

MANAGEMENT DISCUSSION & ANALYSIS

MACRO-ECONOMIC REVIEW

GLOBAL ECONOMY

In 2017, the global economy witnessed a comeback with the strongest growth since 2010. According to the International Monetary Fund's (IMF's) World Economic Outlook, April 2018, the growth of developed economies was backed by improvement in investments and manufacturing output, while key developing economies, including Brazil, China, and India, posted strong momentum.

In the first quarter of 2017, export and investment growth propelled the US economy at an astounding pace. Thereafter, the recovery in household spending, healthy labor market and tax cuts helped maintain momentum in the economy. Given the strong recovery, the IMF has revised its growth forecast for the US. The US economy is now expected to gain from higher external demand and the macroeconomic impact of the tax reform.

The UK experienced a declining economy due to lower-than-expected growth in the first two quarters. The IMF estimates the economy growth to further decline to 1.8% in 2017. Softer growth in private consumption, currency depreciation, and the looming uncertainty over the UK's new economic relationship with the European Union (EU) after the Brexit phenomenon are factors responsible for this slowdown.

Overall, the IMF has predicted that the decline in tax revenues and tax reforms in the US will be responsible for carving a positive growth trajectory for the major economies in 2018 and 2019.

The US growth forecast has been raised from 2.3% to 2.7% in 2018 and from 1.9% to 2.5% in 2019. In emerging and developed economies like Europe, economic activity in 2018-19 is projected to remain stronger than previously anticipated. Moreover, the advanced Asian economies are particularly expected to deliver stronger growth. The emerging and developing economies in Asia are expected to grow at around 6.5% over 2018-19, broadly at the same pace as in 2017

Global growth pattern

	2017	2018 (P)	2019 (P)
World Output	3.8	3.9	3.9
Advanced Economies	2.3	2.5	2.5
US	2.3	2.9	2.7
Euro Area	2.3	2.4	2.0
Japan	1.7	1.2	0.9
UK	1.8	1.6	1.5
Other Advanced Economies*	2.7	2.7	2.6
Emerging and Developing Economies	4.8	4.9	5.1
China	6.9	6.6	6.4
Brazil	1.0	2.3	2.5

P: Projections

*Excludes the G7 – Canada, France, Germany, Italy, Japan, the UK, the US, and eurozone

(Source: International Monetary Fund)

Though the outlook for the global economy remains optimistic, the World Trade Organization has declared that the trade barriers getting erected by major economies could impact growth expectations.

INDIAN ECONOMY

The Indian economy witnessed temporary headwinds owing to the Goods and Service Tax (GST) transition in FY2017-18. However, the economy gained momentum and emerged as one of the fastest growing economies with a Q4 Gross Domestic Product (GDP) growth of 7.7% compared to the 7.2% and 6.5% growth in Q2 and Q3 of FY2017-18, respectively. Gross

Value-Added (GVA) growth, another economic indicator, stood at 7.6% for FY2017-18, indicating a steady growth potential for the economy in the next fiscal. Transformational reforms such as the GST and structural decisions such as demonetization have improved investments and supported economic growth.

Due to higher growth in manufacturing, the farm and construction sectors have provided an impetus to the domestic economy. According to the World Bank's Global Economic Prospects report, India's GDP is expected to rise by 7.4% in FY2018-19 and 7.8% in FY2019-20.

INDUSTRY REVIEW
GLOBAL PHARMACEUTICAL INDUSTRY

Global healthcare spending is estimated to increase at an annual rate of 4.1% during 2017-2021, up from just 1.3% during 2012-2016.

Factors such as ageing and increasing population in key economies, developing markets expansion, advanced medical treatment needs and rising labor costs will contribute to an increase in the spending. Thus, combined healthcare spending in the world's major regions is expected to reach \$8.7 trillion by 2020, up from \$7 trillion in 2015. (Source: 2018 Global Health Care Outlook: The evolution of smart health care by Deloitte)

Future drivers of global pharma growth

Gene therapies	Digital health	Specialty medicines
<div data-bbox="268 600 427 762" data-label="Image"> </div> <p>Since the past few years, scientists have been developing a new generation of cell-based therapies, gene therapies, and regenerative medicines. Some of these treatments have been passing clinical trials and gaining regulatory approval. These therapies and medicines go beyond the conventional definition of a drug — they are engineered personally for each patient and some offer curative results with a single administration.</p> <p>In 2018, it is forecasted that five to eight next-generation biotherapeutics will be approved and launched. Over the next five years, 20% of the 40 to 45 New Active Substances (NAS) projected to be launched each year will come from this group of drugs.</p>	<div data-bbox="718 600 877 762" data-label="Image"> </div> <p>In recent years, the pharmaceutical industry is witnessing a proliferation of digital health tools, including mobile health apps and wearable sensors. With the promise of improving human health, these tools have the potential to change the face of the pharma industry. An increasing number of clinical practitioners are using various digital health apps while treating patients.</p> <p>In 2018, approximately 340 digital health efficacy studies will be completed and published, continuing the trend of building strong scientific evidence to support digital tools and interventions. These studies will span a broad range of diseases. However, they will mainly focus on large-population chronic conditions such as diabetes and heart diseases, which can be avoided and kept in check through self-management, behavioral support or medical intervention.</p>	<div data-bbox="1168 600 1327 762" data-label="Image"> </div> <p>The past decade has seen a sustained shift in the focus of new medicines towards specialty pharmaceuticals. These healthcare products help treat chronic, complex or rare conditions. Driven by new therapies and the slowing or declining growth of traditional medicines, specialty share of global spending has risen from 19% in 2007 to 32% in 2017. In the 10 developed markets, specialty represented 39% of spending in 2017, totalling to \$297 billion, led by five major European countries (France, Germany, Italy, Spain, and the UK) and the US, all having a specialty share above 41%.</p> <p>In 2018, specialty spending in developed countries will reach \$318 billion, representing 41% of market spending in these countries, up from \$172 billion in 2013. Oncology and autoimmune biologics lead the specialty categories, accounting for 46% of 2017 spending and 68% of projected growth in the next five years.</p>

(Source for growth drivers: IQVIA Institute, 2018 and Beyond: Outlook and Turning Points)

GLOBAL MARKETS REVIEW

US

The US pharma market recorded a nominal drug spending of \$452.6 billion in revenue in 2017. Despite the US administration's continuing public scrutiny of drug pricing, the industry recorded a slight growth of 1.4% in nominal spending over the previous year.

In the US pharma market, pricing pressure is fuelled by factors such as increasing competition, payer consolidation and restrictive reimbursement policies. This is further aggravated by cost control tools such as exclusionary formularies and price protection clauses. As a result, the health plan designs are changing and patients may experience a possible increase in both premiums and out-of-pocket payments for their branded medications.

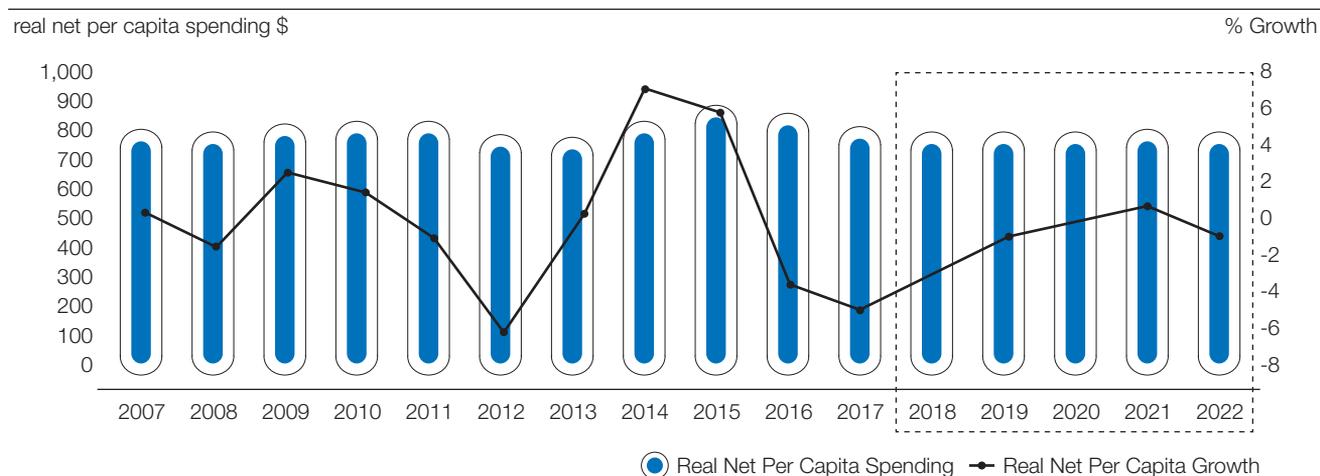
Spending on traditional medicines has declined primarily due to patent expiries and associated losses of brand exclusivity, as well as a general shift in the focus of medical innovation towards next-generation medicines. In the US market, innovation and

technological advances have fast-tracked the growth of specialty medicines; they account for nearly half of the market's current medical spends. According to IQVIA, the largest proportion of new medicines launched in the last five years has been specialty drugs. Also, specialty share of spending has risen, while traditional net medicine spending has declined by more than \$133 per person over the past decade. In non-retail settings, specialty drugs represent 60% of invoice spending and 2.3% of standard unit volumes.

OUTLOOK

Since 2015, the aggregate adjustment of normalized medicine spending has declined due to a strong economy and the rising off-invoice discounts and rebates, slowing overall medicine spending growth. According to the IQVIA projection, the US population's real net per capita spending on medicines will decline in 2018 and remain unchanged at almost \$800, until 2022. Any subsequent growth in the US pharma market will be primarily driven by the large number of new medicines, many of which will be specialty and orphan drugs.

Exhibit 14: U.S. Real Net Per Capita Drug Spending and Growth

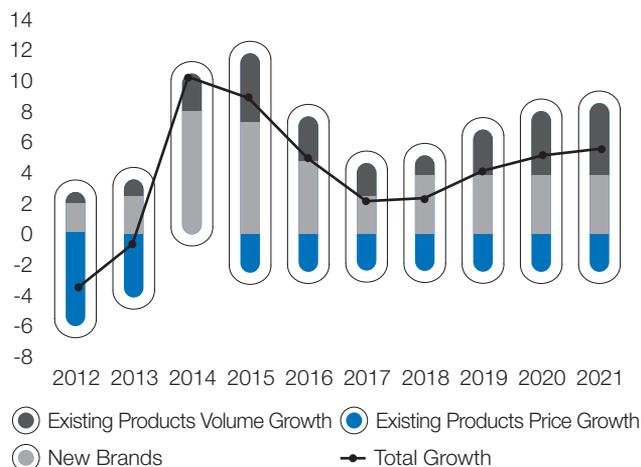


Source: IQVIA Market Prognosis Sep 2017; US Census Bureau; US Bureau of Economic Analysis (BEA), Dec 2017; IQVIA Institute; Feb 2018

Notes: Real medicine spending reflected in 2009 \$

According to Quintiles IMS, net revenue from all types of prescription medicines will grow at 2-5% over the next five years, driven by new products and the wider use of existing medicines. However, this may be offset by reduced pricing of existing drugs. The volume growth for existing products in the market is expected to be highly variable, from 1.1% contribution in 2018 to 4.5% in 2021, as previously launched drugs continue to grow, and generic uptake from patent expiries lift volume. 40-45 new innovative products are expected to be launched per year, from 2018 through 2021, contributing to 3.5-4.5% growth per year.

US Market: Net Medicines Revenue Growth and Contribution by Type



Coface India estimates that in 2018, spending on prescription drugs is set to grow by 4% for the top five EU countries to reach almost €126 million. This is explained by the increasing presence of specialty drugs (more than a third of the total sales), even though payers are reluctant to pay the pharmaceutical companies' list prices. Most importantly, there could be some modest increase in medicine spending above the base-case scenario if the UK Government continues its commitments towards innovative drug access.

Moreover, after Brexit, the UK will require to make major readjustments to the existing and pending European initiatives, ranging from clinical trials regulation to health technology assessment and from digital health to modernized pathways to medicine authorization.

PHARMERGING MARKETS

The decline in the US spending on medicines is expected to be balanced by the growth in the pharmerging markets. The contribution from these markets to global medicine spending has risen from 13% in 2007 to 24% in 2017, almost doubling in a decade. In total value, this accounts for an increase in spends from \$81 billion in 2007 to \$270 billion in 2017, growing at an average rate of 12.8%, which is estimated at more than twice the global growth rate.

This rise has been fuelled by the various governments' efforts to increase healthcare access by reducing medicine costs and the efforts of the global drug companies to expand their reach and scale through tie-ups and partnerships with local companies.

The use of and spending for generic medicines is higher in the pharmerging markets. With self-paying consumers buying these medicines, there is a directly proportional relationship between medicine spending growth and the overall economic growth.

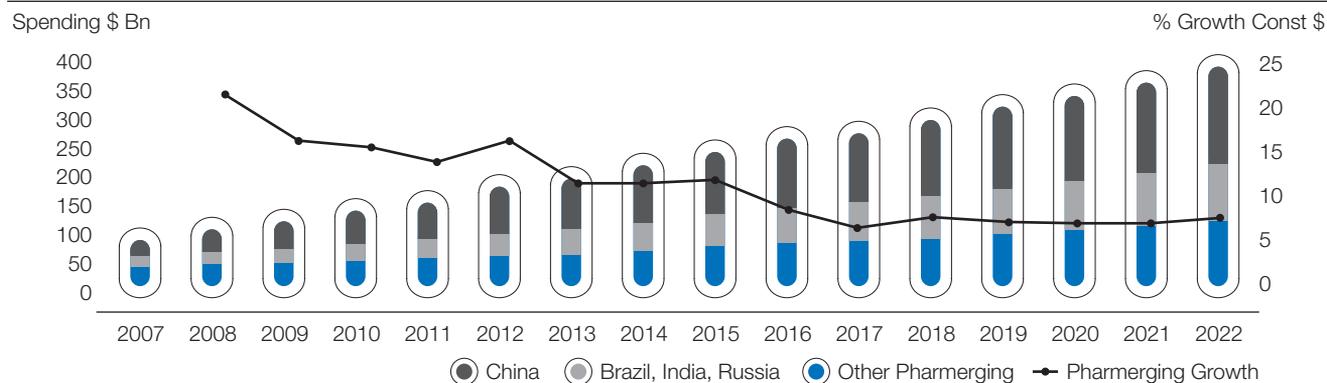
EUROPE

Pharma spending in Europe was \$154.4 billion in 2017 and is expected to increase to \$170-200 billion in 2021. However, the outcome of the UK's negotiations with the EU will create medium-term headwinds for pharma companies, owing to the uncertainty around pharma planning and business strategies. In contrast, some countries in the region, such as Italy and Spain, which are not purely tender-driven markets, have witnessed steady growth in pharma spends owing to the growth in generic sales.

OUTLOOK

According to QuintilesIMS, growth in the five major markets of the EU (France, Germany, Italy, Spain, and the UK) is mixed with a projected CAGR, through 2018, of 2-5% each for Germany and Italy, better CAGR of 4-7% for the UK, but negative to minimal growth for France and Spain.

Pharmerging Spending and Growth



(Source: IQVIA Market Prognosis, September 2017)

OUTLOOK

According to IQVIA, pharmerging markets are expected to experience significant changes. The sale of generic medicines is expected to grow by 7-8% in 2018, down from the 9.7% CAGR over the prior five years. FY2017-18 will mark the third year of less-than-10% growth.

Pharmerging markets are forecasted to grow by 6-9% to \$345-375 billion in the next five years. China, the largest pharmerging country, is projected to contribute \$145-175 billion at a tepid growth of 5-8%.

INDIA

India has among the lowest spends on healthcare, at about 4.5% of the GDP against the global average of 9%. This gap has prompted the Government of India to actively focus on policies that provide impetus to the healthcare sector.

The Government has taken a hallmark step of launching a National Health Protection Scheme (NHPS) to cover over 100 million poor and vulnerable families. The scheme provides an annual coverage of ₹5 lakh per family for secondary and tertiary care hospitalization.

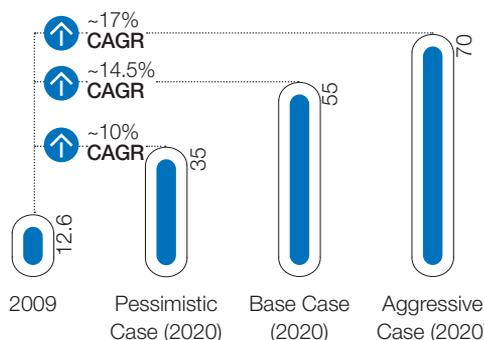
Such measures by the Government saw India attract a record Foreign Direct Investment (FDI) of \$747 million in the healthcare sector during the fiscal. Further, spending on medicines is projected to grow by 9-12% in the next five years compared to China's 5-8%, according to IQVIA. This growth will thrust India forward to reach the list of the Top 10 countries in the ongoing financial year.

While this domestic growth is a massive opportunity for the Indian domestic pharma industry, it is also well-poised to serve the international markets. India is the largest maker of generic medicines, with the Indian pharma industry contributing to 20% of the global generics exports. By 2020, the Indian industry revenue is expected to touch \$55 billion.

New drugs being brought under Drug Price Control Orders (DPCO); a price cap on stents, implants, and procedures; and an increasing number of licenses being withdrawn by the regulators are among the challenges faced by the industry.

Projected size of Indian pharma market

(\$ billion)



(Source: India Pharma 2020: Propelling access and acceptance by McKinsey)

Government of India's healthcare focus

- As per the Economic Survey, child and maternal malnutrition are the major causes of deaths in India. Neonatal disorders and nutritional deficiencies, as well as diarrhoea, lower respiratory infections and other common infections, are responsible for maternal and child malnutrition. The Government of India has worked towards implementing several programs and has also initiated new policy interventions to improve the health and nutritional status of women and children.
- Under the National Health Mission (NHM), the Union Government has rolled out the National Free Diagnostic Service Initiative to provide essential diagnostic services in public health facilities. The Government has approved an amount of ₹7,590 million for the initiative for 29 States/ Union Territories (UTs) in FY2017-18.
- The Government of India unveiled 'Pharma Vision 2020' aimed at making India a global leader in end-to-end drug manufacturing. The approval time for new facilities has been reduced to boost investments. Further, the Government introduced mechanisms such as the DPCO and the National Pharmaceutical Pricing Authority to make medicines affordable and easily available.

COMPANY REVIEW

Aurobindo is one of the largest vertically integrated pharmaceutical companies in India. It has carved a niche for itself in developing high-quality Active Pharmaceutical Ingredients (APIs) and finished-dosage forms. The Company is the market leader in semi-synthetic penicillin. Moreover, it has established a firm foothold in key therapeutic segments such as anti-biotics, Central Nervous System (CNS), cardiovascular (CVS), anti-retrovirals, diabetics, anti-allergies and gastroenterology, among others.

Aurobindo's state-of-the-art manufacturing facilities have been approved by the US Food and Drug Administration (FDA), UK Medicines and Healthcare products Regulatory Agency (MHRA), Medicines Control Council-South Africa (MCC-SA), EMA and ANVISA-Brazil for both APIs and formulations. Leveraging on this, the Company has Joint Ventures (JVs) and strategic alliances with 56 subsidiaries.

Aurobindo exports to over 150 countries across the globe, with around 90% of its revenues being derived from international operations. In the last fiscal, the Company focused on increasing the complexity and diversity of the portfolio, while retaining the core business and augmenting capability and capacity to strengthen it. The Company is now addressing the prescription, biopsy and consumer healthcare [Over-the-Counter (OTC) and Dietary Supplements] segments.

From a long-term growth strategy perspective, the Company is working on differentiated technologies and segments, including biologics, vaccines, and peptides.

KEY STRENGTHS

1) Scale, Diversity, and Leadership

- Among the Top 3 companies in over 60% of commercial portfolio in the US market in terms of prescriptions as per IQVIA QTR Mar 2018
- A large US portfolio comprising 478 Abbreviated New Drug Applications (ANDAs) filed, of which 327 received final approval, 34 received tentative approvals including 11 ANDAs approved under PEPFAR, and 117 are under review
- A strong foothold in the US and EU
- Extensive product portfolio and pipeline
- Experienced and forward-looking leadership team
- Wide pool of committed talent

2) Robust Operations

- Large manufacturing facilities inspected and approved by the USFDA, European Medicines Agency (EMA), and other regulators
- Dedicated and cutting-edge global Research and Development (R&D) centres for diverse technology platforms and APIs
- Focus on complying with quality and Environment, Health, and Safety (EHS) standards
- Speed and effectiveness in execution

3) Patient Focus

- Unwavering commitment to providing access to high-quality, low-cost generics to patients globally
- Continuous effort to maximize patient reach
- Continue to offer a broad, cost-competitive portfolio for all consumer needs

FY2017-18 segment-wise revenue contribution

(%)



FORMULATIONS BUSINESS

Aurobindo manufactures generic formulations that are sold across the US, Europe markets and Growth Markets. The Company also sells Antiretroviral Medicines (ARV) in various Growth Markets by participating in global tenders floated by various international bodies.

Primarily focused on developing oral and injectables generic formulations, Aurobindo is building capabilities for next level complex R&D products. Nearly 90% of the Company's revenue is driven by its international operations. With 20 manufacturing facilities in India, three manufacturing facilities in the US, one in Brazil and one in Portugal, Aurobindo has gained considerable market share in the international formulations market.

US formulations

New launches and a well-diversified portfolio have enabled Aurobindo to deliver steady growth in its US business. The Company launched 38 products, including six injectables, in FY2017-18 in the US market.

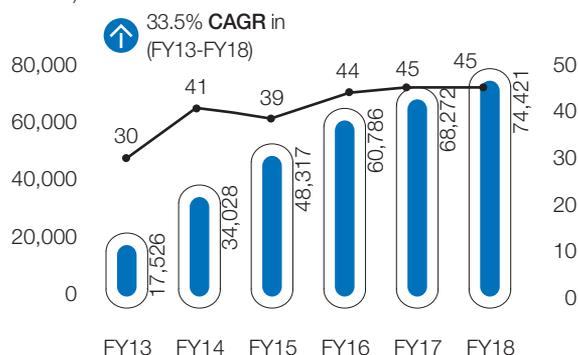
In FY2017-18, the US revenue increased by 9.0% to ₹74,421 million from ₹68,272 million in FY2016-17, accounting for 45% of consolidated revenue. The Company filed 47 ANDAs with the USFDA, including for 16 injectables and received final approvals for 49 ANDAs, including seven injectables during the year under review.

The injectables business contributed to 14% of the overall US business in FY2017-18. Currently, AuroMedics is the third largest generic injectables company by volume as per IQVIA MAT Mar 2018. AuroHealth, the Company's US OTC business, launched the first set of key products in FY2017-18. As on 31st Mar 2018, 16 OTC ANDAs were approved.

Aurobindo is building a strong product pipeline for the US market with differentiated products and believes that new injectables launches will help to improve the product mix and margins going forward.

US formulations revenue growth (FY13-FY18)

(₹ Million)



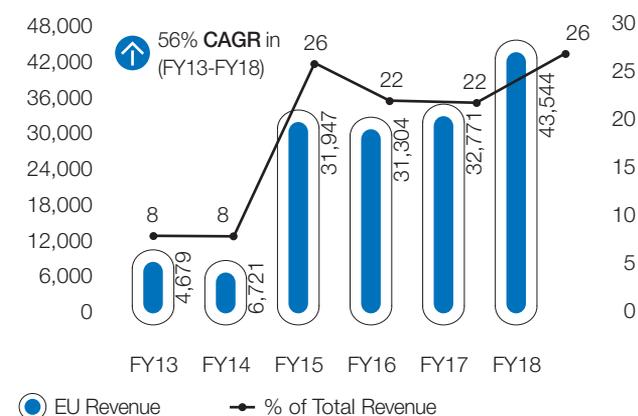
● US Revenue — % of Total Revenue

EU formulations

In FY2017-18, the EU formulations recorded a strong revenue growth of 32.9% reaching to ₹43,544 million, accounting for 26% of consolidated revenue. By the close of the fiscal, the manufacturing activities of around 83 products was transferred from Europe to India.

EU formulations revenue growth (FY13-FY18)

(₹ Million)

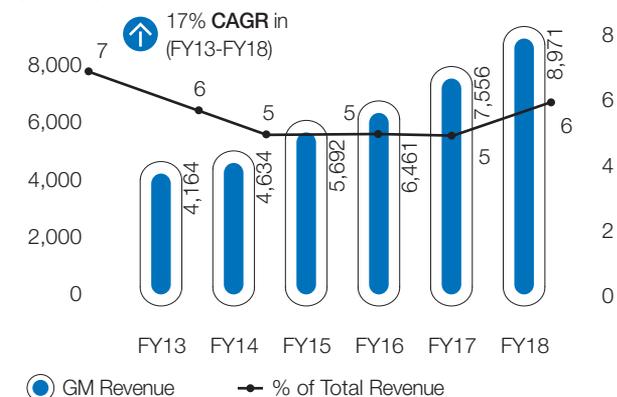


Growth markets formulations

In FY2017-18, Growth Markets recorded a revenue of ₹8,971 million, witnessing a strong growth of 18.7%, and accounted for ~6% of revenue. The key markets like Canada, Brazil and Columbia have propelled the growth.

Growth Markets formulations revenue growth (FY13-FY18)

(₹ Million)

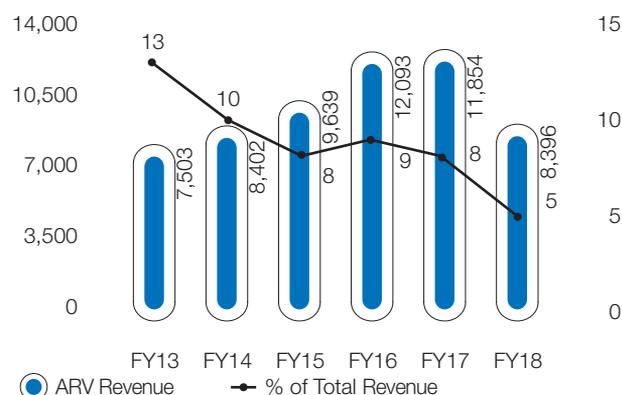


ARV formulations

For the ARV business, the Company's focus has been on global tenders floated by multi-lateral organizations such as Global Fund, USAID/PEPFAR, and country-specific Ministry of Health (MOH) tenders. Aurobindo supplies life-saving ARVs to ~3 million HIV patients spread over more than 125 countries. The ARV formulations business booked revenues of around ₹8,396 million, a decline of 29% YoY in FY2017-18. The decline was due to an increase in pricing pressure in one of the key products and reduction in the tenders floated by various countries particularly in Q4FY2017-18.

ARV formulations revenue trend (FY13-FY18)

(₹ Million)



API BUSINESS

The API segment remains as an important strategic unit for the Company, enabling vertical integration in supplying formulations to regulated markets.

In FY2017-18, the total revenue from APIs was around ₹29,622 million, recording a marginal decline of 3% year-on-year due to increased captive consumption. The Company has also invested capital for capacity creation and capability building to ensure that the base business is strengthened for future growth opportunities. The API business continues to focus on complex products with varying volumes and is consistently evolving its manufacturing processes to meet the market needs. The API facilities meet the advanced market requirements of USFDA, UK MHRA, EMA, Japan Pharmaceuticals and Medical Devices Agency (PMDA), Mexico COFEPRIS, Brazil-ANVISA, Korea FDA, etc.

NEW INITIATIVES

The Company's priority markets are driven by a broad portfolio of products from internal pipeline coupled with acquired entities. To strengthen its foundation for sustainable growth in these markets, the Company continues to focus on building a differentiated

product portfolio through in-house research and development. Aurobindo is investing heavily in R&D efforts towards creating high-value complex products and drug delivery systems. The Company has made steady progress across its new initiatives such as oncology & hormones, penems, vaccines, biosimilars, respiratory and dermatology. In the year ahead, the Company will continue to maintain its focus on further streamlining its operations and provide affordable life-saving drugs to the world.

FINANCIAL REVIEW

In FY2017-18, Aurobindo's revenue from operations on a consolidated basis amounted to ₹164,998 million vis-à-vis ₹150,899 million in FY17, recording 9.3% growth despite headwinds including pricing pressures in key markets.

This rise was driven by a healthy growth in the US, Europe, and Growth Markets. The EBITDA increased by 10.3% YoY to ₹37,885 million. EBITDA margin expanded ~20 bps to 23.0%. The net profit after JV share and minority interest was recorded at ₹24,232 million compared to ₹23,017 million in the previous year, growing by 5.3%.

The Company's total R&D spend stood at ₹6,665 million, which is 4% of its total revenue.

The Company's market capitalization as on March 31, 2018 stood at ₹326.8 billion.

MANUFACTURING REVIEW

In FY2017-18, Aurobindo conquered new frontiers through its resource debottlenecking efforts and its initiatives to reduce cycle time. The Company is now on a path to digitize manufacturing operations by integrating all process-related machines to the server to capture real-time process parameters for better operations control, improvement in productivity and enhanced compliance status. Through this initiative, Aurobindo aspires to set a benchmark for operational excellence.

With a view to increase manufacturing capabilities, the Company has successfully commissioned a Betalactum injectables manufacturing facility (Unit XVI) at Jadcherla in FY2017-18, which will improve the injectables volumes for the US, EU and Growth Markets. The establishment of Unit X for an US FDA - compliant oral manufacturing facility at Naidupet, Andhra Pradesh, is on track and will be commissioned during the ongoing fiscal. The facility has been inspected by the USFDA and EMA.

Aurobindo has also focused on strengthening manufacturing processes through operational-side training and implementation of integrated process systems such as a robust quality management system called Laboratory Information Management System (LIMS), a real-time data management system called PRISM and a stringent material management via a single Enterprise Resource Planning (ERP) system.

THREATS AND CHALLENGES

The pharmaceutical industry is highly competitive, with challenges from both the Indian manufacturers who have similar production facilities as well as those of abroad. Human resources with similar skills, talent, and experiences in the industry are mobile between competing companies.

Price pressures are expected to remain in the US market. Going forward, there is a risk of inability to maintain current margins on products. Price sensitivities are tested in a crowded market where the price tends to sag while the business achieves volume.

Competing pharmaceutical companies have several similar bio-equivalent products in the same market, manufactured at facilities that have been approved by the highest regulatory authorities. All of them stay focused on the same markets, resulting in price elasticity being tested and margins eroding.

Yet, it must be appreciated that Indian manufacturers in general, and Aurobindo in particular, have etched their presence on the global stage and have worked hard to get shelf space. Aurobindo is better placed when compared to many of the other Indian manufacturers because of the Company's control over raw material sourcing. The Company is a dominant player in the API business and has been able to control its quality, improve on timelines, be competitive on costs and deliver at short notice. This is an unique advantage that Aurobindo enjoys over many other manufacturers across the world. The Company has been timing its launches to take advantage of the products going off-patent and the opportunities available in a first-mover market. This strategy is built around the in-house R&D capabilities, technology strength in manufacturing facilities and the marketing infrastructure. Aurobindo has worked on its speed-to-market abilities and is quick to convert product approvals into invoices.

The scientists and other professionals of Aurobindo have been trained to create opportunities, replicate the successes and drive business growth. The Company has unmatched strengths to cope with the challenges of the market, such as an experienced staff with the ability to anticipate market needs, plan for product launches with supportive documentation, create products that meet regulatory norms and execute plans within tight cost and time budgets.

INTERNAL FINANCIAL CONTROLS

The Internal Financial Controls (IFC) framework institutionalized in Aurobindo during FY2017-18 has been evaluated in-depth for its adequacy and operating effectiveness. Basis this Framework, the Company has covered financial reporting controls, operational controls, compliance-related controls and also Information Technology (IT) controls comprising IT General Controls (ITGC) and application-level controls. The ITGC would include controls over the IT environment, computer operations, access to programs and data, program development and program

changes. The application controls would include transaction processing controls in the ERP Oracle system, which supports accurate data input, data processing and data output, workflows, reviews, and approvals as per the defined authorization levels.

To further strengthen the existing IFC framework and to support the growing business, the Company has redefined all the process-level controls at activity level. This has brought more clarity and transparency in daily processing of transactions and in addressing any related risks. All the controls that have been redefined and identified have been properly documented and tested with the help of an independent auditor to ensure their adequacy and effectiveness.

The internal auditors, on a quarterly basis, conduct 'Process and Control Review' as per the scope defined and submit the audit findings, along with management comments and action-taken reports to the Audit Committee for its review.

The IFC framework at Aurobindo ensures the following:

- Establishment of policies and procedures, assignment of responsibility, delegation of authority and segregation of duties to provide a basis for accountability and controls
- Physical existence and ownership of assets at a specified date
- Enabling of proactive anti-fraud controls and a risk management framework to mitigate fraud risks to the Company
- Recording of all transactions occurred during a specific period
- Accounting of assets, liability and revenue and expense components at appropriate amounts
- Preparation of financial information as per the timelines defined by relevant authorities

HUMAN RESOURCES

Aurobindo boasts of a tight-knit team of highly competent and committed industry professionals. The corporate promise, 'Committed to healthier life', reiterates that the team is focused on performing and delivering on patient safety. The knowledge, expertise and skills of the Aurobindo teams form a strong foundation of the Company's progress and hence, considerable strategic emphasis is laid on people development and leadership. The overall target is to enhance business growth by enabling engagement and performance. The Company aims to achieve this target by providing participative leadership for enterprising employees and creating an environment conducive to work towards organizational goals.

Aurobindo's corporate values form the foundation of this development. Aurobindo Pharma has a team of over 19,000 professionals from 31 different countries working at its various divisions – API manufacturing, formulation manufacturing, chemical R&D, formulation R&D and overseas operations. About 80% of these employees are graduates, postgraduates and PhD holders.

As part of its investment in learning and development, the Company has recrafted its human resource philosophy. In brief, the policy is iterated as below:

- Attract, build and retain the right talent at all levels
- Create and nurture a performance culture through continuous capability building, performance measurement, and leveraging of IT
- Foster leadership at all levels through trust, empowerment and openness
- Strengthen collaborative approach for business excellence
- Promote a vibrant work culture based on innovation and incentivize people based on productivity/ outstanding performance

The Company emphasizes the five critical dimensions of people management:

- Establishment of a vibrant organizational culture
- Talent attraction and retention
- Continuous capability building
- Recognition of outstanding performance of the team/ individuals
- Staff welfare

The Company has undertaken the following initiatives for the holistic development of employees:

MISSION QUALITY

This is a key initiative undertaken to create and augment the quality culture across the organization. The process assesses the staff and executives on quality standards compliance. An assessment based on key performance indices and quality metrics has been carried out at the formulations unit to identify Master Quality Leaders (MQLs) who will facilitate the quality initiatives across the organization.

QUALITY MARSHAL PROGRAM (QMP)

This initiative has helped to strengthen the quality culture through continuous reinforcement of Standard Operating Procedures (SOPs) and adherence to quality standards by application of learning with the help of a qualified resource pool.

For the pharma industry, in general, it is critical to ensure that the efficiency of the processes is effectively communicated during the audit interaction. This efficiency in communication needs continuous practice. The QMP was envisaged to address this need by strengthening the Company's quality culture through learning partnerships and developing confidence and communication towards increasing audit interface capabilities.

Potential Quality Marshals are mapped across the value stream with demonstrated high-compliance behaviors, training ability and audit experience. They then become part of collaborative learning with cascading methodology, leading to critical talent development. The program aims to develop close to 500 Quality Marshals across all units by 2019 and the training and certification processes are going on in full gear.

ENVIRONMENT, HEALTH AND SAFETY

Industrial relations continue to be cordial and harmonious. The Management has initiated various measures such as the formation of bipartite forums and joint management councils to promptly redress staff grievances and improve welfare amenities at the plants.

The Company places utmost importance on employee and contractor safety as well as environment protection. In its approach to business, Aurobindo integrates a robust and sustainable safety system that aims for zero incidents to ensure a high degree of safety at the workplace.

Aurobindo works towards fulfilling its environmental and social responsibilities by optimizing the use of resources, minimizing waste, reusing and recycling materials, and reducing the eco-footprint to create more value with less environmental impact.

CORPORATE SOCIAL RESPONSIBILITY (CSR)

Aurobindo's CSR charter covers the following areas of activities:

- Promoting education
- Supporting preventive healthcare
- Eradicating hunger, poverty, and malnutrition
- Making safe drinking water available
- Encouraging environment sustainability
- Sustaining ecological balance and conserving natural resources
- Developing rural sports
- Setting up old-age homes

As part of its societal commitment, Aurobindo provides support in the areas of educational aids for school children, construction of toilets, and provision of safe drinking water. Its social intervention programs have benefited the neighboring communities and the Company continues to give back to the society.

MANAGEMENT OF RISKS

OVERVIEW

The objective of Enterprise Risk Management (ERM) framework at Aurobindo is to address all major risks in a proactive manner and to sustain business growth. The Company's ERM practices are based on COSO-ERM framework. The ERM is designed to minimize impacts arising from the risks and enable the Company to leverage market opportunities effectively. It also enhances Company's competitive advantage on a medium and long-term basis, thereby creating value for its stakeholders.

The Company has aligned risk management framework with critical business processes to ensure that the core functions are designed and operated effectively towards the achievement of business objectives. Risks are addressed across all key business functions in a holistic manner rather than in silos.

COMPANY'S ERM FRAMEWORK



RISK MANAGEMENT COMPONENTS

Process	Description
Business objectives	Business objectives are set by executive management and approved by the Board
Risk identification	A bottom-up approach is adopted through structured interviews, brainstorming sessions and risk questionnaire techniques for the identification of risks which could potentially impact achievement of business goals. Risk registers are updated with existing and emerging risks.
Risk assessment	It includes evaluating and prioritizing risks so that their levels are managed within defined tolerance thresholds. Risk evaluation is carried out using scenario-based assessments to determine the potential impact and likelihood of risk occurrence. Identified risks are compared with established thresholds to determine the priority and method of risk mitigation.
Risk mitigation & monitoring	Aurobindo adopts meaningful mitigation strategies tailored to each identified risk. Risk mitigation procedures involve undertaking appropriate actions by the business heads/process owners who are accountable to mitigate risks in a time bound manner. Risk owners are identified, and progress of mitigation actions are monitored and reviewed periodically. The Risk Management Committee (RMC) periodically reviews the scope adequacy and effectiveness of mitigation actions and provides necessary direction to mitigation teams.
Risk reporting	Risk reports are submitted to RMC on a periodic basis. The reports help in tracking each identified risk and its impact on business. The assessment of key risks, analysis of exposure and potential impact are carried out periodically, presented and discussed with RMC. Periodic updates are provided to the Board highlighting key risks, their subsequent impact and the required mitigation measures.

RISK CATEGORIES

The Risk management framework covers the following broad categories of risks to business objectives:

- **Strategic risks** are the risks arising due to the decisions taken by the management with respect to markets, product & process development, resources, business growth & revenue model, acquisitions, investment model, etc. which can impact business objectives.
Ownership of risk: Key management personnel
- **Operational risks** are attributable to business operations such as production capacities, quality assurance, customer demands, material availability, human safety etc. which can have impact on business.
Ownership of risk: Operations team.
- **Compliance risks** arise out of non-compliance with applicable laws, regulations, standards and policies that could impact the Company's reputation and business.
Ownership of risk: Functional heads
- **Financial risks** are related to financial performance targets of revenue and profit goals of the Company. These risks could have impact on the Company's financial statements and transmission of accurate financial information to stakeholders.
Ownership of risk: Finance & accounts heads and their team
- **IT risks** could have potential impact on information assets and processing systems.
Ownership of risk: Chief Information Officer and his team

RISK GOVERNANCE STRUCTURE

The risk management framework operates at various levels in the Company and the governance structure is as given below:



The risk governance structure of the Company is headed by Board of Directors who form the RMC. The Committee is responsible for framing, implementing and monitoring the risk management framework for the Company and responsible for reviewing the risk management process and ensuring its effectiveness.

The Audit Committee has additional oversight in the area of financial risks and controls. Risk Management Head (RMH) acts as a nodal point for coordinating risk mitigation activities. RMH also appraises the Audit Committee with identified risks and its mitigation. RMH is supported by business heads who are the risk owners to implement the risk management framework in their respective business units.

INTERNAL FINANCIAL CONTROLS (IFC) HIGHLIGHTS FOR THE YEAR

As mandated by the Companies Act 2013, the Board of Directors are responsible to ensure that the Internal Financial Controls are adequate and operating effectively. In addition, the Company's statutory auditors are required to provide an independent opinion on the adequacy and operating effectiveness of such controls in the financial year. During the FY 2017-18, the Company has taken an initiative to automate controls in key business processes and has put in place large number of 'system-driven controls' and reduced dependency on manual controls. Segregation of duties is established in every activity to prevent errors and frauds. This effort has increased the effectiveness of business processes as well as accuracy of transactions processing in ERP. All the controls have been properly documented and tested for their design and operating effectiveness.

BUSINESS RISKS AT AUROBINDO

Some of the key existing and emerging risks affecting Aurobindo's business are listed below:

Economic & geopolitical risks

Economic and political instability arising from changes in foreign policies & political leadership in countries such as USA, Europe and emerging markets (EM), where Aurobindo has business presence could adversely affect the Company's operations and revenues.

There has been a significant growth over the years in the Company's revenues backed by increased exports. The revenues are generated mainly from the sale of formulations and bulk drugs in the global markets. These include developed markets like USA and Europe and emerging markets across the world. The revenue breakup of the Company for financial year 2017-18 is as given below:

- Export sales constitute about 90% of the Company's total revenue with the rest 10% being domestic sales;
- Formulations business contributes 82% to the Company's total revenue and the rest 18% comes from active pharmaceutical ingredients (APIs);
- About 55% of the formulations sales come from the US,

about 32% from Europe, 6% from anti-retroviral (ARV) business segment and the balance 7% from Growth markets.

In the global pharmaceutical industry, there are various concerns on product quality and safety which may lead to penalties, product recalls, brand & reputation damage and revenue loss. The regulatory landscape of global pharmaceutical industry is complex and dynamic which is significantly influenced by political environment, changes in Government policies and decisions.

Aurobindo is an integrated global pharmaceutical company with operational presence across the globe and with broad portfolio of diversified dosage forms. The Company's objective is to expand further in the other untapped markets and to focus on novel technology platforms.

Mitigation strategy:

In order to mitigate the economic and geo-political risks, the Company continues to expand its business presence in other untapped and potential markets like Japan, Brazil, Africa, Canada and Middle East. New markets are added in Poland and Czech Republic. Also, to enhance presence in therapeutic areas like oncology and speciality injectable products, Aurobindo continues to take adequate care to grow in each of the product segment and is striving to improve its presence in all markets by expanding its business. Such well-designed moves would also help consolidate the Company's volumes and revenues over the long-term, thereby spreading the risk portfolio.

As a de-risking strategy, the Company continues to focus on territorial expansions, partnerships, globalization and further penetration through joint ventures and subsidiaries in potential markets.

Competition risks

Aurobindo's products face tough competition from other pharmaceutical companies in India and abroad where multiple players are present, and introduction of new products by competitors may impair the Company's competitive advantage and lead to loss of market share.

The Pharmaceutical industry is severely competitive and is affected by new technologies, new product developments, government regulations and other factors. The Company faces intense competition from other pharmaceutical companies in global and domestic markets and introduction of new products by them may impair company's competitive advantage thereby affecting revenues.

Mitigation strategy:

In order to mitigate the risk of rising and on-going competition from peers, the Company continues to focus on the following aspects.

- Producing products at competitive costs by developing new processes, upgrading existing processes and achieving operational excellence

- Timely launch of new products by talented R&D teams to build and increase market share
- Adding new manufacturing facilities with new products to ensure sufficient levels of production
- Providing the product quality assurance to all customers
- Redefining the production process by R&D team to have cost effective products
- Vertically integrating the manufacturing facilities for most generic formulations to ensure timely material availability
- Micro-level planning of inventory to handle inventory costs efficiently

Regulatory, Statutory & Legal compliance risks

With rigorous regulatory and legal requirements and an evolving compliance landscape, the pharmaceutical industry is constantly being challenged by critical compliance risks at an enterprise level.

Regulatory framework plays a vital role in developing and doing business in global and domestic markets. Due to constantly increasing regulatory requirements as well as globalization market, the demands and responsibilities of business in the form of regulatory readiness are becoming stringent. The regulations require registration, filings and data submission to allow the Company enter diverse markets. Therefore, the Company continues to establish and strengthen systems & controls to monitor and upgrade registrations as and when required. The Company continues to adopt a zero-tolerance approach towards non-compliance with any applications laws.

Mitigation strategy:

Aurobindo has a talent pool of over 1,500 scientists, who have adequate experience in handling complex chemistry and filing applications with the regulatory authorities. The strong scientist pool has helped Aurobindo receive a total of 361 ANDA approvals (327 final approvals including 17 for Aurolife Pharma LLC, and 34 tentative approvals) from US FDA as at March 31, 2018. Cumulative filings total 478 ANDAs.

Similarly, as on March 31, 2018, the team has filed over 427 DMFs including 227 with US FDA. So far, 669 patent applications are pending with various authorities and 106 have been granted patents.

Aurobindo is committed for supplying highest quality medicines to customers for promoting healthier lives. Hence, the Company strives to conform to regulatory and compliance standards to meet stringent requirements of regulators to ensure that our medicines provide best health care for the consumers. Robust quality systems & control measures are available to ensure that the quality is ensured by process design. Every effort is being made to ensure that there is no compromise on quality of products and processes. Continuous monitoring is being done by QC/QA team to deliver highest quality products.

The Company has a robust “Statutory compliance system/ solution” (Vision 360 Tool) for ensuring compliance with all applicable laws and it is designed to meet compliance goals of the Company. Periodic updates to the system are made as and when there is a change in any applicable law. Quarterly compliance declarations generated electronically from the system are submitted to compliance officer. In case of any non-compliance, necessary steps are taken by the concerned functional heads to fix it.

Aurobindo’s commitment to Environment, Health and Safety (EHS) - The Company’s Board and executive management have a strong commitment towards creating and providing a safe working environment for all its employees and other stakeholders. Aurobindo has a full-fledged EHS team which is continuously addressing issues of environmental safeguarding by conducting periodical safety audits and training programs.

Pricing risks

Some of Aurobindo’s products are subject to regulatory pricing controls and other pressures on pricing. The price controls limit the financial benefits of growth in the life sciences market and the timely introduction of new products.

Like most of the other companies, Aurobindo is also subject to pricing pressure. Prices are a function of demand and supply and the Company faces perfect competition in generic drug industry. This year witnessed a significant volatility in global commodity prices and there has been disruption in domestic market in the form of demonetization. Prices change in response to supplies and competitive pressures. Domestic pricing is influenced by global trends in both availability and price of imported active ingredients. The Company continues to face challenges within the industry successfully be it price cuts or increased price controls.

Mitigation strategy:

Aurobindo is able to cope with pricing pressures and focus on quality assurance to minimize the possibilities of commoditization. Also, the Company has a well-diversified product basket in the US which helps in mitigating the pricing pressure. The in-house R&D team is striving to develop cost-effective products by redefining the production process/facility. The Company is moving up the value chain by offering differentiated and speciality products and technology platforms. The supply chain team is continuously putting in efforts to de-risk global procurement issues and is ensuring timely services to key customers in international and domestic markets.

Patent protection risks

Aurobindo’s success to a great extent depends upon the Company’s ability to obtain IP Rights such as patents and trademarks, protect trade secrets and other proprietary information, and operate without infringing the intellectual property rights of the other companies. Aurobindo’s inability

to obtain timely ANDA approval and/or launch a product immediately upon approval due to patent litigation issues or due to settlement for a late market entry date may affect the revenue.

Aurobindo has a dedicated team of IP professionals whose primary task is to ensure that the products are manufactured using essentially non-infringing composition and processes to the best possible extent and in compliance with IP-related requirements by reviewing and monitoring IPR issues continuously.

The IPR team evaluates and provides stage-wise IP clearances during product/process developmental activities. The IPR team also provides frequent updates and alerts on all relevant IP matters (such as patent, trademark, etc.) to R&D scientists for the products and suggests suitable measures to deal with IP-related issues. The IP team is also involved in product selection activity to ensure that right products are selected for development and no potential opportunity is missed out to the best possible extent.

As of March 31, 2018, the Company has more than 563 patent applications pending with various authorities. Aurobindo takes adequate care to protect its trade secrets, know-how and other proprietary information, and ensures that the employees, vendors and suppliers associated with the Company directly or indirectly sign appropriate confidentiality agreements prior to disclosure of any such confidential information.

Market risks

Aurobindo is exposed to market risk if the Company is unable to maintain sufficient portfolio of products and manage their development and timely bringing the products to market which could ultimately affect the business and growth strategy. The Company is significantly dependent on the US market for its business. Failure to conduct profitable operations in that market could adversely affect the Company's business, operations and financial condition. This scenario poses the risk of high concentration and significant dependence on one market.

Aurobindo's success largely depends on the ability to continue the development and commercialization of new products in a timely and cost-effective manner which is a complex and time-consuming process. Therefore, it is important for the Company to maintain a large portfolio of products and product pipeline. Most importantly, the Company needs to focus on managing development and approval process of products to bring them to market on a timely basis.

Mitigation strategy:

As part of mitigation procedure, the Company's R&D team strives to develop new, innovative processes and specialized products that allow the Company to capitalize on competitive market opportunities. As part of product portfolio growth strategy, the Company sells nutritional supplements in US & other markets which enhance revenues.

It is highly challenging for the Company to retain the existing market share and increase it in the future. Any sort of delay in supplying material to customers and deviations in customers' specifications could have adverse impact on customer relationships and loss of revenues and the Company would have to face penalties. It may also affect the Company's reputation and competitiveness which could lead to loss of market share. Such failures could have major impact on the Company's business and brand value. The Company's SCM team ensures that such failures are monitored and mitigated in a real time.

Mitigation strategy:

In order to reduce the concentration risk, the Company continues to spread its business (Formulations and API) into European, Japanese and emerging markets. Aurobindo with its effective marketing strategy is increasing sales volumes for both the businesses in existing markets and is making regular efforts to widen geographical spread by entering into large potential markets in Latin America and emerging markets. The Company has the right balance between high margin-low volume products and low margin-high volume products.

The Company continues to expand the end-to-end manufacturing capacities and to ensure capacity utilization at optimum levels with effective marketing strategy and proper coordination from Production and SCM heads.

Financial risks

Failure to maintain appropriate credit ratings (Downward movement in rating) could affect the Company's cost of borrowings thereby having adverse impact on profitability. While the Company's exports are significantly high, financial obligations towards import payments and ECB payments are also high and any adverse foreign currency fluctuations could have impact on financial position.

Mitigation strategy:

The Company's treasury team continues to ensure reduction in borrowing costs with proper negotiation with banks. There exists a defined credit policy for all its customers which covers defining, approving and monitoring customer credit limits based on customer's profile and their payment history. The treasury team along with the Business Heads evaluate customer credit risk and approve credit limit that can be provided to a customer. The customer credit limits are periodically reviewed and changed in order to mitigate the credit risk. The treasury team reviews customer collections regularly and makes import payments and takes necessary actions wherever necessary. Also, the treasury team continuously monitor day-to-day fund requirements and manages the banking relations effectively.

Aurobindo is predominately an export-oriented company. Around 90% of the Company's revenue is from international markets. At the same time, the Company is having sizable imports/working capital in foreign currency and long-term ECB to fund the export-oriented projects. As such, the Company's growing exports

and its collections provide the natural hedge to the imports and working capital against the foreign exchange fluctuations.

The Company is conscious of the impact that currency fluctuations can have on earnings. The forex position is reviewed on a monthly-basis by the Borrowing Committee and quarterly by the Board/Audit Committee. Based on the decision of the Borrowing Committee, the treasury team ensures the execution of transactions through forward cover.

Raw-material import risks

Aurobindo's dependency on China market for import of raw-material is very high and this may lead to risk of import disruptions, short supplies and production bottlenecks due to unforeseen changes in government regulations & economic policies of China.

The creation of stable sourcing platform is a challenge and critical for the Company in material procurement and the SCM team has taken steps in ensuring long-term supply sustainability in this space.

Mitigation strategy:

As part of strategic sourcing, our procurement team continuously focuses on the following aspects in order to mitigate sourcing risks.

- Cross-functional interaction to address long-term supply concerns and sourcing constraints
- Mapping of geographic risks with alternative vendor development
- Efficient cost management and proper alignment with budget constraints
- Monthly procurement review among cross-functional teams to monitor progress on risk mitigation
- Integrated planning and procurement for operational dynamism
- Continuous tracking of market trends and its dynamics

In our journey of excellence over the years, our key focus has been de-risking of single sourced material and reducing our dependency on China for raw-material procurement due to cost escalation and environmental changes therein. There exists a dedicated procurement team for managing the sourcing risks regularly and the Company is having an effective process and controls to periodically evaluate its vendors for all critical material. The procurement team ensures high quality purchases at economical costs and maintains reliability of supplies from reputed vendors with long-term relationships.

The 'Production planning & inventory control' (PPIC) continues to regularly track the material requirement in coordination with SCM and Production teams for keeping optimum levels of material so that production schedule is not affected.

People risks

Aurobindo's success depends largely upon an effective HR strategy that includes recruitment, learning & development,

succession planning and retention of competent personnel. The HR strategy is aligned to business plan and growth of the Company. It is a well-managed challenge for Aurobindo to maintain good industrial & employee relations. Labour unrest could impact the Company's operations. The industry is human capital intensive with a high rate of attrition and this could have an impact on the Company's operations.

Mitigation strategy:

Aurobindo has a committed Human Resources team to acquire, retain and develop talent considering the competition for qualified and experienced people.

Leadership development – As part of the Company's strategic talent and succession management, the HR team at Aurobindo has identified and developed people with potential to fill key business leadership positions. The Company has instituted NALANDA, online academy, to facilitate Leadership Talent Development and support management philosophy of second-line development and for promoting mentor-mentee relationships within the Company. The second-in-command across each key function and decentralized management style has developed a much stronger organization culture. The Company is continuously fine-tuning its HR strategy in order to meet its business goals.

Talent engagement & empowerment – Talent development is important for the success of business and training needs are identified for each individual on a periodic-basis. The Company understands the need to create a culture of high employee engagement as a method to retain talent. There is a proactive approach to HR management and employees are given responsible authority. Emphasis is on accountability with clear job descriptions and the employees are encouraged to perform to their optimum potential. Regular interactions and communications help the personnel to update and upgrade their knowledge and skills which helps in minimizing the operational risks.

Kaizen change management process has been initiated with focus on Shop-floor Empowerment and provides Partnership-platform for the people to engage with continuous improvement projects. Process Care, People Care and Asset Care are the three enablers to achieve the continuous improvement mission in the Company.

Multi skilling & Quality programs – The Company has introduced multi-skilling program which promotes job enrichment of talent at operational level. Also introduced Quality Marshal Program which facilitates strengthening of Quality culture at shop-floor.

Employee performance appraisals – The Company's on-line employee appraisal system is robust for measuring performance vis-à-vis KRAs defined for the employees. HR team strives to ensure that annual performance assessments are conducted effectively with necessary feedback and counselling.

Harmonious industrial relations – Industrial Relations team is making continuous efforts to maintain a cordial relationship with employees with a view to achieve best performance. The

Company has established an online people care link to redress grievances in a proactive manner and believes in bipartite strategy to prevent and settle any outstanding issues in a peaceful manner. Further, management has initiated Social Accountability Certification process (SA 8000 series) to maintain its commitment towards fair people management.

The Company ensures that there is full adherence to code of business conduct and fair business practices are followed by employees.

Information technology (IT) risks

Achievement of business objectives for Aurobindo depends on the existence of a robust IT strategy that includes adequate IT infrastructure, data storage & processing capabilities, data confidentiality, integrity and availability at all times. Occurrence of any unforeseen threats to IT systems could have adverse impact on data processing, data availability and continuity of operations.

Mitigation strategy:

The Company continues to calibrate and update its key business processes to continuously improve efficiencies. These include controls automation and internal workflows for manufacturing, supply chain and integrating them with material planning, sales & marketing, HR.

The Company has robust IT controls related to back-up, storage and system access including role-based access control for the applications and strong change management controls. There are well documented SOPs and are reviewed periodically for their effectiveness. For all mission critical IT applications and services,

the Company has built highly stringent and secured infrastructure. For business continuity, the Company has a disaster recovery site which hosts backup ERP applications.

Aurobindo has an experienced IT operations team who ensures day-to-day smooth functioning of IT infrastructure and applications including network infrastructure, server & device management, computer operations, and help desk services for the Company. All incidents are tracked through ticketing tool and there is a well-defined process for its closure in a timely manner.

The IT Governance Committee of the Company periodically reviews IT-related matters around policies & practices, budgets proposals for procurement of new applications and hardware, renewal of licenses, process automation to support the business functions etc. and advises the Board for its consideration.

For any business process automation /digitalization and regulatory compliance-related solution, the IT team works very closely with business process owners for effective and timely implementation. Periodic reporting of all critical IT projects to leadership team is done by Chief Information Officer (CIO). The IT team conducts periodic evaluation of IT process and in case of any process gaps and concerns, appropriate corrective measures are taken in a time bound manner.