

Industry Overview

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Notes:

IQVIA MIDAS data combines country-level data, healthcare expertise and therapeutic knowledge to deliver data in globally standardized forms and is a leading source of insight into international market dynamics. IQVIA MIDAS data is designed to support multi-country analyses of trends, patterns and similar types of analyses.

IQVIA™ MARKET PROGNOSIS is a comprehensive, strategic market forecasting publication that provides decision-makers with insights on the drivers and constraints of healthcare and pharmaceutical market growth.

Total Sales Audit is the stockiest sell out to retail and hospital pharmacies along with dispensing doctors. This does not cover direct sales by manufacturer and tender.

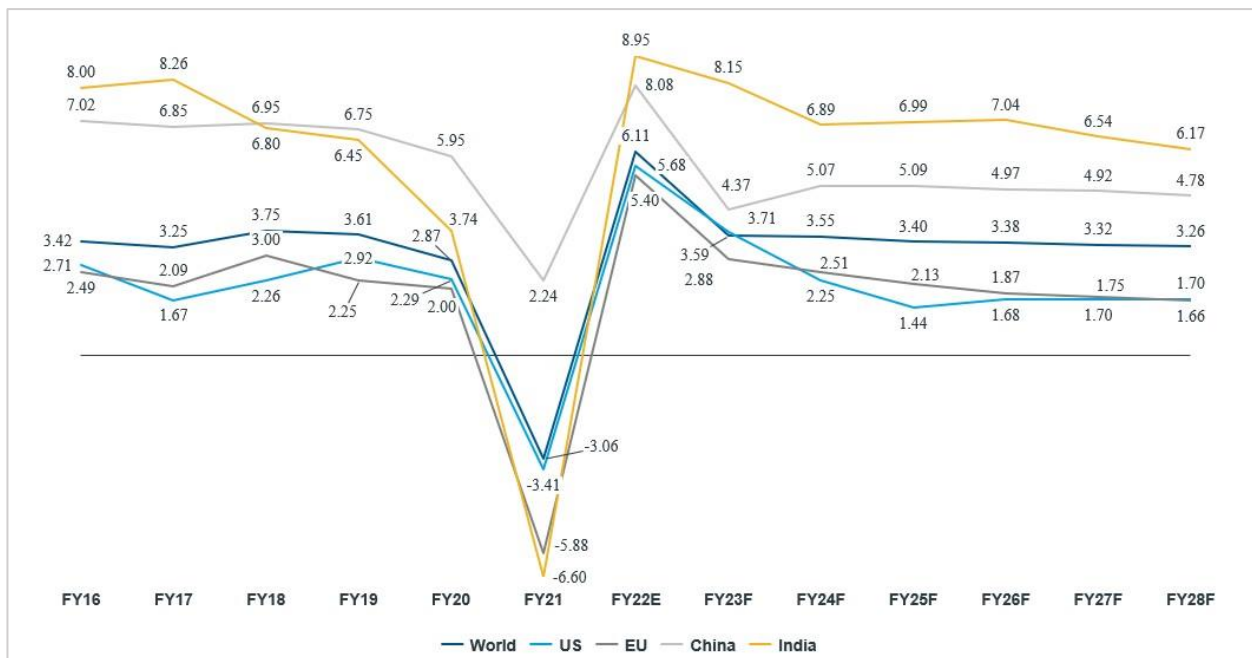
Macroeconomic Overview

Global GDP Review and Outlook

Global Gross Domestic Product (GDP) witnessed a strong rebound in Financial Year 2022 on account of policy and financial support measures announced by governments across the globe, as well as unprecedented speed at which COVID-19 vaccines were developed and administered. As per International Monetary Fund (IMF), after having declined by approximately 3.06% in Financial Year 2021 (on account of COVID-19 pandemic), global economy is estimated to have grown by 6.11% in Financial Year 2022.

While the Indian economy, the 7th largest economy globally, with an estimated GDP of US\$ 1,969.56 billion (₹ 147,717.00 billion) in Financial Year 2022, was more adversely affected by COVID-19 (when compared to developed markets such as the US, EU, and China), it is also projected to emerge as one of the fastest growing economies over Financial Year 2022-2028.

Trend and outlook for global GDP

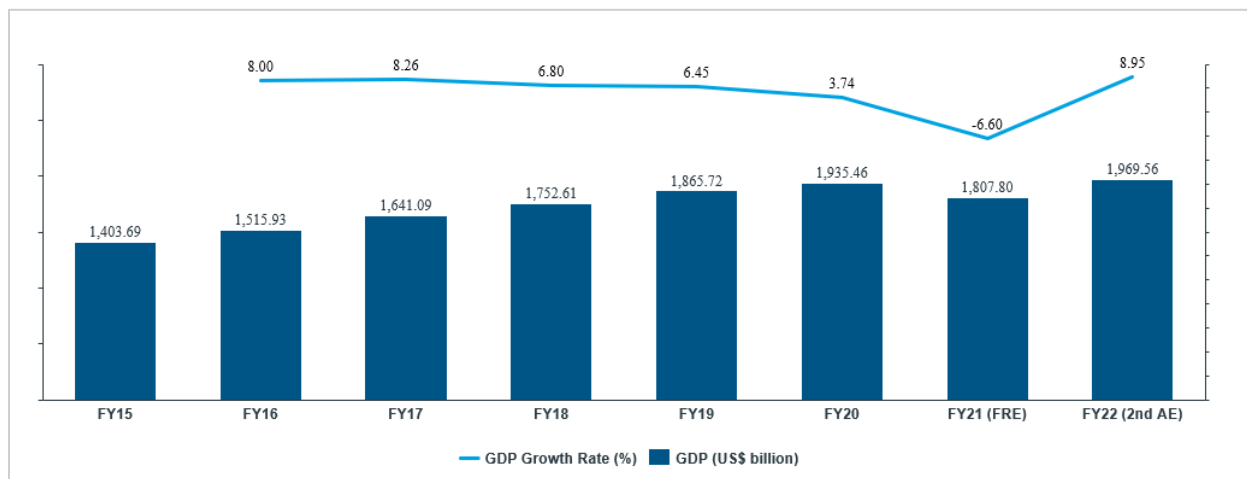


Source: International Monetary Fund

Historic GDP growth in India

India currently ranks 7th in the world in terms of GDP, with an average annual growth rate in the range of 6%-7% since Financial Year 1991. India's real GDP (at constant 2011-12 prices) was estimated at US\$ 1,935.46 billion (₹ 145,159.50 billion) in Financial Year 2020 which dropped to US\$ 1,807.80 billion (₹ 135,585.00 billion) in Financial Year 2021 due to the impact of COVID-19. The Indian economy is estimated to have grown by 8.95% in Financial Year 2022. The RBI's recent Consumer Confidence Survey noted consistent improvement in Consumer Confidence Index since last year (current value standing at 77.3 for July 2022, having jumped 1.4 points in two months), with improved sentiments on parameters like employment and household income. This growth is on account of several factors, such as increased mobility, business activity and trade as COVID-19 situation normalized, strong rebound of end-consumption (in terms of both – domestic consumption and exports), and policy measures taken by the Indian government and the Reserve Bank of India (RBI) – notably – (a) provision of liquidity window of ₹ 500 billion and (b) an additional liquidity window of ₹ 150 billion for contact-intensive sectors, including restaurants, tourism, and aviation.

Real GDP (in US\$ billion) and Growth Rates (in %) (Constant Prices)



FRE: First Revised Estimates; AE: Advance Estimates

Source: Ministry of Statistics and Programme Implementation

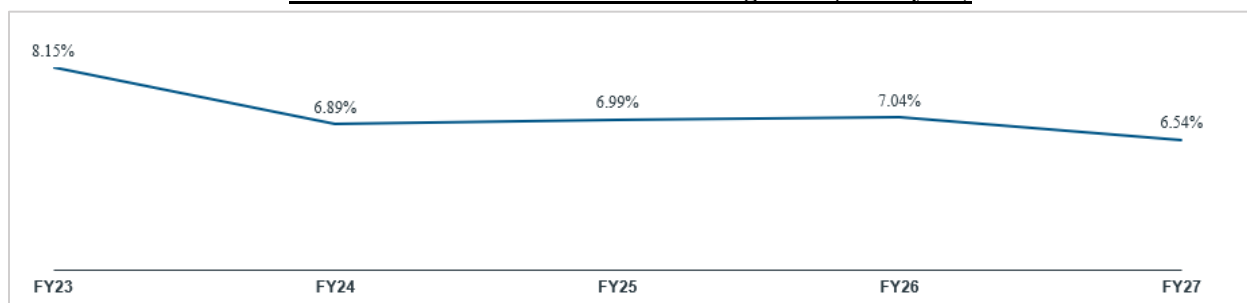
Note: Real GDP data as per 2011-12 series from MoSPI in ₹ is converted to US\$ using exchange rate of 1 US\$ = 75 ₹

Outlook on India's GDP growth

As per IMF, India's GDP growth is pegged at 8.2% in Financial Year 2023. Further, the growth rate is expected to stabilize around 6.5-7% between Financial Year 2023 and Financial Year 2027. Key drivers for India's GDP growth include – (a) Rising domestic consumption supported by rising purchasing power of the population, (b) India's push for domestic manufacturing and its impact on creation of jobs locally, and (c) favourable policy support.

Additionally, the government has launched a four-year National Monetization Pipeline (NMP) worth ₹ 6,000 billion for the period starting from Financial Year 2022. The NMP was announced to provide a clear framework for monetization and provide potential investors with a ready list of assets. The NMP will drive private sector investment, which in turn is expected to generate employment opportunities, thereby enabling high economic growth.

Trend and outlook on India's real GDP growth (% on-year)



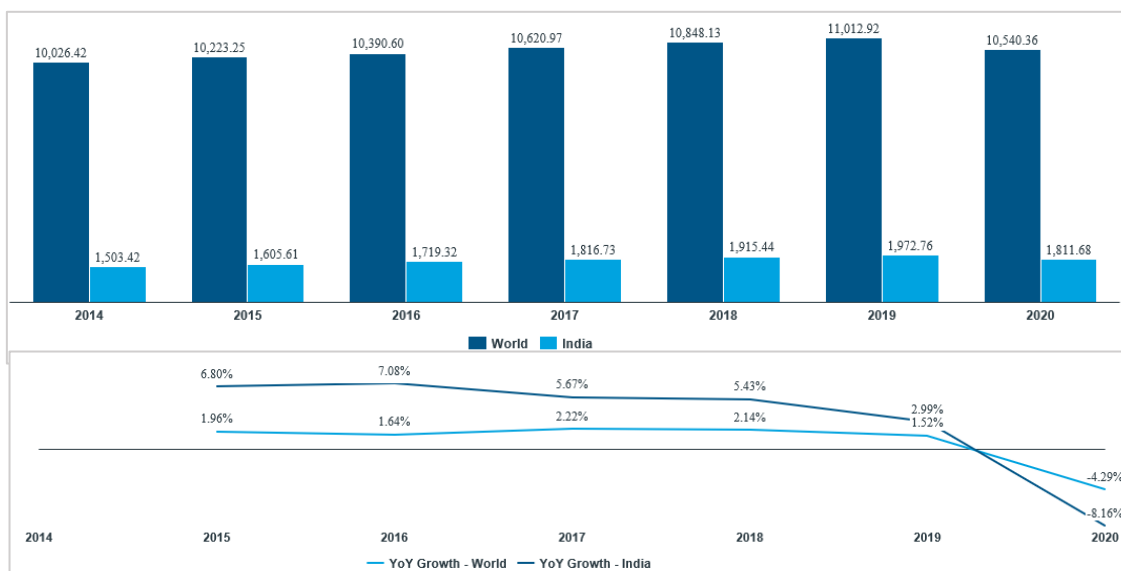
Source: International Monetary Fund

Note: YoY GDP growth forecast in % for FY23-27

Review of GDP Per Capita

Global GDP per capita grew at 0.84% CAGR over CY14-20, as per the World Bank. During this time period, India recorded a GDP per capita growth of 3.16% (that is - nearly 4 times the global GDP growth). With India expected to emerge as one of the fastest recovering economies, the growth in GDP per capita is expected to resume at pre-pandemic levels, over the next 5 years. Between the years 2014 to 2020, the GDP per capita for India has seen the highest growth among the BRICS countries, only second to China, as per the World Bank.

Global and Indian per capita GDP Growth at constant 2015 US\$



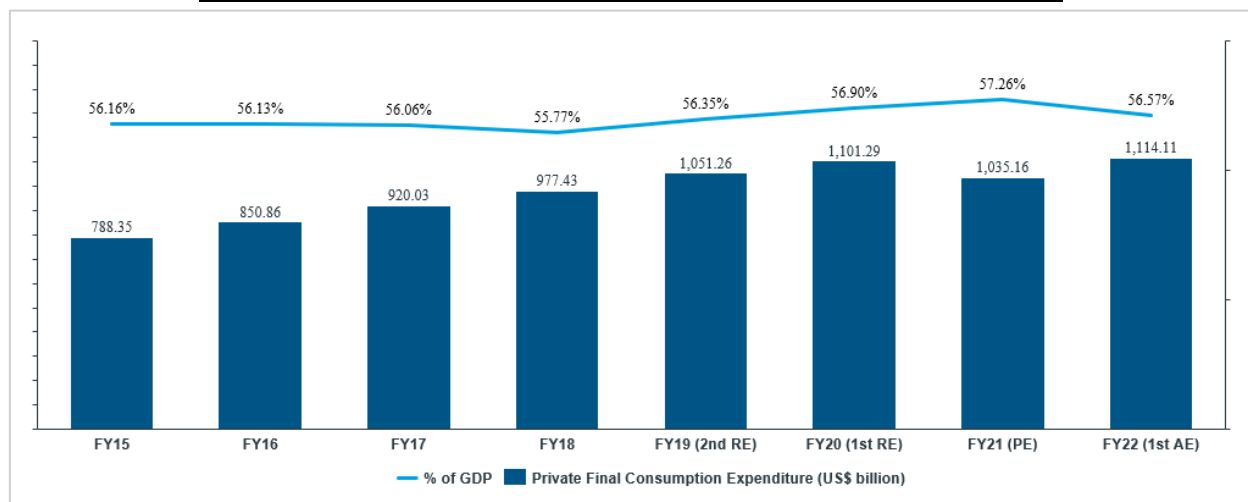
Source: The World Bank

Note: GDP per capita for CY12 to CY20 at constant 2015 US\$; YoY growth in GDP per capita of India compared with global numbers

Review of Private Final Consumption Growth in India

The share of India's domestic consumption, measured in terms of ratio of private final consumption expenditure (PFCE), to GDP was approximately 56.57% in Financial Year 2022 (in terms of constant prices). Such a high share of PFCE in India's GDP provides an effective insulation from the volatility in global economy. India's PFCE witnessed growth of 5.07% CAGR over Financial Year 2015-22.

Total Private Final Consumption Expenditure (Constant Prices US\$ billion)



RE-Revised Estimate; PE-Projected Estimate; AE-Advance Estimate

Source: Ministry of Finance

Note: 2011-12 series PFCE data in ₹ converted to US\$ using exchange rate of 1 US\$ = 75 ₹ for FY15 to FY22

Demographic and Healthcare Indicators

Demographic trends in India

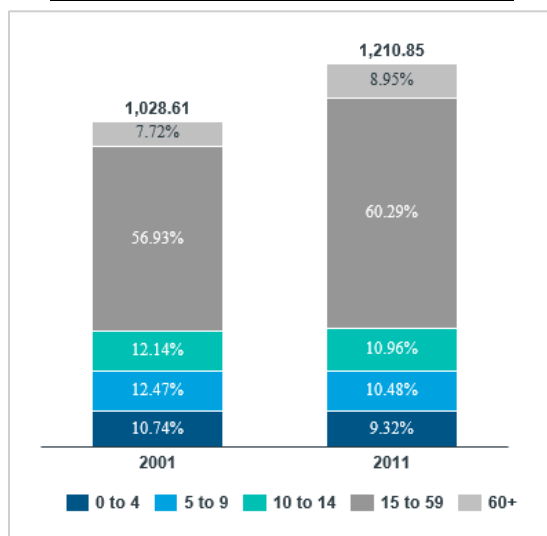
According to the United Nations, India's population is expected to reach 1.5 billion by CY30, making it the world's most populous country, exceeding China (with forecast population of 1.4 billion by CY30).

India currently has one of the largest proportions of population in the younger age groups in the world. As per 2011 census, working age (15-59 years) population in India had increased to 60.29% in CY11 as compared to 56.93% in CY01.

As per the 2011 census, Class I towns (with population greater than equal to 100,000) are the biggest contributors with a population share of approximately 59.98%. Followed by Class II towns (with population between 50,000 and 99,999) and Class III towns (with population between 20,000 and 49,999) which contribute approximately 21.22% and 12.73% by population respectively. Class IV (with population between 10,000 and 19,999), Class V (with population between 5,000 and 9,999) and Class VI (with population <5,000) town classes contribute approximately 1.90% and 2.11% respectively to the total population of the nation.

The Urban population in India is on the rise too; having grown from 28.82% of the total population in CY01 to 31.14% in CY11 and estimated at 35% in CY21. The Urban population is projected to reach 37% of the total population by CY27 as per census estimates. Urbanization is expected to drive the growth of the middle classes; this would in turn positively impact the demand and supply of healthcare goods and services. This is because – (a) on one hand, increasing disposable income, rising levels of education and awareness of an emerging urbanised middle class will drive demand for high quality healthcare products and services (b) on the other hand, this will also translate into an increase in the supply of skilled labour and talent, that can be channelled to meet the growing demand for healthcare goods and services.

Population Distribution by Age (Million)



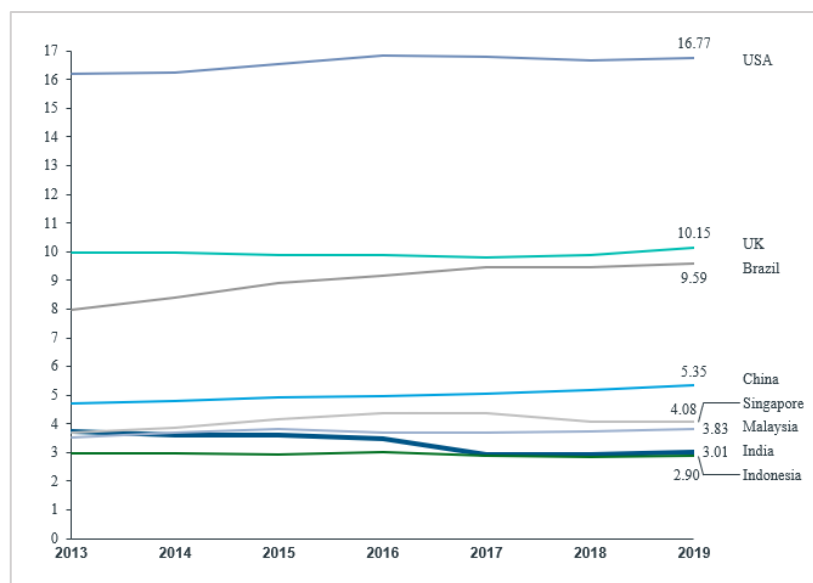
Source: Census India

Note: Share of age group in Indian population in % as per 2001 and 2011 census data

Healthcare Expenditure in India: Current status

At approximately 3.01% in CY19, the proportion of GDP allocated to spending on healthcare in India is significantly less than the OECD (Organization for Economic Co-operation and Development) average. India’s healthcare spend is also amongst the lowest when compared to other BRICS (Brazil, Russia, China, and South Africa) economies. This low healthcare expenditure in India is primarily on account of under-penetration of healthcare services and lower consumer spending on healthcare.

Current Healthcare Expenditure (CHE) as % of GDP



Source: World Health Organization

Note: Healthcare expenditure as % of GDP for CY12 to CY19

Country	2013	2014	2015	2016	2017	2018	2019
India	3.62%	3.60%	3.50%	2.94%	2.95%	3.01%	3.62%
USA	16.25%	16.52%	16.84%	16.81%	16.69%	16.77%	16.25%
UK	9.95%	9.90%	9.87%	9.81%	9.90%	10.15%	9.95%
Brazil	8.40%	8.91%	9.17%	9.47%	9.46%	9.59%	8.40%
China	4.78%	4.94%	4.98%	5.07%	5.17%	5.35%	4.78%
Singapore	3.87%	4.18%	4.39%	4.36%	4.09%	4.08%	3.87%
Malaysia	3.71%	3.82%	3.69%	3.70%	3.75%	3.83%	3.71%
Indonesia	2.96%	2.92%	3.02%	2.90%	2.87%	2.90%	2.96%
Russian Federation	5.18%	5.30%	5.29%	5.36%	5.36%	5.65%	5.18%
South Africa	8.55%	8.79%	8.82%	8.72%	8.86%	9.11%	8.55%

Source: WHO

Current Healthcare Expenditure (CHE) (in US\$ billion)

Countries	2014	2015	2016	2017	2018	2019
India	70.51	75.73	79.70	71.50	76.43	81.14
USA	2,875.29	3,012.97	3,123.89	3,191.07	3,263.23	3,349.73
UK	286.66	292.70	298.42	302.94	310.76	323.94
Brazil	156.95	160.58	159.85	167.26	170.07	174.84
China	493.96	546.44	588.59	640.86	697.61	764.85
Singapore	11.57	12.87	13.97	14.50	14.08	14.24
Malaysia	10.64	11.51	11.61	12.32	13.09	13.97
Indonesia	24.30	25.14	27.31	27.55	28.68	30.43
Russian Federation	72.05	72.26	72.27	74.56	76.65	82.44
South Africa	29.26	30.48	30.78	30.79	31.75	32.68

Source: World Health Organization, The World Bank

Note: Calculated CHE in US\$ billion from CHE as % of GDP data from World Health Organization and GDP data from The World Bank for CY14-19

Pharma Spend as a % of GDP (%)

Countries	2017	2018	2019	2020	2021(E)	2022(E)
India	0.48%	0.54%	0.58%	0.69%	0.66%	0.72%
USA	2.27%	2.23%	2.28%	2.46%	2.42%	2.56%
UK	0.89%	0.86%	0.92%	1.06%	1.05%	1.13%
Brazil	0.71%	0.82%	0.91%	1.32%	1.39%	1.61%
China	0.72%	0.67%	0.70%	0.75%	0.73%	0.74%
Singapore	0.24%	0.24%	0.26%	0.31%	0.27%	0.29%
Malaysia	0.41%	0.41%	0.45%	0.54%	0.46%	0.52%
Indonesia	0.31%	0.34%	0.34%	0.38%	0.33%	0.33%
Russian Federation	0.60%	0.63%	0.67%	0.89%	0.92%	1.24%
South Africa	0.72%	0.76%	0.86%	1.07%	1.01%	1.04%

Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022

Note: Calculated pharma spending % basis total country level value and GDP data from the World Bank for 2014-20. For 2021-22, estimated GDP using International Monetary Fund GDP annual growth rate forecasts.

Healthcare Expenditure: Growth drivers

Irreversible demographic and epidemiologic trends are expected to drive growth of healthcare expenditure in India. These are further supported by policy factors such of liberalized foreign investment norms, incentives for setting up dedicated bulk-drug and medical devices parks and regulations enabling adoption of technology in delivering healthcare goods and services.

- **Demographic factors:** The population of India is expected to increase from approximately 1.2 billion to 1.5 billion during the period CY11-36 – an increase of 25% in 25 years, with the average age expected to be approximately 35 years in CY36 as compared to approximately 25 years in CY11. Urbanisation in India has been growing consistently, having grown from 28% to 31% between CY01 and CY11, with a projected value reaching 37% by CY27 as per census estimate. An ageing population in addition to urbanisation will increase demand for healthcare services.
- **Epidemiologic factors:** India’s healthcare systems have historically been designed to provide the acute care needed to respond to infectious diseases. However, with rising life expectancy, urbanisation and affluence levels, lifestyle changes associated with sedentary behaviour, stress and poor diet are responsible for a growth in prevalence of Non-Communicable Diseases (“NCDs”). Cardiovascular disease, diabetes, and cancer are on the rise and have become the leading causes of deaths. Prevalence of diabetes, cardiovascular diseases, and cancer in India was estimated at over 90 million, 75 million, and approximately 40 million, respectively, in CY21. Prevalence of diabetes, cardiovascular diseases, and cancer in India is expected to exceed 130 million, 90 million, and 45 million, respectively, by CY30.
- **Policy factors:** The Indian government has announced several programs such as Ayushman Bharat, Production-Linked Incentive (PLI) schemes and subsidised medicines to address challenges in different areas of the healthcare sector.
 - Ayushman Bharat aims at providing access to provide a comprehensive range of health care services to nearly 500 million poor and vulnerable individuals, by establishing a new, government-backed health insurance scheme.
 - Through the National Health Policy, in an attempt to improve healthcare provision for lower income groups, the Indian government has established Sub Centres (approximately 158,000), Primary Health Centres (PHCs, approximately 30,800) and Community Health Centres (CHCs, 5,600) as of Financial Year 2020 end. There is also a total of approximately 20,000 Health and Wellness Centres (HWCs) that have been established as part of the Ayushman Bharat programme
 - The Indian government has introduced PLI schemes as part of the ‘Make in India’ import substitution drive, with nearly ₹ 220 billion of incentives provided to boost domestic manufacturing of critical bulk drugs and

pharmaceutical formulations. The government is also setting up dedicated bulk-drug and medical devices parks.

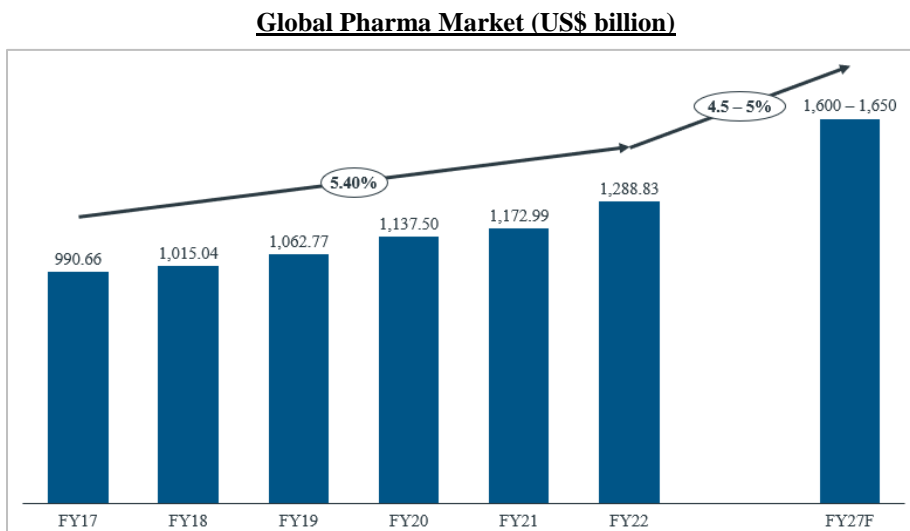
- **Other factors:** As per Insurance Regulatory and Development Authority of India (IRDAI) data, over 500 million people (approximately 38% of the Indian population) were covered under some form of health insurance policy as of March 2020. Of the total 500 million people, 73% were beneficiaries of state or national government programs, while around 140 million (approximately 10% of the population) had private cover. The private sector has traditionally been dominated by group (often employment-related) plans, which account for over two-thirds of cover in that segment. (Source: IRDAI). Both these segments (namely individual health policies and employee group insurance) have witnessed double-digit growth over the past 5 years.

Overview of Global Pharmaceutical Market

Overall market size and estimated growth rate

The global formulation market was estimated at US\$ 1,288.83 billion (₹ 96,662.25 billion) in Financial Year 2022 (Source: IQVIA MIDAS Quarterly Sales Data MAT March 2022) and is expected to grow at a CAGR of 4.5-5% to reach US\$ 1,600-1,650 billion (₹ 120,000-123,750 billion) by Financial Year 2027 (Source: IQVIA Market Prognosis – May 2022 (FY22-27 analysis recalculated based on MAT March 2022 figures)).

Growth in the global pharmaceutical market is a function of (a) launch of novel therapies, including biologics, (b) expansion of existing therapies into newer geographies and adjacent indications (c) growing demand for generic medicines and (d) initiatives taken by pharmaceutical companies and governments globally for accelerated access to drugs.



Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022, IQVIA Market Prognosis – May 2022 (FY22-27 analysis recalculated based on MAT March 2022 figures)

Global pharmaceuticals market: key growth drivers

Increase in ageing population

As per the United Nations, the number of people with age 65 years and above globally is expected to double by CY50, increasing from 727 million in CY20 to 1.5 billion in CY50. Rapid ageing of the population is increasing the prevalence of chronic illnesses and driving pharmaceutical consumption. (Source: The United Nations)

Growing prevalence of chronic diseases

Both incidence and prevalence of chronic diseases (such as hypertension, diabetes, chronic respiratory disease, and cardiovascular diseases) are rising across the globe on account of rapid urbanization, adoption of sedentary lifestyles

and poor dietary habits. As per World Health Organization, as of CY20, deaths caused by chronic diseases were 41 million annually, equivalent to approximately 70% of all deaths globally. Cardiovascular diseases account for the most chronic disease deaths (approximately 18 million people annually), followed by cancers (approximately 9 million), respiratory diseases (approximately 4 million), and diabetes (approximately 1.5 million). These four groups of diseases together account for approximately 80% of all chronic disease deaths.

Strong growth of global generic market

In the wake of global efforts on reducing the overall costs of healthcare, aggravated by a COVID-19 induced economic downturn, weakening purchasing power and financial pressures, there has been increased adoption of generics across the globe. Governments across the globe are adopting pro-generic strategies to increase their uptake, thus offsetting rising expenses. For instance:

- Several developed regions such as Europe, US, and Japan are promoting use of generics to achieve savings in healthcare systems. For example, in the USA the Hatch-Waxman Act (which provided the legal and economic framework for generics) continues to deliver its results. Several factors (faster approval of Abbreviated New Drug Applications (ANDAs) by USFDA, continued roll out of the Affordable Care Act (colloquially known as “Obamacare”)) have led to continued volume expansion of generics.
- Similarly, emerging markets have been advocating for generics to not only reduce rising pharmaceutical expenditure but to also improve access to essential drugs. Several pharmerging countries (there are 15 pharmerging countries namely Algeria, Bangladesh, Brazil, China, Colombia, Egypt, India, Indonesia, Mexico, Pakistan, Philippines, Saudi Arabia, South Africa, Turkey, and Vietnam) actively promote the local pharmaceutical industry.
- Several emerging countries like Brazil, Turkey, Algeria, Vietnam among others, have announced several policy initiatives to increase the penetration of generics medicines.
- Regulatory authorities aim to improve registration timelines and clear backlogs to increase availability of generics and biosimilars in the market.
- Emerging markets are promoting the policy of localization, and health insurance companies are restricting the prescription of many drugs to generics.

Expansion of health insurance coverage

Rollout of basic health insurance coverage in some countries across the globe is expected to make progress, while benefits will be broadened in others, and private health insurance is also anticipated to grow. For example, in India, the central government’s Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) health insurance scheme, will drive healthcare access to poor and vulnerable patients.

Global pharmaceuticals market: key risks to growth

Developed Markets

- **COVID-19 pandemic impact:** Continuing circulation of virus and subsequent waves of infection may potentially cause disruptions in supply chain across most of the developed markets. A slower patient backlog recovery, curtailed detailing and disrupted promotional activity may defer or slow new product uptake which has been one of the key levers of growth in the pharma markets.
- **Prescription controls:** Further measures are expected to be implemented for controlling drug expenditure costs due to budgetary constraints caused by the pandemic. Several governments in developed markets are stepping up efforts in this direction – such as setting targets along with financial incentives for providers and increasing focus on standardisation in prescribing processes to control drug expenditure costs.
- **Pricing pressure:** In developed markets, such as the US, to increase access to affordable drugs the governments are increasingly subjecting pharma players to heavy price competitions by enabling multiple entrants into the

generics market. In recent years, the number of generics approvals by the US authorities have been high and are being processed within shorter time periods, resulting in high competition and pricing pressure.

Pharmerging Markets

- **COVID-19 pandemic impact:** The COVID-19 pandemic had a major impact on healthcare where it led to slowdown or contraction in pharmaceutical sales growth in several pharmerging markets in CY20. This was on account of disruption in diagnosis and treatments due to lockdown measures and movement restrictions, and as hospitals prioritized the treatment of COVID-19 patients. In India, demand continued to vary significantly by therapeutic area during CY2021, with declines in demand for some of the non-COVID fields. The Indian pharmaceutical market has since witnessed strong growth and recovery in Financial Year 2022.
- **Pricing pressures:** Pharmaceutical prices for certain drugs could witness pricing pressure as countries seek to expand patient access to affordable drugs while keeping budgets under control. For instance, more drugs have been subjected to price control in India by expanding the National List of Essential Medicines in 2021.

Market segmentation – by Region

The global pharma market is dominated by the US, which takes up 45.63% share by value, followed by EU5 (EU5 comprises of 5 countries namely France, Germany, Italy, Spain, and the UK) which takes up 15.18% share by value. India, however, constitutes only 1.75% of the market by value. In terms of growth across the last 5 years over Financial Year 2017-2022, US and EU5 have seen growth rates between approximately 5.5 - 6% CAGR whereas India has seen a % CAGR of about approximately 12%.

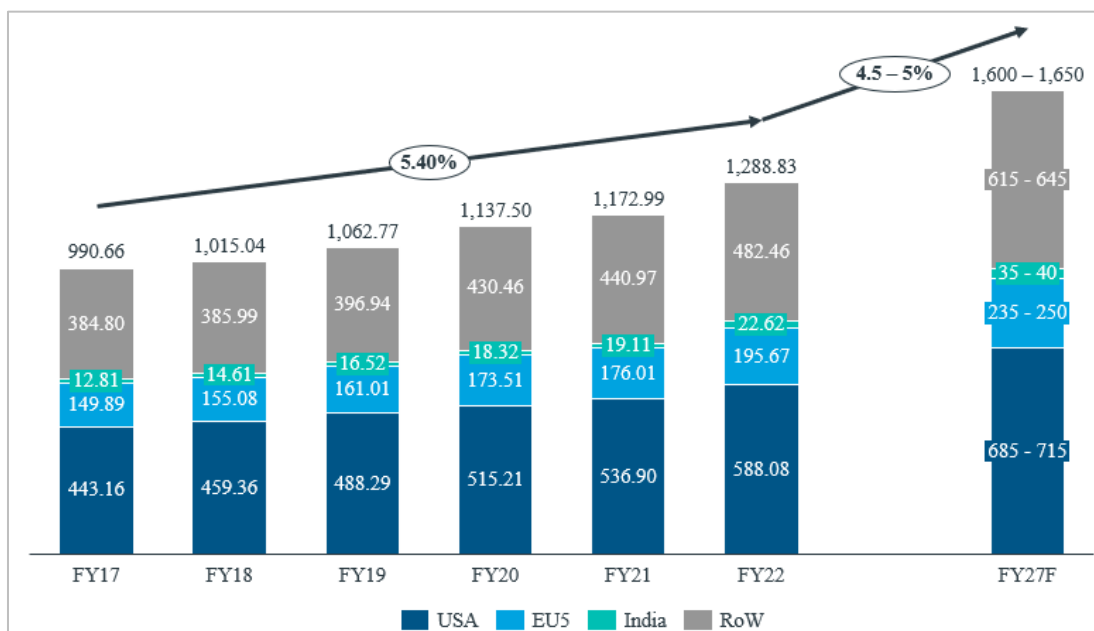
Developed Markets

- US formed 45.63% of the global pharmaceuticals market in Financial Year 2022. The US is expected to remain the key contributor to growth in the major developed markets and is expected to grow at a CAGR of 3-4% over Financial Year 2022-2027. (Source: IQVIA MIDAS Quarterly Sales Data MAT March 2022, IQVIA Market Prognosis Global – May 2022 (FY22-27 analysis recalculated based on MAT March 2022 figures))
- EU5 formed 15.18% of the global pharmaceuticals market in Financial Year 2022. Within EU5, UK is expected to be the fastest growing economy at a CAGR of 5-6% over Financial Year 2022-2027, followed by Germany, Italy, and Spain at 4-5% CAGR over the same period. (Source: IQVIA MIDAS Quarterly Sales Data MAT March 2022, IQVIA Market Prognosis Global – May 2022 (FY22-27 analysis recalculated based on MAT March 2022 figures))

Pharmerging Markets

- China currently forms 9.50% of the global pharmaceuticals market; it is amongst the largest of the 15 pharmerging markets and is expected to grow at a CAGR of 3-4% over Financial Year 2022-2027. (Source: IQVIA MIDAS Quarterly Sales Data MAT March 2022, IQVIA Market Prognosis Global – May 2022 (FY22-27 analysis recalculated based on MAT March 2022 figures))
- Two pharmerging markets, namely Brazil and India, together form 3.66% of the global pharmaceuticals market. Both Brazil and India pharmaceutical markets are forecast to grow at 10-11% CAGR over Financial Year 2022-2027, which is one of the fastest growth rates among the pharmerging markets. (Source: IQVIA MIDAS Quarterly Sales Data MAT March 2022, IQVIA Market Prognosis Global – May 2022 (FY22-27 analysis recalculated based on MAT March 2022 figures))

Global Pharmaceuticals Market – By Region (US\$ billion)



Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022, IQVIA Market Prognosis Global - May 2022 (FY22-27 analysis recalculated based on MAT March 2022 figures)

Note: Regional contribution to global pharma market in % for Financial Year 2017 to Financial Year 2022

Global Pharma Market – Market Share by Region (%)

Region	FY17	FY18	FY19	FY20	FY21	FY22	FY27F	CAGR	CAGR
								FY17-22	FY22-27F
USA	44.73%	45.26%	45.95%	45.29%	45.77%	45.63%	44-45%	5.82%	3.5-4%
EU5	15.13%	15.28%	15.15%	15.25%	15.01%	15.18%	14-15%	5.47%	4-5%
India	1.29%	1.44%	1.55%	1.61%	1.63%	1.75%	2-3%	12.05%	10-11%
RoW	38.84%	38.03%	37.35%	37.84%	37.59%	37.43%	38-39%	4.63%	5-6%

Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022, IQVIA Market Prognosis Global - May 2022 (FY22-27 analysis recalculated based on MAT March 2022 figures)

Market segmentation – Therapy Area

Six key therapy areas – Oncology (antineoplasts and immunomodulating agents), Gastrointestinal, Central Nervous System (CNS), Anti-infectives, Cardiovascular (CVS), and Respiratory disorders – accounted for 74.80% of the total formulations market in Financial Year 2022.

Oncology

- Global Oncology market is the largest therapy market contributing to 23.06% of the total formulations market in Financial Year 2022. Between Financial 2017 and Financial Year 2022, Oncology therapy area grew at 13.39% (Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022)
- The surge in innovation treatments in recent years, accompanied by a strong focus across health systems to increase early diagnosis and expand access to treatments, has resulted in global spending on Oncology drugs reaching US\$ 187 billion (₹ 14,025 billion) in CY21. Global Oncology sales are expected to grow at a rate of 8-10% through Financial Year 2022-2027 as launch of new medicines is expected to offset the effect of loss of exclusivity for certain key molecules. (Source: IQVIA Report - The Global Use of Medicines 2022, IQVIA Analysis (Therapy forecasts for 2022-2027))

- The current Oncology pipeline is expected to add more than 100 new drugs in the next five years, which includes innovative treatment through cell therapy, RNA therapy, and Immuno-Oncology treatments – including those that are mutation-specific and thus tumor-agnostic. (Source: IQVIA Report - The Global Use of Medicines 2022)

Gastrointestinal

- Gastrointestinal is the second largest therapy area, accounting for 16.45% of the market share in Financial Year 2022. It witnessed a growth of 7.95% between Financial Year 2017 and Financial Year 2022. (Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022)
- The market for gastrointestinal is further expected to grow at a CAGR of 4-5% over Financial Year 2022-2027. (Source: IQVIA Analysis (Therapy forecasts for 2022-2027))

Central Nervous System (CNS)

- CNS therapy area was the third largest therapy area with a market share of 12.23% in Financial Year 2022, which witnessed a growth rate of 1.62% over Financial Year 2017-2022. According to World Health Organization, Alzheimer's disease has led to approximately 1.2 million adult-onset brain disorders while there are over 60,000 cases of Parkinson's disease detected in the US alone, annually.
- New therapies contribute to rapid acceleration of neurology market, including greater use of novel migraine therapies, potential treatments for rare diseases, and the potential for therapies for Alzheimer's and Parkinson's.
- Besides focusing on diseases that affect larger populations (such as migraine, depression, and anxiety), companies are also focusing on orphan diseases within neurology. (Source: IQVIA Report - The Global Use of Medicines 2022)

Anti-Infectives

- Anti-Infectives captured 9.83% of the market share in Financial Year 2022 and are expected to grow at a CAGR of 3-4% over Financial Year 2022-2027. (Source: IQVIA MIDAS Quarterly Sales Data MAT March 2022, IQVIA Analysis (Therapy forecasts for 2022-2027))

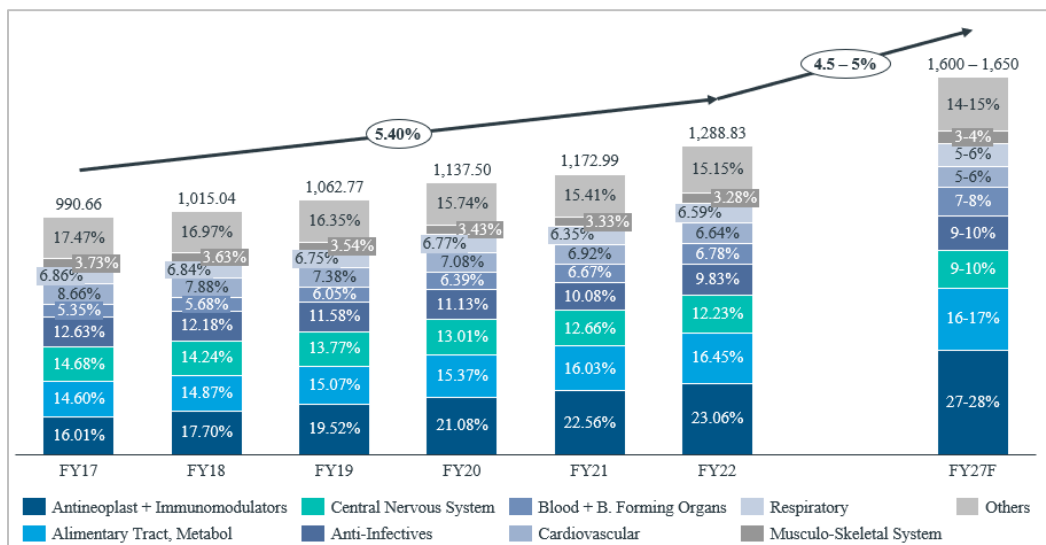
Cardiovascular

- Global Cardiovascular therapy market was estimated at US\$ 85.64 billion (₹ 6,423.00 billion) in Financial Year 2022. (Source: IQVIA MIDAS Quarterly Sales Data MAT March 2022)
- Cardiovascular market is expected to see as many as 25 new launches by CY23. However, impending Loss of Exclusivity (LoEs) for over 130 products between CY19 and CY28 is expected to result in increased usage of generics, thus causing substantial volume growth, but muted value growth.

Respiratory

- Respiratory segment, estimated at US\$ 84.92 billion (₹ 6,369.00 billion) in Financial Year 2022, witnessed a growth rate of 4.55% over Financial Years 2017-2022. The segment accounted for 6.59% share of the total market. (Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022). Global Respiratory sales is expected to grow at 2-3% over Financial Year 2022-2027. (Source: IQVIA Analysis (Therapy forecasts for 2022-2027))

Global Pharma Market – By Therapy Area (US\$ billion)



Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022, IQVIA Analysis (Therapy forecasts for 2022-2027), IQVIA Report - The Global Use of Medicines 2022

Region	FY17	FY18	FY19	FY20	FY21	FY22	FY27F	CAGR	
								FY17-22	FY22-27F**
Antineoplast + Immunomodulators	158.59	179.67	207.42	239.78	264.62	297.21	435-480	13.39%	8-10%
Alimentary Tract, Metabol	144.62	150.96	160.16	174.87	187.97	211.96	255-270	7.95%	4-5%
Central Nervous System	145.47	144.58	146.30	147.99	148.56	157.63	155-165	1.62%	0-1%
Anti-Infectives	125.14	123.61	123.08	126.58	118.19	126.63	145-155	0.24%	3-4%
Blood + B. Forming Organs	52.98	57.66	64.30	72.66	78.24	87.34	115-125	10.51%	6-7%
Cardiovascular	85.78	80.02	78.43	80.51	81.14	85.64	90-95	-0.03%	1-2%
Respiratory	67.99	69.43	71.73	77.01	74.50	84.92	90-100	4.55%	2-3%
Musculo-Skeletal System	210.09	209.11	211.36	218.09	219.79	237.49	50-55	2.71%	4-5%
Others	158.59	179.67	207.42	239.78	264.62	297.21	225-240	2.43%	3-4%
Total	990.66	1,015.04	1,062.77	1,137.50	1,172.99	1,288.83	1,600-1,650	5.40%	4.5-5%

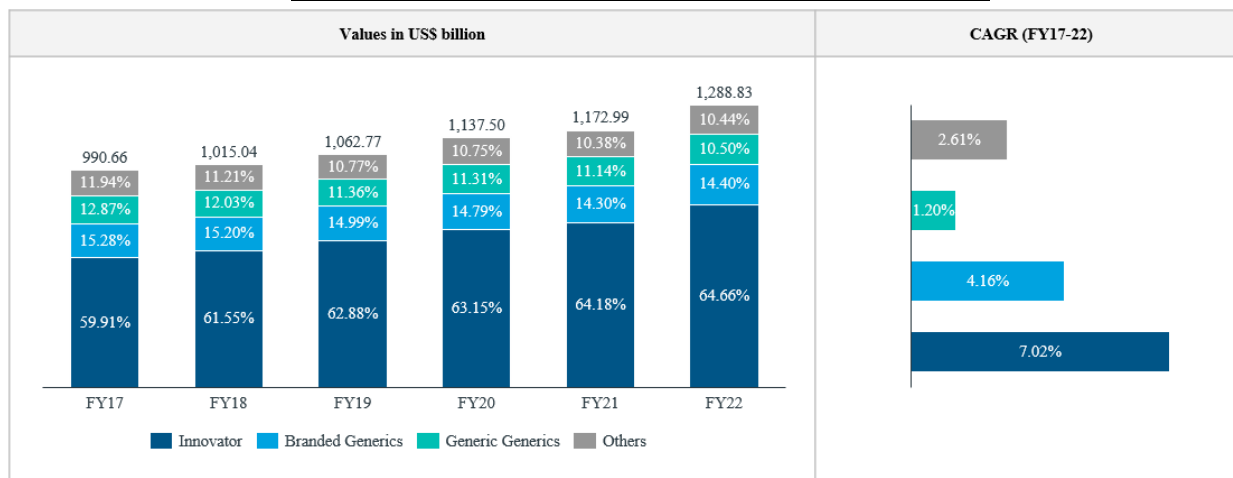
Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022, IQVIA Analysis (Therapy forecasts for 2022-2027), IQVIA Report - The Global Use of Medicines 2022

Market segmentation – Innovators vs Branded Generics

Patented drugs continue to dominate the global pharma market in value terms. Value share of innovators and branded generics has remained in the range of 61-65% and 14-15%, respectively, over Financial Years 2017-2022.

Furthermore, 290 molecules in the US are set to lose exclusivity over 2022-2026. These molecules represented a market size of US\$ 188 billion (₹ 14,100 billion) in 2020. 313 molecules in EU5 are set to lose exclusivity over the same period (which represent a market size of US\$ 38 billion (₹ 2,850 billion) in 2020). Major therapies that will witness loss of exclusivity over 2022-2026 are Oncology (104 molecules with sales of approximately US\$ 81.7 billion (₹ 6,127.50 billion) in CY20), followed by Central Nervous System (CNS) (65 molecules with sales of approximately US\$ 26.9 billion (₹ 2,017.50 billion) in CY20) and Alimentary Tract and Metabol (55 molecules estimated at US\$ 37.3 billion (₹ 2,797.50 billion) sales in CY20).

Global Pharma Market – Innovators vs Generic (US\$ billion)

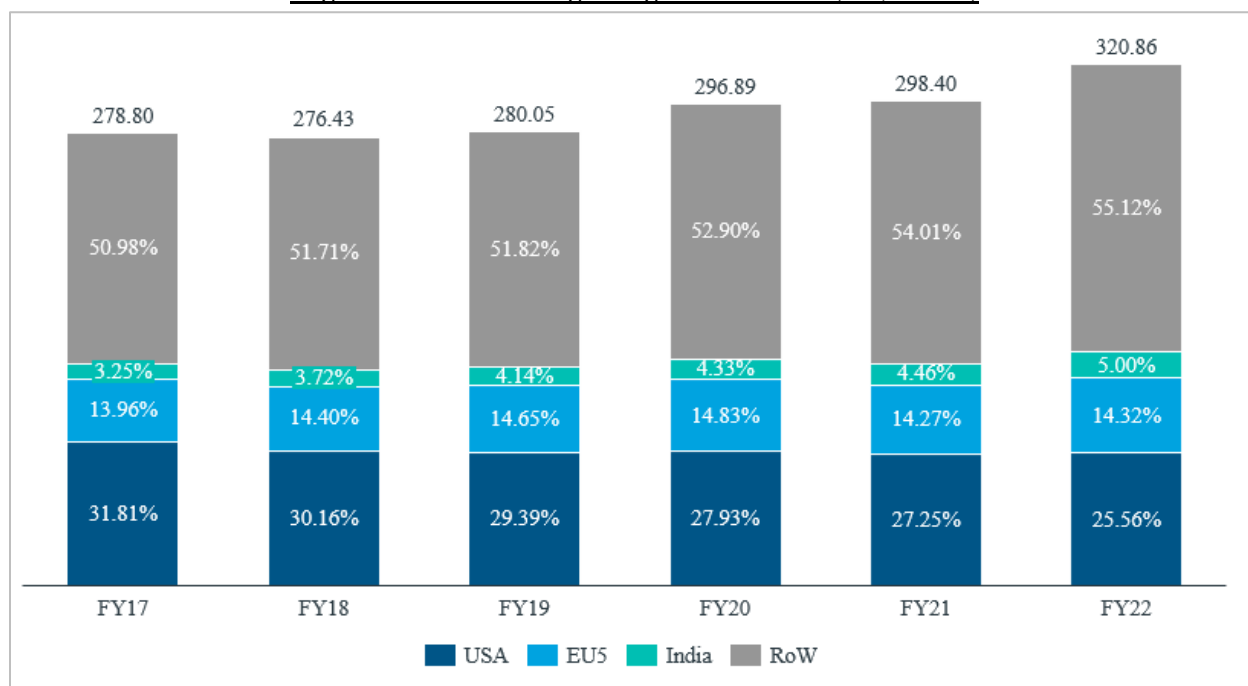


Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022
 Note: Others includes vaccines, non-Rx products, traditional medicines, etc.

Global generics market

Global generics market has grown at 2.85% CAGR over Financial Years 2017-2022 in terms of value to reach US\$ 320.86 billion (₹ 24,064.50 billion). US and EU5 are the top 2 generics markets with market sizes of US\$ 82.01 billion (₹ 6,150.75 billion) and US\$ 45.95 billion (₹ 3,446.25 billion) respectively, having a % CAGR of (-1.55%) and 3.37% over Financial Year 2017-2022. India registered a % CAGR of 12.10% over Financial Year 2017-2022.

Regional distribution of global generics market (US\$ billion)



Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022
 Note: Region wise contribution to global generics market in % over Financial Year 2017-2022

In developed markets, governments adopt pro-generic and biosimilar strategies to increase their uptake, which helps to offset rising costs of healthcare. Moreover, in pharmerging countries, the COVID-19-induced economic downturn, weakening purchasing power and supply availabilities has led to an increased use of generics.

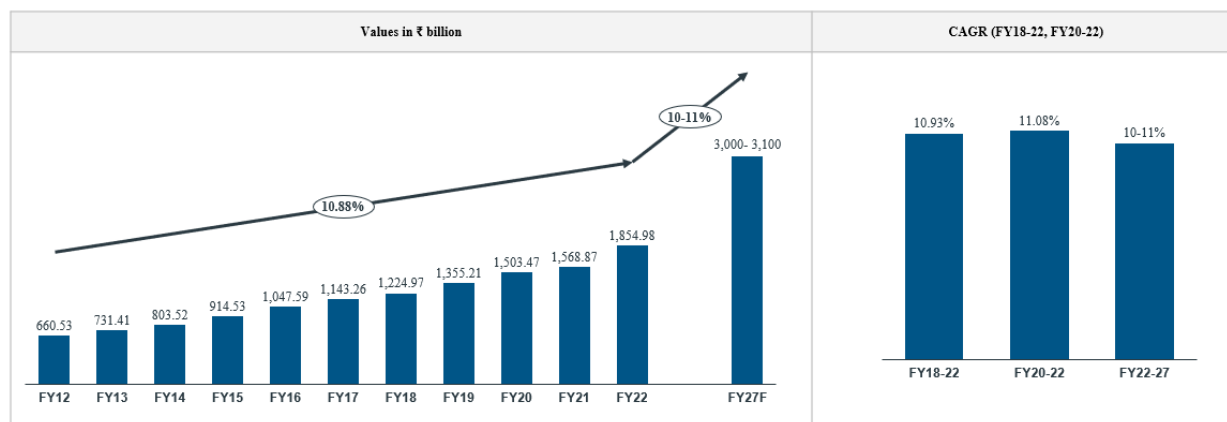
Overview of Indian Pharmaceutical Market

Overall market size and estimated growth rate

The size of Indian Pharmaceutical Market (IPM) has increased from ₹ 660.53 billion in Financial Year 2012 to ₹ 1,854.98 billion in Financial Year 2022 at approximately 10.88% CAGR over Financial Year 2012-22. (Source: IQVIA Total Sales Audit (TSA)). The IPM is forecast to grow at a CAGR of 10-11% to reach ₹ 3,000 – 3,100 billion by Financial Year 2027. (Source: IQVIA TSA, IQVIA Market Prognosis - September 2021, IQVIA Analysis)

Companies in the IPM benefit from defensiveness against recession in a high growth potential market while international markets are typically characterized by headwinds such as regulatory pressures, higher R&D spends and geopolitical tensions. While developed markets like the USA and the EU5 grew at approximately between 5-6% CAGR over Financial Years 2017-22, IPM witnessed approximately 12% CAGR over the same period (Source: IQVIA MIDAS Quarterly Sales Data MAT March 2017-2022).

Domestic manufacturers in IPM, characterized by high entry barriers, control over 80% of the market by value. Further, domestic players stand to grow their share of this market given the demand for high-volumes, fit-for-local (in terms of cost proposition) nature of the market, increased penetration of government financing models like universal healthcare coverage, and the associated requirement to contain costs. Local companies are best positioned to benefit from these market dynamics. Further, price competitiveness is particularly important in the market where growth is significantly driven by increasing penetration.



Source: IQVIA TSA MAT Mar'14, IQVIA TSA MAT Mar'17, IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22, IQVIA Market Prognosis - September 2021, IQVIA Analysis

Key players in IPM

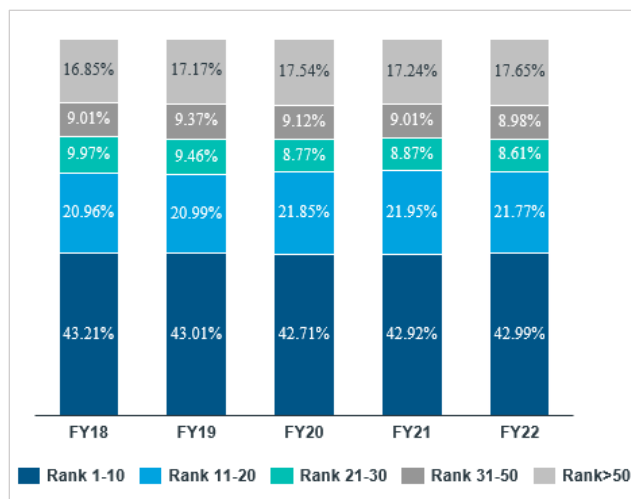
IPM is primarily a branded generics-driven market, dominated by Indian generic players which account for approximately 80-85% of the overall market. Multinational companies (MNCs) - that is companies that are headquartered overseas, have approximately 15-20% share of the IPM; MNCs play a dominant role as innovators in IPM. We have tabulated below the names of the top Indian corporates (on the basis of Domestic Sales) and MNCs operating in IPM. The list is in alphabetical order and has not been arranged by any quantitative parameter.

Top 10 Corporates in IPM	MNCs
Alkem Laboratories Ltd.	AstraZeneca
Abbott India Limited (Indian subsidiary of Abbott Laboratories)	Boehringer Ingelheim
Aristo Pharmaceuticals Pvt. Ltd.	GSK
Cipla Ltd.	Janssen
Intas Pharmaceuticals Ltd.	MSD
Lupin Ltd.	Novartis
Macleods Pharma	Pfizer
Mankind Pharma	P&G Health
Sun Pharmaceuticals Industries Ltd.	Sanofi
Torrent Pharmaceuticals Ltd.	Viartis (formerly Mylan)

Source: IQVIA TSA MAT Mar'14, IQVIA TSA MAT Mar'17, IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22

The composition of market share (in terms of market share held by top 10, 11 to 20, 21 to 30, etc.) is provided in the chart below. As can be noted, the top 10 players have consistently held 42% to 43% market share.

Market share by range of ranking in IPM (%)



Source: IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22, IQVIA Analysis

Key players in the Covered Market/s (CVM)

For the purposes of this section, the key therapy areas that form a part of the Covered Market/s (“CVM”) (all anatomical therapeutic chemical classifications where Mankind had Domestic Sales (Moving Annual Total (MAT) Sales or Sales for a period calculated on a monthly rolling basis) include Anti-Infectives, Cardiovascular, Gastrointestinal, Vitamins/Minerals/Nutrients, Respiratory, Anti-Diabetic, Dermatology, etc. Within the aforesaid Covered Market/s, the key players (peers/ pharma companies operating in similar therapeutic areas) analysed in this industry report are (in alphabetical order) – Abbott India Limited, Alkem Laboratories, Cipla Limited, Eris Lifesciences, GlaxoSmithKline Pharmaceuticals, Ipca Laboratories, J. B. Chemicals & Pharmaceuticals Limited, Mankind Pharma, Sun Pharmaceutical Industries, Torrent Pharmaceuticals, and Zydus Lifesciences Limited (Please note that the sequence of these names is not the same as Peer 1 to Peer 10 as covered in the rest of the industry report.)

Share of Domestic Formulations Revenue in Total Revenue (%) (Financial Year 2022)

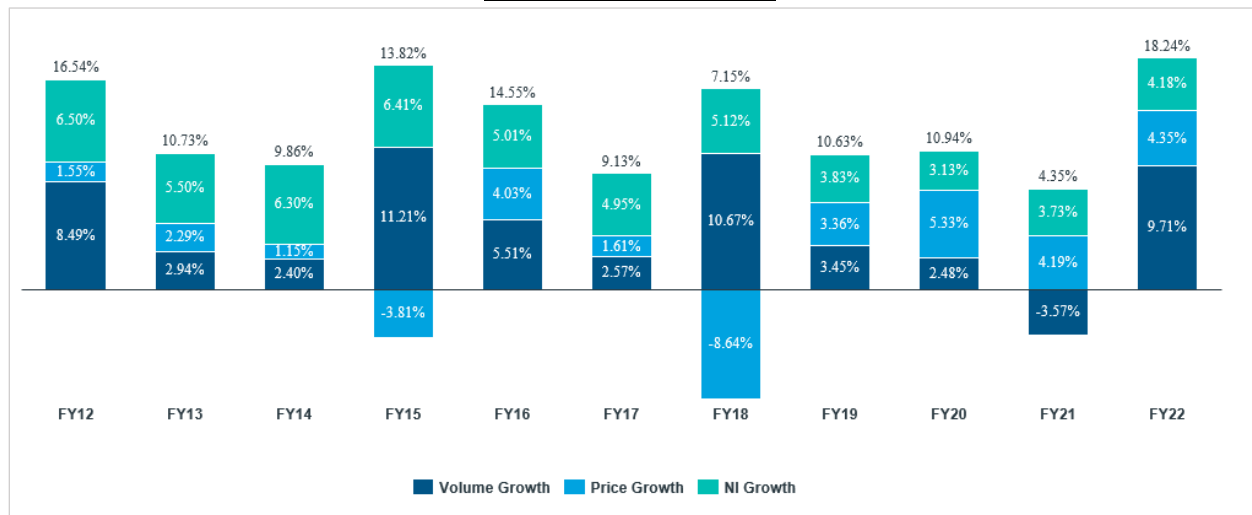
Peers	Share of Domestic Formulations Revenue in Total Revenue (%) (FY22)
Mankind	98%
Peer 1	33%
Peer 2	100%
Peer 3	42%
Peer 4	70%
Peer 5	50%
Peer 6	32%
Peer 7	100%
Peer 8	43%
Peer 9	100%
Peer 10	48%

Source: Annual filings of consolidated financials made by the respective companies with stock exchanges

IPM growth drivers

The key factors affecting the growth of the IPM are evaluated through Volume, Price, and New Introductions (NI). A tabulation of the relative contribution of each of these factors on the IPM is set out below. It is noted that until Financial Year 2019, the growth was largely Volume and NI led and post Financial Year 2019, the growth has primarily been Price led until Financial Year 2021.

IPM Growth Drivers (%)



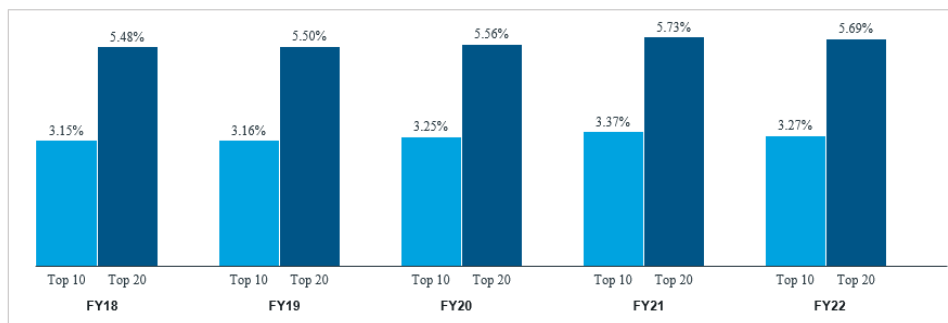
Source: IQVIA TSA MAT Mar'14, IQVIA TSA MAT Mar'17, IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22, IQVIA Analysis
 Note: YoY growth of IPM split into growth drivers like volume, price, and new launches for MAT Mar'12 to MAT Mar'22

Key brand contribution in IPM

The relative contribution of top 10 and top 20 brands (i.e., individual brand extensions) in IPM has remained range-bound, with top 20 brands accounting for approximately 5-6% of the IPM over Financial Years 2018-22. Relative contribution of brands (over Financial Years 2018-22) is attributable to a mix of factors such as (a) physicians and patients' preference for established brands over newly launched products and (b) the supply chain that top / established brands have built over the years.

The contributions of top 10 and top 20 brands (i.e., individual brand extensions) in the IPM over Financial Year 2018-22 are set out in the chart below.

Contribution of top 10 and top 20 brands in IPM (Financial Year 2018-22)

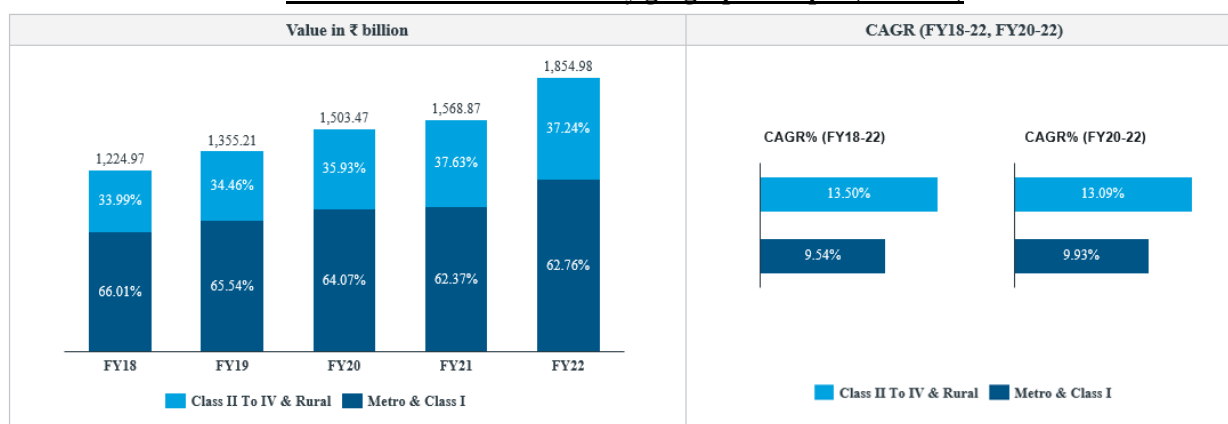


Source: IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22, IQVIA Analysis

Market segmentation – By Town-class

- Distribution of Domestic Sales of IPM between metros and other town-classes has been range-bound between Financial Year 2020 and Financial Year 2022 (Metros & Class I cities have historically comprised approximately 62-64% of the market)
- However, in terms of growth, Metros & Class I cities have witnessed a relatively slower growth of approximately 9.93% CAGR over Financial Years 2020-22, compared to other town-classes that have grown at 13.09% CAGR over the same period.
- High growth in rural and Class II-IV markets can be attributed to the following - (i) increased access to medicines on account of initiatives by pharmaceutical companies (ii) increase in income and awareness (iii) policy initiatives by government aimed at increasing access to health in these regions.

IPM – Domestic Sales share by geographical split (₹ billion)

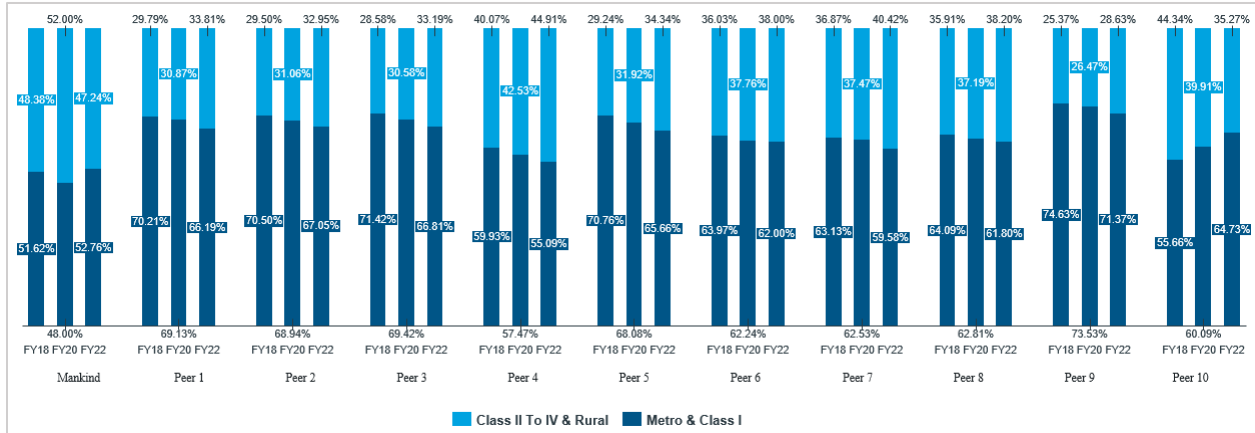


Source: IQVIA Townclass Audit MAT March 2018-22, IQVIA Analysis

Note: Metros constitute 30 cities namely, Agra (Uttar Pradesh), Ahmadabad (Gujarat), Allahabad (Uttar Pradesh), Asansol (West Bengal), Bangalore (Karnataka), Bhopal (Madhya Pradesh), Chennai (Tamil Nadu), Coimbatore (Tamil Nadu), Delhi, Hyderabad, Telangana, Indore (Madhya Pradesh), Jabalpur (Madhya Pradesh), Jaipur (Rajasthan), Kanpur (Uttar Pradesh), Kochi (Kerala), Kolkata (West Bengal), Lucknow (Uttar Pradesh), Ludhiana (Punjab), Madurai (Tamil Nadu), Meerut (Uttar Pradesh), Mumbai (Maharashtra), Nagpur (Maharashtra), Nashik (Maharashtra), Patna, Punjab, Pune (Maharashtra), Surat (Gujarat), Vadodara (Gujarat), Varanasi (Uttar Pradesh), Vijayawada (Andhra Pradesh), Visakhapatnam (Andhra Pradesh); Class I constitutes cities like Thirissur (Kerala), Malappuram (Kerala), Ghaziabad (Uttar Pradesh), Kannur (Kerala), Faridabad (Haryana), Rajkot (Gujarat), Srinagar (Jammu & Kashmir), Aurangabad (Maharashtra), Dhanbad (Jharkhand), Amritsar (Punjab), Kollam (Kerala), Howrah (West Bengal), Ranchi (Jharkhand), Jodhpur (Rajasthan), Durg and Bhilai Nagar (Chhattisgarh), Raipur (Chhattisgarh), Kota (Rajasthan), Chandigarh, Guwahati (Assam), etc.

The following chart compares the share of Domestic Sales by Metros & Class I vs Class II – IV and Rural for Mankind and the ten peers for Financial Year 2018, Financial Year 2020 and Financial Year 2022.

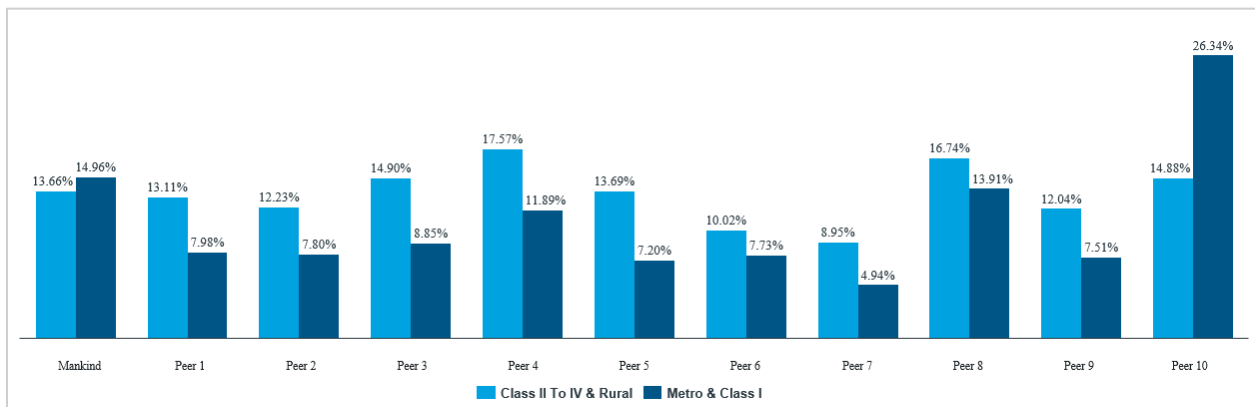
Share of Domestic Sales by geographical split for Mankind and the ten peers (Financial Years 2018, 2020, 2022)



Source: IQVIA Townclass Audit MAT March 2018-22, IQVIA Analysis

The following chart compares the growth of Metros & Class I vs Class II – IV and Rural for Mankind and the ten peers between Financial Year 2018 and Financial Year 2022.

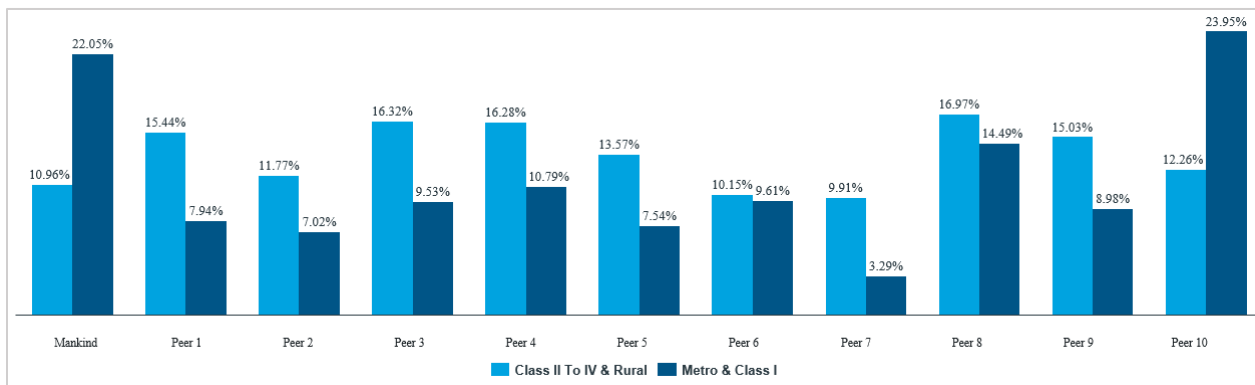
5 Year Domestic Sales CAGR for Mankind and the ten peers by geographical split (Between Financial Years 2018 and 2022)



Source: IQVIA Townclass Audit MAT March 2018-22, IQVIA Analysis

The following chart compares the growth of Metros & Class I vs Class II – IV and Rural for Mankind and the ten peers between Financial Year 2020 and Financial Year 2022.

3 Year Domestic Sales CAGR for Mankind and the ten peers by geographical split (Between Financial Year 2020 and 2022)

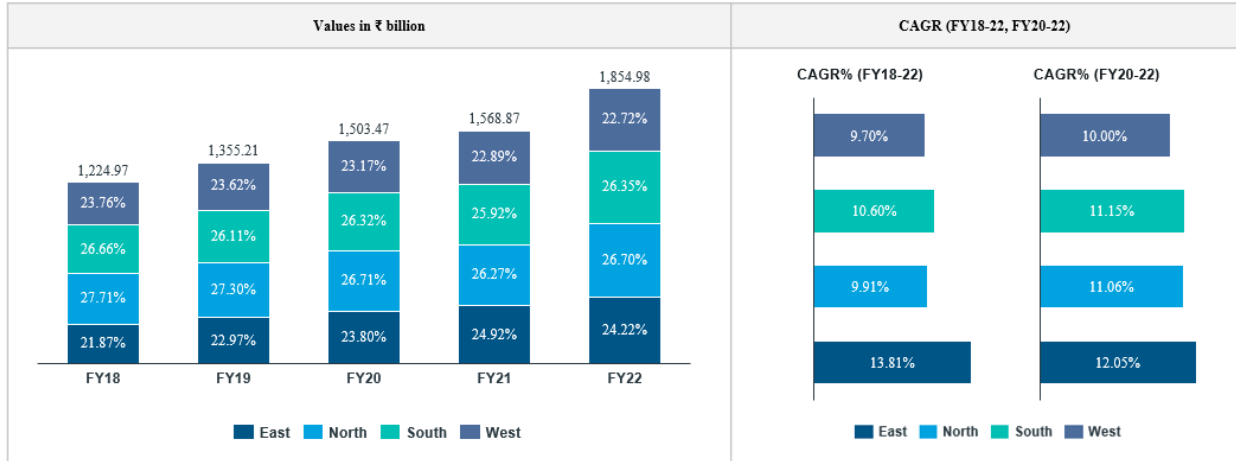


Source: IQVIA Townclass Audit MAT March 2018-22, IQVIA Analysis

Market segmentation – By Zones

The Domestic Sales share by zones in IPM is set out in the chart below. East zone registered the fastest growth over Financial Years 2020-22.

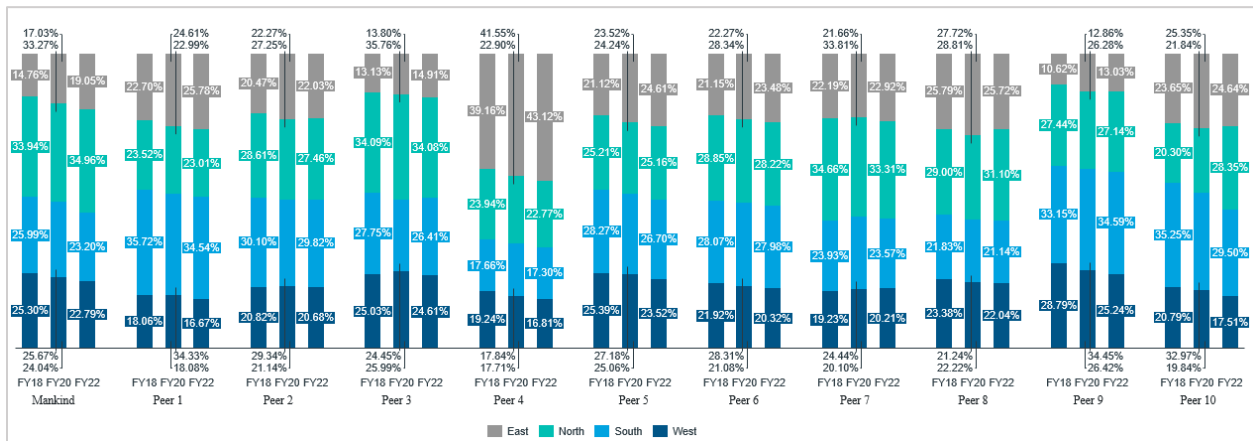
IPM – Domestic Sales share by Zones (₹ billion)



Source: IQVIA Townclass Audit MAT March 2018-22, IQVIA Analysis

The following chart compares the share of Domestic Sales by zones for Mankind and the ten peers for Financial Year 2018, Financial Year 2020 and Financial Year 2022.

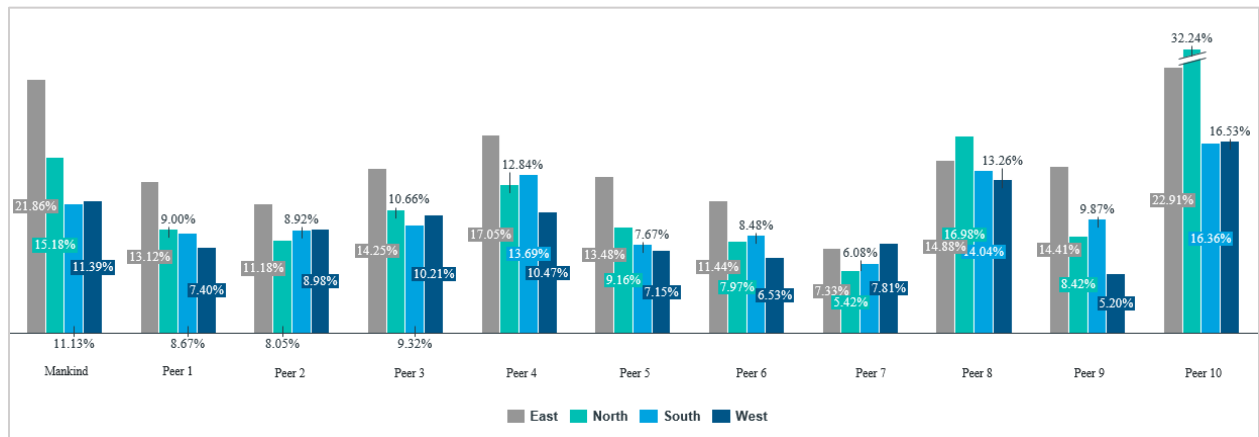
Domestic Sales share by Zones for Mankind and the ten peers (Financial Year 2018, 2020 2022)



Source: IQVIA Townclass Audit MAT March 2018-22, IQVIA Analysis

The following chart compares the growth rate by zones for Mankind and the ten peers between Financial Year 2018 and Financial Year 2022.

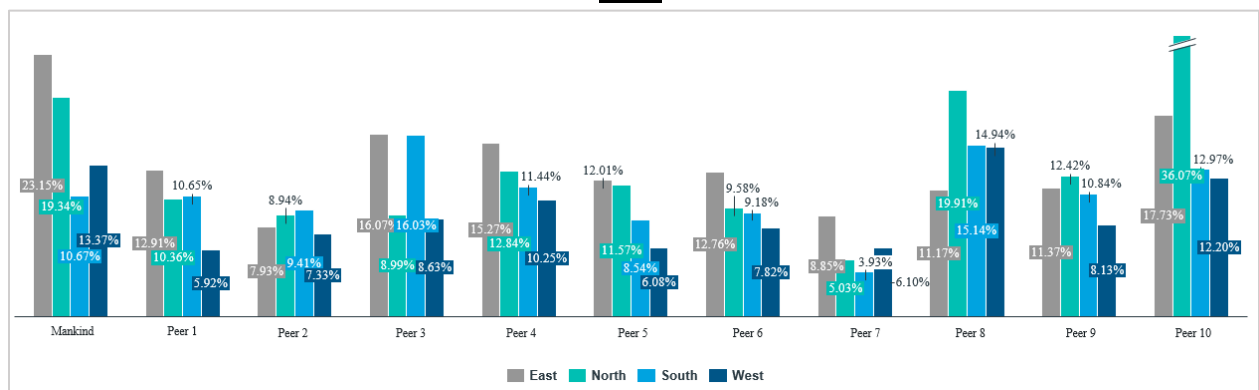
5 Year Domestic Sales CAGR for Mankind and the ten peers by Zones (Between Financial Year 2018 and 2022)



Source: IQVIA Townclass Audit MAT March 2018-22, IQVIA Analysis

The following chart compares the growth rate by zones for Mankind and the ten peers between Financial Year 2020 and Financial Year 2022.

3 Year Domestic Sales CAGR for Mankind and the ten peers by Zones (Between Financial Year 2020 and 2022)



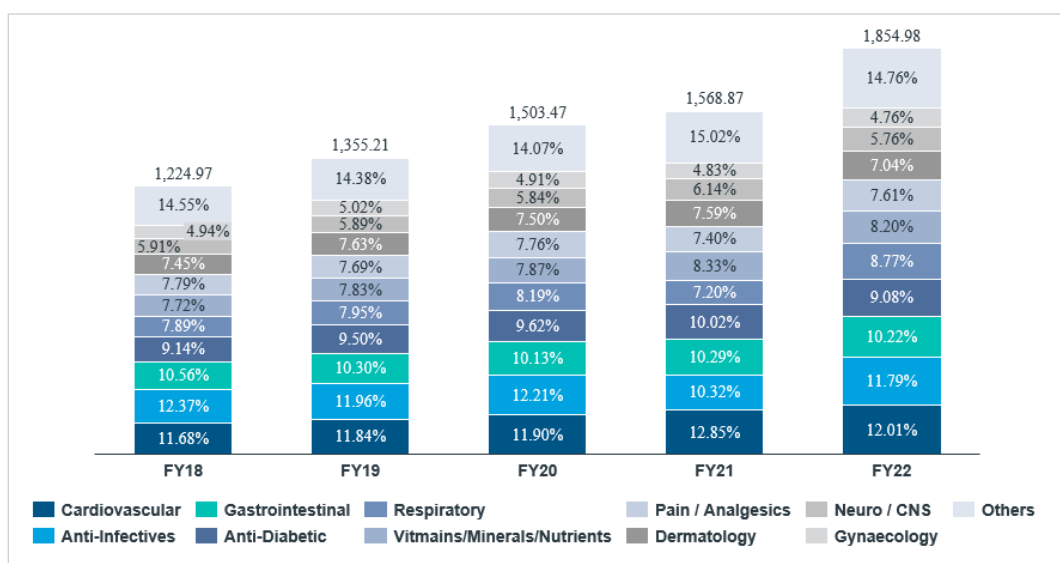
Source: IQVIA Townclass Audit MAT March 2018-22, IQVIA Analysis

Market segmentation – Therapy Area

The top 5 therapy areas in IPM namely – Cardiovascular, Anti-Infectives, Gastrointestinal, Anti-Diabetic and Respiratory, together cover over 50% of the IPM in Financial Year 2022.

Respiratory is the fastest growing therapy area (14.95% CAGR growth over Financial Year 2020-22), followed by Vitamins/Minerals/Nutrients (13.38%), and Cardiovascular (11.59%).

IPM – By Therapy Area (₹ billion)



Source: IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22
 Note: Therapy wise contribution to IPM in % for MAT Mar'18 to MAT Mar'22

The following table sets out the therapy area split of Domestic Sales of the IPM between Financial Year 2018 and Financial Year 2022.

Supergroup	FY18	FY19	FY20	FY21	FY22	CAGR (FY18-22)	CAGR (FY20-22)	CAGR (FY22-27F)
Cardiovascular	143.09	160.41	178.93	201.67	222.82	11.71%	11.59%	12 - 13%
Anti-Infectives	151.53	162.10	183.63	161.98	218.66	9.60%	9.12%	8 - 9%
Gastrointestinal	129.41	139.61	152.31	161.50	189.57	10.01%	11.56%	9 - 10%
Anti-Diabetic	111.94	128.78	144.64	157.20	168.49	10.76%	7.93%	10 - 11%
Respiratory	96.68	107.74	123.11	112.96	162.66	13.89%	14.95%	5 - 6%
Vitamins/Minerals/Nutrients	94.58	106.18	118.30	130.65	152.08	12.61%	13.38%	12 - 13%
Pain / Analgesics	95.39	104.23	116.70	116.14	141.17	10.30%	9.99%	6 - 7%
Dermatology	91.28	103.34	112.71	119.15	130.55	9.36%	7.63%	10 - 11%
Neuro / CNS	72.37	79.88	87.76	96.28	106.89	10.24%	10.36%	11 - 12%
Gynaecology	60.49	68.01	73.82	75.73	88.32	9.92%	9.38%	7 - 8%
Others	178.21	194.93	211.55	235.59	273.76	11.33%	13.76%	12 - 13%
Total IPM	1,224.97	1,355.21	1,503.47	1,568.87	1,854.98	10.93%	11.08%	10-11%

Source: IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22, IQVIA Analysis

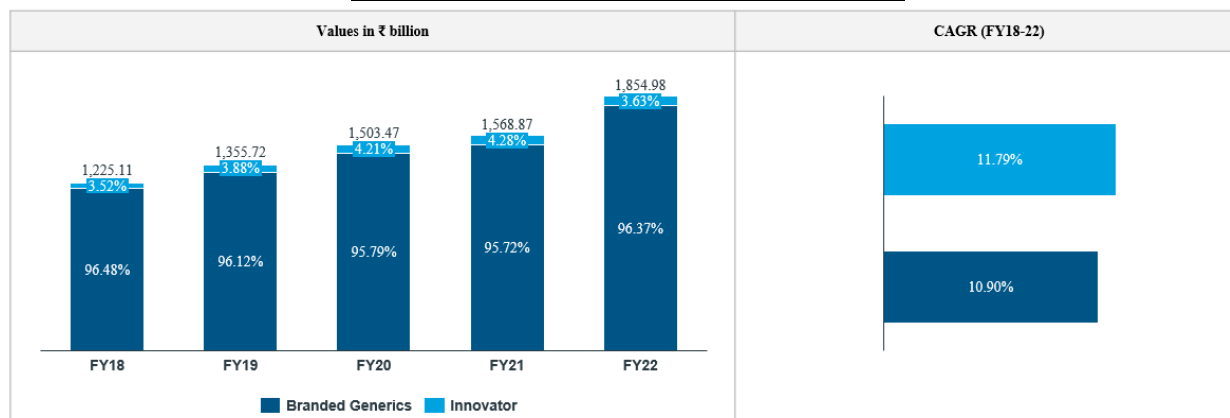
In terms of segmentation of IPM by dosage forms, oral dosage form dominates the market with nearly 73% value share in Financial Year 2022.

Market segmentation – Branded Generics vs Innovator

In developed markets such as the US, innovator drugs have typically contributed a significant majority of the value share (as high as 70% to 80% of the value during Financial Years 2017-21). IPM, on the other hand, is dominated by branded generics that accounted for approximately 96% share of the IPM as of Financial Year 2022. Branded generics by virtue of the competition dynamics, significant brand image, and high availability are likely to continue dominating the Indian market in the near future. Additionally, given that medical insurance penetration is low, product selection is largely driven by doctors and pharmacists unlike in various global markets like the USA and Europe, where product selection is mostly driven by consolidated entities like governments and insurance companies. From such market

conditions arises a need and opportunity for branding. Trade generics led by substitutions and increased reach have created only a marginal shift thus far in the generics space in the Indian market and established pharma companies continue to assess the impact of this sub-segment.

IPM – Branded Generics vs Innovator (₹ billion)



Source: IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22, IQVIA Analysis

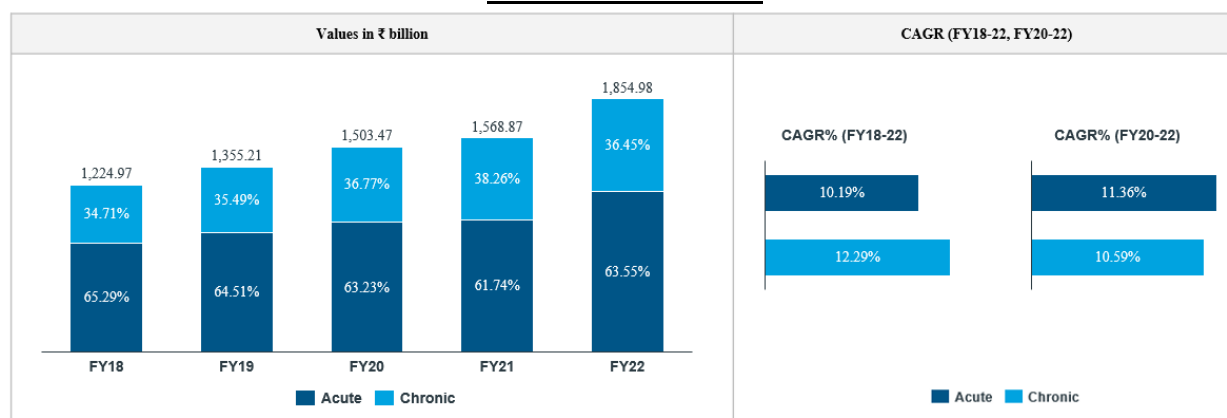
Note: Contribution of branded generics and innovators to IPM in % from MAT Mar'18 to MAT Mar'22

Market segmentation – Acute vs Chronic

The share of chronic therapies (treating chronic illnesses such as hypertension, diabetes, cardiovascular diseases, etc.) in IPM has been range-bound between 34-38% over Financial Year 2018-22. Chronic therapies have grown at a CAGR of 13.80%, 12.29% and 10.59% over Financial Year 2012-22, Financial Year 2018-22 and Financial Year 2020-22, respectively, compared to CAGR of 9.52%, 10.19% and 11.36% for acute therapies (treating acute diseases such as acute pain, gastric infections, etc.) in the same period, respectively.

Chronic therapies have grown at a rate higher than acute therapies on account of increasing prevalence and treatment of chronic lifestyle diseases. As per the Institute for Health Metrics and Evaluation (IHME), prevalence of cardiovascular diseases in India has increased from approximately 54 million in 2011 to approximately 77 million in 2021 and is expected to reach approximately 91 million by 2030. Similarly, for diabetes, prevalence has increased from approximately 53 million in 2011 to approximately 93 million in 2021 and is expected to reach approximately 134 million by 2030. Further, in addition to disease prevalence, in chronic therapies the patients have a higher lifetime value.

IPM – Acute vs Chronic

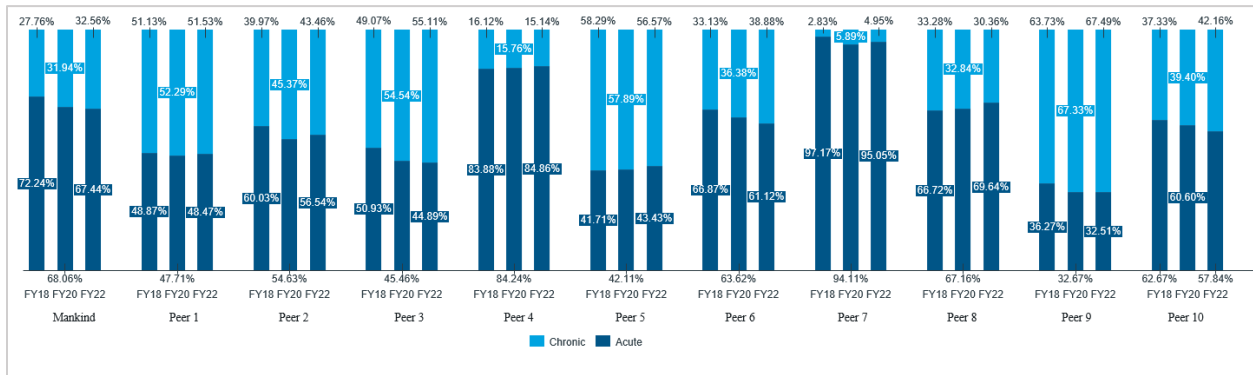


Source: IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22, IQVIA Analysis

Note: Contribution of Acute and Chronic therapies to IPM in % from MAT Mar'18 to MAT Mar'22

The following chart compares the share of Domestic Sales for acute vs chronic therapies for Mankind and the ten peers for Financial Year 2018, Financial Year 2020 and Financial Year 2022.

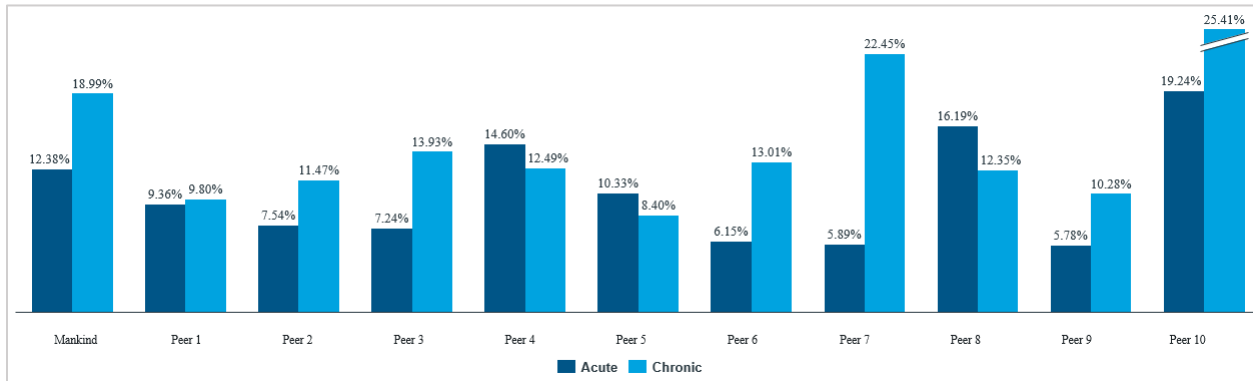
Acute vs Chronic split for Mankind and the ten peers (Financial Year 2018, 2020, 2022)



Source: IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22

The following chart compares the growth rate for acute vs chronic therapies for Mankind and the ten peers between Financial Year 2018 and Financial Year 2022.

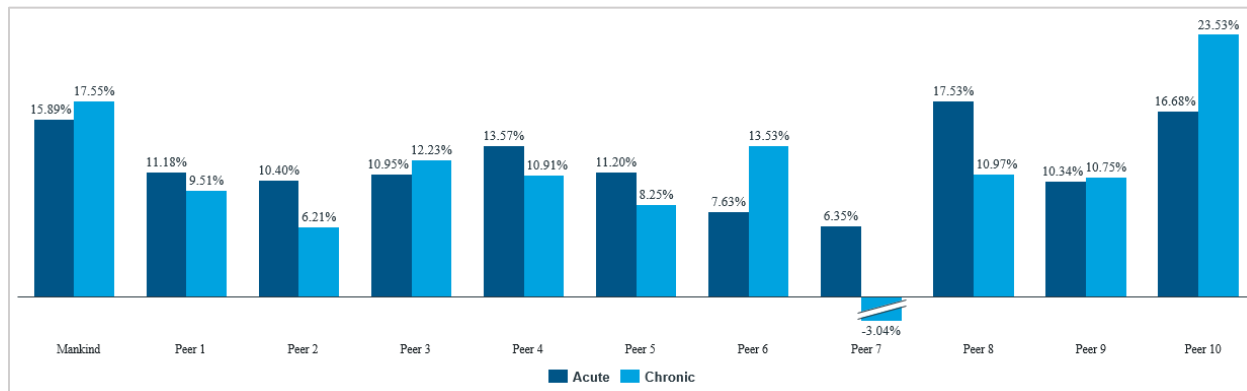
5 year Domestic Sales CAGR for Mankind and the ten peers by Acute vs Chronic split (Between Financial Year 2018 and 2022)



Source: IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22, IQVIA Analysis

The following chart compares the growth rate for acute vs chronic therapies for Mankind and the ten peers between Financial Year 2020 and Financial Year 2022.

3 year Domestic Sales CAGR for Mankind and the ten peers by Acute vs Chronic split (Between Financial Year 2020 and 2022)



Source: IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22, IQVIA Analysis

Key growth drivers for the market

- Rising income levels:** Per capita income of India increased from ₹ 65,538 to ₹ 86,659 between Financial Years 2013-21 indicating a growth of approximately 4.07% CAGR. This has resulted in improved living standards and healthcare awareness. As a result, people across income levels seek high quality healthcare services in terms of better hospitals, medicines, and pharmacy services.
- Government initiatives:** Various schemes have been announced by the Indian government including (a) Ayushman Bharat and (b) the National Commission for Allied, and Healthcare Professions Bill 2021, which aims to create a body that will regulate and maintain educational and service standards for healthcare professionals. In addition to programs and schemes related to core healthcare sector, the government has also launched programs to develop manufacturing infrastructure to support smooth and low-cost raw material supply to pharmaceuticals industry. The PLI scheme is designed to encourage domestic production of 50 key APIs. The list is dominated by anti-infectives, but also includes several cardiovascular drugs. In case of pharmacy services, the number of Jan Aushadhi stores has increased from 100 in CY14 to 7,800 in CY21.
- Increasing life expectancy:** As per the United Nations, the current life expectancy for India in CY22 is estimated at 70.2 years, a 0.3% increase over CY21. Life expectancy for India was 62.3 years in the CY2000 and is expected to reach 74.9 years in CY50. According to National Health Profile, the average age of Indians is expected to be of 34.7 years in CY36 as compared to 24.9 years in CY11. As of CY11, the proportion of population over the age of 60 years was 8% which is set to increase to approximately 11.5% by CY26 and approximately 15% by CY36.
- Growth in lifestyle diseases:** Chronic segment in IPM has grown at a relatively faster rate of 12.29% CAGR compared to the overall IPM (10.93%) over Financial Year 2018-22. Market share of chronic segment increased from 34.71% in Financial Year 2018 to 38.26% in Financial Year 2021 (Source: IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22). Major chronic therapy areas such as cardiovascular and anti-diabetic are expected to continue to grow at 11-13% CAGR over the next five years, driving the growth in IPM (Source: IQVIA Market Prognosis - September 2021, IQVIA Analysis).
- Growth in partnerships and co-marketing agreements:** Partnerships and co-marketing agreements between Indian and foreign companies are expected to increase over the next 5 years, reflecting benefits for both originator and local partners. Such alliances will drive rapid and broader market penetration for new brands or an increase in sales for more established products.
- Increase in health insurance coverage:** The Indian government's Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) health insurance scheme, will drive healthcare access for patients and improve health outcomes over the forecast period. As per Insurance Regulatory and Development Authority of India (IRDAI), over 500 million people (which is approximately 38% of Indian population) were covered under some form of health insurance policy as of 2020. Post the COVID-19 pandemic, there has been increased acceptance of health insurance among people, leading to further increase in insurance penetration. (Source: National Health Profile)

Key Trends in IPM

Review of consolidation trend in IPM

Pharmaceuticals, both formulations and API, have witnessed several Mergers & Acquisitions (M&A) over the last decade. Some of the notable transactions in the domestic formulations market are set out below. A few of these transactions have led to improvement in the ranking (for instance – the Sun Pharma – Ranbaxy transaction led to a 5 place movement in the ranking) in the last 10 years.

Select transactions in IPM

Acquirer	Target	Year of Transaction	Movement in Ranking (based on sales)	
			FY11	FY22
Sun Pharma	Ranbaxy Laboratories	FY15	6	1
Abbott	Piramal Healthcare Solutions	FY11	NA*	2
Torrent Pharma	Unichem Laboratories	FY18	17	9
	Elder Pharmaceuticals	FY14		
Dr. Reddy's Laboratories	Select portfolio of Wockhardt	FY20	15	12
	Select portfolio of UCB	FY16		

Source: Filings made by the respective companies with stock exchanges in India, IQVIA TSA MAT Mar'14, IQVIA TSA MAT Mar'22, IQVIA Analysis

Note: The rankings in the table are only indicative, subject to monthly changes. IQVIA does not take responsibility for the accuracy of the rankings

Note: This list is not exhaustive. It is an illustrative list

*IQVIA maps the sales data for the brands of the acquired company with that of the acquiring company, assuming that these were one entity even historically (pre-acquisition). Given that Abbott and Piramal transaction took place over 12 years back, IQVIA's data sets no longer provide Abbott's rank pre acquisition

Fixed-Dose Combinations (FDC) announcements related impact

As per regulations, FDC medicines contain more than one approved active pharmaceutical ingredient (API), are manufactured as a fixed-dose, and packed in a single dosage form.

In March 2016, the Central Government announced a list of approximately 350 FDCs, following a report submitted by a committee that was set up to evaluate the rationality and safety of fixed dose combinations. However, based on several petitions from drug makers, the resultant impact of such ban was stayed/ deferred. Courts in India directed the Drugs Technical Advisory Board (DTAB) to examine the rationality and safety of the initial set of FDC drugs. In September 2018, based on the recommendations of the DTAB, approximately 325 FDCs were banned which was subsequently increased by an additional 80 FDCs announced in January 2019.

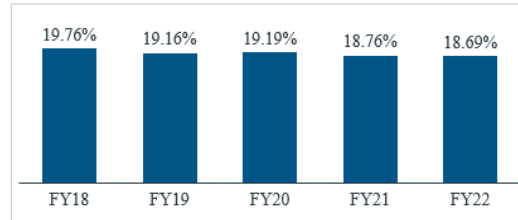
Drug price control regulations (National List of Essential Medicines)

- In India, the National List of Essential Medicines (NLEM) was developed in concordance with the standard treatment guidelines, to take into account (a) priority healthcare needs of majority of the population, (b) to address the disease burden of the nation and (c) increase access to the commonly used medicines at primary, secondary and tertiary healthcare levels.
- The National Pharmaceutical Pricing Authority (Constituted by the Government of India – Department of Pharmaceuticals) has been tasked with periodic review and revision of the ceiling prices of the pharmaceutical products covered under the NLEM. NPPA has periodically issued ceiling prices for several molecules. Periodically, every April, these ceiling prices are revised in line with the changes in the wholesale price index (WPI), to factor the underlying inflation on a year-on-year basis.
- The pricing of pharmaceutical products that are not covered in the NLEM, is determined by the respective pharmaceutical companies, based on several factors (relative benefit of the drug over the current standard of care,

existing competition, etc). For these non-NLEM products, pharmaceutical companies are allowed to increase the prices of drugs by up to 10% every year.

A tabulation of the contribution of NLEM products in IPM sales over Financial Year 2018-22 is set out below.

IPM - Average NLEM contribution in IPM sales (Financial Year 2018-22)



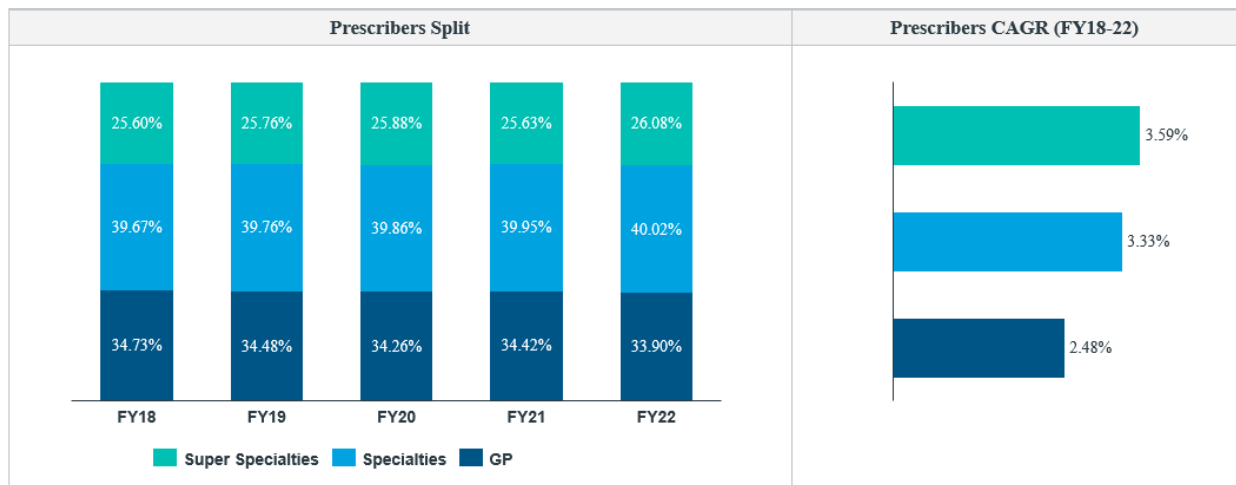
Source: IQVIA TSA MAT Mar'20, IQVIA TSA MAT Mar'22, IQVIA Analysis

Prescriber-related trends in IPM

In IPM, the overall number of prescribers across specialties have grown at a CAGR of approximately 3.11% over Financial Year 2018-22. The split of prescribers in terms of specialty has remained range-bound over the last 5 years, with General Practitioners (GP) accounting for 34-35% of the total prescribers in IPM.

Prescriber trends in India are driven by a form of virtuous cycle or ‘network effect’ as doctors prescribe partly based on what they think pharmacists stock and pharmacists in India are typically small scale with low stocking abilities, favouring to stock the brands which they believe doctors will prescribe or patients will prefer.

IPM – Prescriber split and growth rates (Financial Year 2018-22)

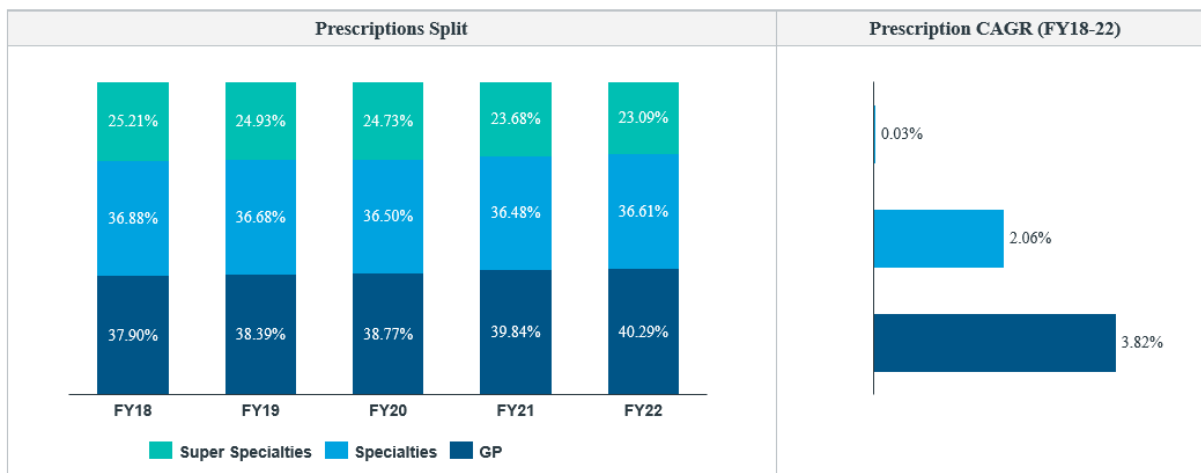


Source: IQVIA Medical Audit 2022

Prescription-related trends in IPM

In terms of prescriptions, prescriptions from GPs account for 38%-40% of the total prescriptions in IPM. The overall prescriptions have grown at a CAGR of approximately 2.25% over Financial Year 2018-22, with prescriptions from GPs growing at a CAGR of approximately 3.82%.

IPM – Prescription trends and growth rates (Financial Year 2018-22)



Source: IQVIA Medical Audit 2022

Trends for key therapy areas

Cardiovascular

- Cardiovascular is the largest therapy area in IPM, with a CAGR of 11.59% over Financial Years 2020-22. It grew 10.49% in Financial Year 2022 over the previous year. Cardiovascular is further expected to grow at 12-13% CAGR over Financial Years 2022-27. (Source: IQVIA TSA MAT Mar'22, IQVIA Market Prognosis - September 2021, IQVIA Analysis)
- Increasing prevalence of hypertension and diabetes are key growth drivers for the growth of cardiovascular therapy area. Prevalence of hypertension and diabetes is increasing in India due to rise in ageing population, rising income levels, rapid urbanization, and adoption of sedentary lifestyle.
- Statins are the largest drug class in Cardiovascular in IPM with a value market share of approximately 19.46% within the therapy area and grew at 11.29% CAGR over Financial Year 2020-22. (Source: IQVIA TSA MAT Mar'22)

Anti-Infectives

- Anti-Infectives is the second largest therapy area in IPM, with a CAGR of 9.12% over Financial Year 2020-22. This therapy area declined by approximately 11.79% in Financial Year 2021 over the previous year, due to COVID-19 induced lockdowns which impacted mobility and in turn- reduced infections. Anti-Infectives are expected to grow at 8-9% CAGR over Financial Year 2022-27. (Source: IQVIA TSA MAT Mar'22, IQVIA Market Prognosis - September 2021, IQVIA Analysis)
- Cephalosporins is the largest drug class with approximately 42.30% value market share, having witnessed a growth of 7.38% CAGR over Financial Years 2020-22. (Source: IQVIA TSA MAT Mar'22)

Gastrointestinal

- Gastrointestinal therapy area includes anti-ulcerants, laxatives, prokinetics, hepatobiliary, anti-inflammatory, pre-probiotics, and anti-spasmodics.
- Gastrointestinal is the third largest therapy area in IPM with a market size of nearly ₹ 189.57 billion and market share of approximately 10.22% as of Financial Year 2022. It has grown at 11.56% CAGR over Financial Years 2020-22 and is expected to grow at CAGR of 9-10% over Financial Year 2022-27. (Source: IQVIA TSA MAT Mar'22, IQVIA Market Prognosis - September 2021, IQVIA Analysis)

Anti-Diabetic

- Anti-Diabetic is the fourth largest therapy area in IPM, with a CAGR of 7.93% over Financial Years 2020-22. It is further expected to grow at 10-11% CAGR over Financial Years 2022-27. (Source: IQVIA TSA MAT Mar'22, IQVIA Market Prognosis - September 2021, IQVIA Analysis)
- In India, over 70 million individuals were estimated to be suffering diabetes in CY21 and the number is expected to exceed 130 million by CY30. (Source: Institute for Health Metrics and Evaluation)
- Factors driving the diabetes growth in India include physical inactivity, dietary alterations, obesity, stress, and genetic aspects
- Oral Anti-Diabetic have a value market share of approximately 73.99% as of Financial Year 2022 while Insulin analogues have value market share of approximately 24.39% in the Indian Anti-Diabetic market. These drug classes have grown at 8.21% and 7.88% CAGR over Financial Years 2020-22. (Source: IQVIA TSA MAT Mar'22)

Respiratory

- Respiratory is the fifth largest therapy area in IPM, with sales of ₹ 162.66 billion in Financial Year 2022. It has grown at a CAGR of 14.95% over Financial Year 2020-22 and is expected to further grow at a CAGR of 5-6% over Financial Year 2022-27. (Source: IQVIA TSA MAT Mar'22, IQVIA Market Prognosis - September 2021, IQVIA Analysis)
- The top two drug classes in Respiratory therapy area are cough preparations and bronchodilator inhalant preparations, which together account for over 50% of the value market share within the therapy area as of Financial Year 2022. (Source: IQVIA TSA MAT Mar'22)

Dermatology

- Dermatology is the eighth largest therapy area in IPM, with sales of ₹ 130.55 billion in Financial Year 2022. It has grown at a CAGR of 7.63% over Financial Year 2020-22 and is expected to further grow at a CAGR of 10-11% over Financial Year 2022-27. (Source: IQVIA TSA MAT Mar'22, IQVIA Market Prognosis - September 2021, IQVIA Analysis)
- Dermatological antifungals and Emollients are the largest drug classes in Indian Dermatology market with value market share of over 30% within the therapy area. (Source: IQVIA TSA MAT Mar'22)

Central Nervous System (CNS)

- Between Financial Year 2020 and Financial Year 2022, CNS therapy area had witnessed a CAGR of 10.36%. Considering rising incidence of disorders in neurological space and increasing number of new drug launches, CNS therapy area is expected to grow at 11-12% CAGR over Financial Years 2022-27. (Source: IQVIA TSA MAT Mar'22, IQVIA Market Prognosis - September 2021, IQVIA Analysis)
- Strokes, headache disorders and epilepsy are some of the leading contributors to neurological disorders in India. Among the known risk factors for neurological disorders, high blood pressure, dietary risks, high fasting plasma glucose, and high body mass index are the leading contributors.

Urology

- Urology is the thirteenth largest therapy area in IPM, with a sales of ₹ 33.30 billion in Financial Year 2022. It has grown at a CAGR of 9.99% over Financial Year 2020-22.

Key measures taken by the government for the healthcare sector

Key budget proposals

- In Budget 2022-23, spending for the health sector was budgeted at ₹ 862 billion, up 16% compared to year-earlier figures.
- In Budget 2022-23, funding earmarked for the flagship Ayushman Bharat ('Healthy India') PMJAY health insurance scheme was increased to ₹ 64 billion.

Ayushman Bharat Program

- In 2018, the government announced the Ayushman Bharat program, designed to deliver on NHP goals. The two-pronged initiative envisaged:
 - Provision of free access to a comprehensive range of primary care services through the transformation of 150,000 public health centres into Health and Wellness Centres (HWCs).
 - Establishing a new health insurance scheme to provide subsidized hospital care for around 100 million of the country's poorest families.
- Both initiatives under the program are being rolled out progressively, while new programs are being designed to build on the two initiatives.
 - In August 2020, Ayushman Bharat Digital Mission (ABDM) was launched to boost the efficiency and transparency of the AB-PMJAY scheme. This involves the rollout of several digital initiatives including electronic health cards, online physician and health facility registries, personal health records, and electronic medical records.

Source: Pradhan Mantri Jan Arogya Yojana website

Production-Linked Incentive (PLI) Schemes

- Department of Pharmaceuticals (DoP) had announced the first PLI scheme in July 2020 with incentives worth ₹ 69.4 billion to boost domestic manufacturing of identified key starting materials (KSMs), drug intermediates, and APIs to attract large investments in the sector and to reduce India's import dependence in critical APIs.
- The investment thresholds for availing the incentives under the PLI scheme are as follows:
 - Fermentation based 4 KSMs / Drug Intermediates – ₹ 4,000 million
 - Fermentation based 10 niche KSMs / Drug Intermediates / APIs – ₹ 500 million
 - Key chemical synthesis based 4 KSMs / Drug Intermediates – ₹ 500 million
 - Other 23 Chemical Synthesis based KSMs / Drug Intermediates / APIs – ₹ 200 million
- The COVID-19 pandemic highlighted both the high degree of reliance of local manufacturers on API imports and the limited capabilities of the domestic industry to produce complex, high-value drugs. In March 2021, the DoP announced a new PLI scheme, with incentives worth ₹ 150 billion, to encourage local investment in both these areas.
- The incentives will be given in accordance with the respective participant's ability to meet investment and sales growth thresholds. Moreover, participants will be divided into three groups based on current global revenues – ₹ 110 billion worth of funds will be awarded to group A companies (global revenues of ₹ 50 billion or more), with those in groups B (global revenues of ₹ 5-50 billion) and C (global revenues of less than ₹ 5 billion) sharing ₹ 22.5 billion and ₹ 17.5 billion, respectively. Incentives will be based on a percentage of annual increases in company revenues for three product types:
 - Category 1 – complex generics, patented drugs, cell-based or gene therapy drugs and orphan drugs.
 - Category 2 – APIs, KSMs and intermediates.
 - Category 3 – repurposed drugs, including autoimmune products, antidiabetics, anti-infectives, antiretrovirals, cancer, cardiovascular and psychotropic drugs.

Source: Department of Pharmaceuticals

Subsidized Medicine Schemes

- The COVID-19 pandemic has led to an increased demand for low-cost generics dispensed by Indian government run Jan Aushadhi outlets. At ₹ 4.8 billion, sales from these outlets through the nine months to 31 December 2020 increased 60% compared to year-earlier figures.
- Less than 100 Jan Aushadhi stores were operational in CY14. The number has increased to 7,800 in June 2021. The range of drugs dispensed by Jan Aushadhi outlets has also increased to 1,250 in June 2021.

Impact of the Pandemic on IPM

- The pandemic took a heavy toll on the Indian economy in 2020 and the second wave of COVID-19 infections triggered further disruption of the Indian pharmaceutical market.
- Demand continued to vary significantly by therapeutic area during 2021, with declines in demand for some of the non-COVID fields offset by strong COVID-19 related therapeutic revenues. However, the unprecedented speed at which COVID-19 vaccines were developed and rolled-out have increased the possibility the market growth will resume to pre-pandemic levels, post 2022.
- The COVID-19 pandemic also led to a rapid increase in the use of digital and virtual communication tools – both for patient consultations as well as for medical detailing. Even prior to the onset of COVID-19, digital health had been slowly becoming part of the therapeutic paradigm alongside traditional medicines. However, the COVID-19 pandemic rapidly thrust patients and physicians into a world of digital health tools. When lockdowns severed several Indian patients from face-to-face physician interaction for longer periods of time, care provision did shift to tele-consultations.
- Physicians who were hitherto not accustomed to consult patients online, embraced e-consultation as mobility-related restrictions in India reduced patient footfalls. Pharmaceuticals companies also developed in-house platforms / partnered with online platforms for (a) medical detailing and (b) provide patient support (in terms of ongoing adherence campaigns, consultations, peer group conversations, etc.).

Overview of the Indian Consumer Healthcare Market

The consumer healthcare market in India primarily comprises categories such as (a) vitamins and dietary supplements, (b) OTC products across varied therapy areas (anti-tussive, antacids / gastroenterology, dermatology, etc.), (c) condoms and other contraceptive products, and (d) herbal/ traditional products. The consumer healthcare segment has witnessed and is expected to continue to witness value-growth in the range of 10%-11% on account of the following growth drivers:

Demand-side drivers

- New lifestyle patterns increasing prevalence of disorders that can be treated / managed by consumer healthcare products
- Rising consumer awareness about preventive healthcare and limited availability of prophylactic / preventive products within allopathy
- Rising income and willingness to spend on wellness
- Rising cases of lifestyle diseases and use of such products as adjuvants
- Increasing awareness / inclination within Indian population to use products labeled as “natural”
- Brand loyalty / pull leading to recall and high growth (consumer brand recognition also drives prescription growth and vice versa)

Supply-side factors / initiatives by pharmaceutical companies

- Efforts on part of consumer healthcare companies to generate evidence (through scientific papers / RWE studies) on the benefits of consumer healthcare products

- Aggressive marketing and category creation (for instance – intimate hygiene) by existing players as well as several start-up companies that have entered consumer healthcare space
- Pharmacy retail reach to push consumer products (e.g., POS counter has high potential for contraceptives)
- Product innovation in terms of dosage forms (for instance- sprays) and introduction smaller pack sizes
- Emergence of new channels (e-pharmacies, dedicated channel players focused on wellness and nutrition). The prevalence of self-medication has increased in the wake of the COVID-19 pandemic – especially among patients seeking refills of drugs for the treatment of chronic conditions.
 - The number of households using e-pharmacy services, which rose by a factor of 2.5 during the initial COVID lockdown, had reached almost nine million by May 2020 according to a study by the Federation of Indian Chambers of Commerce and Industry (FICCI). A further increase in e-pharmacy platform traffic has been observed during the second wave of COVID infections (*Source: IQVIA Market Prognosis - September 2021*)
 - The e-pharmacy boom has attracted major new investors in the sector and these increased partnerships indicate future growth potential.

For the purposes of this section, the key consumer healthcare segments, in which Mankind operates, are set out in the table below.

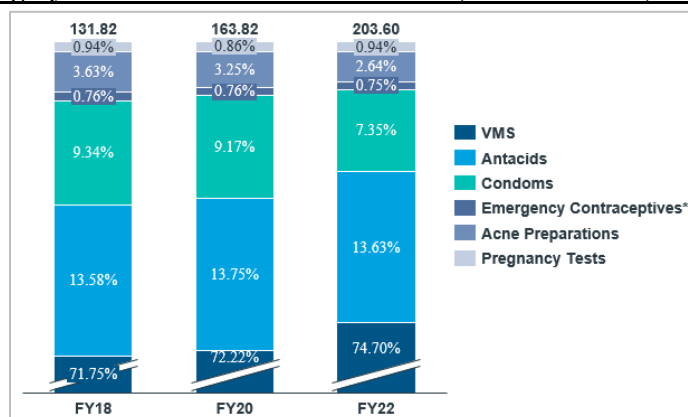
S. No.	Category	Sales in ₹ billion (FY22)	Category CAGR (FY18-22)	Category CAGR (FY20-22)
1	Condoms	14.96	4.97%	-0.23%
2	Acne Preparations	5.38	2.95%	0.54%
3	Emergency Contraceptives*	1.53	11.11%	10.85%
4	Antacids	27.75	11.58%	11.00%
5	Vitamins and Dietary Supplements	152.08	12.61%	13.38%
6	Pregnancy Tests	1.91	11.49%	16.61%

Source: IQVIA MAT March 2018-22 OTC Audits (For Condoms, Acne Preparations, Antacids); IQVIA TSA MAT March'20, IQVIA TSA MAT March'22 (For VMS, Pregnancy Tests, Emergency Contraceptives)

*For emergency contraceptives, Levonorgestrel subgroup has been considered from IQVIA TSA MAT March'22, IQVIA TSA MAT March'20

Taken together this represents a Covered Market/s of ₹ 203.60 billion (*Source: IQVIA MAT March 2018-22 OTC Audits (For Condoms, Acne Preparations, Antacids); IQVIA TSA MAT March'20, IQVIA TSA MAT March'22 (For VMS, Pregnancy Tests, Emergency Contraceptives)*) that has grown at a CAGR of approximately 11-12% between Financial Year 2020 and Financial Year 2022.

Category-wise sales for Financial Year 2018, 2020 and 2022 (₹ billion)



Source: IQVIA MAT March 2018-22 OTC Audits (For Condoms, Acne Preparations, Antacids); IQVIA TSA MAT March'20, IQVIA TSA MAT March'22 (For VMS, Pregnancy Tests, Emergency Contraceptives)

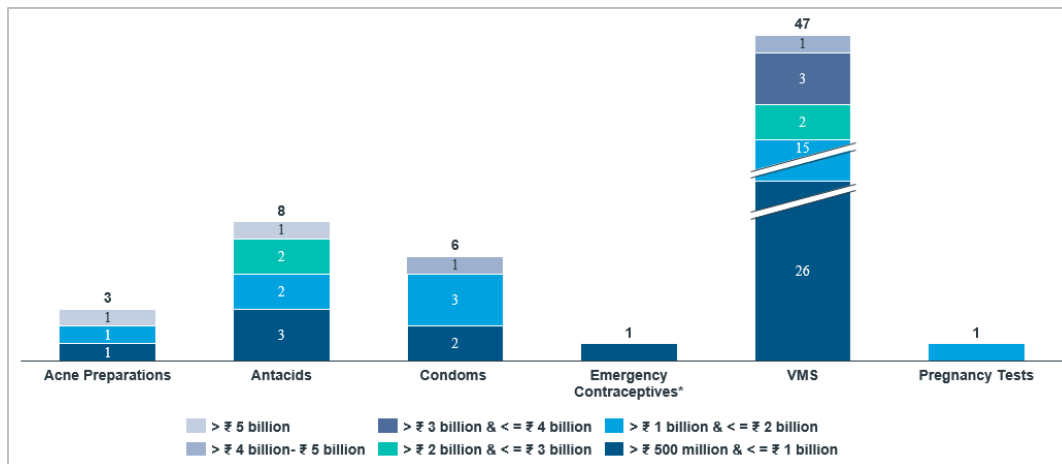
*For emergency contraceptives, Levonorgestrel subgroup has been considered from IQVIA TSA MAT March'22, IQVIA TSA MAT March'20

Key success factors in consumer healthcare

Pharmaceutical companies that have established large brands (INR 500 million and above in annual sales) have typically demonstrated the following key success factors:

- Chemist engagement (including product detailing to chemists)
- Continual engagement with prescribers
- Significant spend on mass promotion (through both mass media (including digital media) as well as targeted campaigns at clinics, residential complexes, as appropriate)

Total number of brands across categories, split by sales generated, in Financial Year 2022



Source: IQVIA MAT March 2022 OTC Audits (For Condoms, Acne Preparations, Antacids); IQVIA TSA MAT March'20, IQVIA TSA MAT March'22 (For VMS, Pregnancy Tests, Emergency Contraceptives)

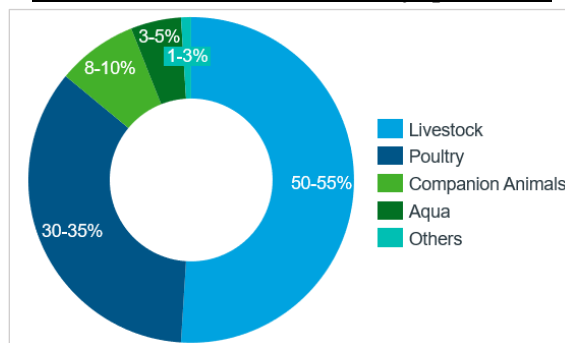
*For emergency contraceptives, Levonorgestrel subgroup has been considered from IQVIA TSA MAT March'22, IQVIA TSA MAT March'20

Overview of the Indian Animal Health Market

Note: There does not exist an industry standard / industry recognized data-set that provides the size, growth trends, competitive landscape of animal health market in general and medicines for animals in particular. The information contained in this section is based on information available in public domain (including but not limited to annual reports of companies that market animal health related products, analyst reports as well as select publications of Government of India and the Indian Federation of Animal Health Companies (INFAH)). Accordingly, the data-points stated in this section are not based on a single data-set.

The Indian animal healthcare market was estimated at ₹ 55-60 billion in CY21 and is expected to grow at 8-10% over the next 2-3 years. The share of species within the animal health market is set out in the chart below:

Animal health market in India by species (%)



Source: Indian Federation of Animal Health Companies

In terms of therapy areas, 4 key therapy areas constitute nearly the entire animal health market. These are:

- Prescription Nutrition: 35-40%
- Parasiticides: 18-22%
- Anti-bacterials: 15-20%
- Biologic products (including vaccines): 13-15%
- Others: 5-10%

Companion Animals segment currently holds a low share of approximately 8-10% within the animal health market and was estimated at ₹ 6 billion in CY21. However, it is the fastest growing as well as evolving segment within the Animal Health market with parasiticides, vaccines, and anti-infectives being significant contributors.

Growth drivers for the Animal Health market

- **Rise in prevalence of Zoonotic diseases:** Incidence rate and prevalence of zoonotic diseases have increased in India. This is most likely due to demographic changes, encroachment of land, and agricultural practices. Zoonotic diseases such as bovine encephalopathy and foodborne, vector borne, and waterborne zoonotic diseases have witnessed an increase in the recent past.
- **Increase in pet adoption and willingness to spend on pets:** Pet ownership and awareness about diseases related to animals witnessed a continual growth over the past 5 years; this was especially led by COVID-19 since stringent lockdowns and resultant seclusion led to an increased willingness to adopt pets. Pet-parents / pet-owners are increasingly considering pets to be “part of the family” and are therefore willing to spend on pet-care products to maintain or improve the pet’s health (including veterinary pharmaceuticals).
- **Rise in integration of IoT with animal health monitoring solutions:** Internet of Things (IoT) is used for animal health care monitoring, which is important in order to reduce the risk of infection among animals. Animal health monitoring and proper animal husbandry can be conducted with this technology. Usage of biosensors and wearable technologies is becoming increasingly important for animal health management. These devices can provide timely diagnosis of diseases in animals.