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Assessment of global and Indian pharmaceutical industry

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by S&P Global

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1 Global macroeconomic assessment

1.1 Global GDP outlook

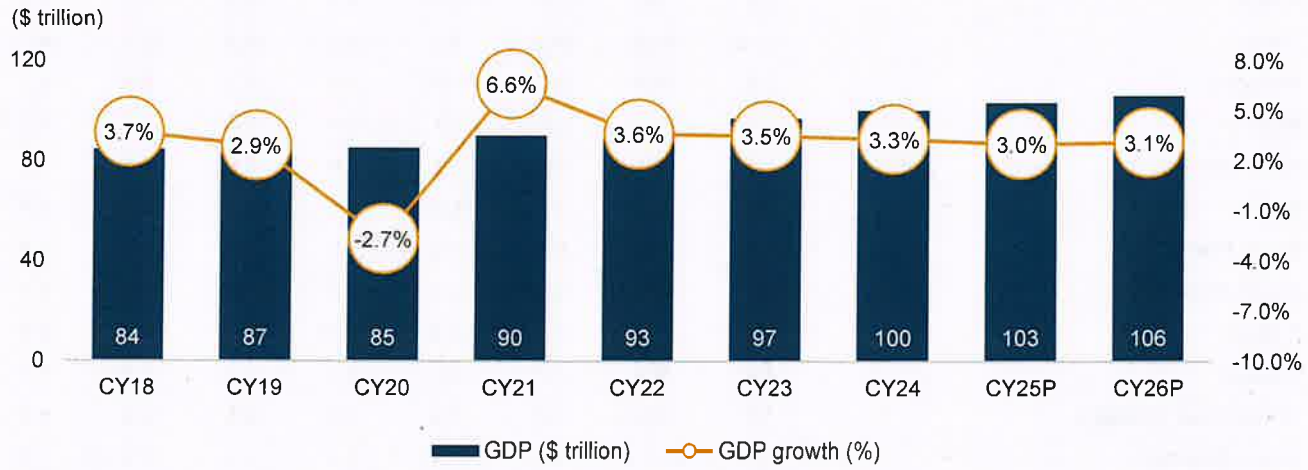
Global GDP is estimated to grow 3.0% in CY25 and 3.1% in CY26

The International Monetary Fund's (IMF) July 2025 update shows global gross domestic product (GDP) grew 3.3% in CY2024 as signs of stabilisation emerged – inflation declined from multi-decade highs and labour markets gradually normalised, with unemployment and vacancy rates returning to pre-pandemic levels. Over CY2015-2024, the global GDP registered a CAGR of ~3.1%.

Moving forward, global GDP growth is projected at 3.0% for 2025 and 3.1% in 2026 owing to stronger-than-expected front-loading in anticipation of higher tariffs; lower average effective US tariff rates than announced in April 2025; an improvement in financial conditions, including due to a weaker US dollar; and fiscal expansion in some major jurisdictions.

However, risks to the outlook are tilted to the downside. A rebound in effective tariff rates, elevated uncertainty, geopolitical tensions, larger fiscal deficits or increased risk aversion could lead to weaker growth. In the medium term (CY2027-2029), the global GDP is expected to expand ~3.2% per year.

Global GDP trend and outlook (CY19-26P, $ trillion)



Note: P - Projection
Source: IMF economic database, Crisil Intelligence

India among fastest-growing major economies

India saw a faster growth of 6.5% in fiscal 2025, surpassing advanced economies, which grew 1.8%, and emerging and developing economies, which grew 4.3%. The trend is expected to continue, with the country leading the growth among its key counterparts.

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GDP of Africa region estimated to grow faster than global average in 2025

In the Middle East and Central Asia, growth is projected to accelerate to 3.4% in 2025 and 3.5% in 2026. Growth is expected to be relatively stable in 2025 in sub-Saharan Africa at 4.0%, before picking up to 4.3% in 2026.

Real GDP growth comparison

Real GDP growth (Annual % change)	2019	2020	2021	2022	2023	2024	2025P	2026P
Algeria	**0.9**	**-5.0**	**3.8**	**3.6**	**4.1**	**3.5**	**3.5**	**3.0**
Australia*	1.9	-2.0	5.4	4.1	2.1	1.0	1.8	2.2
Canada*	1.9	-5.0	6	4.2	1.5	1.6	1.6	1.9
China*	6.1	2.3	8.6	3.1	5.4	5.0	4.8	4.2
Egypt*	5.5	3.6	3.3	6.7	3.8	2.4	4.0	4.1
Emerging market and developing economies*	3.7	-1.7	7.0	4.1	4.7	4.3	4.1	4.0
Ethiopia	**9.0**	**6.1**	**6.3**	**6.4**	**7.2**	**8.1**	**6.6**	**7.1**
Euro area*	1.6	-6.0	6.3	3.5	0.5	0.9	1.0	1.2
India*^	3.9	-5.8	9.7	7.6	9.2	6.5	6.4	6.4
Jordan	**1.8**	**-1.1**	**3.7**	**2.4**	**3.1**	**2.5**	**2.6**	**2.9**
Kenya	**5.1**	**-0.3**	**7.6**	**4.9**	**5.6**	**4.5**	**4.8**	**4.9**
Kuwait	**2.3**	**-4.8**	**2.3**	**5.9**	**-3.6**	**-2.8**	**1.9**	**3.1**
Libya	**-11.2**	**-29.5**	**28.3**	**-8.3**	**10.2**	**-0.6**	**17.3**	**4.3**
Morocco	**2.9**	**-7.2**	**8.2**	**1.5**	**3.4**	**3.2**	**3.9**	**3.7**
Nigeria*	**2.2**	**-1.8**	**3.6**	**3.3**	**2.9**	**3.4**	**3.4**	**3.2**
North Africa	**3.2**	**-0.9**	**4.8**	**4.8**	**3.8**	**2.6**	**4.0**	**3.8**
Qatar	**0.7**	**-3.6**	**1.6**	**4.2**	**1.4**	**2.4**	**2.4**	**5.6**
Saudi Arabia*	**1.1**	**-3.6**	**5.1**	**7.5**	**0.5**	**2.0**	**3.6**	**3.9**
South Africa*	**0.3**	**-6.2**	**5.0**	**1.9**	**0.8**	**0.5**	**1.0**	**1.3**
Sudan	**-2.5**	**-3.6**	**0.5**	**-2.5**	**-20.8**	**-23.4**	**-0.4**	**8.8**
Tunisia	**1.6**	**-9.0**	**4.7**	**2.7**	**0.0**	**1.4**	**1.4**	**1.4**
United Arab Emirates	**1.1**	**-5.0**	**4.4**	**7.5**	**3.6**	**3.8**	**4.0**	**5.0**
United Kingdom*	1.6	-10.3	8.6	4.8	0.4	1.1	1.2	1.4
United States*	2.6	-2.2	6.1	2.5	2.9	2.8	1.9	2.0
Africa (Region)	**3.1**	**-1.4**	**4.6**	**4.3**	**3.3**	**3.2**	**3.9**	**4.1**
Advanced economies*	1.9	-4.0	6.0	2.9	1.8	1.8	1.5	1.6
Middle East and Central Asia	**1.9**	**-2.2**	**4.4**	**5.5**	**2.4**	**2.4**	**3.4**	**3.5**
World*	**2.9**	**-2.7**	**6.6**	**3.6**	**3.5**	**3.3**	**3.0**	**3.1**

Notes: P- projected
^Numbers for India are for financial year from April to March (2020 is FY21 and so on)
India's FY26 projection as per the CRISIL forecast is 6.5%
**Numbers for the calendar year 2023, 2024, 2025 and 2026 from IMF July 2025 update, all the other numbers as per IMF April 2025 Update*
Source: IMF economic database, Crisil Intelligence

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Emerging market and developing economies' per capita GDP growing faster than the global average

Between 2019 and 2024, global per capita GDP clocked a CAGR of 3.8% and that of emerging markets and developing economies a higher 4.3%, according to the IMF. Meanwhile, India witnessed a higher per capita GDP CAGR of 5.7%.

GDP per capita of Middle East registered a positive CAGR between 2019-24

GDP per capita of Africa and Middle East region registered a CAGR of -1.0% and 3.1% respectively between 2019-24. Despite encountering challenging macroeconomic conditions characterised by regional conflicts and high inflation rates, certain MEA countries like Ethiopia and Tunisia surpassed the global average GDP per capita CAGR of 3.8%.

GDP per capita, current prices ($)

GDP per capita	2019	2020	2021	2022	2023	2024	2025P	2026P	CAGR (2019-24)
Algeria	4,453	3,758	4,169	4,984	5,390	5,682	5,691	5,631	5.0%
Australia	54,320	53,163	64,251	65,574	64,652	66,248	64,547	66,277	4.1%
Canada	46,431	43,573	52,912	56,358	54,376	54,473	53,558	56,141	3.2%
China	10,334	10,696	12,878	12,968	12,961	13,313	13,687	14,534	5.2%
Egypt	3,214	3,802	4,146	4,587	3,744	3,570	3,174	3,485	2.1%
Ethiopia	949	969	974	1,143	1,511	1,320	1,066	1,240	6.8%
Euro area	39,310	38,244	43,057	41,672	45,298	46,823	47,857	49,519	3.6%
India	2,050	1,916	2,250	2,361	2,547	2,711	2,878	3,136	5.7%
Jordan	4,166	4,004	4,159	4,317	4,513	4,693	4,903	5,144	2.4%
Kenya	2,108	2,068	2,209	2,266	2,110	2,305	2,468	2,358	1.8%
Kuwait	31,550	25,611	35,205	38,380	33,321	31,641	29,951	29,911	0.1%
Libya	10,526	7,058	5,248	6,386	6,422	6,098	6,801	6,909	-10.3%
Morocco	3,623	3,375	3,911	3,571	3,901	4,157	4,397	4,641	2.8%
Nigeria	2,361	2,097	2,086	2,198	1,637	824	807	805	-19.0%
North Africa	3,828	3,810	4,131	4,498	4,239	4,268	4,143	4,337	2.2%
Oman	19,069	17,076	19,459	22,265	20,499	20,059	18,966	18,904	1.0%
Saudi Arabia	27,893	23,271	28,396	34,454	31,676	30,746	30,099	30,563	2.0%
South Africa	6,583	5,631	6,939	6,629	6,112	6,332	6,397	6,516	-0.8%
Sudan	728	795	772	718	772	575	625	703	-4.6%
Tunisia	3,556	3,570	3,895	3,677	3,967	4,302	4,528	4,622	3.9%
United Arab Emirates	43,940	37,621	42,103	48,861	48,146	48,830	49,498	51,715	2.1%
United Kingdom	42,713	40,231	46,731	46,234	49,213	52,648	54,949	57,387	4.3%
United States	65,561	64,454	71,232	77,801	82,254	85,812	89,105	92,097	5.5%
Advanced economies	48,585	47,603	53,109	54,045	56,668	58,626	60,321	62,572	3.8%
Africa (Region)	2,041	1,912	2,082	2,197	2,058	1,941	1,930	1,998	-1.0%
Emerging market and developing economies	5,447	5,178	6,035	6,398	6,506	6,710	6,803	7,105	4.3%

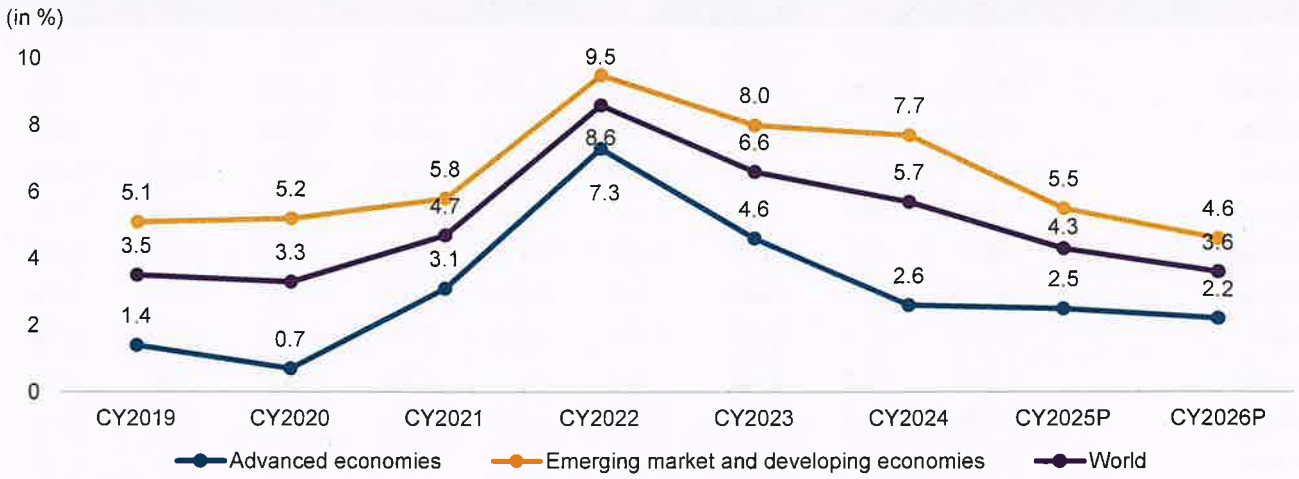
GDP per capita	2019	2020	2021	2022	2023	2024	2025P	2026P	CAGR (2019-24)
Middle East (Region)	11,280	9,562	11,480	13,768	13,014	13,170	12,852	13,163	3.1%
World	**11,554**	**11,147**	**12,610**	**13,030**	**13,474**	**13,933**	**14,213**	**14,742**	**3.8%**

Notes: P – projected
Source: IMF, Crisil Intelligence

Global inflation to subside in the medium term

As per the IMF, global headline inflation is expected to decline from an estimated 5.7% in 2024 and 4.3% in 2025. In advanced economies, the decrease in 2025 is expected to be around 0.1%, from 2.6% in 2024 to 2.5% in 2025. In emerging market and developing economies, it is estimated to decline from 7.7% in 2024 compared to 5.5% in 2025.

Trend and outlook on average consumer prices



Notes: P – projected
Source: IMF, Crisil Intelligence

1.2 Global healthcare expenditure

Aggregate global health spending stood at US$ 9.8 trillion, or 9.9% of global gross domestic product (GDP) in 2022

After surging early in the COVID-19 pandemic, aggregate global health spending fell in 2022, to US$ 9.8 trillion, or 9.9% of global gross domestic product (GDP), the first decline in global health spending in real terms since 2000. Across all country income groups, except lower-middle income countries, average health spending per capita in 2022 fell in real terms from 2021.

Current healthcare expenditure as a percentage of GDP moderated in 2022

In 2021, healthcare expenditure as a percentage of GDP increased to 10.3% globally (~$ 9.8 trillion), owing to prioritization of public health during the pandemic, availability of better medical facilities, advancements in medicine and increase in disposable incomes. During the year, the US, Germany and UK recorded some of the high current healthcare

expenditure (CHE) as a percentage of GDP at 17.5%, 12.9% and 12.0% respectively. Corresponding figures for few other MENA countries like South Africa, Jordon, and Tunisia stood at 8.7%, 7.2%, and 7.0% respectively.

In 2022, aggregate global health spending fell in 2022, to US$ 9.8 trillion, or 9.9% of global gross domestic product (GDP), the first decline in global health spending in real terms since 2000. Subsequently, current healthcare expenditure as a percentage of GDP also fell in 2022 for some of the major countries like USA, Germany, Canada, etc. However, CHE% of GDP increased in 2022 for countries like Japan, South Africa, Morocco, Egypt, Sudan, etc.

Current healthcare expenditure as a percentage of GDP

Countries	Pre- Covid			Post Covid		
	2017	2018	2019	2020	2021	2022
United States of America	16.8	16.6	16.7	18.8	17.5	16.5
Germany	11.3	11.5	11.7	12.7	12.9	12.6
Japan	10.7	10.7	11.0	11.2	11.2	11.4
Canada	10.9	10.9	11.1	13.0	12.4	11.2
United Kingdom*	9.6	9.7	10.0	12.0	12.0	11.1
Finland	9.1	9.0	9.2	9.6	9.8	9.7
South Africa	8.0	8.1	8.2	9.0	8.7	8.8
Tunisia	6.2	5.9	6.0	7.1	7.0	7.0
Jordan	7.1	7.0	7.1	7.1	7.2	6.8
Lebanon	7.8	8.1	8.7	7.6	4.9	5.7
Mexico	5.3	5.2	5.3	6.1	5.9	5.7
Morocco	5.0	4.9	5.0	5.6	5.5	5.7
China	5.1	5.2	5.4	5.6	5.4	5.4
Singapore	4.3	4.0	4.4	5.6	5.2	4.9
Egypt	5.3	4.7	4.6	4.2	4.6	4.7
United Arab Emirates	4.0	4.1	4.4	5.8	5.3	4.7
Saudi Arabia	6.0	5.3	5.5	6.6	5.9	4.6
Sudan	5.9	4.5	4.6	3.0	2.8	4.6
Kenya	4.0	4.1	4.4	4.5	4.6	4.3
Nigeria	3.7	3.1	3.0	3.4	4.1	4.3
Kuwait	4.7	5.2	5.3	6.2	5.5	4.3
Algeria	5.9	5.9	5.4	5.6	5.0	3.6
India	2.9	2.9	3.0	3.3	3.3	3.3
Ethiopia	3.5	3.3	3.2	3.5	3.2	2.9
Qatar	3.2	3.0	3.2	3.8	2.9	2.2

Note:

*** United Kingdom of Great Britain and Northern Ireland*

Source: Global Health Expenditure Database of the World Health Organization (WHO), Crisil Intelligence

In 2022, per capita CHE (at the international dollar rate, adjusted for purchasing power parity) for the US stood at ~$12,434, for Germany at ~$8,454 and for Canada at $6,991. For India, it was considerably lower at $273. However, the

country had registered a notable 9.8% CAGR between 2018 and 2022. Some other countries which have registered notable CAGR between 2018-2022 are Singapore (13.2%), Nigeria (12.0%), China (9.5%), United Kingdom of Great Britain and Northern Ireland (8.8%), Finland (7.8%) and Germany (7.5%).

Per capita CHE (in current PPP)

Countries/ Region	2018	2022	CAGR (2018-22)
United States of America	10,182	12,434	5.1%
Germany	6,341	8,454	7.5%
Canada	5,437	6,991	6.5%
Singapore	4,048	6,658	13.2%
United Kingdom**	4,599	6,449	8.8%
Finland	4,484	6,048	7.8%
Japan	4,522	5,387	4.5%
United Arab Emirates	2,937	3,814	6.8%
Saudi Arabia	3,009	3,102	0.8%
Kuwait	2,597	2,415	-1.8%
Qatar	2,780	2,318	-4.4%
Mexico	1,096	1,353	5.4%
South Africa	1,133	1,341	4.3%
China	789	1,136	9.5%
Tunisia	681	885	6.8%
Jordan	685	767	2.9%
Egypt	542	700	6.6%
Lebanon	1,474	653	-18.4%
Morocco	416	553	7.4%
Algeria	782	547	-8.5%
India	188	273	9.8%
Kenya	186	248	7.4%
Nigeria	156	245	12.0%
Sudan	195	122	-11.1%
Ethiopia	69	79	3.4%

Note:
*** United Kingdom of Great Britain and Northern Ireland*
Source: Global Health Expenditure Database of the World Health Organization (WHO), Crisil Intelligence

Pharmaceutical expenditure as a percent of CHE was higher in emerging economies compared to developed economies

Pharmaceutical care is constantly evolving, with many novel drugs entering the market. These offer alternative treatments, and, in some cases, the prospect of treating conditions previously considered incurable. However, the cost of new drugs can be very high, with significant implications for healthcare budgets.

Furthermore, it is observed that generally pharmaceutical spending as a percent of CHE is relatively higher in emerging economies compared to developed economies. In 2021, Niger, Lebanon and Mexico had pharmaceutical spending as a percentage of CHE at 30.8%, 24.4%, and 22.1% respectively.

In 2022, pharmaceuticals and other medical durable goods, as % of CHE for Niger, and Mexico stood at 21.1% and 21.0% respectively.

Pharmaceuticals and Other medical durable goods, as % of Current Health Expenditure (CHE)

Countries	2018	2019	2020	2021	2022
Niger	29.1	33.2	29.9	30.8	21.1
Lebanon	9.3	25.5	24.6	24.4	N.A.
Mexico	22.7	22.2	21.5	22.1	21.0
Japan	17.8	17.9	17.7	17.8	N.A.
Germany	14.2	13.7	13.8	14.1	13.6
Canada	15.9	15.8	14.2	13.7	14.5
United States of America	11.8	11.8	11.2	11.8	12.3
Finland	12.4	12.4	12.3	11.7	11.6
United Arab Emirates	3.8	3.8	8.6	9.7	N.A.
United Kingdom	11.1	10.9	10.3	9.6	9.6
Saudi Arabia	14.2	4.6	4.3	4.3	N.A.
Nigeria	0.0	0.0	24.7	2.5	N.A.
India	22.4	22.0	N.A.	N.A.	N.A.
South Africa	9.1	9.0	8.7	N.A.	N.A.
Egypt	29.8	N.A.	31.9	N.A.	N.A.
Ethiopia	1.1	1.2	1.5	N.A.	N.A.

Note:
***United Kingdom of Great Britain and Northern Ireland*
Source: Global Health Expenditure Database – WHO, World Bank database, OECD, Crisil Intelligence

2 Assessment of global pharmaceuticals market

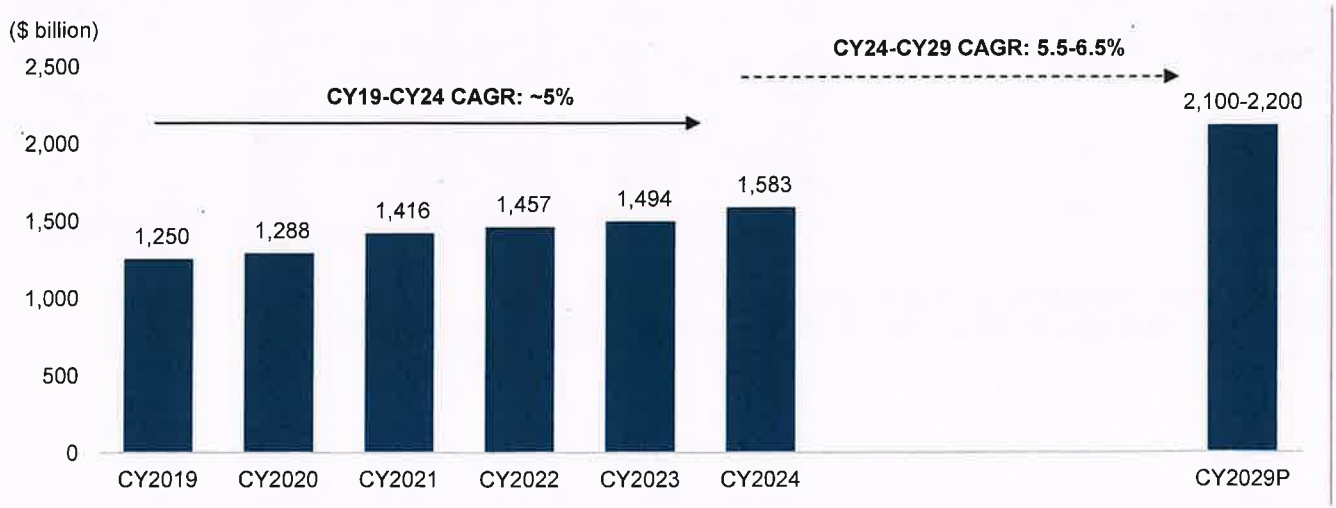
The global pharmaceuticals industry is characterised by the concentration of consumption, production and innovation in a relatively small number of high-income and developed regions, such as North America and Europe, which continue to account for a major chunk of this market in value terms on account of higher priced drugs and newer products. However, over the last few years, production and consumption have picked up in middle-income countries, such as India, China and Brazil. These 'pharmerging' markets also account for a significant share in volume consumption. However, in pharmaceutical research and development (R&D), high-income regions continue to dominate expenditure in both public and private sectors.

2.1 Overview of global pharmaceutical market

Global pharmaceutical market to grow at steady 5.5-6.5% CAGR between 2024 and 2029

The global pharmaceuticals market has logged a CAGR of ~5% from ~$1,250 billion in 2019 to ~$1,583 billion in 2024. After clocking strong growth in 2021 and 2022 on account of pent-up demand, the market is estimated to have moderated in 2023. The global market continued a healthy growth in CY2024 aided by growth in key regulated and semi-regulated market. Pharmaceutical market is estimated to grow at healthy pace aided by volume growth in some of the key pharmerging markets and new product introductions in developed markets. Further, global pharmaceutical market is expected to sustain 5.5-6.5% CAGR from 2024 to 2029 to reach ~$2,100 to $2,200 billion by 2029. Globally, pharmaceutical companies are offering drugs for customized treatment and precision medicine for different diseases, which aim to provide medical care according to the patient's individual characteristics, needs, preferences, and genetic make-up. Also, generic medicines are seeing increased uptake with cost advantages and effective treatment options.

Global pharmaceuticals market by value

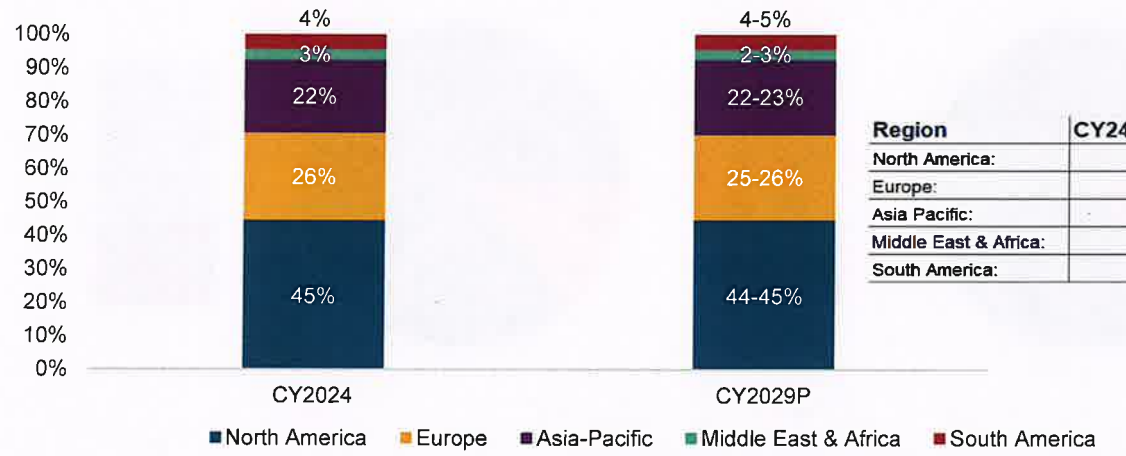


Note: P-projections, CY-calendar year
Source: Pharma company reports, Crisil Intelligence

North America expected to continue holding major share of global pharmaceuticals industry

As of 2024, the North America led the global pharmaceutical consumption in value terms. From the North America region, the US has been the dominant market in the global pharmaceuticals with strong regulatory framework and presence of multinational pharmaceutical companies who market their drugs in the US pharmaceutical market. North America market is followed by another regulated market- Europe, which accounts for ~26% of the global pharmaceuticals market. Fast growing markets like Asia pacific and south America forms 22% and 4% of the global pharmaceutical market respectively in 2024.

Segmentation of global pharmaceuticals market based on region



Region	CY24-CY29 CAGR
North America:	5.5-6.5%
Europe:	5-6%
Asia Pacific:	6-7%
Middle East & Africa:	4.5-5.5%
South America:	6-7%

Note: P-projections
The overall pharmaceuticals market stood at ~$1,583 billion in 2024
Source: Crisil Intelligence

Significant spending on R&D in North America and Europe to continue to boost regions' pharmaceuticals markets

The global pharmaceuticals market is dominated by developed markets such as North America and Europe, supported by higher uptake of innovative medicines and increased spend on healthcare. These developed markets are characterised by higher research and development spend in the pharmaceuticals industry. As per the Pharmaceutical Research and Manufacturers of America (PhRMA), the United States biopharmaceuticals industry has been one of the world leaders in the development of new medicines. Over the last decade, PhRMA member companies have more than doubled their annual investment in the search for new treatments and cures, including nearly $101 billion in 2022 alone. Similarly, as per the European Federation of Pharmaceutical Industries and Association (EFPIA), in Europe, the pharmaceutical R&D investment was ~€47 billion in 2022.

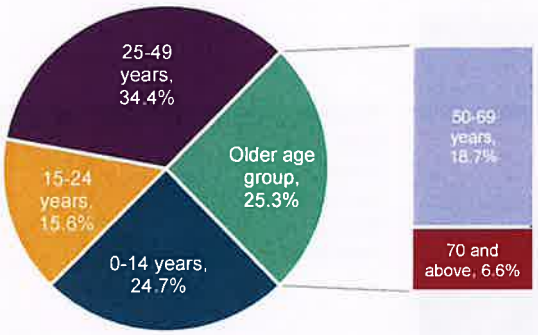
Emerging economies in Latin America and the Asia-Pacific such as Brazil, China and India, are also witnessing rapid growth in the pharmaceuticals market as a result of a gradual shift of manufacturing and research activities from developed markets to these fast-growing markets. In India, along with developing capabilities via the inorganic route, companies are also looking at strengthening their in-house product pipelines through increased R&D investment.

2.2 Key growth drivers of global pharmaceuticals industry

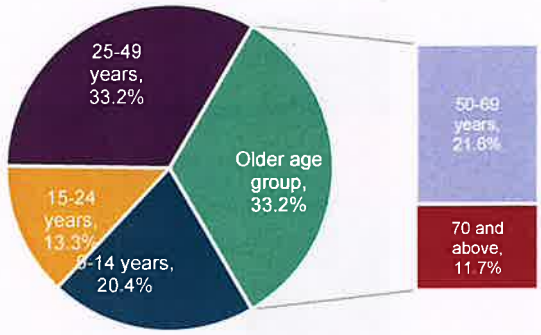
Ageing population

The share of older population (50 years and above) comprised 24.7% of the total global population in 2024. By 2030 and 2050, the share of the older population is projected to increase further to ~27.2% and 33.2%, respectively. In fact, the older population forms a dominant share in developed countries (~40.4% in 2024) compared with less developed countries, where the older population comprised 22.5% share.

Population break-up 2024



Population break-up 2050P



P – projected
Source: United Nations World Population Prospects 2024, Crisil Intelligence

This rise in the older population, along with the growing prevalence of a sedentary lifestyle, is expected to increase the incidence of chronic and lifestyle diseases. Consequently healthcare needs of the elderly population is expected to drive the growth of the global pharmaceuticals industry.

Growing prevalence of chronic diseases

The prevalence of chronic diseases is increasing rapidly across the world. Rising incidence of cancer, cardiovascular diseases, obesity and diabetes are likely to drive demand for pharmaceuticals and chronic therapies, which can, consequently, significantly impact the economy of a country.

The incidence and prevalence of chronic diseases is increasing rapidly all around the world. The rising incidence of diseases such as cancer, cardiovascular diseases, obesity, and diabetes, is likely to drive demand for pharmaceuticals and chronic therapies and can have a significant impact on the economy of a country.

According to the Organization for Economic Co-operation and Development's (OECD's) Health at a Glance 2023 report, more than one-third of people aged 16 and over reported living with a longstanding illness or health problem on average across 24 OECD countries in 2021. Cardiovascular diseases are found to be most prevalent across the world and are the leading causes of death causing an estimated 17.9 million deaths each year. According to Indian Council of Medical Research – India Diabetes (ICMR INDIAB) study published in 2023, it is estimated that in 2021, 101 million people had diabetes, and the number with prediabetes was 136 million. About 315 million people in India had hypertension, 254 million had generalised obesity, and 351 million had abdominal obesity. In addition, 213 million people had hypercholesterolaemia and 185 million had high LDL cholesterol.

Additionally, as per WHO, Noncommunicable diseases (NCDs) killed at least 43 million people in 2021, equivalent to 75% of non-pandemic-related deaths globally. In 2021, 18 million people died from an NCD before age 70 years; 82% of these premature deaths occur in low- and middle-income countries.

Within NCDs, Cardiovascular diseases account for most NCD deaths, or at least 19 million deaths in 2021, followed by cancers (10 million), chronic respiratory diseases (4 million), and diabetes (over 2 million including kidney disease deaths caused by diabetes).

This rising prevalence of chronic diseases is expected to further increase the demand for drugs globally. Additionally, rising prevalence of chronic disease also necessitates sustained investments in R&D for the development of the novel drugs and improvement of existing ones which is expected to contribute to the rising capex activities in the pharmaceutical industry.

DALYs by cause- 2021

Rank	Cause	DALYs (000s)	% DALY	DALYs per 100,000
0	**All Causes**	**3,013,735**	**100.0**	**37959.3**
1	COVID-19	243,063	8.1	3061.5
2	Ischaemic heart disease	193,893	6.4	2442.2
3	Stroke	160,202	5.3	2017.8
4	Lower respiratory infections	105,642	3.5	1330.6
5	Preterm birth complications	100,480	3.3	1265.6
6	Back and neck pain	90,882	3.0	1144.7
7	Diabetes mellitus	80,534	2.7	1014.4
8	Chronic obstructive pulmonary disease	78,068	2.6	983.3
9	Diarrhoeal diseases	69,743	2.3	878.4
10	Road injury	67,853	2.3	854.6
11	Tuberculosis	60,636	2.0	763.7
12	Birth asphyxia and birth trauma	59,259	2.0	746.4
13	Depressive disorders	56,656	1.9	713.6
14	Congenital anomalies	52,722	1.7	664.1
15	Malaria	52,059	1.7	655.7
16	Cirrhosis of the liver	45,936	1.5	578.6
17	Trachea, bronchus, lung cancers	45,648	1.5	575.0
18	Other hearing loss	44,193	1.5	556.6
19	Falls	43,855	1.5	552.4
20	Kidney diseases	43,721	1.5	550.7

Source: Global Health Estimates 2021, Crisil MI&A

Better access to medicines in emerging markets

With the world's population reaching ~8 billion in 2024, per capita consumption of medicine per person per day is also estimated to have increased. Much of the increased consumption has been driven by emerging pharmaceuticals markets, such as Brazil, China, India and Indonesia, where there has been a substantial rise in average medicine volume usage.

In fact, the gap in average medicine usage between developed markets and emerging markets is narrowing, owing to reasons such as increased per capita income, improvement in healthcare infrastructure and increase in insurance coverage. The rise of government safety nets and private insurance are also key factors that will increase medicine volume usage across emerging markets.

However, the extent and pace of investments, both public and private, will be a key determinant of continued increase in medicine usage.

Strong development of generic formulations market

Developed economies spend a significant portion of their GDP on healthcare expenditure. Going forward, demand for pharma products in the developed markets is expected to be driven by factors such as an ageing population and the growing incidence of chronic diseases.

Healthcare reforms in the US have resulted in higher insurance coverage and greater usage of generic medicines. The US is the largest pharmaceuticals market for both innovator brands and generic drugs. It has been at the forefront of medicine research and healthcare spending. Driven by the Hax-Watchman Act, the generic drugs industry in the US has grown tremendously over the years. The Hax-Watchman Act is a US federal law introduced in 1984 to regulate procedures for approval and marketing of generic drugs in the country. Driven by greater dependence on generic medicines and enactment of the Patient Protection and Affordable Care Act, growth in the generic drugs market in the US is expected to continue.

Increased preference for affordable healthcare along with favourable regulatory environment for generic medicines such as the Hax-Watchman Act and Generic Drug User Fee Amendments (GDUFA) are expected to drive growth in the generic drugs market in the US.

In Europe, it is expected that austerity measures adopted by the government will continue to drive demand for generic drugs. The key growth driver for the European market will be underpenetrated generic markets, such as Belgium (17.1%), the UK (26.2%), France (17.7%) and Germany (18.0%), which indicate tremendous untapped potential for growth of generic medicines.

Global pharmaceutical capex to witness growing traction in coming years

The capex in global pharmaceutical industry is estimated to increase moving forward owing to factors such as rising demand for innovative treatments, advancements in technology, expiring patents and increasing regulatory focus. Additionally, the need for modernization due to increasing integration of artificial learning (AI) tools and expansion of manufacturing facilities by pharmaceutical companies to increase their geographical presence will also contribute to higher capex investments by pharmaceutical companies. Pharmaceutical companies are increasingly leveraging the use of AI for more sophisticated decision making and R&D efforts. Companies are investing money in target identification of diseases like cancer, neurodegenerative and neuromuscular diseases, etc.

Moreover, increasing regulatory focus by the governments of emerging economies including Asia- Pacific and Middle East and Africa on pharmaceutical sector is further propelling capex spending. Simultaneously, the patent expirations along

with increasing occurrence of antibiotic resistance in humans are also expected to intensify R&D investments by the pharmaceutical companies.

Overall, the increased focus on healthcare underscores heightened emphasis on healthcare by the government and individuals, and is poised to catalyse growth in pharmaceutical sector, which will translate into higher capex investments into the sector by the corporates, governments and international organisations.

3 Assessment of pharmaceutical market in Middle East and Africa

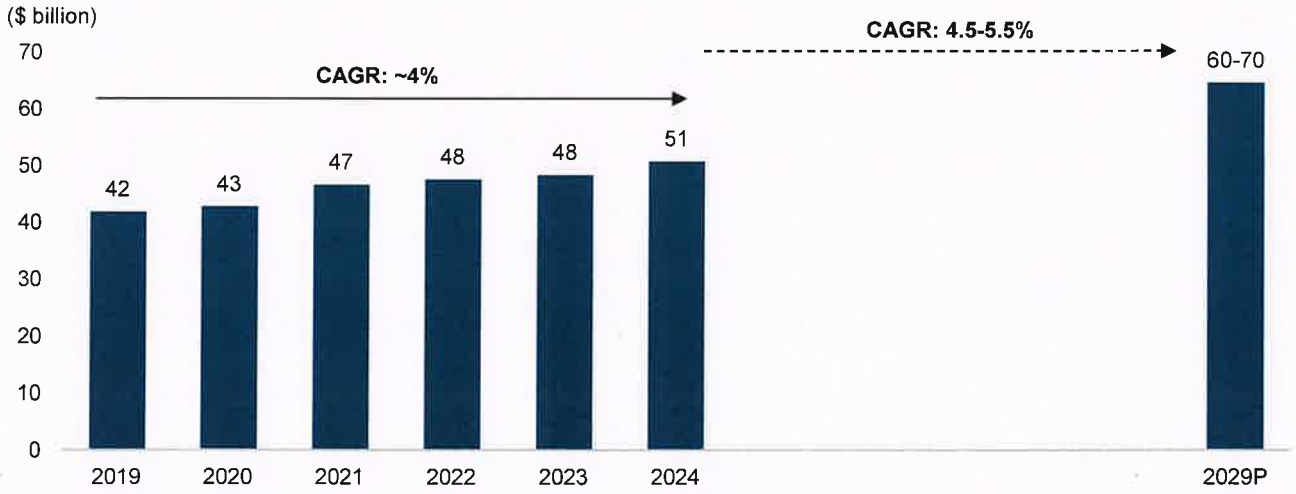
3.1 Overview of pharmaceuticals market in MEA

Pharmaceuticals market in MEA estimated to log 4.5-5.5% CAGR from 2024 to 2029

The pharmaceuticals market in the Middle East and Africa (MEA) region have grown at ~4% CAGR between 2019 and 2024, to ~$51 billion. Within the MEA region, Saudi Arabia (KSA), Egypt, the UAE and South Africa are some of the major pharmaceutical's markets.

Between 2024 and 2029, the industry is expected to grow at a higher CAGR of 4.5-5.5%, to $60-70 billion, driven by multiple factors, including expanding retail channels across the MEA region, supportive regulatory environment in Egypt, increase in expat population in the UAE following revised visa policies, and better access to generic medicines.

Pharmaceuticals market in MEA region



P – projected
Source: Industry, Crisil Intelligence

Pharmerging countries to drive the growth in the MEA region, with focus on self-reliance for pharmaceuticals post covid-19 pandemic

Pharmerging countries like KSA, Egypt, Nigeria etc in MEA region are becoming significant driving force of the regional pharmaceutical growth. Currently, these countries have relatively low share in the global pharmaceutical market. However, these countries possess high potential of growth backed up increasing regulatory reforms, improving government focus as well as improving demographics like growing per capita income and increasing population.

COVID-19 pandemic highlighted the importance of having proper healthcare infrastructure and local manufacturing of necessary drugs and vaccines for enabling nations to become medicinally independent, and to overcome disruptions in

global supply chains. Hence, countries in MEA region are increasing focusing on localization of pharmaceutical sector post Covid-19 to achieve self-reliance and decrease high dependence on imports of pharmaceutical products.

This drive towards local manufacturing of pharmaceuticals and improving investment environment in the pharmerging countries is expected to steer capex investments in the region, with turnkey engineering solution providers playing a key role in efficient utilization of capex through establishing manufacturing facilities, technology integration and procuring equipment, etc .

Policy focus on local manufacturing of pharmaceutical products to improve capex cycle

Governments of the UAE and the KSA are increasingly focusing on local manufacturing of pharmaceuticals, which is expected to, consequently, increase capex in the space. In 2017, Pfizer Global Supply completed the construction of a new manufacturing facility in King Abdullah Economic City. The site – the first for Pfizer in the KSA – will allow patients in the country to access Pfizer medicines such as Lipitor (atorvastatin calcium), Lyrica (pregabalin) and Zithromax (azithromycin). In 2017, the KSA and Japan also set up a joint group for Saudi-Japan Vision 2030. As part of this, the KSA and Japan will collaborate on areas of medical training and research, etc.

Additionally, in October 2023, Local Content & Government Procurement Authority (LCGPA) and Government Expenditure &Projects Authority (EXPRO) signed a preliminary agreement with National Unified Procurement (NUPCO), Sudair Pharmaceutical Company and Sanofi to localise the manufacture and transfer of knowledge of insulin products. In 2024, the KSA's LCGPA also signed agreements with multiple pharmaceuticals companies, including Jamjoom Pharma. Jamjoom Pharma signed a contract for the localisation and technology transfer of pharmaceutical product Sitagliptin Phosphate, which is used to treat Type 2 diabetes, with the contract valid for three years.

In the UAE, Neopharma, a local pharmaceuticals company, and GlaxoSmithKline entered into a partnership in 2020 to launch the first-ever locally produced batch of medicines. In 2023, the Department of Health–Abu Dhabi signed a declaration of collaboration with Eli Lilly for support in clinical research and life science activities in the emirate, with focus on oncology, diabetes and neurological diseases.

Some key examples of localization of pharmaceuticals in MEA

Region	Year	Stakeholders	Contract Details
KSA	2017	Pfizer, KSA	Pfizer Global Supply completed the construction of a new manufacturing facility in King Abdullah Economic City. This will improve access to medicines like as Lipitor (atorvastatin calcium), Lyrica (pregabalin) and Zithromax (azithromycin)
	2017	Japan, KSA	KSA and Japan set up a joint group for Saudi-Japan Vision 2030 to collaborate on areas of medical training and research, etc.
	2023	NUPCO, Sudair Pharmaceutical Company, Sanofi, LCGPA, EXPRO	This agreement will contribute to maximizing the government's purchasing power and achieving self-sufficiency in a number of priority products and sectors, as it aims to localize the manufacture of some insulin products.
	2024	Jamjoom Pharma, KSA	Jamjoom Pharma signed a contract for the localisation and technology transfer of pharmaceutical product Sitagliptin Phosphate, which is used to treat Type 2 diabetes, with the contract valid for three years.
UAE	2020	Neopharma, GlaxoSmithKline (GSK)	Neopharma and GSK entered into a partnership in 2020 to launch the first-ever locally produced batch of medicines

Region	Year	Stakeholders	Contract Details
	2023	Eli Lily, Department of Health (Abu Dabi)	Department of Health–Abu Dhabi signed a declaration of collaboration with Eli Lilly for support in clinical research and life science activities in the emirate, with focus on oncology, diabetes and neurological diseases.
Egypt	2023	Sanofi-Minapharm	Sanofi and Minapharm announce the signing of an exclusive Manufacturing and Supply Agreement for the localization of the full range of its product, Clexane®. The agreement between Sanofi, a global pharmaceutical company and Egypt's Minapharm, a regional Biotech company, boosts Egypt's national localization strategy of biopharmaceutical manufacturing.
Africa	2022	Eli Lilly- EVA Pharma	Eli Lilly, in a first, entered into an agreement with EVA Pharma to supply API for insulin at a significantly reduced price to EVA Pharma. Lilly will also provide a pro-bono technology transfer to enable EVA Pharma to formulate, fill and finish insulin vials and cartridges. This is expected to empower local manufacturing, finishing and distribution of quality insulin in Africa.

Source: Company websites, Crisil Intelligence

3.2 Key growth drivers

Increasing percentage of older population to aid pharmaceuticals industry

The share of older population (50 years and above) is increasing across the MEA region, including Egypt, South Africa, the KSA and the UAE, which is, consequently, expected to increase the demand of pharmaceuticals across the region. By 2030, countries like the KSA are expected to have a relatively higher percentage of older people at ~21%, compared with ~13% in 2024.

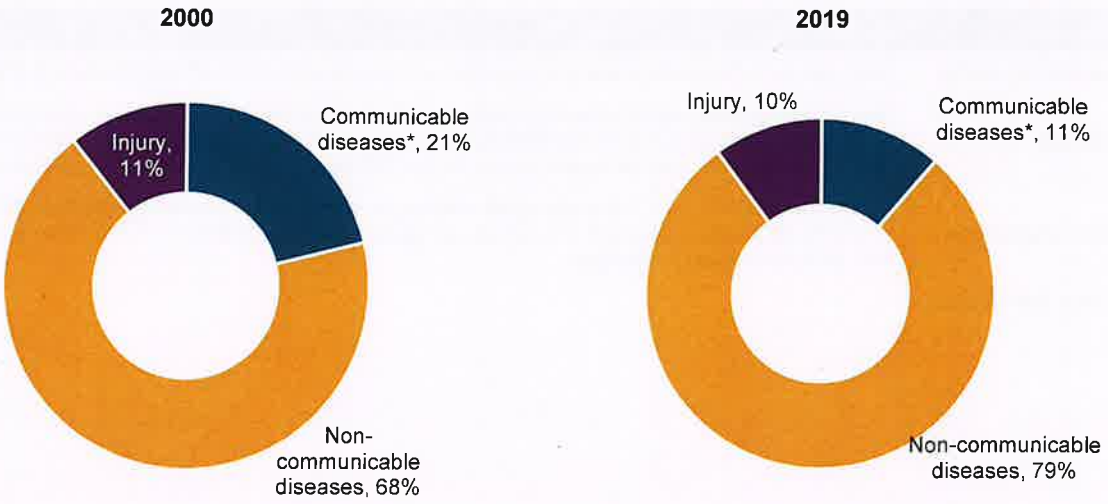
Countries/ region (years)	2024E					2050P				
	0-14	15-24	25-49	50-69	70 and above	0-14	15-24	25-49	50-69	70 and above
Egypt	32.0%	17.6%	33.9%	13.7%	2.8%	24.7%	15.3%	35.2%	18.8%	6.0%
South Africa	25.9%	16.3%	39.0%	14.7%	4.0%	21.5%	15.1%	35.4%	20.9%	7.1%
Saudi Arabia	23.8%	14.8%	48.3%	11.4%	1.7%	20.1%	13.7%	45.1%	16.0%	5.1%
UAE	16.1%	12.9%	58.9%	11.1%	0.9%	18.1%	11.6%	56.8%	11.8%	1.6%

E – estimated, P – projected
Source: United Nations, Crisil Intelligence

Growing burden of non-communicable diseases

In 2019, share of non-communicable diseases in overall deaths increased to 79%, compared to 68% in 2000, a rise of 11 percentage points. This increasing trend of non-communicable diseases highlights the growing burden of non-communicable disease including cardiovascular diseases, cancers and respiratory disorders. Addressing this growing burden of non-communicable diseases requires substantial investments in the research and development as well as overall improvement in healthcare infrastructure of the country.

Share of communicable and non-communicable diseases in deaths- MEA region



Note:
**Includes maternal, prenatal and nutrition conditions*
Source: World Bank, Crisil Intelligence

Increasing government focus on expanding health insurance

Governments across the MEA region are focusing on expanding the health insurance coverage among the population. The KSA, the UAE, South Africa, etc are making progress in the implementation of their respective universal health coverage (UHC) programmes.

South Africa plans to implement UHC through its National Health Insurance. Countries such as the KSA have mandated compulsory insurance for its expatriates and Saudi nationals working in the private sector.

These steps by the governments to expand UHC is expected to positively impact the pharmaceuticals sector by increasing the population's access of healthcare facilities.

Improving regulatory scenario to boast pharmaceuticals markets

The regulatory landscape in the MEA region is primarily geared towards improving access to medicines through better clinical investigations and patent coverage. In key MEA markets, drug registration timelines have notably been expedited in recent years, although there is headroom for further improvement.

During the peak of the pandemic, regulatory authorities in the KSA, the UAE and South Africa expedited approvals of various Covid-19 vaccines and therapeutics through streamlining the registration process. Additionally, the Egyptian Drug Authority (EDA) has been granted an independent agency, which has positively impacted the registration timelines of drugs. These favourable regulatory environments are expected to significantly boost the region's pharmaceuticals market.

3.3 Key challenges

Key challenges	Description
Geographical instability	Regional conflicts could disrupt supply chains and daily operations of pharmaceuticals companies.
Limited talent	Even though governments in the MEA region have increased focus on healthcare, pharmaceuticals companies find it difficult to recruit skilled employees, which could lower productivity and increase costs as companies have to either spend money on skill development or hire talent from overseas.
Increasing localisation	Increasing localisation of pharmaceuticals markets in the region can discourage foreign MNCs because of exit barriers, and uncertainty over dispute settlement and enforcement of foreign arbitral award, as well as technological challenges.

Source: Crisil Intelligence

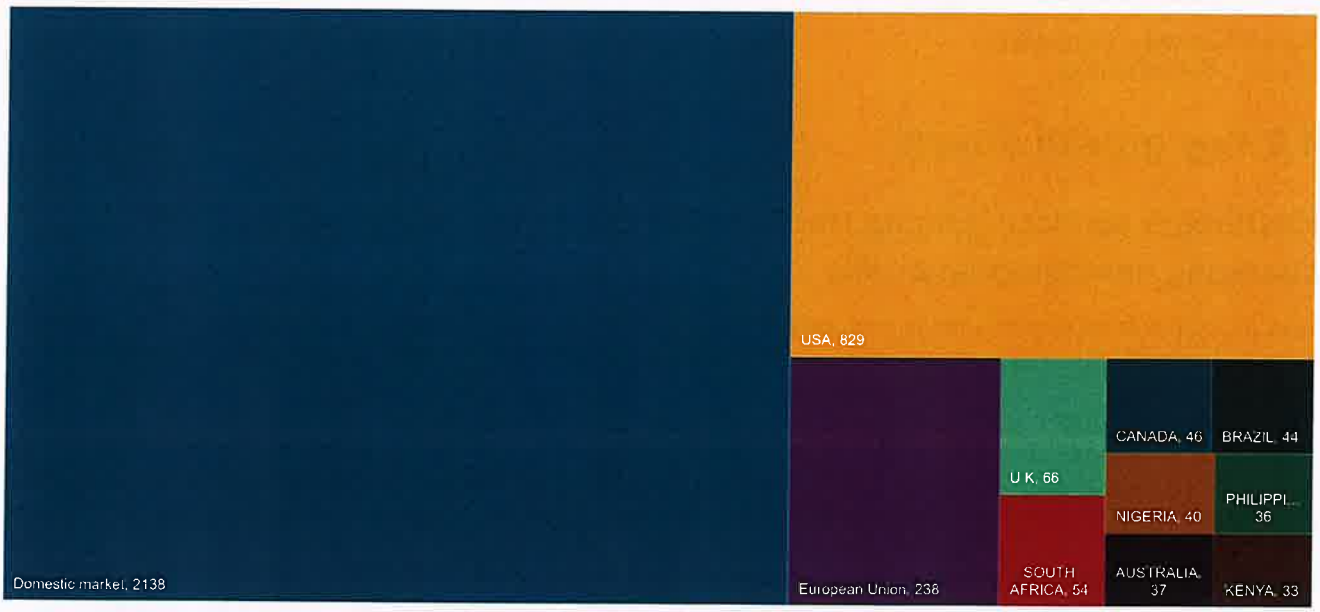
4 Assessment of Indian pharmaceuticals market

4.1 Introduction to India's pharmaceutical market

The Indian pharmaceutical industry is the world's third largest by volume and was valued at Rs 4.5 trillion (including bulk drugs and formulation exports) as of fiscal 2025. The industry can be broadly classified into formulations and bulk drugs. Formulations can further be divided into domestic formulations and export formulations, both having almost an equal share in the market. At present, low-value generic drugs constitute a large part of Indian exports. India accounts for ~3.5% of total drugs and medicines exported globally, and exports pharmaceuticals to more than 200 countries and territories, including highly regulated markets such as the US, the UK, the European Union and Canada. India has a complete ecosystem for the development and manufacturing of pharmaceuticals, with companies having state-of-the-art facilities and skilled/ technical manpower. Moreover, the country has several renowned pharmaceutical educational and research institutes and a robust ecosystem of allied industries.

Indian pharmaceutical industry (fiscal 2025) (Rs billion)

Domestic (51%) **Export (49%)**



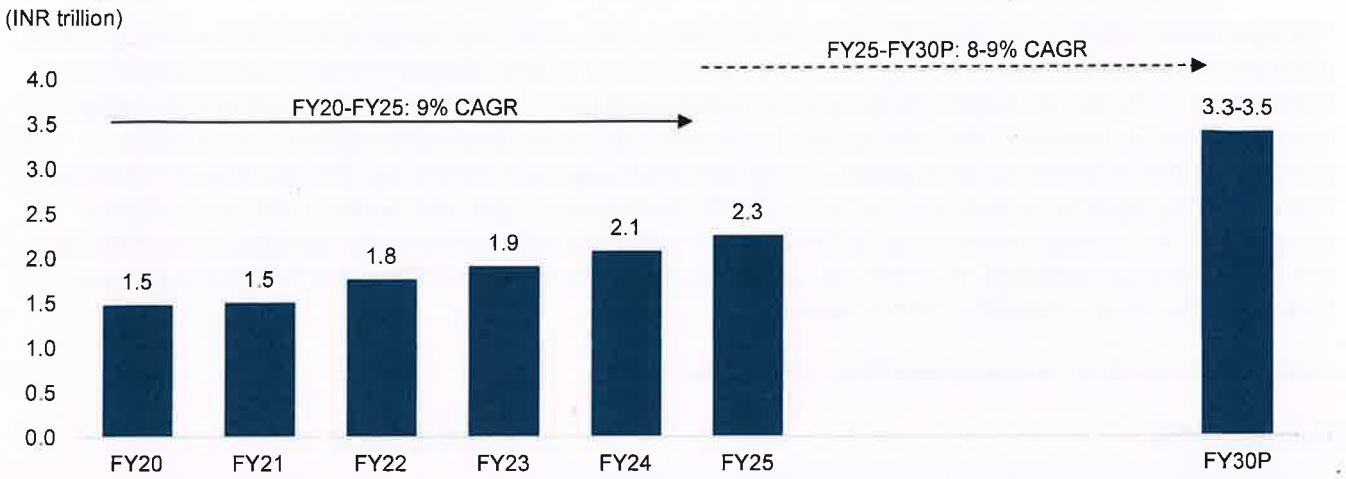
Note: Total exports from India in FY25 stood at Rs 2,081 billion. The above chart only represents top 10 export destinations.
Source: DGFT, Crisil MI&A

Domestic formulations market to grow at ~8-9% CAGR over FY2025 to FY2030

The Indian domestic formulation market has seen healthy growth in the recent times. As of FY2025, the Indian domestic formulation market contributed to approximately ~2% of the total global pharmaceutical market. Indian domestic formulations market (consumption) grew at a healthy rate at a CAGR of 9% CAGR from FY2020 to FY2025. The Indian domestic formulations segment (consumption) is expected to grow at a CAGR of 8-9% CAGR over the next five years

from FY2024 to reach ~INR 3.0-3.2 trillion in FY2029, aided by strong demand because of rising incidence of chronic diseases, increased awareness and access to quality healthcare.

Review and outlook of Indian domestic formulation market



Notes :E-Estimated, P-Projected
Source: Crisil Intelligence

4.2 Key growth drivers

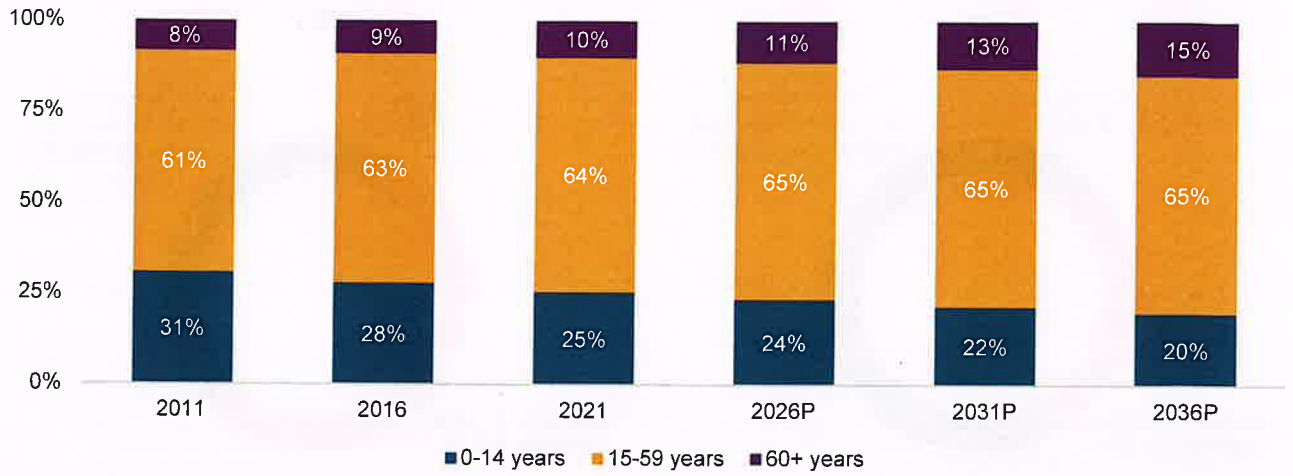
Healthcare services gaining traction with improving life expectancy and changing demographic profile

With improving life expectancy, the demographic profile of the country is also witnessing a change. As of 2011, nearly 8% of the Indian population was of 60 years or more, and this is expected to surge to 11% by 2026 and 13% by 2031.

According to the Report on the Status of Elderly in Select States of India, published by the United Nations Population Fund (UNFPA) in September 2023, chronic ailments such as arthritis, hypertension, diabetes, asthma, and heart diseases were commonplace among the elderly. Over 30% of the elderly women and 28% of the men suffered from one chronic morbid condition and nearly one-fourth (across both sexes) suffered from more than two morbid conditions.

With the Indian population expected to grow to approximately 1.4 billion by 2026, it is imperative to ensure availability of healthcare services to this vast populace. This is expected to present a substantial growth potential for the Indian domestic formulations industry.

Trend and outlook on age group-wise segmentation of Indian population



Source: Census, Crisil Intelligence

Growth in the chronic segment to continue to boost growth in the medium term with long-term treatments and prescriptions

Chronic disease care drugs (meant to treat many non-communicable diseases) are seeing high growth rates. The treatment for chronic diseases requires medium-to-long term treatment where medical practitioners prescribe a chain of prescriptions to treat these diseases. Also, with chronic diseases, these prescriptions are used more frequently in the market as the treatment usually takes a longer duration.

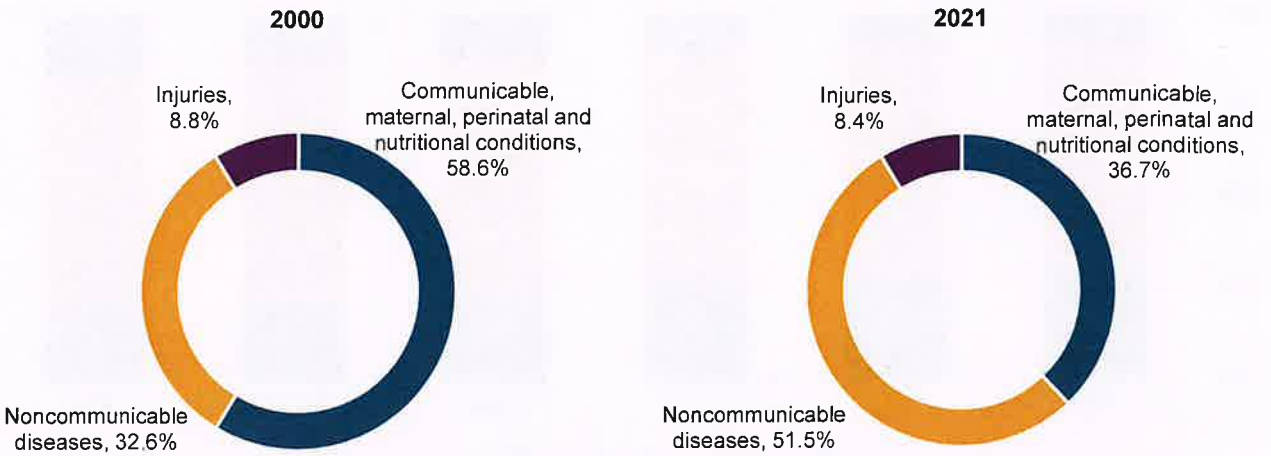
According to the World Health Organization (WHO), communicable diseases were a major contributor to disability-adjusted life years (DALYs) in India in 2000, with approximately 59% share. The major reasons were lack of basic public healthcare facilities and vaccination, which led to communicable diseases.

DALY helps assess the overall burden of disease in a country as it is a time-based measure that combines years of life lost due to premature mortality and disability. One DALY represents the loss of the equivalent of one year of full health.

By 2021, there was a notable shift in the disease burden landscape in India. The share of communicable diseases in total DALYs in the country witnessed a significant decline to about ~37%, indicating progress in controlling infectious illnesses through vaccination drives and availability of public healthcare services. Conversely, non-communicable diseases witnessed a substantial increase and accounted for ~52% of the DALYs in India, compared to a share of ~33% in 2000.

This shift can be attributed to the growing ageing population in India and lifestyle changes, leading to a more-sedentary living. Furthermore, injuries accounted for ~8.4% in 2021, showcasing a slight decline compared with 2000.

Contribution of major disease groups to total DALYs in India



Source: WHO, Crisil MI&A

This escalating burden of chronic/ non- communicable diseases underscores the imperative of substantial and sustained capex investments in research and development activities including new facilities, manufacturing abilities, access to latest technology and cutting-edge equipment.

Contribution of major disease groups to DALYs (2021)

Region	Share of communicable, maternal, neonatal, and nutritional diseases in total DALYs	Share of non-communicable diseases in total DALYs	Share of injuries in total DALYs
Global	30.8%	58.6%	8.9%
Low income	55.9%	32.5%	10.7%
Lower middle income	41.0%	48.3%	8.3%
Upper middle income	17.5%	71.7%	9.2%
High income	12.6%	78.3%	8.3%

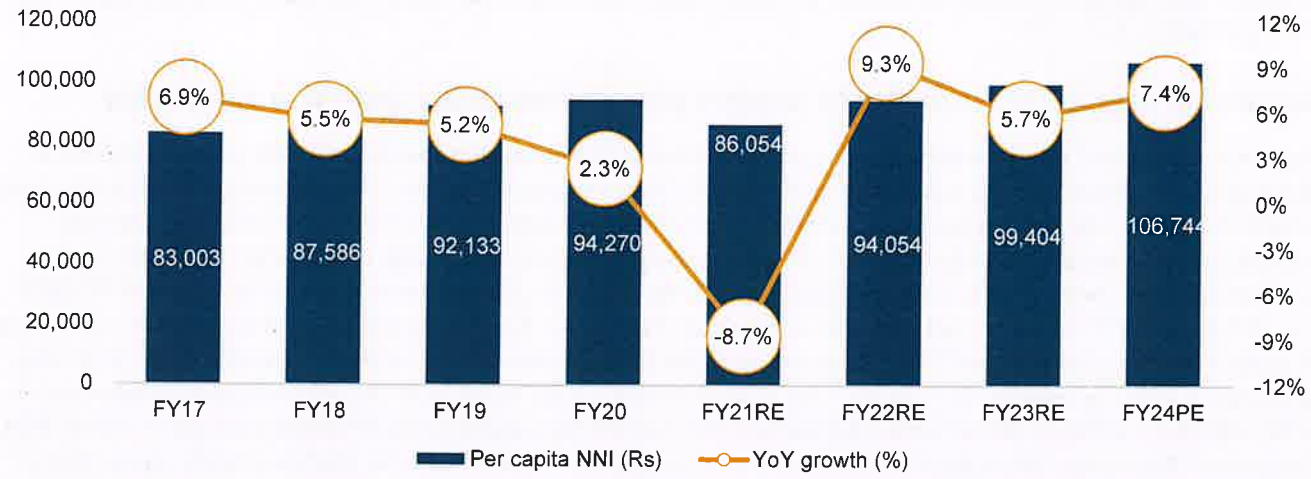
Source: WHO, Crisil Intelligence

Rising income levels along with strong awareness for health has resulted in people seeking quality healthcare services

The Covid-19 pandemic had caused a temporary setback to the Indian economy in FY21, leading to a decline in NNI per capita. However, the economy rebounded in FY22, with NNI per capita rising 9.3% on-year to INR 94,054. Furthermore, NNI per capita further increased to INR 99,404 in FY23 and INR 106,744 in FY24. With rising income levels and health awareness people are seeking better and quality healthcare services. This includes availing of better hospital services, better medicine and pharmacy services.

With per capita income rising to upper middle-income category by FY31, the share of PFCE is expected to be dominant in India's GDP growth.

Per capita NNI

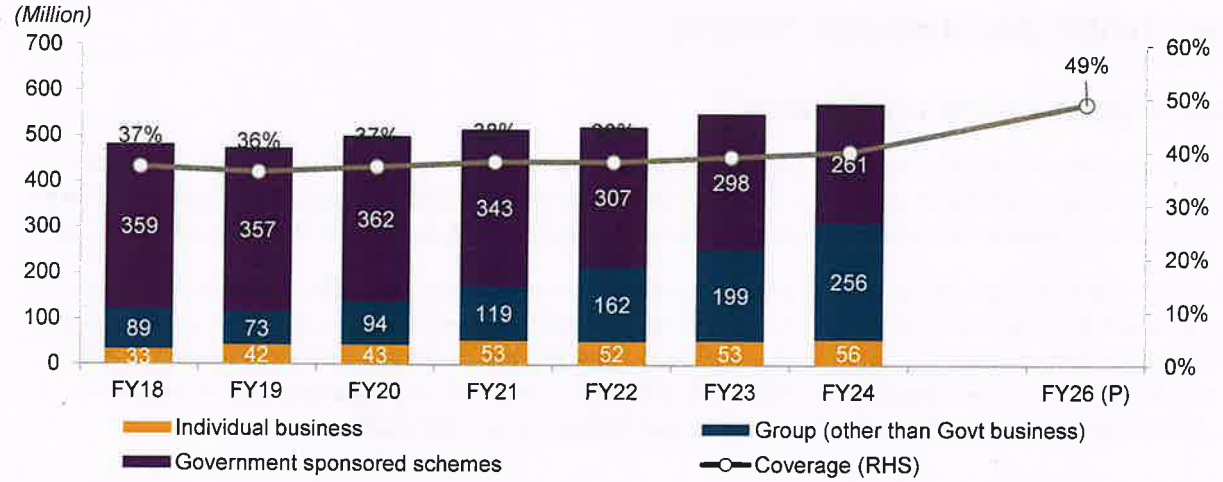


RE: Revised estimates, PE: Provision estimates
Source: PIB, MoSPI, Crisil Intelligence

Improvement in health insurance penetration in India

Health insurance penetration in India has improved in recent years. As per the Insurance Regulatory and Development Authority (IRDA), nearly 550 million people have health insurance coverage as of fiscal 2023) compared with 288 million in fiscal 2015. Despite this robust growth, health insurance penetration stood at only 39% of the population in fiscal 2023. With growing awareness of healthcare and government-sponsored schemes, this figure is expected to reach approximately 49% in fiscal 2026, aiding growth of the healthcare industry.

Population-wise distribution among insurance businesses



Note: Coverage represents insurance penetration in India, i.e. number of individuals covered; P — projected
Source: IRDA, Crisil Intelligence

Government or government-sponsored schemes, such as the Central Government Health Scheme, Employee State Insurance Scheme, Rashtriya Swasthya Bima Yojana, Rajiv Aarogyasri (Andhra Pradesh government) and Kalaignar (Tamil

Nadu government), account for 60% of health insurance coverage.The remaining is through commercial insurance providers, both government (such as Oriental Insurance, New India Assurance) and private (ICICI Lombard, Bajaj Allianz, among others).

Renewed regulatory interest to impact pharmaceuticals industry positively

High dependence on Chinese imports is a concern for the domestic pharmaceuticals industry. The Covid-19 pandemic revealed the consequences of a supply disruption from China and its potential impact. The Government of India has taken several measures to encourage domestic manufacturing in Pharmaceutical Sector including Bulk Drugs and Medical Devices to reduce import dependence, boost domestic manufacturing and attract large investments. For example, The financial outlay for the PLI Scheme for Pharmaceuticals is Rs 150 billion over the scheme production tenure of FY 2022-23 to FY 2027-28. Similarly, the government has also launched the PLI Scheme for promotion of domestic manufacturing of critical Key Starting Materials (KSMs)/ Drug Intermediates (DIs) and Active Pharmaceutical Ingredients (APIs) in India (also known as PLI scheme for Bulk Drugs), with a financial outlay of Rs. 69.40 billion and the production tenure from FY 2022-2023 to FY 2028-29. The scheme provides financial incentive for manufacturing of notified products. In March 2024, Dr Mansukh Mandaviya, Union Minister for Chemicals & Fertilizers and Health & Family Welfare virtually inaugurated 27 greenfield bulk drug park projects and 13 greenfield manufacturing plants for medical devices.

Focus on niche and specialty products to aid growth

A focus on specialty products and niche molecules would aid the growth of bulk drug players. Players have a healthy pipeline of complex generics and limited competition products, which are difficult to manufacture but command a higher premium. The pricing pressure is also expected to normalise in regulated markets in the coming years.

Further, the supply disruption from China is expected to aid business opportunities for bulk drug players in the global market. Also, recent quality issues related to Chinese APIs have slightly dented the country's image globally, which would, in turn, boost business for India, the next largest and cost-effective API supplier after China. Some multinational corporations are looking at alternative sources for bulk drug procurement following the challenges in China.

4.3 Key challenges and risk factors

Changes in government regulations

Pharmaceutical industry is highly regulated as it deals with health of human life. The pharmaceutical industry entails higher requirement of certification and approvals, such as drug regulatory approvals, product (drug) effectiveness testing, biological and chemistry testing, manufacturing plant certifications, quality standards, entry to market qualification, etc.

The Indian Government has been taking various steps to control the prices of drugs and make it more affordable to consumers. Between FY2014 and FY2015, the industry saw drug prices being regulated for more than 500 medicines under the Drug Price Control Order (DPCO), thereby negatively impacting the industry. Currently as per DPCO order there 954 drug formulations under National List of Essential Medicines. Drugs under the National List of Essential Medicines (NLEM) comprised approximately 20% of the overall domestic pharmaceutical market.

Fluctuation in foreign exchange rates

Bulk drug players meet ~70% of their intermediary requirements through imports and ~40% of the end-products are exported to regulated as well as semi-regulated markets. As the bulk drug industry is fragmented, many small bulk drug players (<INR 2.5 billion) export to the semi-regulated markets without hedging against their currency risk. Therefore, bulk

drug players will continue to face the risk of currency volatility. However, the large bulk drug players who have long-term contract with formulation players are unlikely to face major risk, as they hedge against currency appreciation.

Dependence on China for imports

India imports ~70% of intermediaries required for active pharmaceutical ingredients (API) from China. Over the past few years, many chemical-based companies have been shut down in China due to failure to meet environment norms. Further, Covid-19 led disruptions during February and March in China further disrupted supplies. Any such disruptions in the bulk drug industry will adversely impact the Indian API industry and subsequently the formulations industry. Further, the Chinese bulk drug industry receives extensive support from the government in the form of subsidies. Any change in policy in this front, will also lead to pressure on margins for the Indian players.

Domestic formulation industry is highly fragmented; manufacturing bases concentrated in few states

The domestic formulations industry is highly fragmented in terms of both number of manufacturers and products. Over 100,000 drugs across various therapeutic categories are produced annually in India. In terms of number of manufacturers, there are mixture of large and smaller players operating in the industry, with larger players dominating the market in term of sales. Traditionally, Indian pharma companies operate largely in a few states, including Maharashtra, Gujarat and Andhra Pradesh. After the imposition of an MRP-based excise duty system in 2015, many players have shifted their manufacturing bases to excise-free zones such as Baddi (Himachal Pradesh), Haridwar (Uttaranchal) and Sikkim.

Pricing pressure in the US market

Wholesale consolidation in the United States pharmaceutical market has led to lower bargaining power for Indian players thereby exerting pricing pressures. Only three players in the United States pharmaceutical market held approximately 90% of the market share in 2022.

Further, faster Abbreviated New Drug Application (ANDA) approvals due to implementation of Generic Drug User Fee Amendments (GDUFA) has led to more players entering the US generic pharmaceutical market, thereby putting pressure on realisations.

Compliance with US FDA regulations

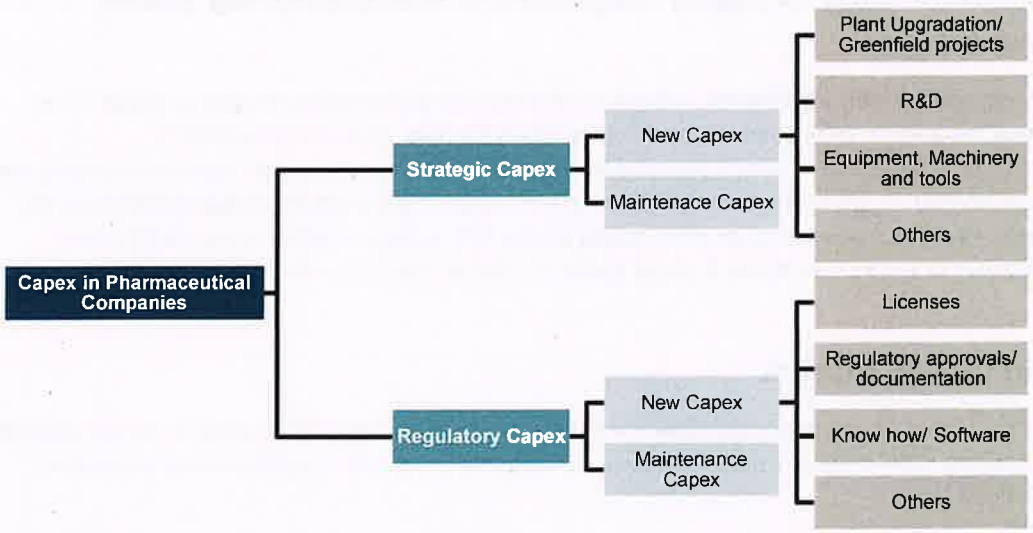
Adherence to good manufacturing practices (cGMP) prescribed by the US FDA and maintenance of data integrity remain key challenges for the Indian players. High number of warning letters were imposed on Indian players by US FDA in 2013 and 2014, resulting in Indian players hiring US-based consultants to advise on compliance with the US FDA regulations. Thereafter, the larger players have already taken substantial steps to implement corrective measures and make their facilities US FDA compliant.

5 Assessment of capex in the pharmaceuticals industry

5.1 Overview of capex in pharmaceuticals industry

Capex activities across pharmaceuticals companies can be broadly bucketed into two groups—regulatory capex and strategic capex. The pharmaceuticals industry is regulated due to which there are multiple regulatory/compliance factors, including regulatory approvals, licences, non-compete fees, etc. Strategic capex includes investments in the strategic goals of the companies through investments in capacity upgradation, improvements in plant and machinery, market expansion, R&D expenditure, etc.

Overview of capex



Source: Crisil Intelligence

Furthermore, owing to the increasing usage of generic medicines, patent expiries, price pressures, companies earmark a substantial portion of their capex to research and development (R&D) activities to ensure sustained revenue. R&D, buildings and land improvement, land acquisition and investments in equipment are the segments which account for major share within capital expenditure. According to the Congressional Budget Office, pharmaceuticals companies have devoted a growing share of their net revenue to R&D activities, higher than other research-intensive industries, such as software and semiconductors.

Additionally, both the types of capex—strategic and regulatory—involve a substantial amount of maintenance capex to ensure proper functioning of the organisation.

5.2 Role of turnkey engineering solution providers in pharmaceutical industry

The value chain of turnkey pharmaceutical engineering solution providers in pharmaceutical capex activities encompass a comprehensive range of stages and contributions. It usually starts with consulting/advisory services which includes thorough market research and analysis, which help in identifying specific needs, goals, and challenges. This stage also includes strategic planning and feasibility studies to ensure the viability of capex projects. Advisory services are usually

followed by implementation of design and engineering expertise to develop facilities that meet regulatory requirements, industry standards and client specifications.

Once the design and detailed layout are prepared, it is followed by procurement and supply chain management involving vendor selection, sourcing equipment, machinery and materials while managing contracts, deliveries and quality control. Some turnkey engineering solution providers also supply equipment, machinery and systems themselves to ensure greater control over quality and processes.

During the construction and installation phase, turnkey engineering solution providers oversee operations, coordinating with contractors and vendors to ensure efficient execution within the safety and regulatory frameworks. Regulatory compliance and quality assurance measures are implemented to secure the necessary permits and approvals and uphold quality standards.

Audit, training programmes and support is also provided to pharmaceuticals company staff to facilitate the seamless operation, maintenance and optimisation of newly installed equipment and facilities.

Throughout the process, turnkey engineering solution providers offer project management services, ensuring effective coordination, communication, and oversight to maintain project integrity, budget adherence and timely completion. However, depending on the project requirements and client interactions, turnkey engineering service providers may provide either end-to-end project management services or just select customised services. Overall, these providers play a pivotal role in streamlining capex activities, mitigating risks and optimising outcomes for pharmaceuticals companies with a formal and structured approach.

Turnkey engineering solution providers help in optimized capex utilisation

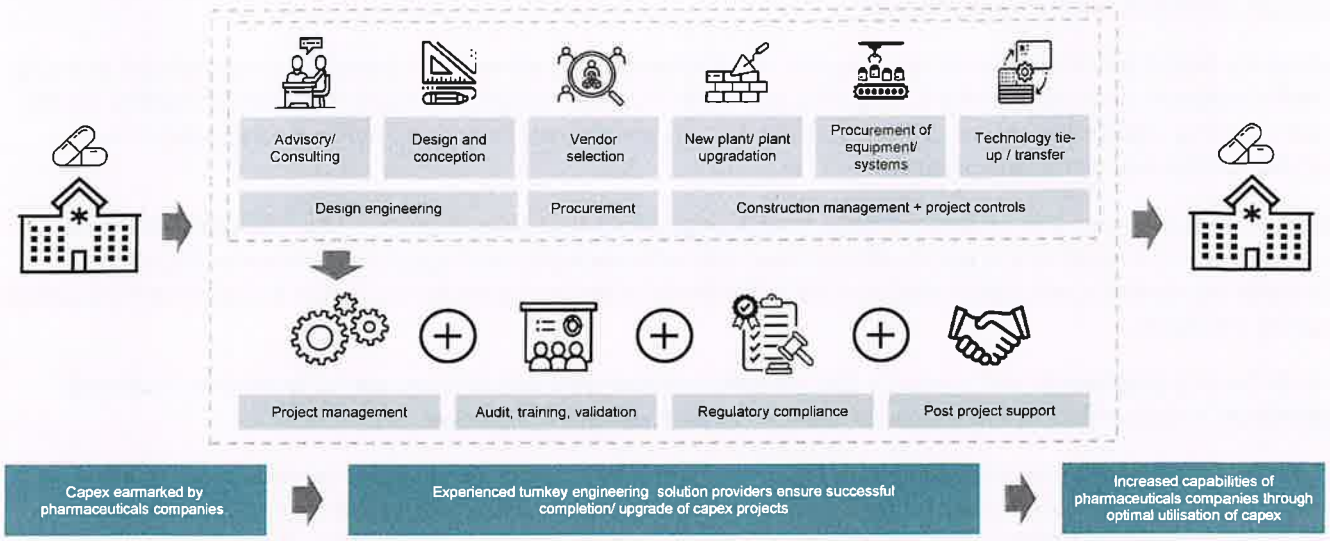
Turnkey engineering solution providers play a key role in ensuring optimal use of resources through providing comprehensive and customized solutions as per individual projects need. As integrated turnkey solution providers manage every aspect of the project from conception to completion, they ensure seamless and streamlined integration between various stages of the project, thereby increasing the chances of successful implementation. Turnkey solution providers have experienced teams that possesses extensive knowledge of various domains, which makes them more adept at handling complex challenges effectively.

Additionally, as turnkey engineering solution providers operate across different geographies, they offer substantial benefits to the companies which are expanding into new regions. Their extensive experience combined with their local contacts helps pharmaceutical companies in navigating the complexities of new markets. These turnkey engineering solution providers usually offer a deep understanding of regional regulations, cultural differences and market conditions crucial for successful navigation.

Involvement of turnkey engineering solution providers in multiple projects through different clients enables them to leverage economies of scale. These broad set of customer base usually allow them to negotiate better deals with contractors, suppliers and other stakeholders, which ultimately translates into cost savings.

Some of the key turnkey solution providers in pharmaceutical turnkey engineering solutions include Telstar (part of Azbil Group), Fabtech Technologies Ltd., Abu Dabi International Medical Services (ADI), Exyte GmbH, Pharma Access Pvt Ltd, Nicomac Taikisha Clean Rooms Pvt Ltd, Pharma Access Pvt Ltd, Hvax Technologies Ltd, Airtech Systems (India) Pvt Ltd, Integrated Cleanroom Technologies Pvt. Ltd., Lotus Technicals Private Limited etc.

Value chain of turnkey engineering service providers



Source: Crisil Intelligence

Key benefits of turnkey engineering solution providers

Benefit	Description
Project management experience	• Due to stringent regulatory requirements, involvement of multiple stakeholders and the long duration of a majority of capex projects, experience and comprehensive offerings of turnkey solution providers/project management companies ensure seamless project execution. • Furthermore, their experience in the industry provides them a vast network of contacts which further facilitate collaboration with suppliers, contractors and regulatory authorities.
Expert oversight	• Generally, pharmaceuticals companies have long duration projects and company management may not have the capacity to provide dedicated cost oversight due to operational responsibilities. Hence, having a specialised turnkey engineering solutions provider increases the chance of project completion through proper oversight and navigation of complexities.
Streamlined communications	• Project management companies ensure proper coordination and execution by serving as a prominent hub of communication. They streamline communication flow among contractors, pharmaceuticals companies and regulatory agencies, thereby minimising delays and mismanagement
Increased chances of on-time completion	• Turnkey engineering solution providers have a dedicated team of experts to ensure methodical scheduling of resources, tracking of milestones, agile/dynamic adaption, and experience of navigating complexities, which ensure timely completion of projects. • These teams also have good understanding of the regulatory environment of pharmaceuticals players, further enhancing execution of projects.
Limit cost overruns	• Turnkey engineering solution providers exercise vigilant cost control and risk management to ensure cost optimisation. Furthermore, role of turnkey engineering providers in the implementation of capex projects becomes crucial as pharmaceutical companies can leverage expertise and scale of turnkey engineering solution providers and accelerate time-to-market, and optimize costs

Source: Crisil Intelligence

5.3 Overview of global capex

Global pharmaceutical capex to increase 1.3x times in the period 2025-2029 compared to 2020-2024

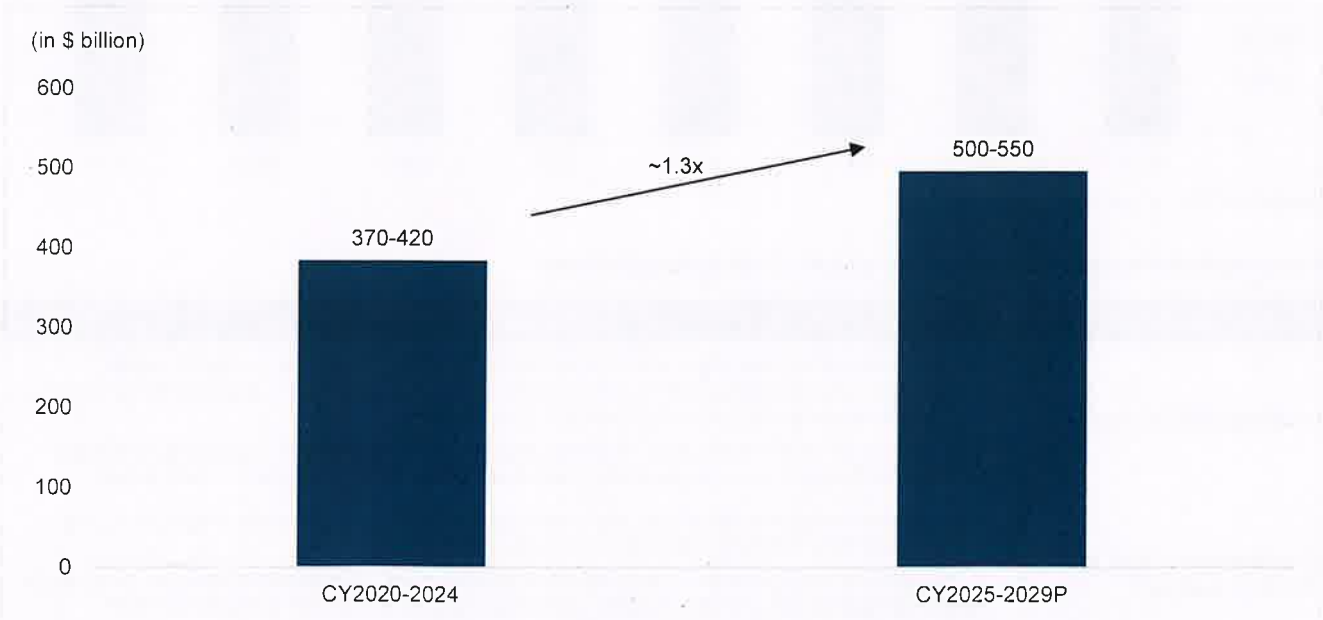
Cumulative capex in global pharmaceuticals industry was ~$ 370-420 billion over 2020 to 2024. During this period, capex of pharmaceuticals companies as a percentage of their revenue remained between 5.0-6.0%. However, analysis of regional capex trends reveals that the capex activities are dependent on industry dynamics as well as policy frameworks across different regions. Capex activities are also dependent on the maturity of market in terms of penetration of different medicines. In the growth stage some of the emerging markets like Latin- America and Caribbean and Asia- Pacific have seen higher capex spends compared to matured markets like the US, Europe and Canada.

Additionally, the share of maintenance and new capex in overall capex also varies for different markets (between emerging and mature economies). For example, the share of maintenance capex would be higher in matured economies such as the US and Canada due to sustained capex investments, whereas the share in emerging markets of the Middle East, Asia-Pacific would be lower due to a recent pickup in capex investments.

Additionally, capex investment is crucial for pharmaceuticals companies to sustain their revenue and market share due to factors such as expiration of patents and price pressures. Hence, capex investments are indispensable for ensuring company's competitiveness.

Global pharmaceutical capex is estimated to increase 1.3x and witness cumulative capex investments of $500-550 billion between 2025-2029 owing to sustained capex investments due to expiration of patents, increasing generic medicines usage and pricing pressures.

Global capex in pharmaceutical industry



Source: Company annual reports, Crisil Intelligence

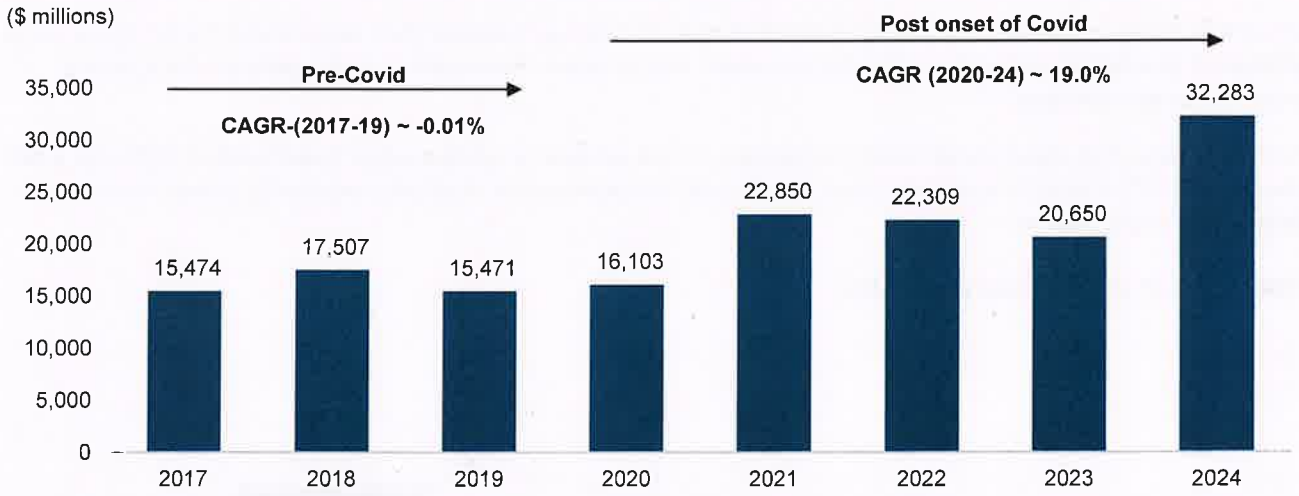
Value of greenfield FDI projects increased post onset of Covid

Value of announced greenfield foreign direct investment (FDI) projects in the pharmaceutical sector stood at $32,283 million in 2024, compared to $15,474 million in 2017, registering a CAGR of 11.1%.

However, between 2017 and 2019, the value of FDI in the pharmaceutical sector worldwide exhibited a negative CAGR of 0.01%, signalling a period of stagnation in the announcements of greenfield projects in pharmaceuticals sector. However, the landscape transformed dramatically in the after the onset of Covid-19 pandemic. The pandemic highlighted the essential role of healthcare infrastructure and pharmaceutical research in safeguarding public health and overall economic growth. Subsequently, the value of announced greenfield FDI projects surged between 2020-2024 with a CAGR of 19.0%. This notable growth underscores the increasing significance of the pharmaceutical industry on a global scale and reflects growing government and private focus in sector's long-term growth.

Hence, investments in the global pharmaceutical sector are expected to increase as stakeholders recognize crucial importance of pharmaceuticals in overall economic growth and healthy lifestyle.

Value of globally announced greenfield FDI projects in pharmaceuticals



Source: UCTAD, Crisil Intelligence

Key growth drivers and trends driving global pharmaceutical capex

Growth Driver	Description
Increased R&D spending	• As discussed earlier, the global pharmaceuticals industry has witnessed increased capital expenditure towards R&D activities, with companies based in the US, the largest pharmaceuticals market, earmarking ~20% of overall capex to R&D activities. • Additionally, with fixed assets such as plants, machinery and equipment accounting for a major share of R&D spend, an increase in R&D spend will positively impact capex in fixed assets.
Growing use of data in decision making	• Global pharmaceuticals companies are increasingly investing in digital technologies, including machine learning and data analytics to make informed decisions. • Additionally, pharmaceuticals companies are also leveraging advanced data analytics tools, which enable advanced and complex analysis, including predicative analytics to accelerate their operational processes and optimise costs.
Focus on sustainability and green capex	• Due to increasing awareness of climate impact and the focus on sustainability, pharmaceuticals companies are investing on reducing their carbon footprint and optimising their energy operations by utilising solar panels, etc.

Growth Driver	Description
	• Pharmaceuticals companies are also increasingly using sustainable options such as sustainable bonds to fund their expenses. For example, in 2021, Pfizer launched a $1 billion sustainability bond to fund Covid-19 vaccine expenses. • Similarly, J&J saved 48,000 tonnes of CO2 annually through renewable and energy efficient programmes and invested $50 million at Limerick and Jacksonville manufacturing sites to reduce its CO2 footprint.
Investments in managing and protecting supply chains	• Growing geopolitical tensions, along with increasing economic uncertainty, are forcing pharmaceuticals companies to invest in their supply chains to ensure resilient business operations. • Companies are also focusing on their operational strategies to build resilient supply chains and diversify their sourcing needs.
Increasing capex investments in emerging economies	• Even though there has been an overall increase in the global capex of pharmaceuticals companies, capex investments are also picking up in emerging economies. Companies are now directing investments on infrastructure in emerging markets to expand their market and leverage growing regulatory interest and incentives in emerging economies.

Source: Crisil Intelligence

5.4 Overview of pharmaceutical capex in MEA

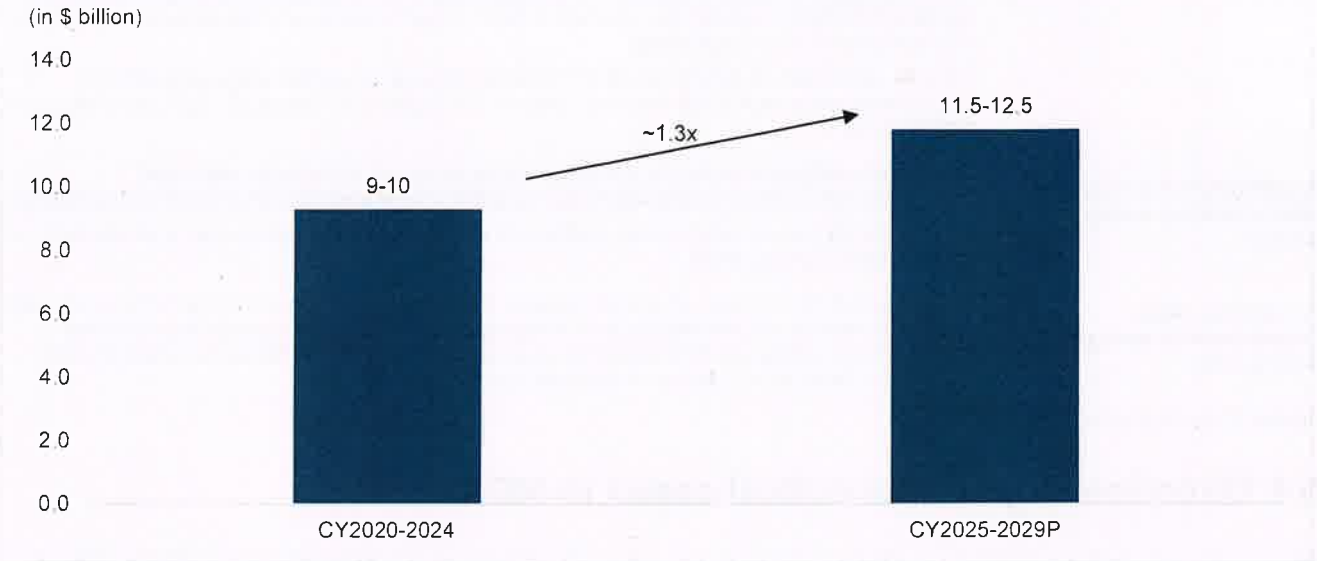
Pharmaceutical capex in MEA region to rise ~1.3 times in the period 2025-2029 compared to 2020-2024

Cumulative capex of pharmaceuticals companies in the MEA region was $ ~9-10 billion over 2020 to 2024, During this period, capex of pharmaceuticals companies as a percentage of their revenue fluctuated between 3.5-4.5%. Additionally, the growing focus on increasing localisation of pharmaceutical manufacturing among governments in the MEA region through incentives and moderation of existing laws is expected to positively impact capex in the region.

For example, the Kingdom of Saudi Arabia (KSA) announced its Vision 2030 plan to increase local production of medicines and decrease its dependence on imports. According to a World Bank report in 2020, 27 domestic pharmaceuticals manufacturers were registered in KSA that concentrated on the production of generic medicines and accounted for 15-18% of the national market; Vision 2030 aims to raise the proportion to 40%.

Given the increasing focus of several governments in the MEA region, capex investments in the pharmaceuticals sector are estimated to grow ~1.3x to $11.5-12.5 billion over 2025-2029. Additionally, due to relatively recent emphasis of these governments on pharmaceuticals, the share of new capex in overall capex is expected to be relatively higher than that of mature markets such as the US and Canada.

Capex in pharmaceutical industry- MEA



Source: Company annual reports, Crisil Intelligence

Increasing investments in pharmaceutical sector post Covid-19

Covid-19 has catalysed a shift in healthcare and pharmaceutical prioritises across MEA region. As most of the MEA regions dependent on imports for necessary medicines and pharmacy products due to lack of required facilities, the disruption of supply chains by the pandemic served as a pivot factor in driving the investments in these regions. Additionally, devastating impact of pandemic on mental and physical health of people, also led to increased awareness of the critical rule of pharmaceuticals in combating heath crisis.

These factors led to the recognition of the utmost need of local pharmaceutical capabilities to ensure resilient supply of pharmaceuticals in health emergencies like Covid-19 pandemic. Subsequently, governments of these countries are increasingly trying to attract investments in pharmaceutical and healthcare space through simplifying regulations and offering financial incentives like tax benefits, etc.

Additionally, to better formulation and implementation of the policies and ultimately improve their local manufacturing of pharma sector, the government of these countries are also partnering with international organizations including World Bank (WB), African Development Bank (AfDB), The International Finance Corporation (IFC), The Multilateral Investment Guarantee Agency (MIGA), and International Bank for Reconstruction and Development (IBRD).

International financing sources

Source: UNCTAD, Crisil Intelligence

MEA region witnesses rise in schemes to promote local production

In recent years, MEA region has seen a surge in schemes and action plans in collaboration of international organisations aimed at increasing local production of pharmaceutical drugs to enhance their drug security and reduce their dependence on exports.

For example, AfDB developed the 2030 Continental Pharmaceutical and Vaccine Manufacturing Vision and Action Plan, which is expected to positively impact the pharmaceuticals sector in the region. For this plan, investments of $111 billion are envisaged from all active players through 2030. Out of this quantum, $11 billion is expected to be dedicated to the development of the pharmaceuticals industry.

Additionally, in December 2023, Gavi announced the creation of the African Vaccine Manufacturing Accelerator (AVMA). The board of Gavi described the AVMA as, "a financing instrument that will make up to $1 billion available to support sustainable vaccine manufacturing in Africa. Gavi board also approved a US$ 500 million investment in a First Response Fund, part of a broader Day Zero Financing Facility, to ensure financing is immediately available from the start of a future pandemic. Gavi's Board also recognized the need for exceptional support to countries to close immunity gaps created during the COVID-19 pandemic, approving an initial amount of US$ 290 million to provide fully funded doses to help countries "catch-up" children who missed routine vaccinations. As per Africa Centres for Disease Control and Prevention (Africa CDC) press release, African leaders pledge to increase the share of vaccines, medicines, and diagnostics locally manufactured in Africa to 60% by 2040. These initiatives are expected to increase local vaccine production in the region and are a significant step towards achieving this goal.

Similarly, Government of Gordon has collaborated with organisations like WB, IFC and MIGA for developing a five- year plan- Jordan Country Partnership Framework (CPF) for 2024-2029- to improve nine high priority sector which includes healthcare and pharmaceuticals, manufacturing and ICT/digital. On implementation front, CPF will be implemented with the financing support of over $ ~6.5 billion, which will be funded by MIGA, IBRD and IFC.

The countries have also launched programs like Make it in Emirates and Made in Saudi to enhance domestic manufacturing capacity by attracting corporates, industrialists and entrepreneurs. These initiatives complement the bigger initiatives by these governments like UAE Centennial 2071 plan and Vision 2030 (KSA) through which these countries aim at attracting investors and increasing domestic production/ manufacturing across multiple sectors including pharmaceuticals and healthcare.

Some key schemes related to pharmaceutical sector in MEA region

Country/ Region	Scheme/ Policy	Investments	Key financing stakeholders
Africa	Continental Pharmaceutical and Vaccine Manufacturing Vision and Action Plan	$ 111 billion ($11 billion is expected to be dedicated to the development of the pharmaceuticals industry)	African Development Bank Group, Governments of African Countries, Aga Khan Fund for Economic Development (AKFED)
	African Vaccine Manufacturing Accelerator (AVMA)	~ $ 1.5 billion (Up to USD 1 billion + $ 500 million in First Response Fund)	Africa CDC, Gavi (the Vaccine Alliance)
Jordon	Jordan Country Partnership Framework (CPF) for 2024-2029	CPF will be implemented with the financing support of over $ ~6.5 billion	Government of Jordon, International Organisations like MIGA, IBRD and IFC

Source: Government websites, Crisil Intelligence

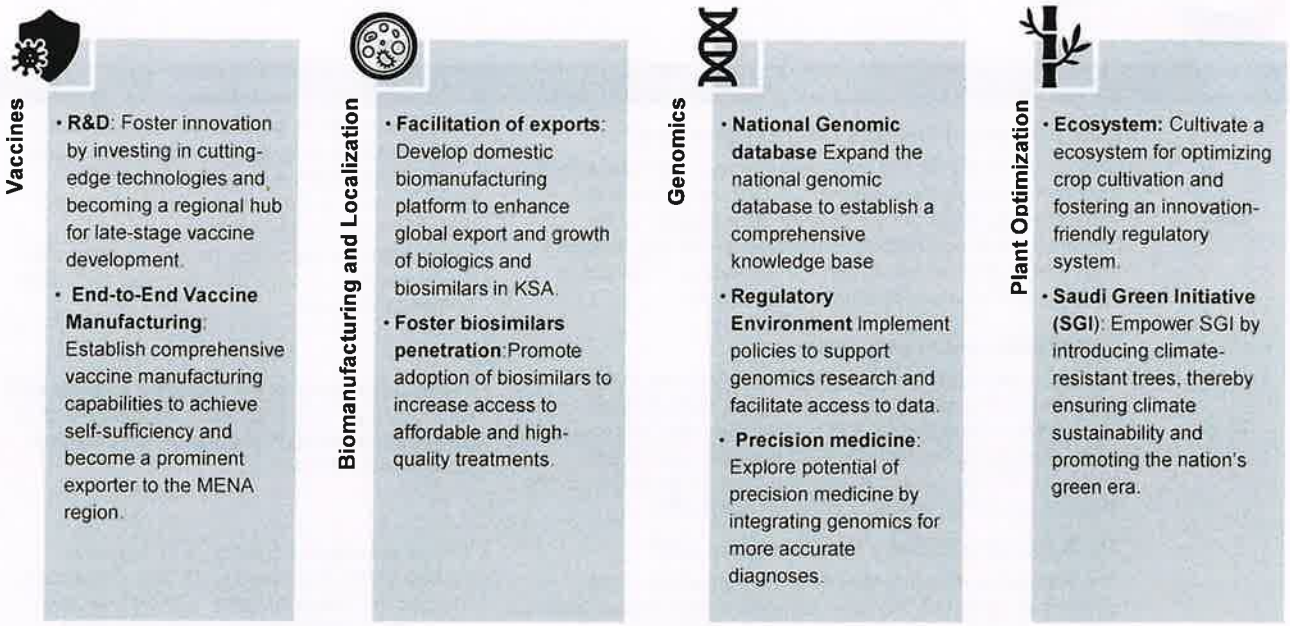
Increasing promotion of biotechnology in the region

The MEA region is seeing increasing focus on biotech medicines by both private and public players to make drugs more affordable, post Covid.

For example, KSA launched National Biotech Strategy in 2024, under Vision 2030 initiative, which aims to position Saudi Arabia as a biotech leader through end-to-end vaccine manufacturing capabilities, biomanufacturing and localization, improvement in national genomic database and plant optimization. The strategy focuses on supporting research and development, fostering local biomanufacturing capabilities, and forging strategic partnerships with global leaders in the biotechnology field.

Similarly, through 2030 Continental Pharmaceutical and Vaccine Manufacturing Vision, AfDB also plans on increasing the domestic production of vaccines in the region.

National Biotech Strategy- KSA



Source: Government website, Crisil Intelligence

5.5 Favourable government initiatives related to pharmaceutical sector

In recent years, MEA region has witnessed a surge in favourable government initiatives aimed at bolstering the pharmaceutical industry in the region. These initiatives are designed to attract investments in the region, foster innovation, and improve the overall healthcare and pharmaceutical landscape. While some of these initiatives are specifically tailored to improve the local pharmaceutical sector, others are aimed at augmenting the overall investments in the region, which in indirectly bolstering the regional pharmaceutical industry.

Some of the common themes evident across multiple countries in the region, includes regulatory reforms aimed at expediting the approval process, provision of financial incentives like tax breaks, promotion of local manufacturing of pharmaceuticals and adoption of FDI friendly policies. Some of the prominent government initiatives in the realm of pharmaceuticals by various MEA countries are as follows:

UAE

Year	Policy	Potential Impact
2023	**Establishment of Emirates Drug Establishment:** UAE Government issued a Federal Decree Law establishing the Emirates Drug Establishment (EDA), which aims at strengthening the country's position as a global hub for pharmaceutical and medical industries, promoting research and development in this sector and providing an attractive environment for pharmaceutical investments.	This is expected to positively contribute to the UAE's position as a regional and global leading medical and pharmaceutical production destination by enhancing the production and export of high-quality medical and pharmaceutical products, as well as ensuring the availability, quality, effectiveness and safety of these products.
2020	**UAE FDI law and Positive List** UAE took an initiative to increase FDI in the country by premising 122 economic sectors to have 100% foreign ownership in mainland UAE. The UAE Federal Law now allows 100% foreign ownership of UAE-based companies and facilitates 10-year visas for investors and professionals in the medical, scientific, research and technical fields.	These developments are expected to bode well for investors in the healthcare sector as well as decrease reliance on exports by encouraging local manufacturing.
2018	**The National In-Country Value Program (ICV)** The National In-Country Value (ICV) Program is a UAE government program that aims to boost economic performance and support local industries by redirecting higher portions of public spending into the national economy. The strategy aims of raising the industrial sector's contribution to the GDP to AED300 billion by 2031. Emirates Development Bank (EDB), key enabler this program is allocated a portfolio of AED30 billion to support priority industrial sectors, which includes pharmaceuticals, over a period of five years.	This is expected to contribute to financing 13,500 SMEs and creating 25,000 jobs across five sectors which includes following sectors. Additionally, UAE has undertaken multiple initiatives including establishing an integrated R&D ecosystem and promoting the 'Made in the Emirates' brand. All these initiatives are expected to boast the industrial segment, including investments in pharmaceuticals, in the country.

Source: Government websites, Crisil Intelligence

KSA

Year	Policy	Potential Impact
2024	**National Biotechnology Strategy** Through the Strategy, KSA is aiming to address the current challenges and seize opportunities in this vital sector. The strategy focuses on supporting research and development, fostering local biomanufacturing capabilities, and forging strategic partnerships with global leaders in the biotechnology field, to propel KSA to the forefront of the global biotechnology landscape.	This initiative is part of Saudi Arabia's broader Vision 2030 plan to diversify the economy and reduce reliance on oil. Also aims to create 11,000 high quality, innovative job opportunities by 2030, and 55,000 by 2040.
2024	**Introduced premium residency for investors and entrepreneurs** The Government of KSA introduced five premium residency products to attract investors, skilled professionals and entrepreneurs. It offers foreign nationals the ability to become temporary or permanent residents. Among them, the 'Investor' Residency caters to individuals keen on exploring Saudi Arabia's burgeoning business opportunities and generating impactful economic returns.	The 'Entrepreneur' Residency is aimed at ambitious entrepreneurs and innovative project owners, encouraging them to develop their start-ups within the nation. These products offer a range of benefits such as conducting business, investing, owning real estate, and obtaining work permits for themselves and family members and is

KSA

Year	Policy	Potential Impact
		expected to attract foreign investors and businesses in the country.
2022	**Establishes an Investment Promotion Authority** The Government of KSA approved the establishment of the Saudi Investment Promotion Authority (SIPA), which will work to attract national and foreign investment as part of the National Investment Strategy, a major objective of the Kingdom's economic reform programme.	The new authority will help the Ministry of Investment in international cooperation and in attracting consulates and diplomatic commercial representations, facilitating investors' access to and understanding of laws related to investment in the Kingdom.
2020	**Liberalization of foreign investments in pharma sector** The Cabinet of the Kingdom of Saudi Arabia issued a resolution approving the Pharmaceutical and Herbal Establishments and Substances Regulation, which liberalized certain pharmaceutical businesses in KSA	This move signals KSA's commitment to fostering a more investor friendly environment and will help in opening up of opportunities for collaboration, technology transfer and innovation in pharmaceutical sector
2016	**Vision 2030** Under Vision 2030, KSA aims at transforming its healthcare sector through 23 semi-private "health clusters" – collocated health care facilities and medical cities under local administration. Saudi Arabia also plans to open a clinical trials registry and provide incentives for international pharmaceutical companies to bring clinical trials and research and development operations to the Kingdom.	Through this program, KSA aims to increase local production of pharmaceuticals to 40% and subsequently decrease reliance on exports, which in term will positively impact pharmaceutical capex investments in the country.

Source: Government websites, Crisil Intelligence

Egypt

Year	Policy	Potential Impact
2024	**Right to own assets** Egypt passed a law enabling foreigners to own land for investment projects. The amendment explicitly allows foreign investors to acquire land for investment purposes, in alignment with the regulations outlined in the Investment Law. This amendment removes previous constraints that mandated Egyptian ownership to be at least 51 per cent of a company's capital and limited individual ownership to a maximum of 30 per cent of its capital.	These initiatives are expected to encourage foreign investments in the country and will also facilitate acquisition of real estates for greenfield ventures. Additionally, providing tax exemptions to the corporates will also provide financial incentives to the companies to invest in Egypt. Overall, these initiatives are expected to improve the overall investment landscape of Egypt, thereby positively impacting the investment inflows in the region.
2023	**Tax incentives** The President of Egypt directed the Government to implement a package of incentives, including tax exemptions, to support projects in strategic industries. As per the directives, these projects will be exempted from all taxes except the value-added tax (VAT) for up to five years, subject to certain conditions.	
2016	**Vision 2030**	This program will help in attracting pharmaceutical investments through multiple ways including establishment of incentive structure to encourage investment in

Egypt

Year	Policy	Potential Impact
	Government of Egypt launched Vision 2030 plan, reflecting the state's long-term strategic plan to achieve the principles and goals of sustainable development in all fields. The plan envisions to improve multiple health parameters including doubling of per capita health expenditure and reducing trade deficit for pharmaceuticals and bio-medicine manufacturing to zero. This plan also aims at developing the healthcare and pharmaceutical sector in Egypt through implementation of clear plans and better investments.	pharmaceutical sector and partnership program between the public and private sectors (PPPs) to increase investment in healthcare service provision.

Source: Government websites, Crisil Intelligence

Jordon

Year	Policy	Potential Impact
2024	**Pharmaceutical Industry Support Project** The Ministry of Industry, Trade and Supply, the Ministry of Investment, the Jordan Food and Drug Administration (JFDA) and the Jordan Pharmaceutical Industry Support Project, with support from the World Bank's International Finance Corporation (IFC) and funding from The Netherlands, launched an initiative to boost Jordan's pharmaceutical industry.	This project has potential to enhance Jordan's pharmaceutical industry, positioning the Kingdom as a regional hub for the sector.
2024	**New 5-Year Country Partnership Framework** Ministry of Planning and International Cooperation of Jordan launched a new five-year country partnership framework in association with World Bank (WB) to support inclusive and green growth and promote job creation, especially for youth and women. This program will focus on the implementation of key private sector-enabling reforms in high-potential sectors, which includes health and pharmaceutical sector. In the realm of health, this program will seek to advance digital transformation and improve efficiency and cost-effectiveness in the health sector.	This program will positively impact the healthcare and pharmaceutical sector of Jordon as multiple international organisations including IFC will be providing advisory services to pharmaceutical and healthcare sectors. Additionally, pharmaceutical sector of Jordon will also witness increase investments through this program, through international organisations including IBD and IFC.
2023	**Investment Promotion Strategy 2023-2026** The Government of Jordan introduced the Kingdom's Investment Promotion Strategy (IPS) for the years 2023-2026, succeeding the launch of Economic Modernization Vision 2033. This program has been developed in close collaboration with the World Bank and in consultation with the local public and private sector stakeholders, taking into account the best international practices in the field.	This program will positively contribute to Jordon's aim of being a regional industrial hub for multiple sectors, including pharmaceuticals, through high growth exports with high quality and value products. This program may also promote licensing and joint venture partnerships between pharma companies in Jordan and multinational pharma companies to produce products for export to EU and regional markets
2022	**Economic Modernisation Vision** Jordan launched Economic Modernisation Vision 2033 to sustainability accelerate growth of Jordon and provide	Jordon's pharmaceutical sector is expected to benefit through the 11 initiatives related to pharmaceutical sector proposed under this vision.

	improved quality of its citizen through focus on eight high value sectors which includes pharmaceuticals sector. The vision envisages Jordon to become a regional hub for pharmaceutical production through 11 initiatives, including developing a detailed pharmaceutical sector exports strategy & roadmap, simplifying government processes and rules, launching a domestic product promotion policy, and attracting new investments.	This program is expected to promote investments in the sector by increasing the attractiveness of the sector through multiple initiatives including relaxation of the pricing laws, promoting domestic production, and improving digital infrastructure.

Source: Government websites, Crisil Intelligence

South Africa

Year	Policy	Potential Impact
2023	**Extends research and development tax incentive** The Minister of Finance announced 150% deduction for qualifying expenditure on eligible scientific or technological R&D undertaken by companies in South Africa, will be extended for another 10 years until 31 December 2033. In addition, a grace period will be introduced to allow taxpayers to claim qualifying expenditure incurred up to six months. Previously only expenses incurred from the date of submission of the application could be claimed. Further, the definition of R&D will be simplified to enable easier administration and clear understanding. Finally, the prohibition on R&D related to internal business processes will be deleted.	Simplifying R&D definitions/ requirements along with extension of R&D tax deduction is expected to encourage more robust and ambitious research initiatives. This in turn is expected to benefit sectors which require sustained research and development efforts.
2018	**Formation of South African Health Products Regulatory Authority (SAHPRA)** SAHPRA assumed the roles of both the Medicines Control Council (MCC) as well as the Directorate of Radiation Control (DRC) which were housed at the National Department of Health (NDoH). Subsequently, SAHPRA was constituted as an independent entity that reports to the National Minister of Health through its Board. SAHPRA set up a dedicated Backlog Clearance Project unit to clear the application backlog which went live in August 2019.	SAHPRA is expected to improve efficiencies and reduce timelines for medicine registrations. Formation of SAHPRA is expected to expedite and streamline regulatory processes and outcomes, which will eventually translate into improved access to quality, safe and effective medicines. In a noteworthy achievement, SAHPRA concluded the Backlog Clearance Project in 2022.

Source: Government websites, Crisil Intelligence

Selected African Countries

Year	Policy	Potential Impact
2023	**Grant of state-owned land for investment projects (Algeria)** In November 2023, Algeria enacted law establishing the guidelines for allocating State-owned land for investment projects, with the primary objective of promoting and streamlining investment endeavours. This legislation grants authority to the Algerian Investment Promotion Agency (AAPI) to grant concessions for investment projects on State-owned land, in accordance with criteria outlined by regulatory mechanisms, for an initial duration of 33 years, with the possibility of renewal.	The law is expected to improve the overall investment landscape by providing a more conducive and streamlined policies. This may also potentially increase the investments to the greenfield projects, which is estimated to boast the benefit capex heavy industries, including pharmaceuticals.

Selected African Countries

Year	Policy	Potential Impact
2023	**Offers corporate income tax exemption for expansion and upgrading of investment (Ethiopia)** Ministry of Finance released directive offering two types of tax benefits: income tax exemption and exemption from custom duties. Specifically, investors who reinvest their resources or profits back into expanding or upgrading their investment will be eligible for these benefits, subject to certain qualifying conditions and regulations.	This will encourage companies to invest in the expansion of their existing capacities/ facilities which is expected to benefit the local production/ manufacturing facilities of the region.
2021	**Opens the health sector to FDI and foreign professionals (Morocco)** The Minister of Economy of Morocco announced that the Government of Morocco decided to open up the health sector to foreign investors and international experts, in order to address the shortage of human resources. According to the Minister, investors who select under-served "medical deserts" for their investment would be offered tax incentives and State aid.	This initiative will help Morocco in gaining more investments in the underserved and under penetrated health sector of the country, potentially improving access to healthcare services and expertise across the region.

Source: Government websites, Crisil Intelligence

5.6 Key growth drivers and trends driving pharmaceutical capex in MEA

Focus on domestic manufacturing	Improving regulatory environment	Increasing partnerships & technology tie-ups	Growing government focus post Covid
			

Source: Crisil Intelligence

Growing focus on localised pharmaceutical manufacturing

Governments of major MEA countries are improving the regulatory environment to attract investors/companies in the pharmaceuticals industry and also providing additional incentives to companies to increase localisation of pharmaceuticals production.

For example, on April 15, 2020, the KSA Cabinet passed a resolution approving the Pharmaceutical and Herbal Establishments and Substances regulation to liberalise certain pharmaceuticals businesses in Saudi Arabia. The new regulation was enacted on April 16, 2020 pursuant to Royal Decree number (M/108) of 2020.

Under the previous regulation, ownership of certain pharmaceuticals businesses including medicinal consultation and pharmaceutical-substance analytical centres and pharmaceuticals wholesale warehouses was strictly limited to Saudi nationals. Under the new regulation, the restrictions on foreign ownership of certain pharmaceuticals businesses have been removed, enabling foreign investors to directly own pharmaceuticals businesses in Saudi Arabia. In addition, the new regulation dispensed with certain "localisation" requirements, which existed in the "old" pharmaceuticals regulation. For example, the earlier law required pharmaceuticals wholesale warehouses to be managed by a licensed pharmacist who was a Saudi Arabian national. Such a clause was removed in the new regulation.

Improving regulatory environment

As discussed, increasing government focus on the pharmaceuticals industry is expected to boost investments in the region. Governments of these regions are providing multiple incentives to investors to attract investments. These initiatives include premium visa's, tax incentives, streamlining of existing regulations, etc.

Summary of key policies/ framework in pharmaceutical industry- MEA

Country/ Region	Date	Policy
United Arab Emirates (UAE)	2023	Establishment of Emirates Drug Establishment
	2020	UAE FDI law and Positive List
	2018	The National In-Country Value Program (ICV)
KSA	2024	National Biotechnology Strategy
	2024	Introduced premium residency for investors and entrepreneurs
	2022	Establishes an Investment Promotion Authority
	2020	Liberalization of foreign investments in pharma sector

Country/ Region	Date	Policy
	2018	Privatization Program
	2016	Vision 2030
Egypt	2024	Right to own assets
	2023	Tax incentives
	2016	Vision 2030
Jordon	2024	Pharmaceutical Industry Support Project
	2024	New 5-Year Country Partnership Framework
	2023	Investment Promotion Strategy 2023-2026
	2022	Economic Modernisation Vision
South Africa	2023	Extends research and development tax incentive
	2018	Formation of South African Health Products Regulatory Authority (SAHPRA)
Morocco	2021	Opens the health sector to FDI and foreign professionals
Algeria	2023	Grant of state-owned land for investment projects

Source: Government websites, Crisil Intelligence

Increasing partnerships and technology tie-ups

Due to an improving regulatory environment and the overall increase in the pharmaceuticals markets in the MEA region, multiple companies are entering into pharmaceuticals contracts as well as technology transfer contracts.

In 2020, SPIMACO Addwaeih signed an agreement with US company Amgen Inc. to localise marketing rights and transfer the technology for manufacturing a biotechnology product used to treat immunological diseases, in line with Saudi Arabia's Vision 2030 to encourage the localisation of high technology pharmaceuticals industries.

Similarly, in December 2021, Biocon Ltd, a biopharmaceutical company, announced a partnership with Tabuk Pharmaceutical Manufacturing Company (a fully owned subsidiary of Astra Industrial Group), a pharmaceuticals company in the Middle East and North Africa (MENA) to commercialise select speciality products in the Middle East. Under the terms of the agreement, Tabuk Pharmaceuticals will hold marketing authorisation for these products and will be responsible to register, import, and promote them in Saudi Arabia and other Middle East countries. The partnership will pave the way for Biocon's expansion into the MENA region, including Saudi Arabia, the UAE, Kuwait, Qatar, Oman and Iraq, in addition to Jordan and Lebanon.

In December 2023, Saudi Chemical Company Holding (SCCH), through its subsidiary AJA Pharmaceutical Industries Ltd (AJA Pharma), entered into a definitive agreement with Dr Reddy's Laboratories Ltd. As part of the agreement, AJA Pharma will get licensing rights for registration and commercialisation of three injection products developed by Dr Reddy's in KSA and other Gulf Cooperation Council countries. Through this agreement, SCCH aims to forge a partnership with Dr Reddy's and discuss tech-transfer to produce these products locally in Aja Pharma plant. The signing of the contract is expected to bring in cumulative revenue of SAR 100 million in five years starting 2025.

Recent tie-ups in MEA pharmaceutical industry

Year	Country/ Region	Stakeholders	Details
2024	Africa	Eva Pharma, Eli Lilly	Eli Lilly will license the manufacturing know-how for its rheumatoid arthritis, alopecia areata, atopic dermatitis, and COVID-19 treatment to Egypt's Eva Pharma to help localize the drug's production in Africa.
2024	Jordan, Egypt, Spain, Canada	Globalpharma	UAE's Globalpharma (Dubai Investments) signed four targeted MoUs to advance pharma localization and innovation: • PharmaPrimes Laboratories (Jordan): Collaborate on batch release and analysis capabilities for biosimilars in the UAE. • Nerhadou International (Egypt): Develop region-tailored nutraceuticals and OTC products. • Aora Health (Spain): Co-develop and locally manufacture functional wellness supplements. • BioSyent Pharma Inc. (Canada): License and market FeraMAX®, a high-bioavailability iron supplement, within the UAE.
2023	South Africa	Aspen Pharmacare Holdings Limited- Novo Nordisk A/S	Aspen Pharmacare Holdings Limited have concluded an agreement for the technical transfer and commercial manufacture of Human Insulins with Novo Nordisk A/S, which will allow local manufacturing of Human Insulin in South Africa.
2023	Kingdom of Saudia Arabia (KSA)	SCCH- Dr Reddy's Laboratories Ltd	SCCH, through its subsidiary AJA Pharma, entered into a definitive agreement with Dr Reddy's Laboratories Ltd to get licensing rights for registration and commercialisation of three injection products developed by Dr Reddy's in KSA and other Gulf Cooperation Council countries.
2020	Kingdom of Saudia Arabia (KSA)	SPIMACO Addwaeih-Amgen Inc.	Saudi Pharmaceutical Industries and Medical Appliances Corporation (SPIMACO Addwaeih) signed an agreement with Amgen Inc. to localise marketing rights and transfer the technology for manufacturing a biotechnology product used to treat immunological diseases.
2017	MEA	Biocon Ltd- Tabuk Pharmaceutical Manufacturing Company	Biocon Ltd, announced a partnership with Tabuk Pharmaceutical Manufacturing Company to commercialise select speciality products in the Middle East. Tabuk Pharmaceuticals will be responsible to register, import, and promote them in Saudi Arabia and other Middle East countries

Source: Company Websites, Crisil Intelligence

Crisil
Intelligence

5.7 Overview of pharmaceutical capex in India

Pharmaceutical capex in India region to rise ~1.5 times in the period FY2026-2030 compared to FY2021-2025

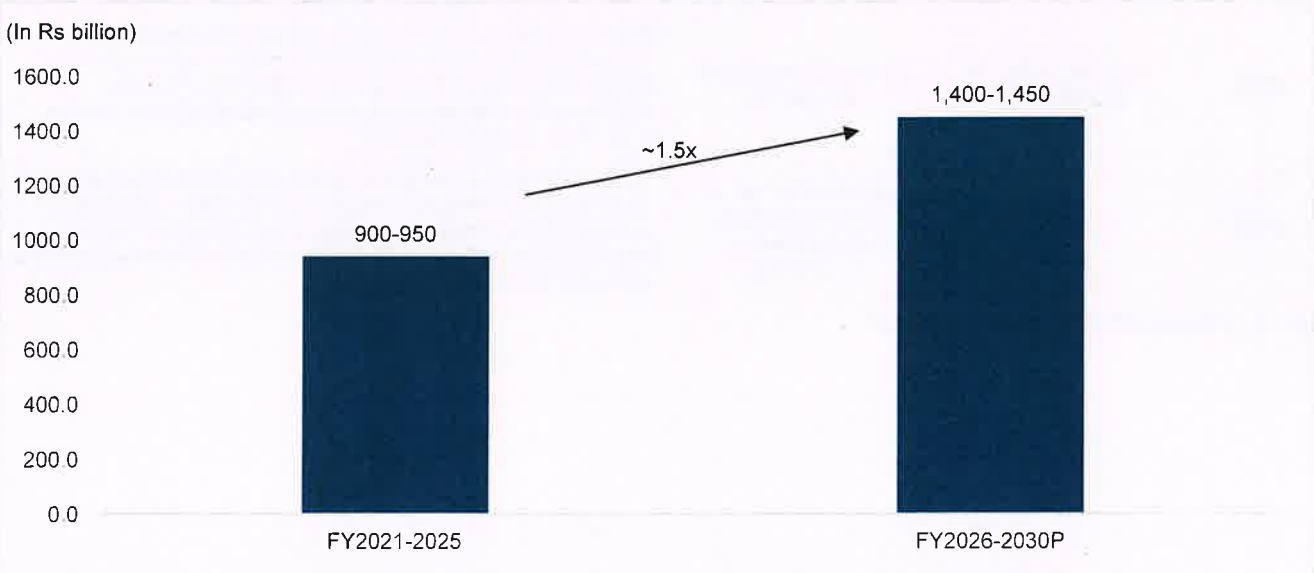
The Indian pharmaceuticals industry witnessed capex investments of ~Rs 900-950 billion over fiscals 2021-2025 due to increasing exports and favourable government policies such as the Production Linked Incentive (PLI) scheme and pharma parks.

The Government of India has taken several measures to encourage domestic manufacturing in Pharmaceutical Sector including Bulk Drugs and Medical Devices to reduce import dependence, boost domestic manufacturing and attract large investments. For example, thr Production Linked Incentive (PLI) Scheme for promotion of domestic manufacturing of critical Key Starting Materials (KSMs)/ Drug Intermediates (DIs) and Active Pharmaceutical Ingredients (APIs) in India (also known as PLI scheme for Bulk Drugs), with a financial outlay of Rs. 69.40 billion and the production tenure from FY2022-2023 to FY2028-29. The scheme provides financial incentive for manufacturing of notified products.

Additionally, PLI Scheme for Pharmaceuticals, with a financial outlay Rs. 150 billion and the production tenure from FY 2022- 2023 to FY 2027-28, provides for financial incentive to 55 selected applicants for manufacturing of identified products under three categories for a period of six years. Under this scheme, high value pharmaceutical products such as Patented/Off-Patented drugs, Biopharmaceuticals, Complex Generics, Anti-cancer drugs, Auto-immune drugs, Orphan Drugs etc. are manufactured. These schemes are expected to positively stimulate capex investments in pharmaceutical sector.

Overall, domestic pharma related capex is expected to increase ~1.5x to Rs 1,400-1,450 billion over fiscals 2026-2030.

Capex in pharmaceutical industry- India



Source: Company annual reports, Crisil Intelligence

5.8 Key growth drivers and trends driving pharmaceutical capex in India

Favourable government policies in India

The Indian government has introduced multiple policies such as the PLI scheme and pharma parks to encourage investments in the Indian pharmaceuticals sector.

Additionally, the government also launched the PLI scheme for promotion of domestic manufacturing of critical key starting materials (KSMs), drug intermediates (DIs) and active pharmaceutical ingredients (APIs) in India (also known as PLI scheme for Bulk Drugs), with a financial outlay of Rs. 69.40 billion and the production tenure from FY 2022-2023 to FY 2028-29. The scheme provides financial incentive for manufacturing of notified products. Under the PLI scheme for Bulk Drugs, a total of 48 projects have been selected under the scheme, of which 34 projects have been commissioned for 25 bulk drugs. Against committed investment of Rs.39.38 billion, investment worth Rs. 41.56 billion have been realised under the scheme (as per a PIB article dated December 2024). The cumulative sales made by the applicants under the scheme is Rs. 13.31 billion (which includes exports worth Rs.3.90 billion) and employment has been generated for 4,241 persons.

The DoP has also implemented multiple initiatives, including the scheme for Strengthening of Pharmaceutical Industry (SPI) with a financial outlay of Rs 5 billion and the tenure from FY 2021-2022 to FY 2025-26; and the scheme for Promotion of Bulk Drug Parks with a financial outlay of Rs 30 billion (and the tenure from FY 2020-2021 to FY 2024-25), to further promote the sector. All these programmes/schemes are expected to boost investments in the pharmaceuticals industry of India.

Growing footprint of Indian players in the global market

Indian pharmaceuticals companies are expanding their footprint through partnerships, acquisitions, and subsidiaries and investing in research and development to ensure constant revenue inflows through multiple project pipelines. These activities will require sustained investments and provide impetus to capital expenditure in the Indian pharmaceuticals industry.

5.9 Key challenges and threats in the pharmaceutical turnkey engineering solutions industry

Industry/segment	Challenges
Pharmaceutical turnkey engineering solutions industry	**Changes in government regulations:** Pharmaceutical industry is highly regulated and entails higher requirement of certification and approvals, such as drug regulatory approvals, manufacturing plant certifications, quality standards, entry to market qualification, etc. Hence, any changes in the regulations related to pharmaceutical industry may also have impact on pharmaceutical capex solutions/turnkey solutions industry.
	Regulatory compliance like US FDA regulations Pharmaceutical companies need to comply with stringent regulations to ensure quality and safety of the public. Hence, adherence to regulatory compliances like good manufacturing practices (cGMP) prescribed by the US FDA, etc remains a key challenge for pharmaceutical players as well as pharmaceutical turnkey engineering solutions providers.

Industry/segment	Challenges
	Additionally, turnkey engineering solutions provider operating at global level also needs to be aware of and complaint to regional regulations, which further adds to the complexities of the operations. Furthermore, these pharmaceutical turnkey engineering solutions providers may require new (or renewal) of licences, permits, NOCs, etc and failure to obtain these regulatory approvals, may hinder their operations.
	Geographical instability Regional conflicts as well as increasing geopolitical issues can disrupt supply chains and daily operations of pharmaceuticals companies, which can negatively impact capex plans of pharmaceutical companies. This, in turn can affect the revenue of pharmaceutical turnkey engineering solution providers. Furthermore, geopolitical issues including regional conflicts may negatively impact supply chains of pharmaceutical turnkey engineering solution providers, which can delay project timelines as well as increase overall project costs.
	Limited talent pool Pharmaceutical turnkey engineering solution providers experience difficulties in recruiting and retaining skilled employees, which could lower productivity and increase costs as companies have to either spend money on skill development or hire talent from overseas. Additionally, regional regulations may warrant certain percentage of local hiring, which can further increase the complexities of hiring qualified workforce.
	Increasing localisation Increasing localisation of pharmaceuticals markets in regions like MEA can discourage foreign MNCs because of exit barriers, uncertainty over dispute settlement and enforcement of foreign arbitral award, as well as technological challenges. This, in turn may also impact turnkey engineering solutions providers with exposure to these regions.
	Fluctuation in foreign exchange rates For global pharmaceutical turnkey engineering solution providers, the volatility in currency may have an impact on revenue realization, which in may impact profitability of the players.
	Complex projects: Managing large scale pharmaceutical projects is a complex exercise as it requires proper coordination among multiple stakeholders like client, suppliers, government authorities, etc as well as thorough understanding about the client's industry and local regional environment. Additionally, the complexity of the projects can further increase due to change in the global economic conditions, regional environment as well as clients' expectations during the project which may require additional resource allocation. Hence, any mismanagement or gaps in understanding can lead to project overruns and additional costs, which in turn may negatively impact pharmaceutical turnkey engineering solution providers.
	Cost overruns: Accurate cost forecasting is critical in this industry due to the high regulatory demands as well as long project timelines. Any miscalculation regarding raw material cost, regulatory cost, production cost, labour cost, operational costs, etc can led to project delays and impact overall profitability of the project.
	Extensive working capital requirements: Operations of pharmaceutical turnkey engineering solutions industry are working capital extensive, which puts pressure on maintaining cash flows. Additionally, these extensive working capital requirements along with long project durations may affect liquidity of the players and require proper management of cash flows.
Cleanroom providers	**Supply chain disruptions:**

Industry/segment	Challenges
	Cleanroom providers need to ensure high quality raw materials as well as any equipment for cleanrooms. Hence, any disruption in their supply chain, whether due to political reasons, pandemics, etc can lead to project delays. This may in turn lead to increased cost, low quality products or delayed timelines, which may eventually harm reputation and revenue of the players.
	Cost pressure: Due to the regulated nature of the industry, high safety standards need to be followed, which increases the cost pressures on the players.
	Slowdown in end use industries like pharmaceutical, healthcare, etc. As the demand for cleanrooms is heavily dependent on end use industries like pharmaceuticals, semiconductors, healthcare, etc. any economic downturn or slowdown in these industries may significantly impact on the demand for cleanrooms. This may have an impact on the revenue generation of cleanroom providers.
Pharmaceutical equipment providers	**Dependence on transportation and logistics providers**: Pharmaceutical equipment providers need to rely on efficient and reliable logistic partners to deliver their products (machineries) to clients, even globally. As these equipment are typically large, complex and require specialized handling protocols, logistics become a critical factor in delivering pharmaceutical equipment's properly within agreed timelines. Any mishandling or delays in transportation can lead to project delays, increased costs and potential damage to the supplier's reputation.
	Reliance on third party pharmaceutical equipment providers: Pharmaceutical equipment providers often depend on third party contractors or sub-suppliers for essential components, services, etc. related to the pharmaceutical equipment. This reliance on third parties can lead to vulnerabilities in the overall supply chain such as subpar quality, delays or noncompliance with the regulatory standards. This may eventually harm the seller's reputation, lead to project delays and overshoot costs.
	Supply chain disruptions: As pharmaceutical equipment providers often depend on third party contractors or sub-suppliers for essential components, services, etc. any supply chain disruptions due to pandemics, geopolitical issues, etc. can lead to project delays and revenue loss. Additionally, any change in tariffs, trade restrictions, etc. may also limit the supplier base as well as the market accessibility of the pharmaceutical equipment providers.

Source: Crisil Intelligence

6 Competitive landscape assessment

In this section, Crisil MI&A has analysed some key players operating in the pharmaceutical capex solutions providers landscape in India.

Data in this section has been obtained from publicly available sources, including annual reports and investor presentations of listed players, regulatory filings, rating rationales, and/or company websites. Financials in the competitive section have been re-classified by Crisil MI&A, based on annual reports and financial filings by the relevant players. The financial ratios used in this report may not match the reported financial ratios by the players on account of standardisation and re-classification done by Crisil MI&A.

Note: The list of competitive landscape peers considered in this section is not exhaustive but an indicative list.

6.1 Operational Overview

Company	Year of Incorporation	Overview
Airtech Systems (India) Private Limited	2004	Airtech Systems (India) Private Limited provides turnkey clean room solutions for pharmaceutical, biotechnology and healthcare segments. The company has completed turnkey HVAC & clean room projects across multiple sectors including industrial, commercial, municipal, healthcare, governmental and non-profit sectors. Some of its client include Zydus Cadila Ltd., Wockhardt Ltd, Ruchi Soya Ltd., etc.
Avant Garde Cleanroom & Engg. Solutions Private Limited	2010	The company provides turnkey solutions related to HVAX and cleanrooms systems and is present across multiple sectors including Pharmaceutical, Automotive, and Food and beverages. Some of its clients include Dr Reddy's Laboratories Ltd, and Sun Pharmaceutical Industries Ltd.
Azbil Telstar/ Azbil Corporation	1906[1]	Telstar is part of Azbil, a Japanese group providing offerings related to building automation for the building market, advanced automation for the industry market and life automation systems for the life sciences and healthcare markets. Telstar India was established in 2008 and provides engineering concept solutions.
Exyte GmbH	1912[2]	Exyte Holding GmbH was a wholly owned subsidiary of M+W Group GmbH until 31st March 2023. Post which Exyte Holding GmbH became the parent company of the group. The company operates in the engineering, construction, and consulting services space and provides multiple offerings including consulting and planning, engineering and design, project and construction management, technology & services, etc.
Fablab Engineering India Private Limited	2013	Fablab Engineering India Pvt. Ltd. is a turnkey solution-based manufacturing firm which supplies products across multiple sectors including pharmaceuticals, hospitals and commercial sectors. Some of its offerings are classified/non-classified air conditioning, clean room setups, laboratory setups, electrical HT-LT, pharmaceutical equipments, etc. Some of its clientele includes Glenmark Pharmaceuticals, Claris Lifesciences Ltd and Aarti Drugs Ltd.
Fabtech Technologies Limited	2018	Fabtech Technologies Limited is engaged in the business of providing turnkey projects solution to pharmaceuticals and allied industries by supplying pharmaceutical machinery/ equipment, in house designing and engineering, etc. Some of its clientele include Sudair Pharma Company (Saudi Arabia), Laboratorie Biorem (Algeria)
Hvax Technologies Limited	2010	Hvaxs Technologies Limited was incorporated with the main business objective of executing HVAC- Heating, Ventilation, & Air Conditioning- projects and units. The company provide multiple offerings including clean room

Company	Year of Incorporation	Overview
		partition, HVAC Systems, building management systems, electrical HT/LT Panels, engineering consultancy, gap analysis & validation, containment consultancy, etc. Some of its clients include Patanjali Foods Ltd, Divi's Laboratories Ltd, Biocon Ltd, etc.
Integrated Cleanroom Technologies Private Limited	2002	Integrated Cleanroom Technologies Pvt. Ltd. provides multiple products and services including cleanroom metal and non-metallic partitions, cleanroom equipment, laboratory furniture, and air handling units. Some of its clientele include Shivalik Rasayan Ltd, Lauras Labs Ltd, Natco Pharma Ltd, Lupin Ltd, etc. In 2023, TTE Japan acquired 100% stake in this company.
Lotus Technicals Private Limited	2019	Lotus Technicals Pvt Ltd is primarily engaged in supply of engineering goods, commissioning & consultancy in engineering projects in India as well as overseas countries. The company corporate office is located in Mumbai and centralized service office in Kenya. Some of its clientele includes Cosmos Limited, Regal Pharmaceutical Limited (Kenya), Dhofar Pharmaceutical Ind. LLC (Oman), etc.
Nicomac Taikisha Clean Rooms Private Limited	2021	The company is a part of Taikisha Group and provides turnkey solutions including cleanroom solutions and HVAC engineering solutions. The company has offerings across multiple sectors including healthcare, biotechnology, hospitals, cosmetics, pharmaceutical, and laboratories. Some of its clientele include Dr Reddy's Laboratories Ltd, Aurobindo Pharma Ltd, etc.
Pharma Access Private Limited	2013	Pharma Access Private is involved in the business of import and export of medical instruments. Company provides multiple offerings including engineering consultancy and advisory services, supplies and supply chain management, project management and control. Some of its clients includes, Beker Laboratoires, ASIA Pharmaceutical Industries, etc.

Note:
1 Founding year of Azbil Group
2 According to company's website accessed in August 2025, Exyte was founded in 1912
Source: Company websites, annual reports, Crisil Intelligence

Selected Operation parameters

Company	Presence	Manufacturing/ Plants Location	Certifications*	
Airtech Systems (India) Pvt Ltd@	12+ countries	Palghar, Maharashtra, India[1]	ISO 9001:2015	
Avant Garde Cleanroom & Engg. Solutions Pvt Ltd	12+ countries[2]	N.A.	N.A.	
Azbil Corporation (Telstar)@	100+ countries	Spain and China[3]	ISO 9001	Telstar Spain, U.K., France, China, Brazil, Italy
			ISO 17025	Telstar Spain
			ISO 14001	Spain, U.K.
			Certification ASME	Telstar Spain
			Certification PED[4]	Telstar Spain
			Certification PE(S)R[5]	Telstar Spain
Exyte GmbH@	16 countries[6]	N.A.	N.A.	

Company	Presence	Manufacturing/ Plants Location	Certifications*
Fablab Engineering India Pvt Ltd@	35+ countries	Bhiwandi, Thane, Vasai, Baddi	ISO
Fabtech Technologies Ltd	62 countries@	N.A.	ISO 45001:2018, ISO 9001:2015, ISO 14001:2015^
Hvax Technologies Ltd	15+ geographies@	N.A.	ISO 9001:2015^^
Integrated Cleanroom Technologies Pvt Ltd@	21+ countries	Hyderabad, India[7]	N.A.[7]
Nicomac Taikisha Clean Rooms Pvt Ltd@	17 countries	Telangana, India[8]	FM Approved, UL Classified, ASTM International, TÜV SÜD
Lotus Technicals Pvt Ltd@	Yes	N.A.	ISO 9001 Certified[9]
Pharma Access Pvt Ltd@	18+ countries	N.A.	ISO 45001:2018, ISO 9001:2015, ISO 14001:2015

Notes:
N.A. Not available
**The certifications mentioned in the above table may apply solely to specific entities, business units or individual products and may not be applicable to the company in its entirety. Furthermore, the list of certifications is only indicative and not exhaustive; and as per the information available on the respective company's website*
1 Factory (works)- Unit 1
2 Countries served
3 The company operate in over a hundred countries and have production plants in Spain and China, 5 technology centres, 9 consultancy and engineering services centres, and commercial offices all over the world as per website accessed in August 2025
4 Certification PED (Directive 97/23/EC on pressure equipment)
5 Certification PE(S)R (Pressure Equipment (Safety) Regulations 2016)
6 Locations of offices: Exyte Corporate: Germany, Americas Region (AMER): United States of America, Europe Region: Austria, Belgium, Czechia, France, Germany, Ireland, Israel, Italy, Switzerland, United Kingdom; Asia-Pacific Region (APAC): Mainland China, Malaysia, Singapore, Taiwan
7 First manufacturing unit in Hyderabad. As per the company's brochure, the company has three manufacturing plants in Hyderabad and Vadodara. Additionally, as per the company's brochure, iClean's products are certified by FM, Warrington Fire, CE, UL, CBRI, and SEFA. The company's manufacturing facilities are ISO certified, holding ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018 certifications.
8 Head office (unit 2) in Hyderabad and Innovation Fab Hyderabad (Unit 3) in Chandenvalle, Telangana
9 As per the company's website, the company was ISO 9001 Certified in 2022
@As per website accessed in August 2025
^ Details of certifications as per the DRHP document of the company filed in September 2024.
^ Details of certifications as per the RHP document of the company filed in September 2024
Source: Company websites, annual reports, company filings, Crisil Intelligence

Key observations

- Fabtech Technologies Ltd has global presence across regions like Middle east, Africa, Asia, Europe, Latin America, North America, etc. Further, it has a presence across 62 countries including Bangladesh, Egypt, Ethiopia, India, Kenya, Kingdom of Saudi Arabia, Morocco, Nicaragua, Nigeria, South Africa, Turkey, UAE, USA and Tanzania.
- Fabtech Technologies Ltd has presence across some of the key emerging economies like Bangladesh, Egypt, Ethiopia, India, Kenya, Kingdom of Saudi Arabia, Morocco, Nicaragua, Nigeria, South Africa, Turkey and Tanzania.

6.2 Financial Overview

Key financial parameters (FY2025)

Company Name	Operating Income (Rs million)	OPBDIT (Rs million)	PAT (Rs million)	OPBDIT (%)	PAT (%)	RoE (%)	RoCE (%)	Gearing Ratio
Turnkey engineering solution focused players								
Azbil Corporation	166,995.08	22,823.89	23,139.11	13.67	13.86	18.24	22.89	0.03
Fabtech Technologies Limited	3,286.01	422.84	464.53	12.87	14.14	37.04	40.20	0.40
Cleanroom Focused players								
Hvax Technologies Limited	1,310.32	185.85	110.44	14.18	8.43	21.48	22.52	0.39

Note:
The categorization provided is based on the concentration of offerings within the company's overall product portfolio and does not imply exclusivity i.e. companies listed in one category may also have offerings in the other category.
The financial ratios used in this report may not match the reported financial ratios by the players on account of standardisation and re-classification done by Crisil Intelligence
Conversion rate used for Yen to INR conversion (in case of Azbil Corporation) is as follows: 1 Yen= 0.56 INR
Financials for all the players are on standalone basis except for Azbil corporation and Fabtech Technologies Ltd
Hvax Technologies Limited FY25 numbers are based on quarterly results and may not be directly comparable with previous year numbers.
Formulae are as follows:
OPBDIT % = OPBDIT / operating income
PAT % = PAT / operating income
RoCE = Profit before interest and tax (PBIT) / average [total debt + tangible net worth]
RoE = PAT / Average of tangible net worth
Gearing Ratio= Total Debt/ Tangible Net worth
Source: Company websites, annual reports, Crisil Intelligence

Key financial parameters (FY2024)

Company Name (Rs. Million)	Operating Income		Operating profit before depreciation, interest and taxes (OPBDIT)		PAT	
	FY2024	CAGR (FY2022-24)	FY2024	CAGR (FY2022-24)	FY2024	CAGR (FY2022-24)
Turnkey engineering solution focused players						
Azbil Corporation	176,276.64	-1.99%	26,639.71	6.57%	18,764.98	10.67%
Exyte GmbH	450,982.65	2.88%	7,590.60	-40.62%	6,787.70	-40.13%
Fablab Engineering India Private Limited	656.33	36.28%	64.92	48.13%	37.33	91.29%
Fabtech Technologies Limited	2,261.74	-6.23%	367.02	4.56%	272.18	7.67%
Lotus Technicals Private Limited	465.38	38.19%	42.57	107.97%	35.36	833.61%

Company Name (Rs. Million)	Operating Income		Operating profit before depreciation, interest and taxes (OPBDIT)		PAT	
	FY2024	CAGR (FY2022-24)	FY2024	CAGR (FY2022-24)	FY2024	CAGR (FY2022-24)
Pharma Access Private Limited	1,671.33	37.98%	357.33	61.12%	300.87	78.72%
Cleanroom Focused players						
Airtech Systems India Private Limited	938.53	52.58%	69.21	37.17%	40.37	101.01%
Avant Garde Cleanroom & Engg. Solutions Private Limited	4,246.14	22.63%	332.20	2.45%	268.80	6.94%
Hvax Technologies Limited	1,060.61	24.50%	134.92	38.83%	85.16	45.52%
Integrated Cleanroom Technologies Private Limited**	6,954.42	N.A.	660.84	N.A.	299.37	N.A.
Nicomac Taikisha Clean Rooms Private Limited	2,507.26	9.40%	394.94	24.22%	279.00	24.49%

Note:
The categorization provided is based on the concentration of offerings within the company's overall product portfolio and does not imply exclusivity i.e. companies listed in one category may also have offerings in the other category.
The financial ratios used in this report may not match the reported financial ratios by the players on account of standardisation and re-classification done by Crisil Intelligence
Financials for all the players are on standalone basis except for Azbil corporation, Exyte GmbH, Integrated Cleanroom Technologies Pvt. Ltd., and Fabtech Technologies Ltd
@Financials of Exyte GmbH are on calendar year basis. For example, financials of CY2022 are considered for FY2023, and so on.
*** Financials as of FY2023*

Conversion rate used for Yen to INR conversion (in case of Azbil Corporation) is as follows:

	FY2022	FY2023	FY2024
1 INR	1.40 Yen	1.60 Yen	1.65 Yen

Conversion rate used for Euro to INR conversion (in case of Exyte GmbH) is as follows:

	CY2021	CY2022	CY2023
1 Euro	87.44 INR	82.69 INR	89.30 INR

Source: Company websites, annual reports, Crisil Intelligence

Key financial ratios (FY2024)

Key financial ratios	PAT (%)	OPBDIT (%)	RoE (%)	RoCE (%)	Gearing Ratio
Turnkey engineering solution focused players					
Azbil Corporation	10.65	15.11	14.69	19.32	0.04
Exyte GmbH	1.51	1.68	n.m.	n.m.	0.00
Fablab Engineering India Private Limited	5.69	9.89	33.54	27.73	0.81
Fabtech Technologies Private Limited	12.03	16.23	26.65	31.64	0.09

Key financial ratios	PAT (%)	OPBDIT (%)	RoE (%)	RoCE (%)	Gearing Ratio
Lotus Technicals Private Limited	7.60	9.15	n.m.	n.m.	n.m.
Pharma Access Private Limited	18.00	21.38	39.99	46.52	0.14
Cleanroom Focused players					
Airtech Systems India Private Limited	4.30	7.37	25.24	22.99	0.64
Avant Garde Cleanroom & Engg. Solutions Private Limited	6.33	7.82	24.38	32.49	0.08
Hvax Technologies Limited	8.03	12.72	34.51	28.82	0.79
Integrated Cleanroom Technologies Private Limited**	4.30	9.50	9.60	14.01	0.20
Nicomac Taikisha Clean Rooms Private Limited	11.13	15.75	21.82	29.54	n.m.

Note:
n.m.: not meaningful
The financial ratios used in this report may not match the reported financial ratios by the players on account of standardisation and re-classification done by Crisil Intelligence
Financials for all the players are on standalone basis except for Azbil corporation, Exyte GmbH, Integrated Cleanroom Technologies Pvt. Ltd., and Fabtech Technologies Ltd
@Financials of Exyte GmbH are on calendar year basis. For example, financials of CY2022 are considered for FY2023, and so on.
*** Financials as of FY2023*
Formulae are as follows:
OPBDIT % = OPBDIT / operating income
PAT % = PAT / operating income
RoCE = Profit before interest and tax (PBIT) / average [total debt + tangible net worth]
RoE = PAT / Average of tangible net worth
Gearing Ratio= Total Debt/ Tangible Net worth
Source: Company websites, annual reports, Crisil Intelligence

Crisil Limited

Name : Dharmendra Sharma
Director : Business Development

About Crisil Intelligence (formerly Market Intelligence & Analytics)

Crisil Intelligence is a leading provider of research, consulting, risk solutions and advanced data analytics, serving clients across government, private and public enterprises. We leverage our expertise in data-driven insights and strong benchmarking capabilities to help clients navigate complex external ecosystems, identify opportunities and mitigate risks. By combining cutting-edge analytics, machine learning and AI capabilities with deep industry knowledge, we empower our clients to make informed decisions, drive business growth and build resilient capacities.

For more information, visit Intelligence.Crisil.com

About Crisil

Crisil is a global, insights-driven analytics company. Our extraordinary domain expertise and analytical rigour help clients make mission-critical decisions with confidence.

Large and highly respected firms partner with us for the most reliable opinions on risk in India, and for uncovering powerful insights and turning risks into opportunities globally. We are integral to multiplying their opportunities and success.

Headquartered in India, Crisil is majority owned by S&P Global.

Founded in 1987 as India's first credit rating agency, our expertise today extends across businesses: Crisil Ratings, Crisil Intelligence, Crisil Coalition Greenwich and Crisil Integral IQ.

Our globally diverse workforce operates in the Americas, Asia-Pacific, Europe, Australia and the Middle East, setting the standards by which industries are measured.

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