

2020 lead to dramatic GDP drops, especially in India – 2021 and 2022 pave the way for economic recovery

Scenario evaluation (GDP focus) - our synthesis of market views

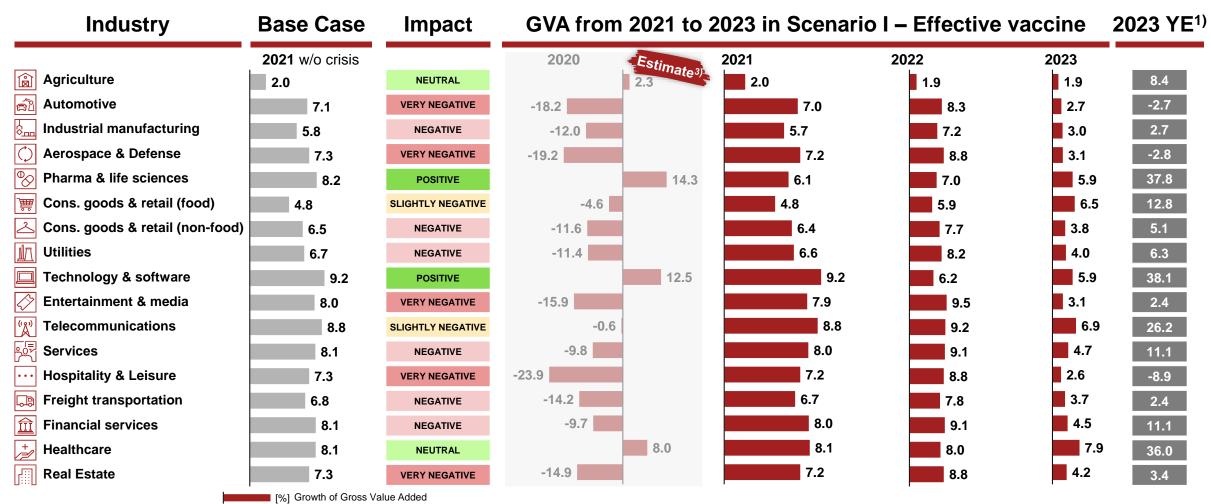
		Actual	al Base (no COVID-19)			Effective vaccine			Mutations and measures			Sources (excerpt)
		2020	2021	2022	2023	2021	2022	2023	2021	2022	2023	Fitch Ratings UNITED NATIONS UNITED NATIONS
★ China	GDP Growth (%)	2.3	5.5	5.4	6.2	7.4	8.3	4.9	5.5	6.0	1.9	THE WORLD BANK
EU ¹⁾	GDP Growth (%)	-6.8	1.3	1.3	1.2	3.9	5.0	2.1	2.5	3.6	1.1	OECD INSTITUT
Germany	GDP Growth (%)	-5.0	1.6	1.6	1.5	4.0	4.2	3.1	2.0	2.8	1.9	JOHNS HOPKINS UNIVERSITY CSIS CENTER FOR STRATEGIC 6 INTERNATIONAL STUDIES
India	GDP Growth (%)	-10.2	7.3	7.3	6.9	7.2	8.3	4.1	6.5	7.1	2.4	BNP PARIBAS EUROPEAN CENTRAL BANK
KSA	GDP Growth (%)	-1.8	1.7	1.8	2.0	3.2	3.5	1.0	2.1	2.4	0.8	eurostat London Business School
UK	GDP Growth (%)	-9.8	1.8	1.5	1.9	4.3	5.0	2.3	3.6	4.1	2.0	CREDIT SUISSE
USA	GDP Growth (%)	-6.3	1.9	1.8	1.6	4.5	4.7	2.1	3.0	3.9	1.5	Bloomberg Moody's Morgan Stanley Bloomberg Moody's

Further Parameters: Unemployment rate, Consumer Price Index, USD Exchange Rate, Long-Term Bond Yields, National Stock Index, Oil Price, Gold Price

Pre-COVID output levels of over 4/5 of industries likely to be restored in India by 2023

Impact on industries (Gross Value Added %)

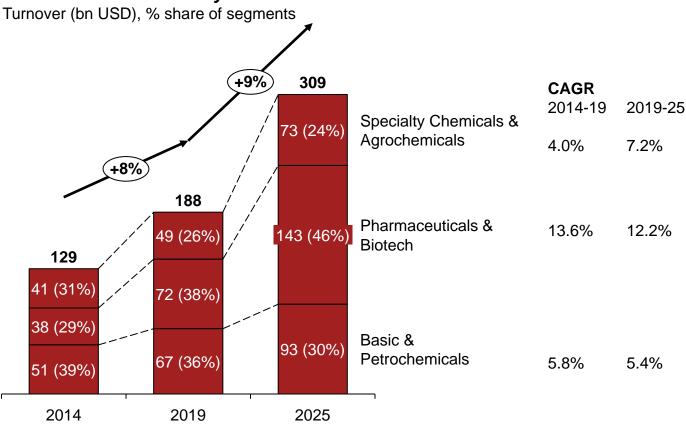




Growth is expected to remain strong going forward across the entire chemicals value chain

Indian Chemical Industry Outlook

Indian Chemical Industry 2014-2025



 Indian chemical industry, as well as key segments relevant for chemicals, delivered steady growth and are expected to continue growing (post-COVID) long-term

Investment and growth opportunities

- Today's trade deficit in chemicals calls for investments into self-sufficiency in petrochemical intermediates
- Accelerate building at scale production plants, e.g. forming strategic partnerships with local refineries to secure feedstock
- Ramping up exports of specialty chemicals to increase India's global share of value
- Partner with major chemical MNCs or technology licensors for access to technology
- Enhance capabilities to offer tailored product applications and solutions, such as compounding (partnering, M&A)

Global chemical industry trends translate into opportunities for India

Global Chemicals Trends

Opportunities for India



Accelerating commoditization

Consolidation for greater scale, portfolio prioritization downstream

O&G players exploring petrochemicals and downstream opportunities; ease feedstock challenges, achieve scale to fortify competitiveness



Deglobalization

Trade conflicts cause uncertainty and shift in global supply chains

Supplement chemicals supply for downstream players reducing dependence from China, offering an accessible market



Sustainability

ESG impact becomes management imperative, stricter regulations

Sourcing from China under scrutiny following disruptions due to stricter EHS norms; opening chances for Indian players in certain segments short-term



Digitization

Technology as lever for efficiency and productivity

Expand profit margins through enhancing digital and analytics capabilities, access to young and skilled workforce



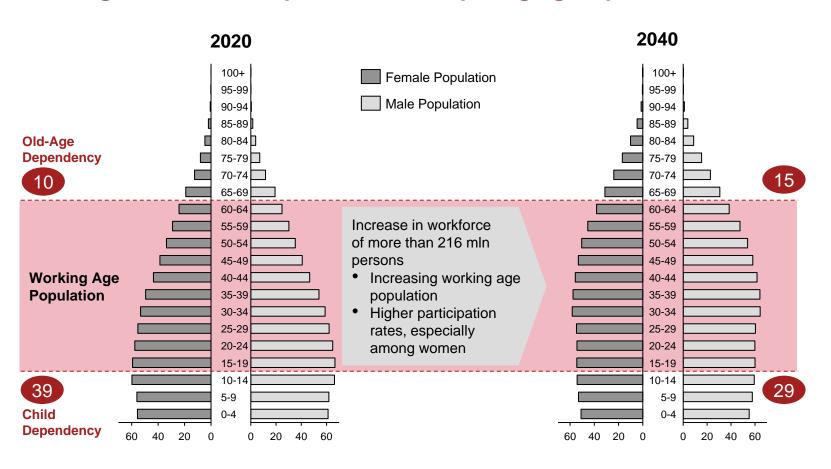
Shift of economic power

Emerging players drive consolidation and strive for self-sufficiency

Benefit from rising domestic demand in chemical end-use sectors and improved ease of doing business

India can use its demographic dynamics as a basis for further growth

India Age Structure, Population in Mio per age group¹

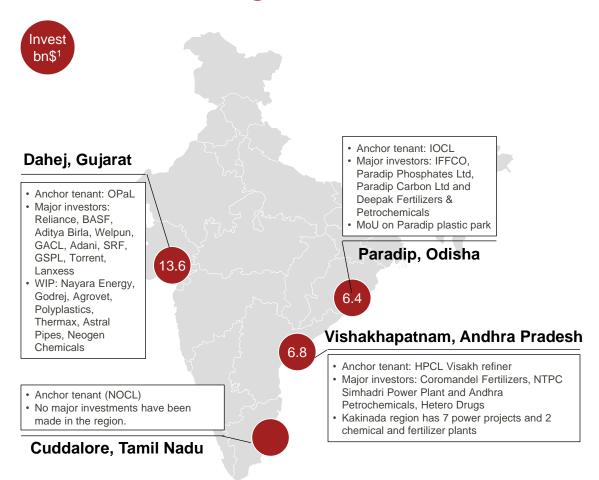


Realizing the Demographic Dividend

- India's population is amongst the youngest in the ageing world, yet with great heterogeneity across the states (e.g. relation working-age/ non-working age population)
- Harnessing the demographic dividend depends upon employability of working-age population, i.e. health, education, vocational training and skills, as well as appropriate land and labor policies, as well as good governance
- India spends 4.6 per cent² of its total GDP on education, and ranks 62nd in total public expenditure on education per student
- Expanding quality of education to increase number of highly qualified employees and greater female participation in workforce on governmental agenda
- Increasing wealth and domestic consumption, i.e.
 move up the income ladder from bottom of pyramid
 to emerging middle class expected for large parts of
 population and shift consumption beyond food
 towards consumer goods

Key to foster growth are the PCPIR clusters which are being refocused for attracting investments

PCPIR manufacturing hubs





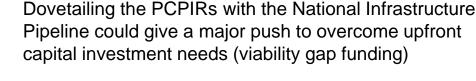
- Petroleum, Chemical and Petrochemical Investment Region (PCPIR) set up to
 - Attract (FDI) investment to reach world scale
 - Enable downstream integration
 - Cluster knowledge and competencies in one area



 Except for Dahej, PCPIRs have not been able to attract desired investment and growth due to issues ranging from overall infrastructure development to project financing



- New policy 2020-35 revising the concept²
 - Size of each investment region cut down from 250 sq km to 50 sq km, with a specific cluster integration strategy





Investment and Collaboration Opportunities between India and EU Strategy&

1) FY2019 committed and actual investments

2) Source: FICCI Whitepaper PCPIR Policy Review 2019, India Business Review

India remains an attractive investment hub for chemical companies

Success drivers for India

GDP Growth Projection 2021 (%)¹ India #63 in 2020 India 2010 #122 in 2010 China Vietnam Malaysia ▲ France Indonesia Germany Japan South Korea Pakistan Ease of Doing Business Index 2020 (Global Rank)² Less Ease More Ease

Ease of doing business

- Increasingly liberal regulatory frameworks in line with international practices, relaxation of FDI norms
- Recent changes to corporate tax rates that have shaped a more supportive ecosystem

Rising domestic demand

- End-use sectors (agro, consumer, retail, auto, health, infrastructure,...) spur ~50% of incremental growth
- Expected to drive chemical demand, creating lucrative value pools across chemical subsegments

Competitive cost and capabilities

- Attractiveness as a manufacturing destination due to competitive labor costs and plant building cost
- Specialty players with distinctive capabilities and established supply relationships with global networks

Accessibility and Infrastructure

- Overcome lack of well-developed infrastructure with global standard, incl availability of reliable utilities
- Enhance partnering with international companies for access to advanced process technologies



Thank you

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