create recency bias and breed complacency in policymaking and reforms. If India wants to maintain its stature as the fastest-growing large economy and create an upside to its growth potential, it needs to keep the foot on the reform pedal



The sectoral outlook

Capital investments to fire on both cylinders

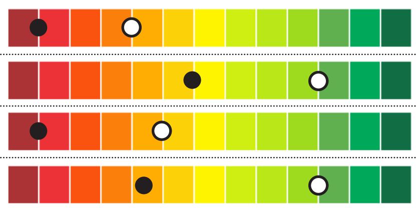
After a decade, industrial capex to match infrastructure growth

Private investments to take burden off government to drive capex

- In the past four years, capex in the country was driven by the household sector and the infrastructure buildout bankrolled by the central and state governments. Going ahead, the industrial sectors are expected to pick up pace, with investments flowing towards both conventional and emerging sectors. Parallelly, infrastructure capex will maintain its momentum
- Overall industrial capex grew ~9% on average between fiscals 2019 and 2023, with the past two fiscals outperforming. In absolute terms, industrial capex averaged Rs 3.9 lakh crore per annum in the period. It will likely rise to ~Rs 6.5 lakh crore on average between fiscals 2024 and 2028, marking an increase of ~1.7x on an annual basis
- Growth would be driven by higher capacity utilisation, strong investment intent in emerging sectors and PLI scheme implementation over the next 3-4 fiscals
- CRISIL Ratings estimates Rs 30-35 lakh crore of debt will be needed to fund capex by the private sector alone
- While the infrastructure and corporate sectors are expected to be funded predominantly by banks and the corporate bond market, emerging sector capex, dominated by multinationals and large Indian companies, is expected to be funded by the domestic and international corporate bond markets

Power sector will drive infrastructure capex

Rs lakh crore	FY24E	FY25P	FY19-23	FY24E-28P	FY24E-28P CAGR	FY24E-28P/ FY19-23	
Industrial (I + II + III) (A)	5.4	17-19%	19.6	31-33	8-10%	1.7	
Emerging (I)	0.5	70-80%	0.4	5-7	70-80%	14.5	India's value chain capability by FY28
Semiconductors and electronics	0.3	35-40%	0.4	3	55-60%	8.5	
EV capex	0.2	1.2-1.3x	0.0	2	NM	NM	
Battery manufacturing	0.0	14-16x	0.0	0.4	NM	NM	
Solar modules	0.0	30-35%	0.0	0.2	15-20%	5.2	
PLI (II)	0.5	45-50%	0.6	2	NM	3.8	
Conventional (III)	4.4	5-7%	18.6	24	5%	1.3	
Infrastructure (B)	14.0	14-16%	45.5	85-88	10-12%	1.9	Sources of fund (FY24E-28P)
Roads	3.8	11-13%	13.3	24	11-13%	1.8	60% / 21% / 19%
Power	2.9	35-40%	10.8	22	13-15%	2.0	16% / 30% / 54%
Railways	2.9	7-9%	8.8	17	8-10%	1.9	84% / 16%
Urban infra	2.4	3-5%	5.7	13	8-10%	2.2	43% / 53% / 4%
Other infra	2.0	8-10%	6.9	12	9-11%	1.7	18% / 47% / 35%
Total (A+B)	**19.4**	**9-11%**	**65.1**	**115-125**	**9-11%**	**1.8**	



● Current value chain capability
○ Future value chain capability by FY28

Low — High

● Centre ● State ● Private

Note: NM - not meaningful; other infrastructure sectors include ports, airports, telecom towers, warehousing, green hydrogen and irrigation. Conventional sectors include oil and gas, steel, cement, auto (internal combustion engines) and others; E - estimates, P - projections
Source: CRISIL MI&A Research

Non-conventional sectors to contribute 18-20% to industrial investments

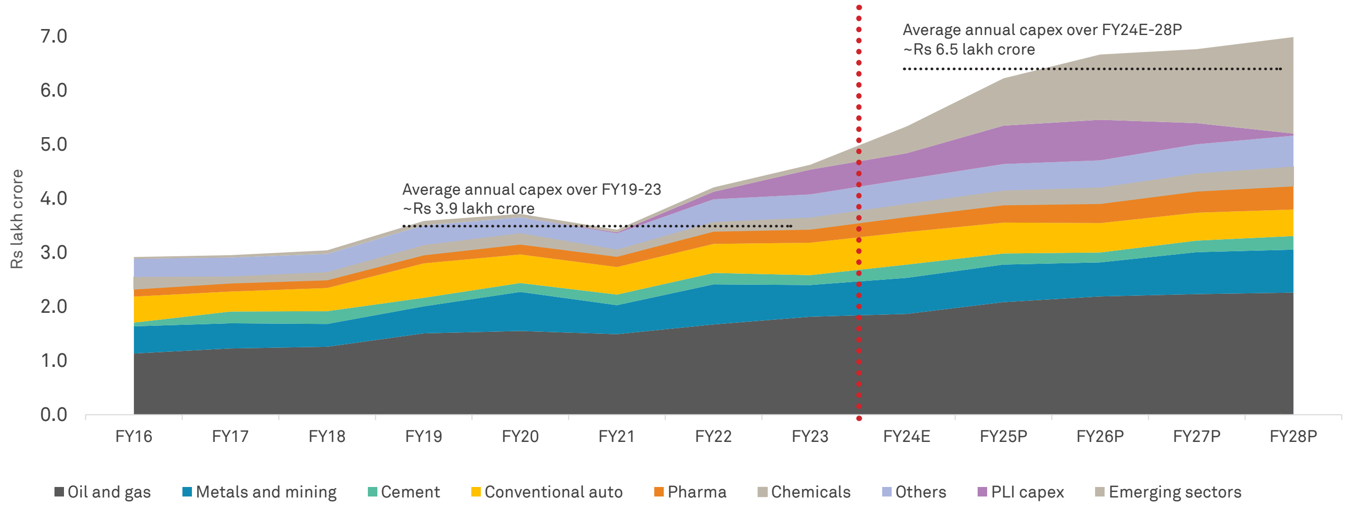
Emerging sectors to boost value-added manufacturing

1 Capex catalyst

Sectors such as EVs, semiconductors and electronics will dominate investments

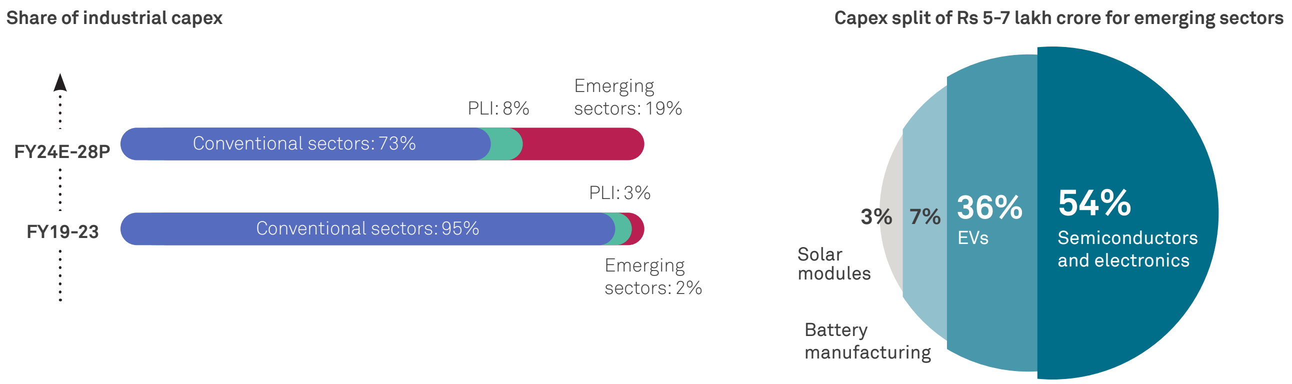
- PLI and emerging sectors accounted for 5% of the capex between fiscals 2019 and 2023. This is set to rise to 27% between fiscals 2024 and 2028. Put another way, these two segments will drive the bulk of the incremental capex
- There is strong investment intent in most emerging sectors. Their scaling would require large capex, and hence they are likely to have a crucial role in domestic manufacturing
- Three segments are expected to draw as much as 85-90% of the non-PLI emerging-sector capex: EVs, semiconductors and electronics. Transition towards greener sources of fuel and setting up of semiconductor design hubs in India are expected to provide impetus
- In addition, the PLI capex incurred by approved applicants could peak by fiscal 2026 as they aim to meet the commitments that will qualify for incentives

PLI and emerging sectors to account for 27% of industrial capex



Note: E - estimate, P - projection

EVs, semiconductors and electronics to drive 85-90% of non-PLI emerging-sector capex



Note: E – estimate, P – projection
Source: CRISIL MI&A Research

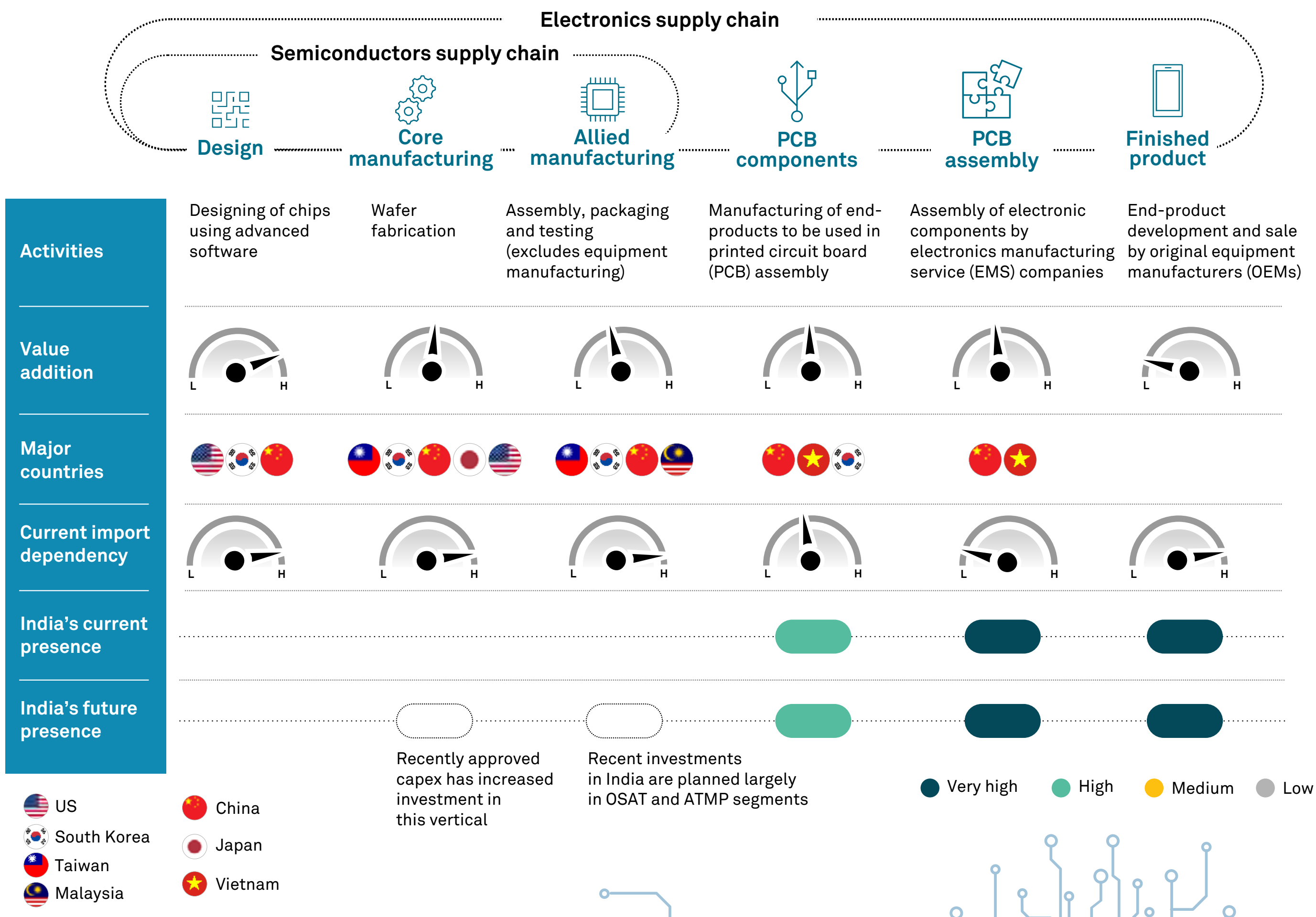
Electronics: Investments in semiconductor manufacturing to boost value addition

Value addition has ample room to grow

Global supply-chain diversification strategies support the electronics ecosystem in India

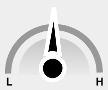
- Due to gains made over the past three years, India's value addition in products such as mobiles has increased to 15-20%, though still lagging global benchmarks
- Further, owing to the globally integrated nature of supply chains, India's import dependency in semiconductors is likely to remain high in the medium term. However, we believe once large-scale capex entrenches India's capability in semiconductor assembly, packaging and testing, the extent of value addition across electronics and allied manufacturing can improve significantly. Current investments aimed at high-nanometer specifications are targeted at industries such as auto and defence
- Capex in the sector will establish a strong ecosystem in the coming years, which will increase India's value-addition potential. However, sustained capex would be required as India moves up the value chain, given the capital-intensive nature of these processes

Sustained capex to drive India's ascent from assembly to higher value-adding segments



Note: OSAT - outsourced semiconductor assembly and test; ATMP - assembly, testing, marking and packaging
Source: Industry, CRISIL MI&A Research

Semiconductor business models

	Integrated device manufacturers (IDMs)	Fabless firms	Foundries	OSATs
Activities	Performs design, fabrication, assembly, packaging and testing in-house	Focuses on design and outsources fabrication, assembly, packaging and testing	Addresses fabrication needs of IDMs and fabless firms	Provides assembly, packaging and testing services to IDMs and fabless firms
Value-chain focus	• Design • Front-end manufacturing • Back-end manufacturing	• Design	• Front-end manufacturing	• Back-end manufacturing
Capex intensity				

Source: Industry, CRISIL MI&A Research

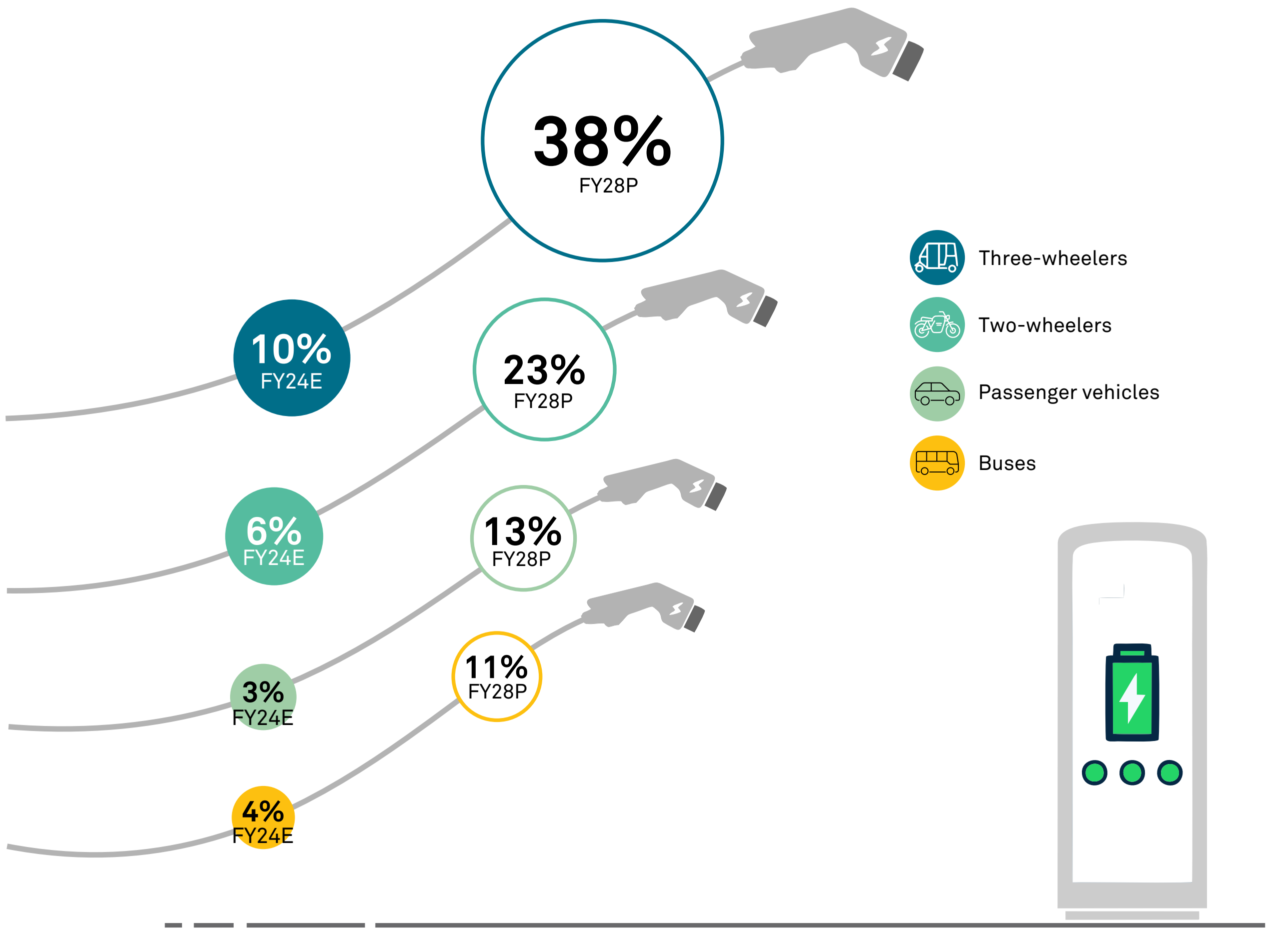
Battery ecosystem: Capex to drive up value addition in battery ecosystem

Demand momentum across EVs and electronics to propel growth in battery manufacturing

Increasing penetration across segments to drive EV investments

- For India's commitment to achieving the net-zero emission target, reduction of emissions from the transportation sector remains a key priority. A rapid transition and increase in penetration levels in the EV segment would encourage OEMs to build large capacities. In addition to EVs, growth in segments such as mobiles and electronics, consumer durables, and energy storage will keep battery demand intact
- Components account for 80-85% of a battery's cost. Cathodes, which cost the most, are imported from China, Japan and South Korea. As India forays into cathode and anode production, dependency will shift to Australia, South Africa, Indonesia, Chile and China for import of lithium, cobalt, nickel and manganese since India lacks these materials

EV penetration to be most pronounced in two- and three-wheeler segments over the next four fiscals



E – estimate, P – projection
Source: CRISIL MI&A Research

Cell production and lithium refining and processing are capital-intensive in nature, leading to high concentration

Supply chain	India's current position in value chain	Geographies	Level of consolidation	Companies	Typical lead time for initial production in battery supply chain
Mining		Mining of key minerals concentrated in a few countries, such as Chile and Australia	**Medium level** In lithium mining, the top five companies cater to 50% of global demand	**Lithium** - SQM, IGO, Alkem **Nickel and cobalt** - BHP and Glencore	6-19 years
Refining and processing		Raw material processing is concentrated in China, accounting for more than 50% of supply of all metals	**High level** In lithium processing, the top five companies account for 75% of global demand	**Lithium** – Ganfeng, Chengxin Lithium Group **Nickel and cobalt** - Zhejiang Huayou	3-8 years
Cathode and anode production	Expansion by FY28	Electrode production is highly concentrated in China, accounting for more than 60% of supply	**High level** For cathode, seven companies account for 55% of supply	**Cathode** – Sumitomo, Tianjin **Anode** – Shanghai Putailai, BTR	2-5 years
Cell production	Expansion by FY28	Battery cell production is capital-intensive and China accounts for more than 75% of production	**Very high level** The top 3 companies account for more than 65% of global production	CATL, LG Energy Solution, Panasonic	1-4 years
Module and battery assembly	Medium	Battery assembly is less concentrated and distributed across the globe	**Low level** Battery assembly is done by cell manufacturers or automakers	CATL, LG Energy Solution, Panasonic	1-2 years
OEM	High	EVs are manufactured in several countries	**Medium-high level** The top six companies account for 52% of global production	Tesla, Volkswagen, BYD, Toyota	2-3 years

India's current position in value chain

- High
- Medium
- Expansion by FY28

Source: Industry, CRISIL MI&A Research

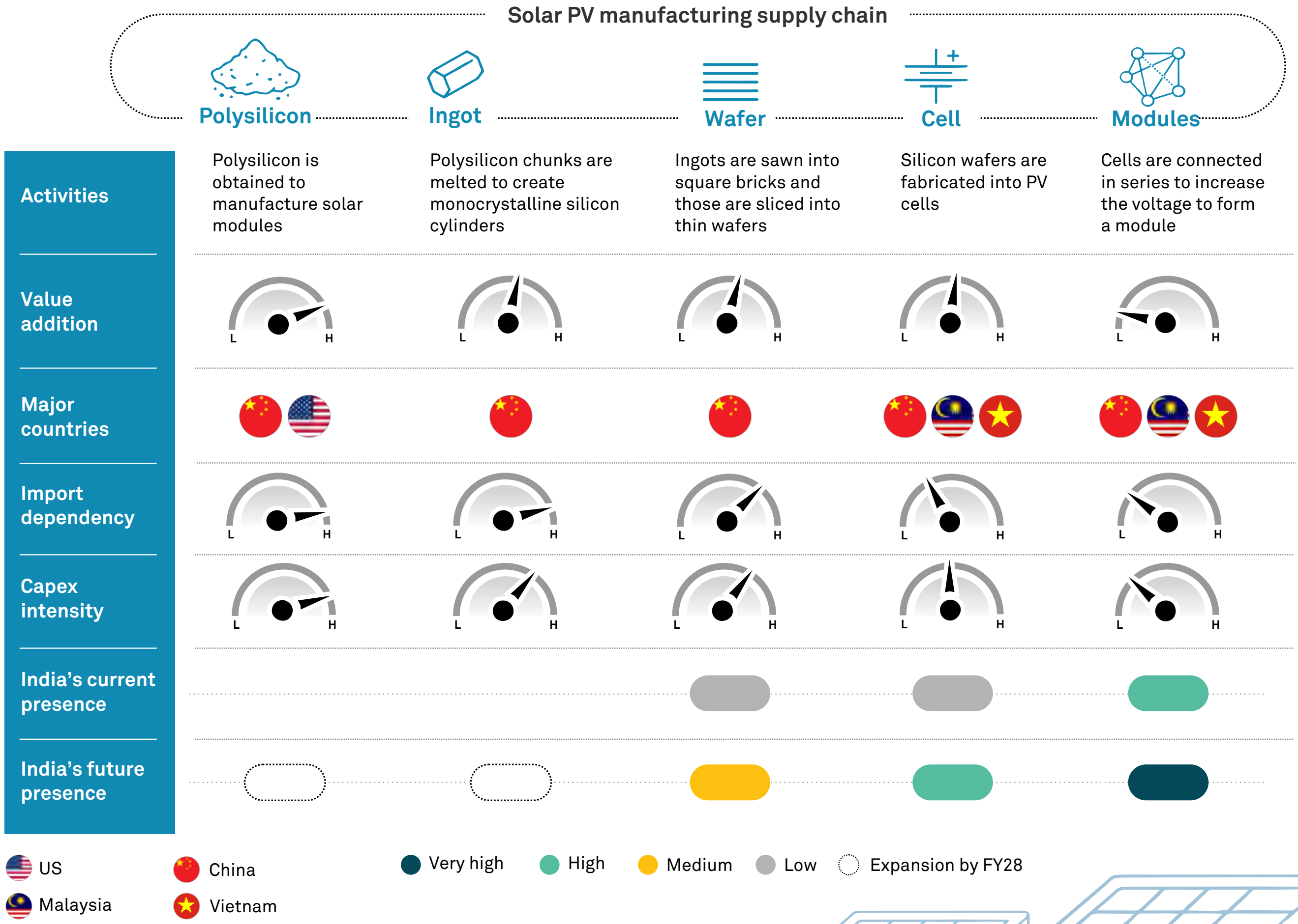
Solar module import dependency to fall to less than 10% by fiscal 2028

Investment of ~Rs 1 lakh crore across the photovoltaic value chain to amp up domestic manufacturing

Government interventions and PLI support to boost manufacturing capability

- Backed by rapid capacity additions, the share of solar in India's total power generation capacity rose from 3% in fiscal 2019 to 6% in fiscal 2023. The share is expected to rise to ~20% by fiscal 2028
- However, when it comes to photovoltaic (PV) modules, not only does India lag peers such as China in terms of scale, but it is also highly dependent on them for import of raw materials such as polysilicon
- Nonetheless, backed by government interventions, the PLI scheme and the transition towards cleaner energy sources, capex in the sector would continue to grow rapidly
- Apart from capacity additions, these investments would also be directed towards upstream integration and efficiency improvement. The three-pronged benefit of this would enable India to increase its presence across the value chain, reduce import dependency and achieve scale

India to have presence across the solar PV manufacturing value chain by fiscal 2028



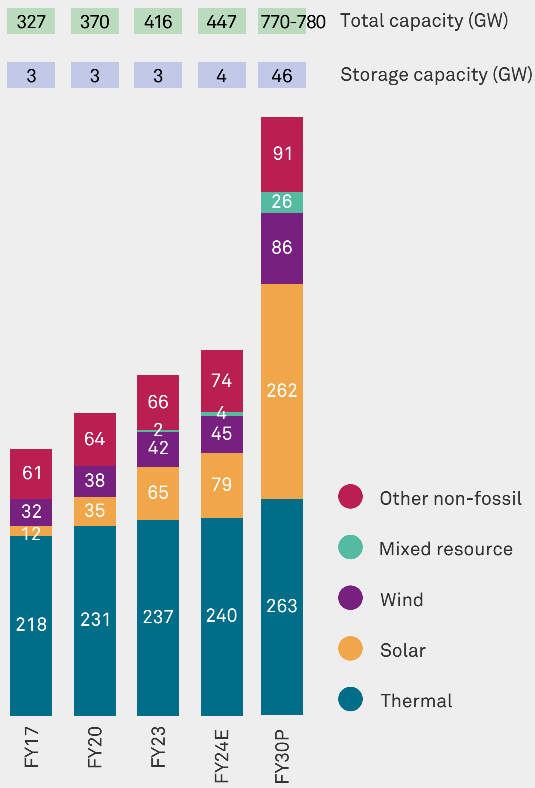
Source: CRISIL MI&A Research

India's non-fossil fuel capacity to triple by fiscal 2030

By 2030, renewable sectors will have 57% share in the country's installed capacity

- India plans to increase the share of non-fossil fuels in installed electrical power capacity to meet its target of a 45% reduction in emission intensity in GDP by 2030 compared with the 2005 level
- The installed capacity is likely to grow a substantial 86% from 416 GW in fiscal 2023 to 770-780 GW by fiscal 2030. Non-fossil fuel sources are expected to constitute ~90% of this additional capacity
- Renewable sources (excluding hydro) should see a strong addition of 310-320 GW until fiscal 2030, implying a CAGR of 18% from fiscal 2023, resulting in a 57% share of renewables in the installed capacity. Solar and wind will see the largest addition of 210-220 GW and 50-55 GW, respectively, between fiscals 2023 and 2030
- The expansion underscores the need for integrating storage elements, pumped storage plant (PSP) and battery energy storage system (BESS) to address intermittency challenges associated with renewable energy. Mixed resources will also see significant addition as hybrid systems gain traction for round-the-clock and peak power supply
- The installed capacity of storage elements should reach 45-50 GW by fiscal 2030, accounting for ~6% of total installed capacity. The installed capacity of BESS is expected to be 25-30 GW by fiscal 2030, while that of PSP is expected to be 17-20 GW. Capacity addition for PSP will be slow in the initial years, but is expected to pick up after fiscal 2028, when several ongoing/under-construction projects are commissioned

Renewable energy to dominate capacity addition till fiscal 2030 along with focus on storage elements



Note: CRISIL numbers for capacity addition; renewable energy additions include additions for green hydrogen projects
Source: CRISIL MI&A Research

PLI: 33% spent, remaining Rs 2.0-2.2 lakh crore to be invested over next four fiscals

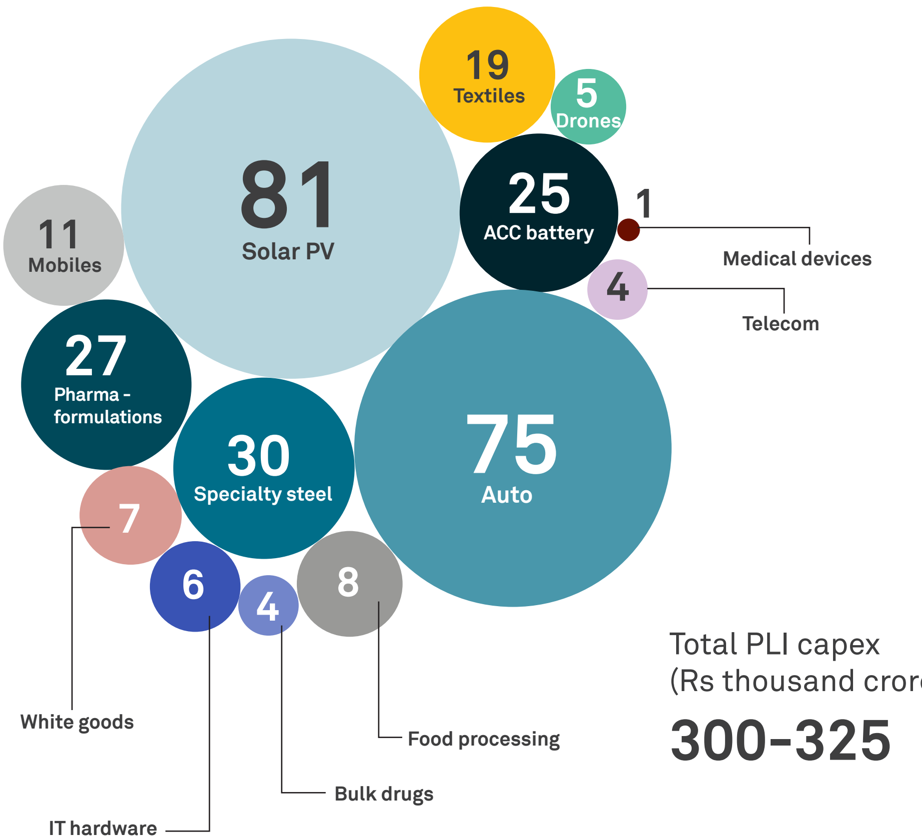
PLI capex to peak by fiscal 2026

2 Capex catalyst

As of November 2023, cumulative capex under the PLI scheme was ~Rs 1 lakh crore

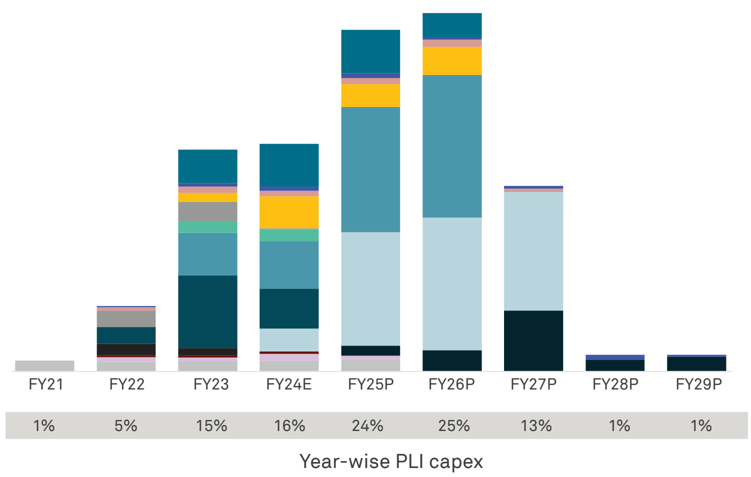
- The PLI scheme is focused on enhancing manufacturing value chains to reduce import dependence and improving competitiveness to support exports
- The scheme would pay out incentives of Rs 1.82 lakh crore for generating revenue close to Rs 30 lakh crore and capital spend of Rs 3-3.25 lakh crore
- Stringent disbursement criteria will be a monitorable for nearly 50% of the sectors benefiting
- Although the scheme promotes capex across 14 sectors, the bulk of the capex will be concentrated in three sectors — solar, automobile and advanced chemistry cell (ACC) battery
- Of the top five sectors that account for ~80% of the spend, three are linked to green investments
- Since capex-heavy sectors such as ACC battery, solar PV and specialty steel are currently in nascent stages capex uptick in these sectors would bear watching given their large share in the overall PLI-linked capex
- The above estimates factor in PLI across 14 sectors as per current announcements. There could be upside potential to these numbers if more sectors are included in the scheme

Top 5 sectors account for 80% of PLI capex



Total PLI capex (Rs thousand crore)

300-325



Source: PIB, CRISIL MI&A Research

CRISIL's INDIA OUTLOOK
ECONOMY • INDUSTRIES • MARKETS

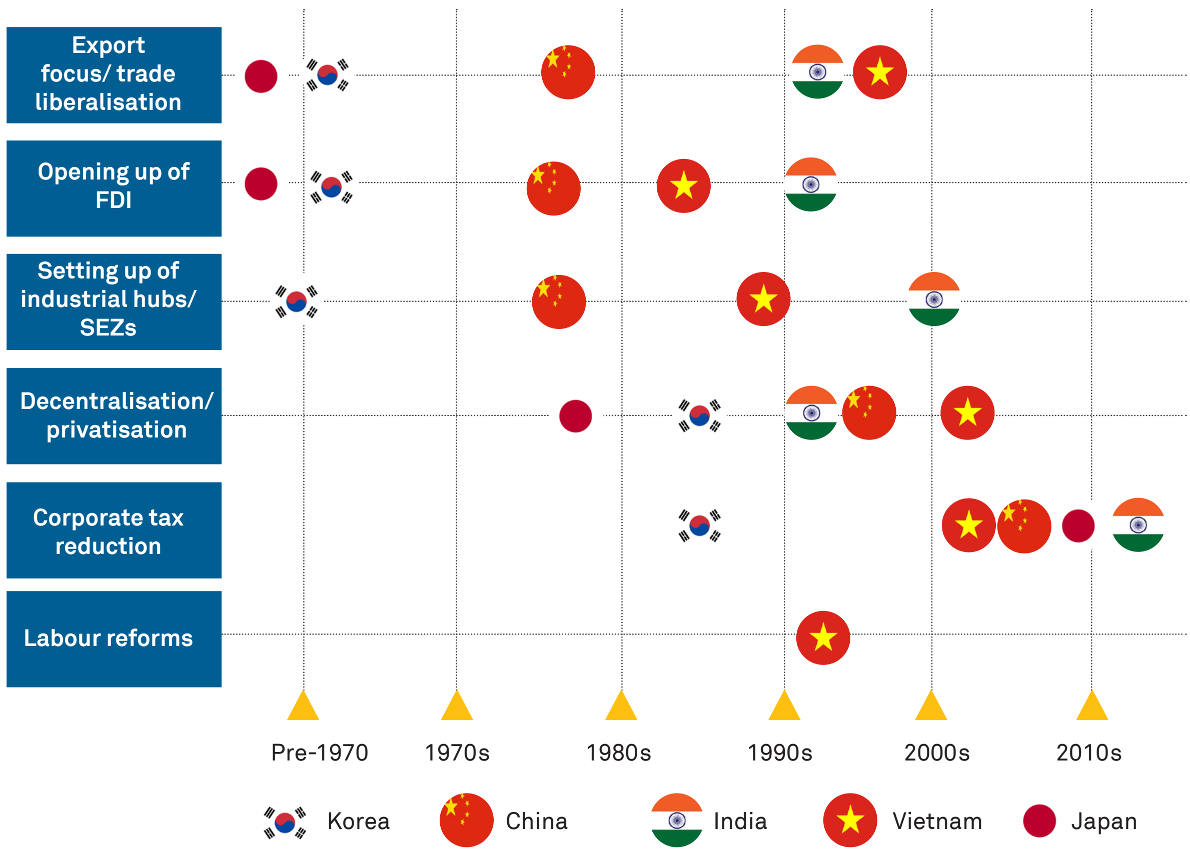
Manufacturing: Shaking off decadal sloth, but services still in the driver's seat

Surmounting challenges, more reforms key to raising manufacturing's contribution to GDP

Emerging economies have been more proactive on attracting investments

- Over the past decade, India has accelerated the reforms pace to boost its manufacturing sector. Key reforms include increasing FDI, the PLI scheme, the Make in India programme, improving ease of doing business, higher spending on infrastructure, setting up special economic zones (SEZ), decentralisation, reduction in corporate tax and labour law amendments
- India's reforms pace has been slower compared with Japan, Korea and China. India implemented privatisation and globalisation policies in 1991, way later than its Asian counterparts. For instance, South Korea focused on labour and export sectors in the 1950s, while China initiated reforms in 1978, which increased its global trade share significantly
- Even emerging economies have been more proactive in attracting investments. For instance, Vietnam has signed FTAs to boost its textile exports. Further, the country's enterprise laws in 2000 and 2005 have facilitated business startups
- Notably, China's larger SEZs along the coast contribute over 50% of its exports compared with 25-30% for India

A lot of ground to cover



Source: CRISIL MI&A Research

Reforms have led to visible progress over the past decade...

Year	Manufacturing focused	Infrastructure focused	Overarching
2014	**Make in India** • Focused on ease of doing business, increasing FDI and local sourcing norms • India jumped to the **63rd** position in World Bank's ease of doing business ranking	**Pradhan Mantri Awas Yojana** • Affordable housing to the urban poor with a target of building **2 crore** houses	
2015	**Phased manufacturing programme** • Phased increase of basic customs duty on mobiles and components to support domestic production		
2016		**Smart Cities Mission** • Tech-led local area development – **Rs 98,000 crore** approved for developing 100 smart cities	
2017	**National Industrial Corridor Development Programme** • To promote world class manufacturing facilities and futuristic industrial cities **11** industrial corridor projects undertaken with **32** projects	**Real Estate Regulatory Authority** • Led to transparency and prompt work implementation for builders and buyers of properties	**GST** • GST replaced and consolidated several central and state indirect taxes
2018			
2019		**Bharatmala Pariyojana** • Phase 1 target of constructing 84,000 km of national highway network at an investment of Rs **10.63 lakh crore**	
2020	**PLI scheme** • Sales and capex-based incentives of Rs **2.0 lakh crore** across 15 sectors for reducing import dependence and boosting exports	**National Infrastructure Pipeline** • To develop world-class infrastructure across sectors, targeting Rs **111 lakh crore** investment till 2025	**Labour reforms** • In 2019 and 2020, **29** central labour laws were rationalised and subsumed under four labour codes
2021	**SPECS scheme** • Financial incentive of **25% on capex** for the identified list of electronic goods that comprise downstream value chain of electronic products	**National Monetisation Pipeline** • Asset monetisation blueprint of Rs **6 lakh crore** to recycle capital	
2022	**Semiconductor Mission** • **Rs 76,000 crore** for development of semi-conductors and display manufacturing ecosystem in India	**National Logistics Policy and PM Gati Shakti** • Unified logistics programme to enable integration among ministries and states with a focus on technology	

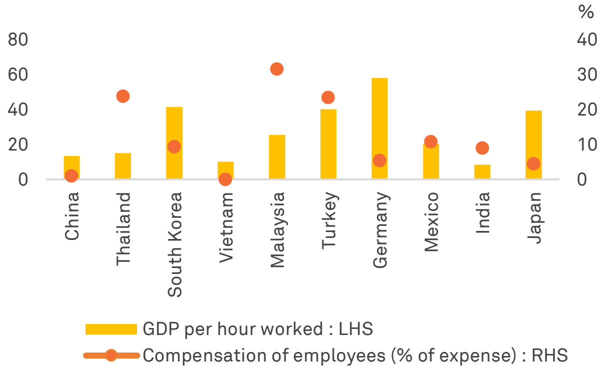
Source: CRISIL MI&A Research

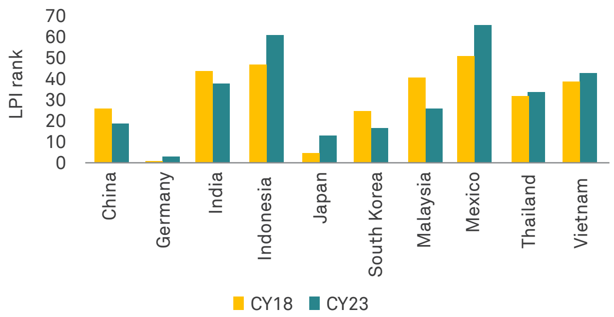
...but there are challenges galore

Low labour productivity, high logistics and power costs, and lack of the required innovation are the key challenges faced by the domestic manufacturing sector.

Low labour productivity

- GDP per hour worked measures how efficiently labour input is combined with other factors of production and used in the production process
- India benefits from lower labour costs due to a large labour force and competitive wage structure but suffers from skills gap/disparity and, hence, low productivity
- Germany has the highest GDP per hour worked because of advanced technology adoption and innovation
- In contrast, China, with a vast and varied workforce, experiences disparities in productivity due to urban-rural distinction and technology utilisation



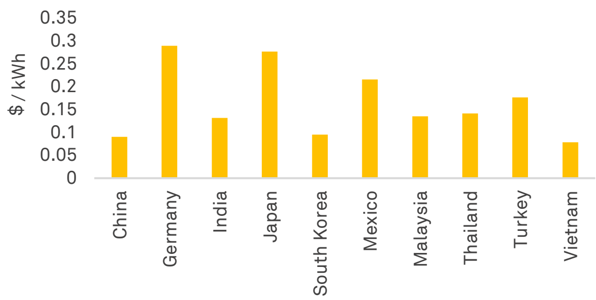


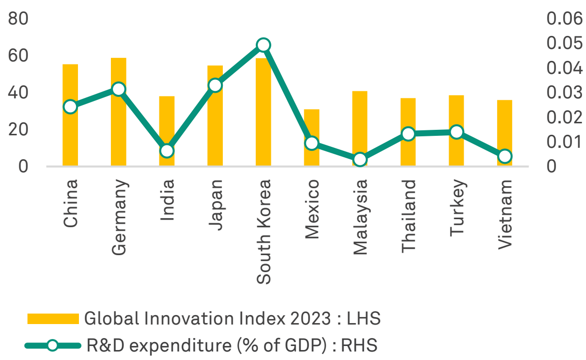
Logistics cost

- Logistics cost in developed counterparts such as Japan and Germany stands at 8% of GDP. In comparison, India's logistics cost stands at 14%.This shows that our logistics ecosystem presents both challenges and opportunities
- India's climb in the logistics performance index from 44th to 38th by 2023 reflects strategic efforts such as Bharatmala, Sagarmala, National Infrastructure Pipeline, etc, highlighting the government's dedication to enhance competitiveness

Power cost

- India's relatively higher power cost compared with China and Vietnam places it at a disadvantage from a manufacturing standpoint
- Despite India's substantial electricity production capacity of 410 GW, the manufacturing sector still faces challenges related to grid reliability and distribution
- The share of renewables in the energy mix is targeted to rise from the current 13% to ~40% by fiscal 2030





Ease of doing business

- R&D expenditure as a percentage of GDP reveals countries' distinct approach to innovation and technological advancement
- China's allocation of 2.1% of GDP reflects its ambition to become a global tech leader
- Japan's substantial 3.2% investment highlights its dedication to cutting-edge technologies, crucial for its electronics and automotive industries
- At 0.7% of GDP, India's R&D expenditure has headroom for improvement in order to boost scientific capabilities and foster innovation-driven growth
- India's ascent on the Global Innovation Index, from 57th position in 2018 to the 40th in 2023, underscores its growing innovation ecosystem and policy direction that spurs innovation

Source : World Bank, Organisation for Economic Co-operation and Development, Global Petrol Prices, Ministry of Power

Pace of reforms needs to sustain for India to join the global value chain...

... And for the manufacturing sector to account for 20% of GDP over the medium to long term

Ease of doing business
- Improvement in ease of doing business brings in a favourable environment for investments, showcasing India as an attractive hub for production and industrial growth while helping attract foreign capital

National single window clearance
- This will simplify regulatory procedures and approvals, reducing administrative burdens and accelerating project implementation for the manufacturing sector

Labour reforms and skill development
- Introducing labour reforms aimed at flexibility and productivity enhancement, coupled with robust skill development initiatives, will ensure a skilled and adaptable workforce capable of meeting the evolving needs of the manufacturing sector

Competition enhancement
- Enactment of the Competition (Amendment) Bill 2022 alongside strengthening competition policies and regulations will create a level playing field, promote innovation and drive efficiency within the manufacturing sector, ultimately benefiting consumers and businesses alike

Stable customs regime and FTAs
- Maintaining a stable customs regime and actively pursuing FTAs will facilitate smoother trade operations, reduce import/export costs and expand market access for Indian manufacturers

Stability in tax policies
- Rationalising tax policies, offering incentives for R&D and reducing compliance burdens will create a more favourable tax environment for manufacturers, encouraging investment and growth

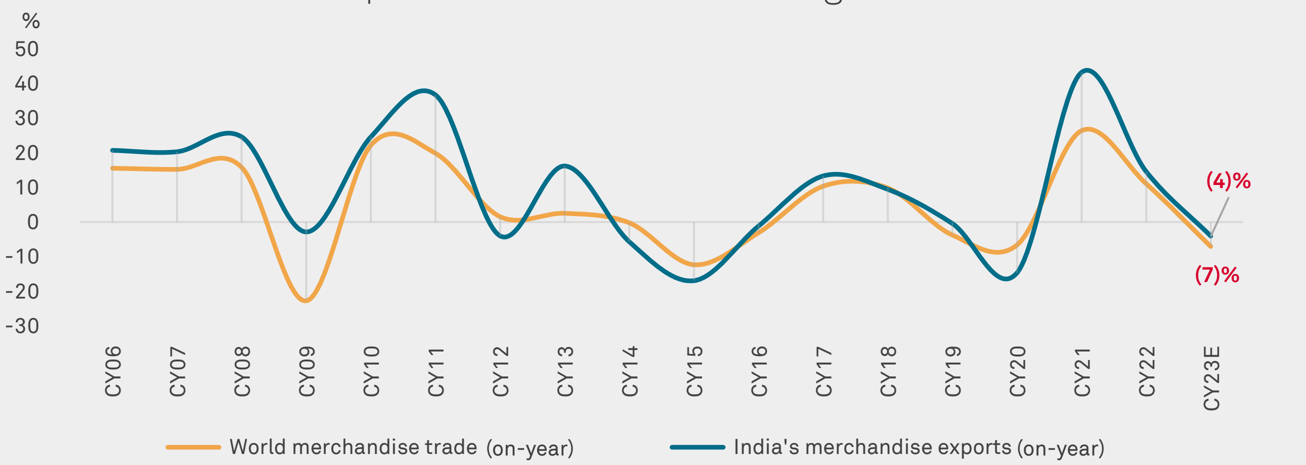
Enforcing contracts
- Strengthening legal frameworks for contract enforcement and establishing efficient dispute resolution mechanisms will instill confidence in businesses, encourage investments and promote a conducive environment for manufacturing activities

Dispute resolution mechanisms
- Establishing dedicated commercial courts, leveraging technology for case management and promoting alternative dispute resolution methods such as arbitration and mediation will expedite conflict resolution, ensuring business continuity and growth

Amid challenging merchandise exports, electronics provides some respite

- India's overall exports are likely to close the current fiscal at $750-800 billion, having declined 1-2% year-to-date. The manufacturing sector continues to grapple with challenges, while the services sector exhibits flexibility
- After a notable rise of 7% in fiscal 2023, India's merchandise exports are likely to decline 3-5% in the current fiscal on account of global slowdown and increased competition. Value-added verticals like electronics have limited the slide in merchandise exports, while commoditised ones have exerted pressure to downturns
- Next fiscal, we anticipate a moderate export growth of 4-6% to $800-850 billion. The slowdown in India's primary trading partners, the US and the EU, has hindered robust expansion of exports. However, with anticipated recovery in the latter half of the year, CRISIL expects merchandise exports to rise moderately. Value-added verticals such as electronics and pharmaceuticals remain persistent and will drive merchandise exports amid the macroeconomic challenges
- Over the past decade, engineering and electronic goods have significantly expanded their share in merchandise exports, from 7% to nearly 25%, propelled by increased domestic potential unleashed by government interventions such as PLI

India's merchandise exports remained muted amid global economic headwinds



Source: Trademap statistics, UNCTAD estimates, CRISIL MI&A Research

Top 10 verticals account for ~70% of overall export share; engineering and electronic goods gained export share over the past decade

	Automobile and components	POL products	Pharma products	Metals and products	Textiles	Engineering and electronic goods	Plastics and related	Gems and jewellery	Agricultural products	Organic chemicals
PLI scheme	✓		✓	✓	✓	✓			✓	
FY13	4%	21%	3%	5%	4%	7%	3%	15%	2%	4%
FY24E	4%	20%	6%	5%	3%	25%	2%	8%	2%	6%
FY25P	5-10%	0-5%	Above 10%	Above 10%	5-10%	5-10%	0-5%	5-10%	5-10%	Above 10%

0-5% 5-10% Above 10%

Source: Directorate General of Foreign Trade (DGFT), Trademap, CRISIL MI&A Research, industry estimates; % denotes sectoral share in overall merchandise exports from India. FY24 sectoral share: YTD basis (April-November). FY25P denotes sectoral export growth projections for the next fiscal

#Exports success story 1: PLI turning the tide for India's electronics sector

- Government initiatives have boosted India's electronics exports nearly threefold in the past three years. The PLI scheme has played a pivotal role in attracting investments into the sector, with over $360 million announced by November 2023. This investment surge is expected to fuel robust growth and position India as a competitive player in the global market
- India is prioritising the establishment of a strong manufacturing base through initiatives such as PMP and PLI. While progress is evident in value chain addition, challenges persist in backward integration

PLI scheme boosts the electronics sector

FY17

Exports **$0.2 billion** — Imports **$3.8 billion**

- India a net importer
- High import dependence
- Dependent on global markets owing to shortfall in domestic production

FY20

Exports **$3.8 billion** — Imports **$1 billion**

- Implementation of PLI scheme boosts domestic production
- India turns net exporter from net importer

FY23

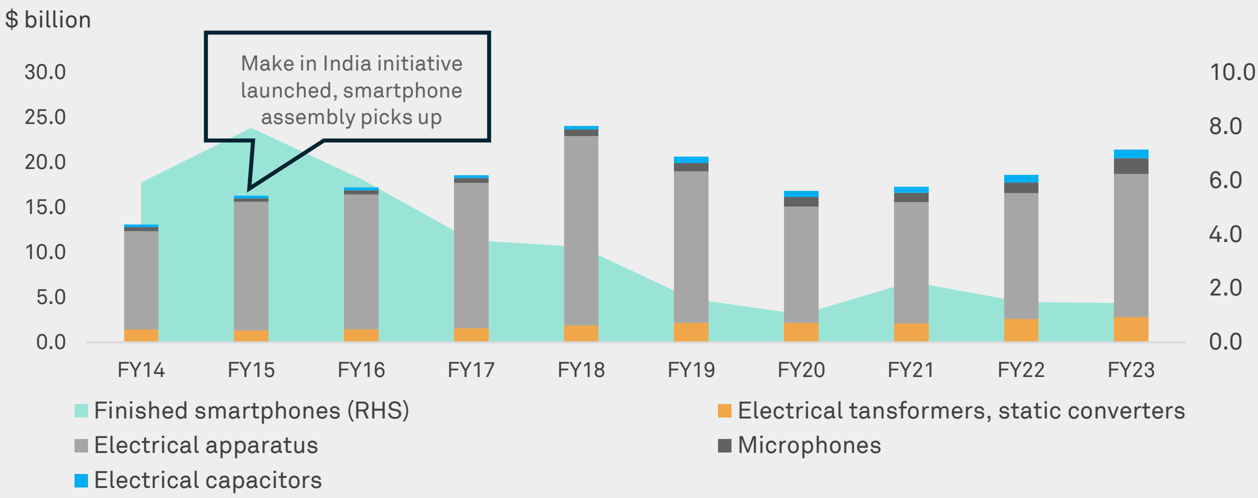
Exports **$11.1 billion** — Imports **$1.4 billion**

- Growth continues on increased investments and government support; the sector has more potential to grow

2017	2020	2020	2020
PMP	**EMC 2.0**	**SPECS**	**PLI**
Incentivising domestic manufacture of electronic components by raising basic customs duty on imports	Providing financial assistance in project cost of 50% for EMCs and 75% for common facility centres	Providing financial incentives of 25% on capex	Providing 4% to 6% incentive on incremental sales of goods manufactured in India

Phased Manufacturing Programme (PMP), Electronics Manufacturing Clusters (EMC), Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS)

Import trend: Contrasting trajectory of mobiles and raw materials provides ample potential to enter core manufacturing

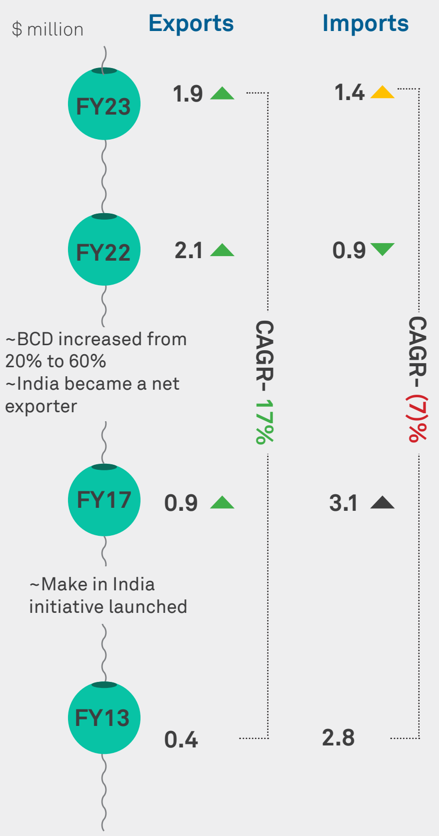


Source: DGFT, CRISIL MI&A Research

#Exports success story 2: Government push and domestic manufacturing lend strong support to toy exports

- With an outlay of ~$300 million under the Scheme of Fund for Regeneration of Traditional Industries (SFURTI), domestic manufacturing of toys has emerged at a rapid pace. Spread across states such as Madhya Pradesh, Rajasthan, Karnataka, Uttar Pradesh and Tamil Nadu, key clusters have become an integral part of the industry's supply chain, benefiting both material suppliers and manufacturers
- Government interventions, including a significant hike in import duties (from 20% to 60%), stringent quality control measures through BIS regulations and mandatory sample testing of toy imports have bolstered domestic production, thus reducing dependency on imports. Initiatives such as National Toy Plan, Make in India and Vocal for Local have not only fostered competitiveness among Indian manufacturers but have also showcased Indian toys on a global stage, leading to a rise in exports over the past five years at a CAGR of 17%

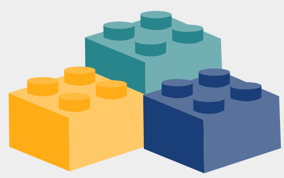
Exports surge with the rise in import duties, aiding domestic manufacturing



Source: DGFT, industry, CRISIL MI&A Research

High potential for India as toy giants eye the domestic market

State incentives
30% subsidy on the cost of manufacturing

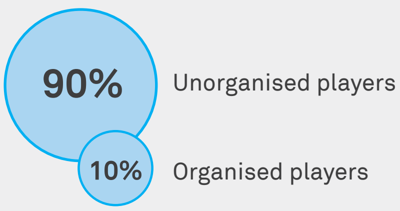


Raw material availability
Second-largest producer of polyester and related fibres

Large cluster ecosystem
Government planning 60+ toy clusters to increase domestic output

Source: CRISIL MI&A Research

Fragmented market with higher share of unorganised players



Decadal low net debt to Ebitda at less than 2.0 augurs well for incremental capex

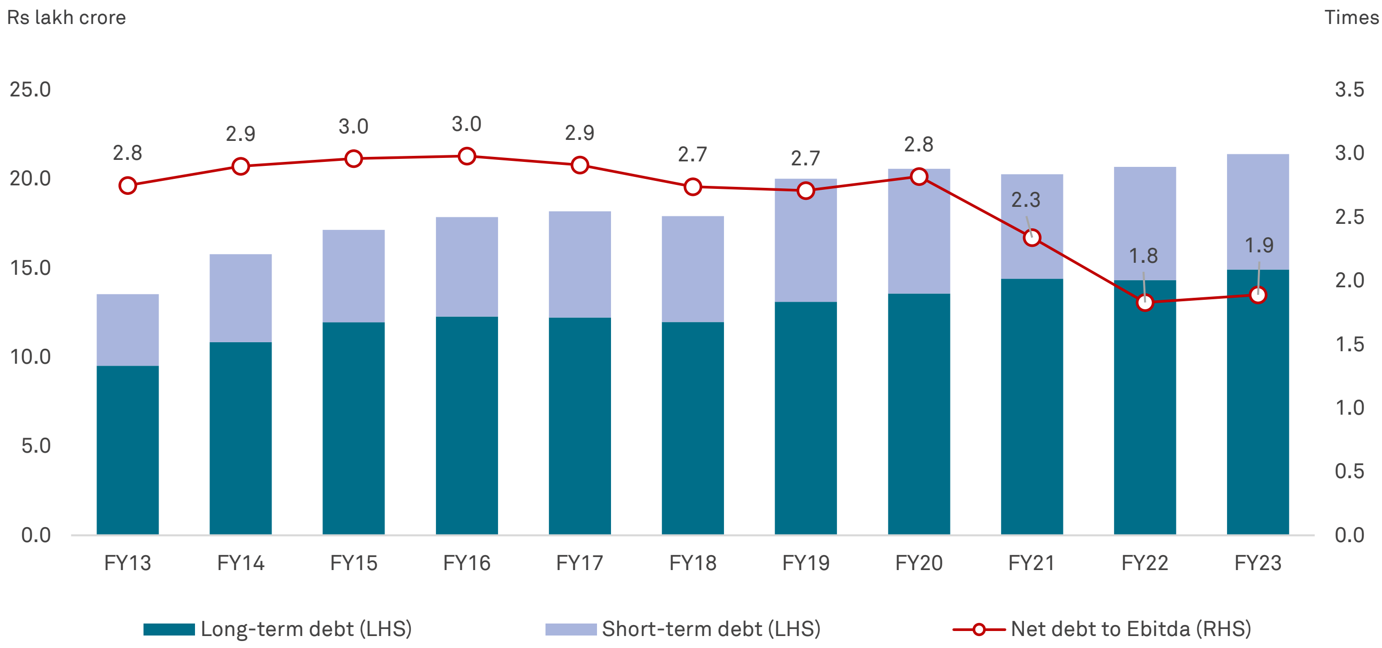
Moderation in debt-funded capex has led to muted growth in long-term debt for India Inc

1 Capex enabler

Healthy earnings growth, focus on operational efficiencies and cost optimisation help India Inc

- Strategic deleveraging, aided by strong revenue growth and sustained profitability, has strengthened corporate balance sheets in India. Between fiscals 2019 and 2023, corporate earnings logged a CAGR of 12%, which, together with sharp focus on operational efficiencies and cost optimisation across sectors, has helped position them for sustainable growth
- Fiscals 2021 to 2023 saw muted growth in long-term debt to ~Rs 15 lakh crore, contributing to healthier balance sheets, thereby creating positive push towards growth in capex by players
- The improved financial health augurs well for higher levels of investment. With lower debt burdens, these companies now enjoy greater financial flexibility to pursue expansion opportunities, invest in innovation, and explore new areas of growth

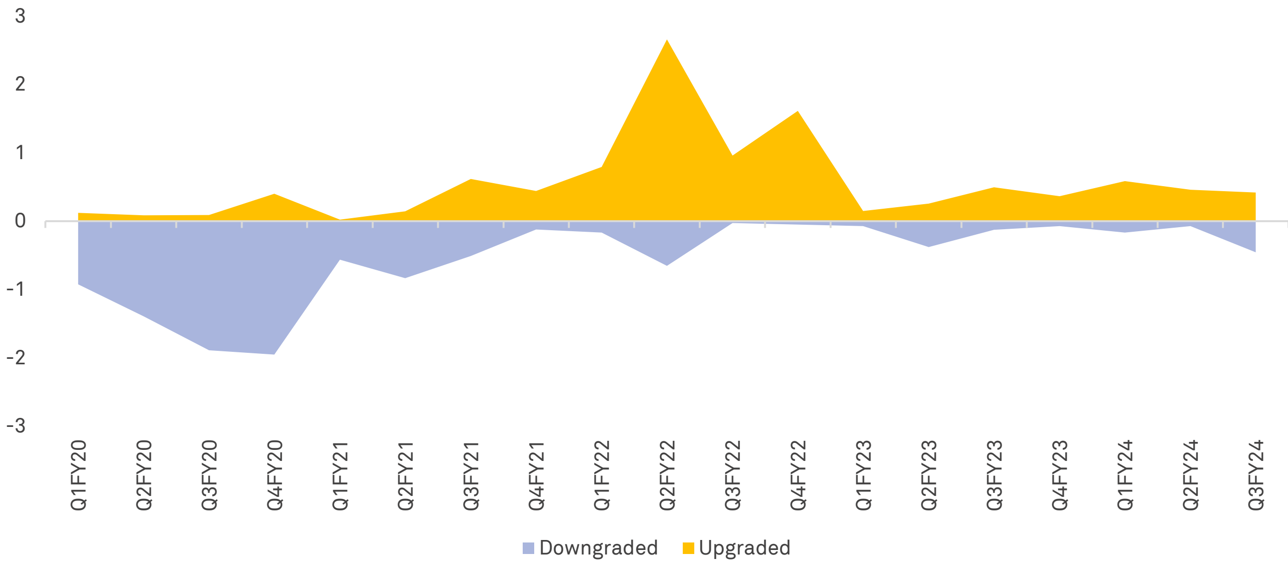
Enhanced profitability and strategic deleveraging have led to healthier balance sheets



Note: Net debt to Ebitda analysed based on performance of ~718 companies (barring BFSI, and oil and gas)
Source: Quantix, Industry, CRISIL MI&A Research

Strong financial profile continues to support credit profiles of Indian corporates

Rs lakh crore



	FY20				FY21				FY22				FY23				FY24		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
By debt	0.1	0.1	0.0	0.2	0.0	0.2	1.2	3.6	4.7	4.1	35.3	33.2	2.1	0.7	3.9	4.9	3.5	6.2	0.9
By count	0.7	0.4	0.3	0.4	0.1	0.5	0.7	1.6	2.8	4.4	3.9	2.4	2.3	3.3	2.3	1.8	1.2	1.5	1.3

Note: Based on information in public domain from all credit rating agencies for 718 listed companies
Source: CRISIL Quantix, CRISIL MI&A Research

- This is evidenced by the prevalence of upgrades outweighing downgrades, showcasing a trend where positive revisions to credit ratings and outlook surpass negative assessments
- Improved financial profiles support the credit metrics of corporates with upgrade to downgrade ratio remaining well over 1 until the first half of the current fiscal

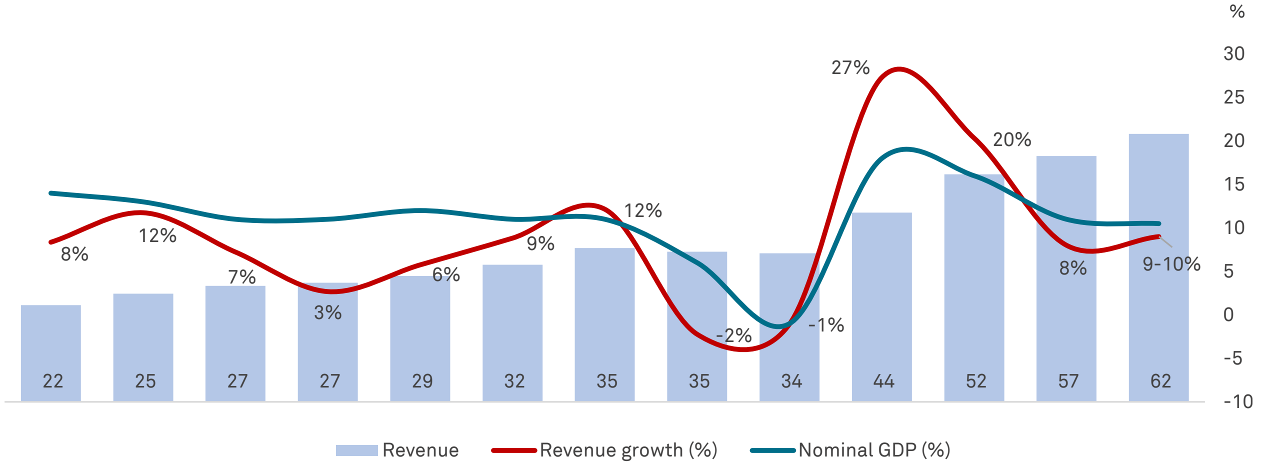
Corporate India's revenue growth to stay healthy for the fourth consecutive year

Consumer discretionary sectors to spur 200 bps uptick in revenue growth next fiscal

2 Capex enabler

Healthy growth momentum

Rs lakh crore

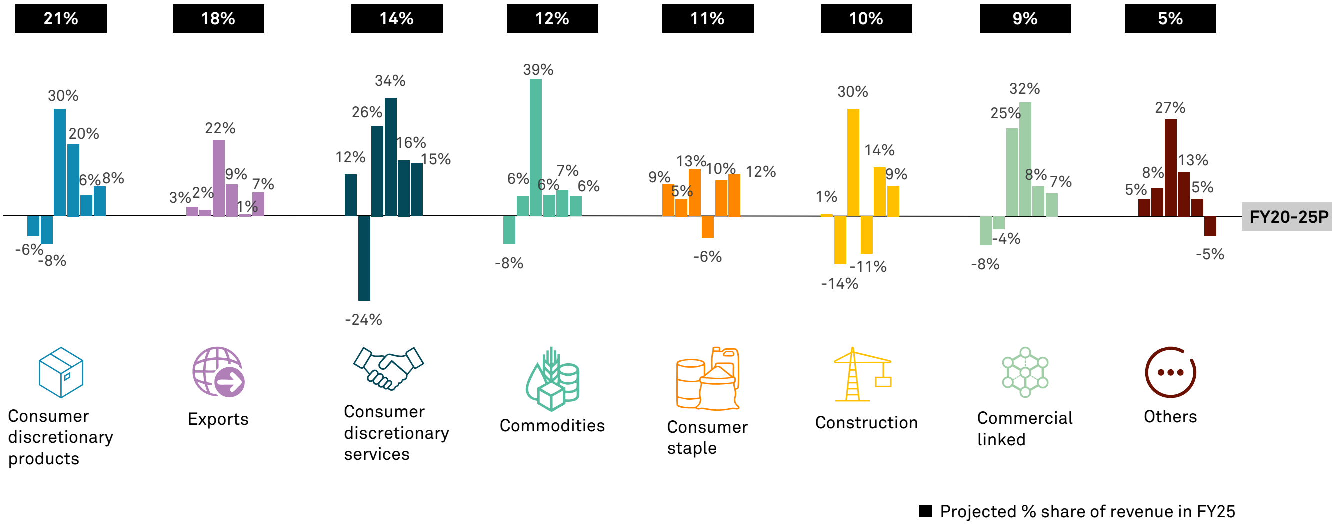


	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24E	FY25P
Real GDP % (on-year)	5.5	6.4	7.4	8.0	8.3	6.8	6.5	3.9	(5.8)	9.7	7	7.6	6.8

Note: E - estimated, P - projected. Figures of the 718 listed corporates exclude oil & gas and BFSI
Interest rates are represented by weighted average lending rates for fresh rupee loans
Source: RBI, company reports, industry, CRISIL MI&A Research

- Revenue growth should improve to 9-10% next fiscal following a moderation to ~8% in this fiscal, driven by sectors less dependent on commodities and largely catering to the domestic market
- Consumer discretionary segments, comprising both goods and services, will grow despite easing of the post-pandemic release of pent-up demand. Growth of the consumer staples segment will pick up pace due to resumption of rural demand. The export sector, bolstered by the information technology and pharmaceutical industries, is poised to experience reinforced growth next fiscal
- Nonetheless, subdued performance in commodity-based sectors will exert downward pressure on their revenue streams. Consequently, growth of the commodities vertical is seen slackening to 6% next fiscal
- Three factors can swing corporate performance next fiscal:
  1. Sedate global growth, which presents a downside risk to the growth of export revenue
  2. Timing and extent of rate cuts
  3. Geopolitical tensions in the Middle East, which continue to be a concern, with the potential to disrupt global trade flows and affect commodity prices, thereby posing additional risks to India's growth prospects

Commodity revenue to continue moderating after the 2022 supercycle



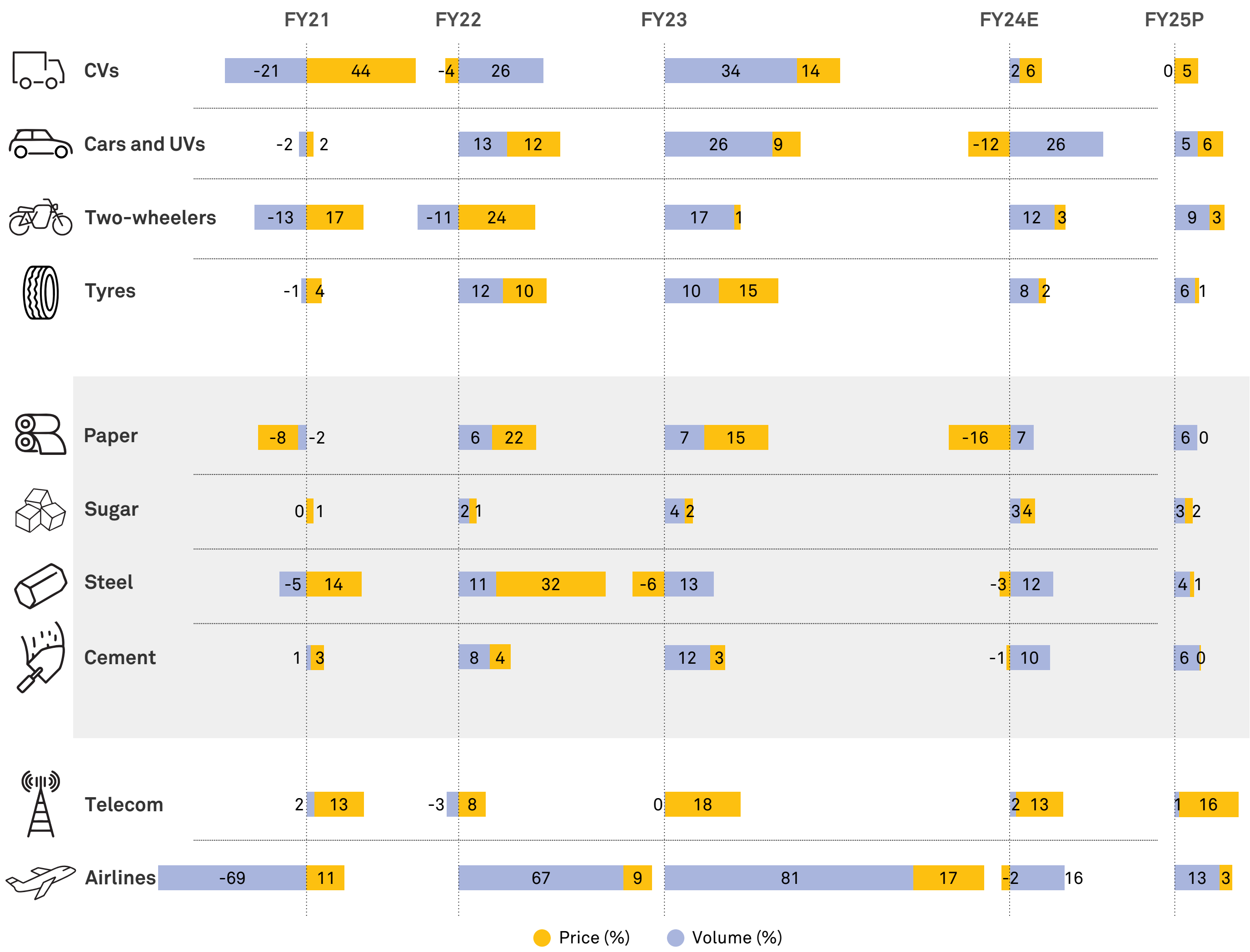
Note: Sectors in the above classification are listed below:

Consumer discretionary products: Auto components, cars and utility vehicles (UVs), consumer durables, cotton yarn, cotton yarn, gems & jewellery, paper, ready-made garments, two-wheelers, tractors
Exports: Gems & jewellery, IT, pharmaceuticals, pesticides
Consumer discretionary services: Airline services, hotels, media, organised retailing
Commodities: Petrochemicals, chlor alkali, non-ferrous metals, steel
Consumer staples: Fast-moving consumer goods, hospitals, pharmaceuticals, sugar, telecom
Construction: Construction, real estate
Commercial-linked: Cement, commercial vehicles, power – generation, power – transmission, power equipment, tyres, power – distribution
Others: Pesticides, edible oil, packaging, home textiles

Source: CRISIL MI&A Research

- Nearly half of the sectors tracked by CRISIL MI&A will close the current year with double-digit growth. However, a decline in commodity prices and tricky demand environment has shifted the growth drivers from value to volume. Volume growth is set to drive revenues for most sectors next fiscal
- Exceptional growth rates seen across consumer discretionary services may temper slightly as pent-up demand subsides and revenue growth is set to print at 15-17% during this and next fiscals after accelerating to 34% during fiscal 2023. Industries such as hotels, airlines, organised retail and media & entertainment are expected to maintain robust growth
- Consumer discretionary products and staples will grow 9% and 12%, respectively, backed by demand from both, urban and rural regions. Rural demand lagged urban demand, which was relatively less affected by economic downturn
- Next fiscal, growth for discretionary products as well as staples will see contribution from rural India as well, as favourable inflation, better agricultural output and increased government spending towards rural India offer reward
- The export sector will pick up pace, especially with pharmaceuticals benefiting from easing price pressures and the IT sector poised for another year of consistent performance. Conversely, sectors such as textiles and gems and jewellery, which rely on discretionary spending primarily from the US market, face pressure
- Commodity revenue will see subdued growth of 6% due to lower realisations for the third consecutive year. With spending, demand growth for steel and cement may weaken, impacting volume growth. Additionally, a decrease in project awards in key sectors such as roads may lead to a slight reduction in project execution for the upcoming year, further affecting the construction-related sectors amid intense competition

Discretionary products such as cars, UVs and two-wheelers to see equitable contribution from pricing



Note: For commercial vehicles, value growth includes price growth and product model mix
Source: CRISIL MI&A Research

- After the pandemic, while input costs marched upwards, the release of pent-up demand, both globally and domestically, enabled a complete pass-through by companies. Consequently, growth was driven by pricing and supported by volumes. This is evidenced by eight of the top ten sectors witnessing growth led by better realisations
- A cooling commodity cycle, moderation in export demand and normalisation in domestic demand led to volumes shouldering revenue growth. The growth will be skewed by volumes. Next fiscal, growth will largely be driven by volumes and supported by pricing

Profitability to get a 50-150 bps leg-up as commodity prices fall

As supply pressures ease, commodity prices to be less volatile

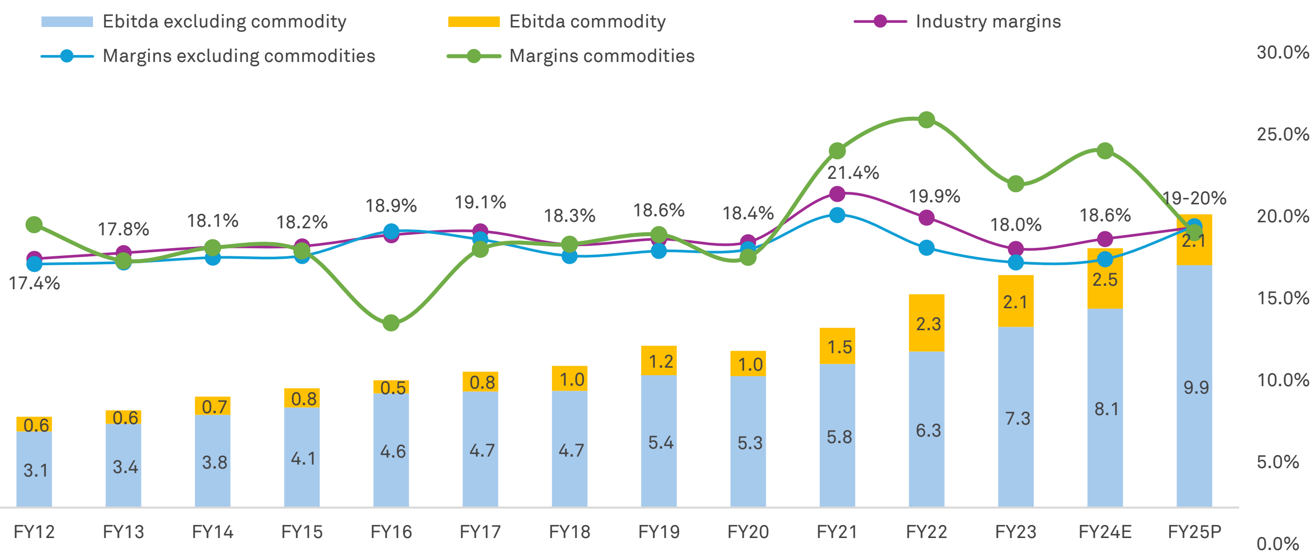
3 Capex enabler

Commercial-linked, consumer staples and discretionary products to witness higher expansion

- Fiscal 2023 underscored the susceptibility of Indian corporates to volatility in global commodity prices, which trended up before stabilising. As the year progressed, interventions by global policymakers aimed at tempering inflationary pressures, improvement in supply chain bottlenecks, easing of geopolitical standoffs and recalibration of demand forecasts contributed to a moderation in commodity prices, which helped companies recover their margins
- In the current fiscal, a notable adjustment in commodity prices alleviated input cost burdens in various non-commodity sectors, bringing their margins back to pre-pandemic levels. Margin expansion is expected to be broad-based this fiscal as easing input costs lower the cost of goods sold and volume growth supports revenue
- The positive trajectory is set to persist in fiscal 2025 as well. An additional reduction in input costs, combined with continued expansion, will further enhance corporate profitability by 50-150 bps, with commercial-linked, consumer staples and discretionary products, which make up 52% of corporate India's Ebitda, clocking the highest expansion in margins
- The Red Sea crisis, which has resulted in increased transport times and higher freight costs, remains a monitorable, particularly for Asia-Europe shipping lanes. Broadly, we believe India Inc's margins are unlikely to be affected immediately because of better ability to pass on the rise in costs to buyers because of a seasonally weak trade period. However, certain sectors, including capital goods, crude oil, shipping, fertilisers and pharma, will be severely impacted if the crisis prolongs

India Inc to close this fiscal with margins at pre-pandemic levels

Rs lakh crore



Note: E - estimated, P - projected. Figures of the 718 listed corporates exclude oil & gas and BFSI
Source: Company reports, industry, CRISIL MI&A Research

Commodity prices to be less volatile as supply pressures ease

Energy

- Supply-chain rejigs post the Russia-Ukraine conflict and the emergence of viable alternatives for Europe have created conditions for lower volatility
- Regional geopolitical tensions, extreme weather events and industrial actions still have a potential to disrupt the tight demand-supply balance. In calendar year 2024, crude oil will average $80-85 per barrel

Metals and cement

- With the expectation of muted global demand growth and on a high base of fiscal 2024, domestic steel and cement demand growth is set to moderate in fiscal 2025
- Steel and cement prices will remain rangebound as supply increases with new capacity additions

Agriculture

- Better production of food grains and governmental intervention will keep domestic price hikes in check
- Higher demand amid subdued supply growth will push up prices of sugar and palm oil by 2-4% next fiscal

New-age materials

- New-age materials, crucial for economies to transition to Net Zero, touched historic highs in fiscals 2022 and 2023
- However, with new mines and production facilities being commissioned, as well as increased competition and lower-than-expected demand for EVs, prices have corrected since and will drop further in calendar year 2024

Energy prices to correct in CY24 amid supply increase

Crude oil

A rangebound run

- Amid flattish consumption growth in Europe and expected increase in US oil output, crude oil price will correct and remain rangebound
- Supply-chain concerns around the Middle East remain a monitorable

CY22: 43%	CY23: (18)%	CY24P: (1)-1%

Average CY19 to CY23 – **$72.1/BBL**

CY23 prices are **81.8%** of peak annual prices*

CY22: 29%	CY23: (29)%	CY24P: (8-10)%

Average CY19 to CY23 – **$56/MT**

CY23 prices are **70.6%** of peak annual prices*

Thermal coal

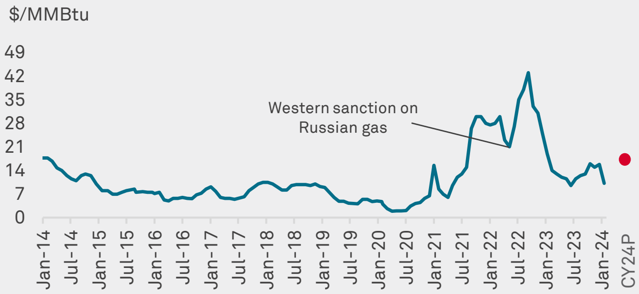
Prices to fall as supply catches up with demand

- Improved energy situation in Europe will reduce pressure on spot coal demand
- Delays in approvals and funding for mine expansion, and delayed reversal of El Niño can trigger price volatility

Spot LNG

Muted demand to stabilise prices

- The combination of muted demand sentiment and robust inventories on a global scale is poised to usher in a period of stability for liquefied natural gas (LNG) prices



CY22: 80%	CY23: (55)%	CY24P: (3-5)%

Average CY19 to CY23 – **$13.9/MMBtu**

CY23 prices are **45.3%** of peak annual prices*

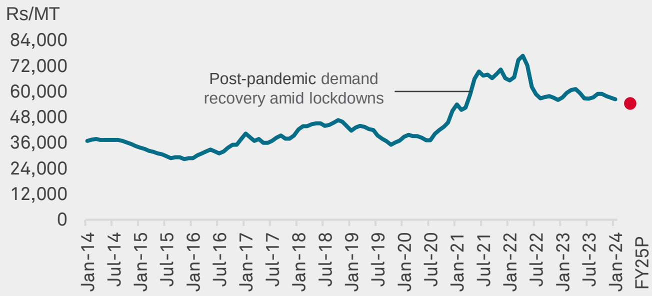
Source: Industry, CRISIL MI&A Research
Note: Dated Brent, Spot LNG and Indonesian thermal coal prices are taken as proxies for the commodities
*Previous five years

Metal and cement prices to stabilise as input-cost pressures ease

Steel

Some moderation in demand growth, prices

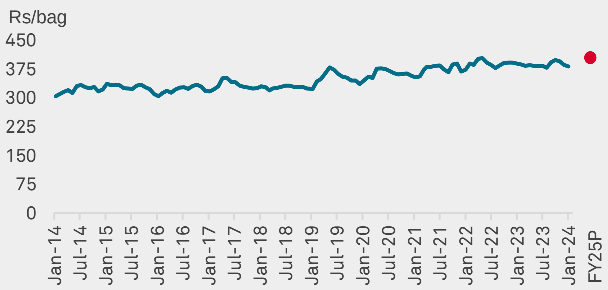
- Demand in China to remain flat; Indian demand growth to moderate on a high base
- Continued government capex crucial for domestic demand momentum



FY23: **(9)%**	FY24E: **(4-5)%**	FY25P: **(1)-1%**

Average FY20 to FY24E – Rs **54,110/MT**

FY24E prices are **87.0%** of peak annual prices*



FY23: **3%**	FY24E: **(1.5-0.5)%**	FY25P: **(1)–1%**

Average FY20 to FY24E – Rs **376/bag**

FY24E prices are **98.92%** of peak annual prices*

Cement

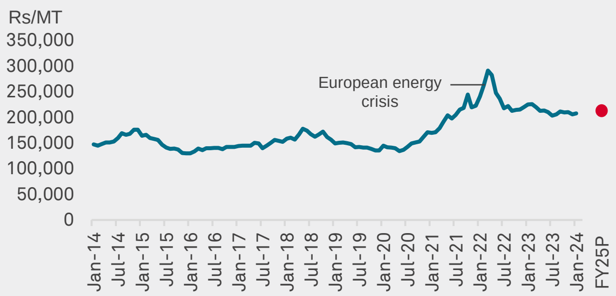
Demand steady, prices to edge up

- Prices stabilised in fiscal 2024 with correction in crude and coal prices
- With record capacity additions and steady demand, prices are expected to remain rangebound in fiscal 2025

Aluminium

Reviving global demand positive for prices

- Gradual resumption of operations from European smelters expected
- Domestic demand to remain healthy



FY23: **1%**	FY24E: **(6-7)%**	FY25P: **5-7%**

Average FY20 to FY24E – Rs **192,918/MT**

FY24E prices are **93.8%** of peak annual prices*

Source: Industry, CRISIL MI&A Research
Note: Ex-factory HRC steel prices, average retail selling prices for cement and Indian listed aluminium prices are taken as proxies for the commodities
*Previous five years

Subsiding El Niño, government intervention to affect prices of agricultural commodities

Palm oil

Surging demand to push up prices

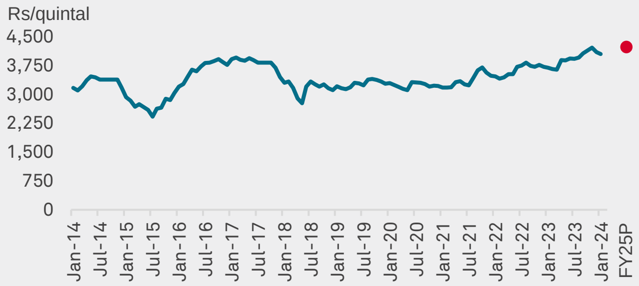
- Robust domestic demand amid stagnant production outlook from major palm oil producing countries to support price rise
- High inventory will curb sharp rise in prices

FY23: **(11)%** | FY24E: **(22-23)%** | FY25P: **2-4%**

Average FY20 to FY24E – Rs **96,746/MT**

FY24E prices are **67.9%** of peak annual prices*

Sugar



FY23: **7%** | FY24E: **8-9%** | FY25P: **2-4%**

Average FY20 to FY24E – Rs **3,506/quintal**

FY24E average prices are higher than in the previous five years

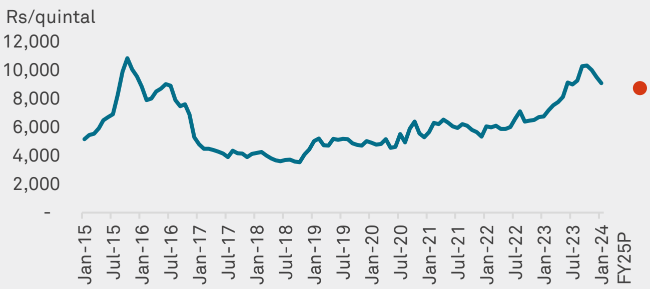
Lower output to lift prices

- Consumer-centric policy ahead of elections and limited diversion of sugarcane for ethanol production to impact prices
- Sugar prices are expected to rise a marginal 2-4% in fiscal 2025 with higher industrial offtake

Arhar

High-base hangover on prices

- The government has allowed duty-free imports of pulses until March 2025, which may improve supply, thereby containing prices



FY23: **10%** | FY24E: **32-33%** | FY25P: **(5-7)%**

Average FY20 to FY24E – Rs **6,414/quintal**

FY24E average prices are the highest in the previous five years

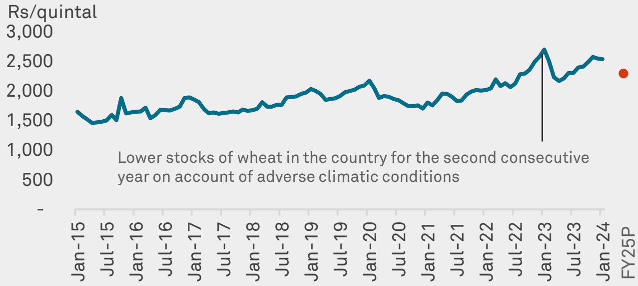
Note: *Previous five years

Higher availability to cool down food grain prices in fiscal 2025 on a high base

Wheat

Higher supplies to subdue prices

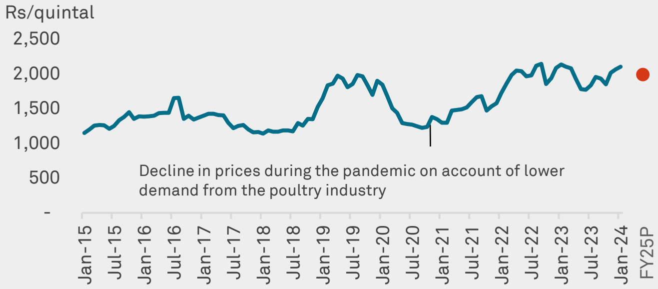
- Wheat production is expected to reach an all-time high in fiscal 2025, thereby bringing down prices
- With the ban on wheat exports expected to continue, ~5 million tonne of wheat will be in the domestic market, increasing supply



FY23: 10% | FY24E: 3-4% | FY25P: (2-4)%

Average FY20 to FY24E – Rs **2,042/quintal**

FY24E average prices are the highest in the previous five years



FY23: 24% | FY24E: (2-3)% | FY25P: (0-2)%

Average FY20 to FY24E – **Rs 1,742/quintal**

FY24E prices are **98%** of peak annual prices

Maize

High-base pressure on prices

- After two years of price increase, at 24% in fiscals 2022 and 2023, prices will decline minimally in fiscals 2024 and 2025
- The decline is anticipated to be marginal, given demand from the feed and ethanol segments in fiscal 2025

Paddy

Better supplies, lower exports to impact prices

- Paddy prices will decline on a high base in fiscal 2025, given an anticipated continuation of the ban on exports and ~80% higher buffer stock of rice (as of December 2023)

FY23: 9% | FY24E: 9-10% | FY25P: (2-4)%

Average FY20 to FY24E – Rs **1,986/quintal**

FY24E average prices are the highest in the previous five years

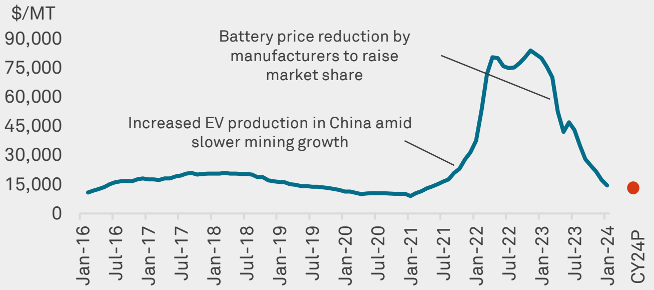
Source: Industry, CRISIL MI&A Research
Note: *Previous five years

Demand-supply mismatch of new-age commodities to affect prices in CY24

Lithium hydroxide

Prices to decline with improved availability

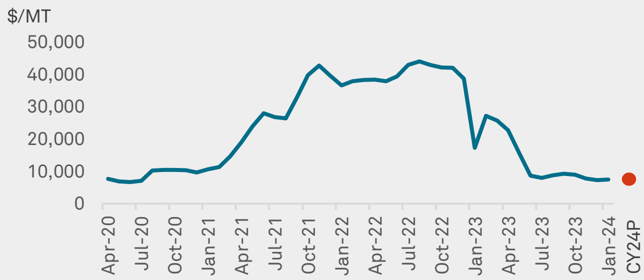
- Prices to decline with improved availability and lower-than-anticipated EV demand growth
- Producers shifting to lithium carbonate production due to declining margin



CY22: 315%	CY23: (40)%	CY24P: (67-69)%

Average CY19 to CY23 – **$31,855/MT**

CY23 prices were **19.2%** of peak annual prices*



CY22: 23%	CY23: (65)%	CY24P: (48-50)%

Average CY20 to CY23 - **$23,254/ MT**

CY23 prices were **34.8%** of peak annual prices*

PV-grade silicon

After plunge, prices to stabilise

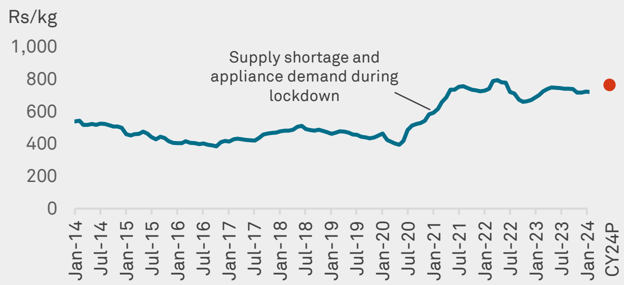
The global nameplate polysilicon capacity increased 43% on-year at the end of December 2023, resulting in an oversupply and pushing prices to a new trough

- Annual average prices are expected to plummet another 48-50% in 2024 due to a robust capacity pipeline in China

Copper

Green transition as a price buoy

- Tight supply of ore concentrate and healthy global demand to move prices north in 2024
- Being a key commodity for green transition initiatives and Net-Zero target, prices to increase 1-3% in 2024



CY22: 3%	CY23: 1%	CY24P: 1-3%

Average CY19-CY23 – Rs 619/kg

CY23 average prices were higher than in the previous five years

Source: Industry, CRISIL MI&A Research
Note: *Previous five years

Rs 30-35 lakh crore debt needed for private sector capex

India's corporate credit ecosystem, comprising banks, corporate bond market and external commercial borrowings is well poised to finance the country's humongous capex requirement.

CRISIL Ratings estimates Rs 30-35 lakh crore of debt will be needed to fund capex by the private sector alone.

While the infrastructure and corporate sectors are expected to be funded predominantly by banks and the corporate bond market, emerging sector capex, dominated by multinationals and large Indian companies, is expected to be funded by the domestic and international corporate bond markets.

Banking system fundamentals strong

In terms of capitalisation, the domestic banking sector has adequate buffers and is placed well to fund growth over the medium term.

Public sector banks have raised more than Rs 3.6 lakh crore since fiscal 2018 and now all of them have a cushion of at least 100 bps over regulatory Tier I capital requirement.

While most private banks have traditionally maintained comfortable buffers, many are also benefiting from capital raised over the past few fiscals.

The improvement in capitalisation is also reflected in capital adequacy ratios. The capital position of the banking sector is expected to remain comfortable despite the recent regulatory increase of 25 bps in risk weights on exposure to unsecured consumer credit and to higher-rated NBFCs, which may lower capital adequacy levels marginally.

Asset quality trends are benign with gross non-performing assets (NPAs) trending down this fiscal from 3.9% as on March 31, 2023, while banking system gross NPAs stood at ~3% as on December 31, 2023.

The corporate segment is likely to see continued improvement with gross NPAs expected to decline below 2% in the current fiscal from a peak of ~16% as on March 31, 2018. This follows a significant clean-up by banks and stronger risk management and underwriting norms.

Indeed, the health of India Inc has improved with secular deleveraging over the past few fiscals.

Better asset quality of banks has translated to improvement in profitability. With provision coverage ratio (PCR) high and incremental credit cost lower, return on assets rose to 1.1% in fiscal 2023 and are holding the level.

This supports the capital position of banks. In the near to medium term, CRISIL Ratings expects a compression of 10-20 bps in net interest margin as deposit rate hikes play out. But lower credit cost will provide an offset due to better asset quality and strong PCR.

But deposit growth will bear watching and must not lag far behind credit growth. The differential between credit and deposit growth has narrowed to ~300 bps from ~500 bps in fiscal 2023 as deposit rates have continued to inch up.

Competition for deposits among banks is par for the course. Banks are likely to walk the tightrope between growing their deposit base and protecting profitability, depending on ability to mobilise cost-effective deposits. This, in turn, will determine their pace of growth.

Stars aligning for the corporate bond market

India's corporate bond market clocked a CAGR of ~9% over the past five fiscals (2018-2023) and contributed close to a third of the corporate credit landscape.

Over the medium to long term, the market is poised for faster growth. In terms of corporate bonds outstanding, it has the potential to reach Rs 100 lakh crore, equal to ~22% of GDP, between fiscals 2028 and 2030.

The inclusion of G-secs in the global bond indices can spur foreign inflows to them. That should create more room for the corporate bond market.

The crowding-out effect will also be reduced with the government set to borrow ~Rs 1 lakh crore less than expected next fiscal to rein in the fiscal deficit to 5.1% of GDP.

What also augurs well is the expected moderation in interest rates given inflation is quite under control.

Both demand and supply-side factors are favourable today.

In terms of supply, large capex in the infrastructure and corporate sectors, growing attractiveness of the infrastructure sector for bond investors and strong retail credit growth are expected to boost issuance of corporate bonds.

Rising financialisation of household savings and the consequent growth in managed investment products[49] should drive demand as well.

The corporate bond market is also expected to play a crucial role in facilitating take-out financing, i.e., refinancing bank exposure in project-phase entities. This is on account of infrastructure assets becoming strong contenders for investment because of their improving credit risk profile, recovery prospects and long-term nature.

The improving risk profile of infrastructure assets is confirmed by the median ratings in the CRISIL Ratings portfolio of infrastructure assets improving from 'BBB' in fiscal 2017 to 'A+' last fiscal.

A CRISIL Ratings study found loss given default for infrastructure assets to be in the 20-60% range[50], well below the typical 60-80% factored in by lenders. Structural improvements aided by a raft of policy measures have made infrastructure bond issuances amenable to crucial patient-capital investors such as insurers and pension funds.

Moreover, large corporates are expected to incur the lion's

[49] Insurance, mutual funds, retirement funds (PF and NPS), alternative investment funds, and portfolio management services
[50] https://www.crisilratings.com/en/home/our-analysis/reports/2023/09/a-structural-lift-for-infra-lgd.html

share of Rs 32 lakh crore corporate sector capex. The corporate bond market is well-positioned to complement banks in funding this segment.

In terms of demand, managed investment products are expected to be a big source, having clocked a solid ~16% CAGR in the past five fiscals. This high-growth phase is expected to continue over the medium term.

Factors such as increased digitalisation, rising investor sophistication in terms of retirement planning, higher awareness and use of insurance, investment objective to beat inflation and a growing middle-income population have been contributing to the growth of managed investments.

Complementing the banking system

The domestic bond market has been concentrated in the higher-rated space, with the 'AAA' and 'AA' categories contributing 85%-90% to annual issuances.

Because of low penetration of the 'A' and below category issuances, corporates here depend on loans from banks and NBFCs for majority of their funding.

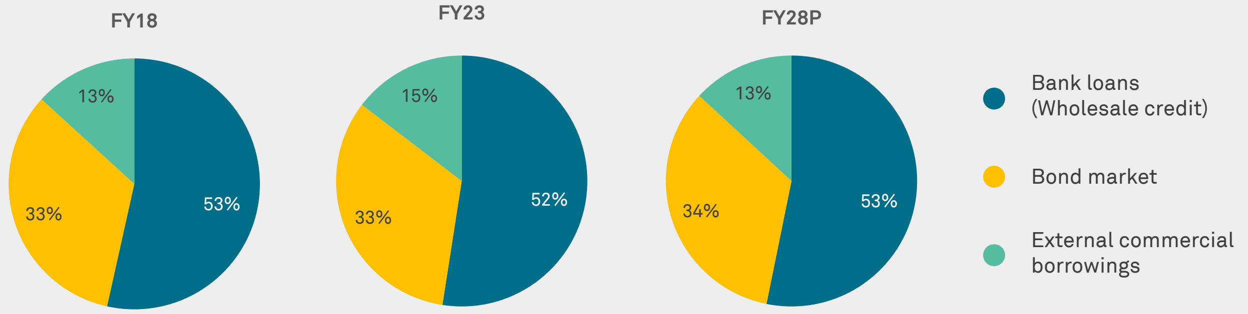
A deepening of the corporate bond market can complement the domestic banking system, especially during times when deposit growth lags credit growth.

The milestone of Rs 100 lakh crore of corporate bonds outstanding can be achieved well before fiscal 2030 (by ~2028) if the market were to deepen through the following measures.

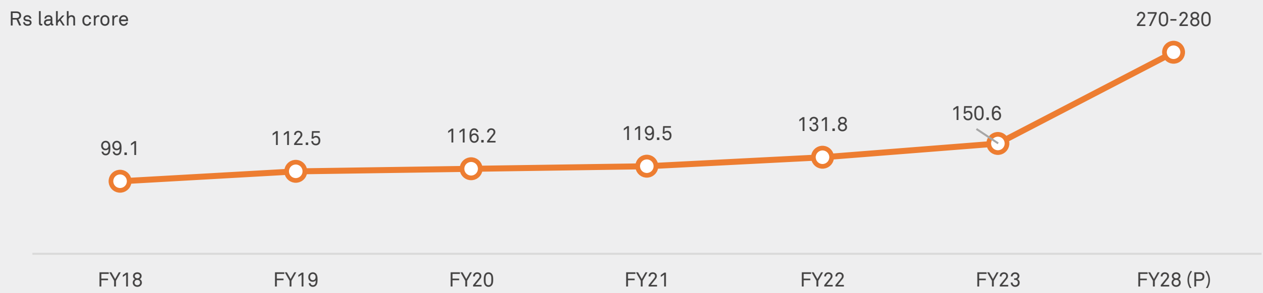
- Insurers and pension funds may have to start looking at 'A' category papers for investments. Regulators should facilitate this by relaxing investment restrictions for below 'AA' category issuances for insurers and pension funds
- Currently, financialisation of savings is a positive trend and investors are pushing more savings into managed investment products. Hence, the need to leverage this opportunity to attract more retail investors to the corporate bond market through direct (public bond issues) and indirect means (mutual funds). For example, the Securities and Exchange Board of India is considering a new category of mutual funds that cater to high risk-appetite investors, which is a step in the right direction
- Increased adoption of expected loss scale as a complement to the existing probability of default scale can improve the flow of bonds to infrastructure financing
- Fast-tracking the operationalisation of the Credit Guarantee Enhancement Corporation
- Enhancing robustness of the insolvency regime to streamline the resolution timelines of stressed assets will further improve investor confidence

Ways to deepen the corporate bond market

Indian credit ecosystem



Indian debt ecosystem



Source: CRISIL Ratings

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