GREEN DELTA CAPITAL

Date: 4th September, 2023

BANGLADESH PHARMACEUTICALS & HEALTHCARE SECTOR

Emerging Asian Hub for Generic Drugs

Contents

Overview

The Pharmaceutical sector is one of the most developed technology and knowledge based sectors within Bangladesh, has been transforming and evolving since the early 80s. Over the last 4 decades of painstaking effort, Bangladesh is now considered as emerging generic drug hub in the region. These manufacturing companies meet around 98% of local demand. Specialized products like vaccines, anti-cancer products and hormone drugs are imported to meet the remaining 2% of the demand. 80% of the drugs produced in Bangladesh are generic drugs, rest 20% are patented drugs.

Bangladeshi pharmaceutical products are exported to approximately 150 countries and export has already generated earnings of USD 175.42 million in FY2022-23 (July-May). The sector contributes around 1% of the country's GDP while catering to majority the domestic demand for medicine. Now, Bangladesh proudly stands alone as the only LDC that has a well-developed pharma sector.

Another important contributor to the economy and wellbeing of the society in Bangladesh is the Health Sector. The proposed budget for Health Sector in FY2023-24 is BDT 380.52 billion, which is 5% of the total proposed budget. In FY2022-23, it was 5.40%. The allocation was reduced due to the controlled COVID pandemic situation. Per Capita Health Expenditure of Bangladesh in 2020 was USD 50.66.

Pharmaceutical Sector Highlights

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Market Size

BDT 324.72 Billion
(Q3, FY22-23)

% of Total GDP

0.73%

Registered Companies

265 licensed manufacturers
213 are functional

Export Earnings

USD 175.42 Million in FY22-23

Market Share

90% is under local manufacturers
10% is under multinational institutions

Top 5 companies hold **73%** of total Market Share

Local demand

97% local demand meets up by in-house pharmaceuticals companies

Active pharmaceutical Ingredients (API)

15% of API are produced locally

Vaccine Market

BDT 1000 Million market size

Source: DGDA, EPB, BAPI, BBS, MOHFW

Pharma Market Size

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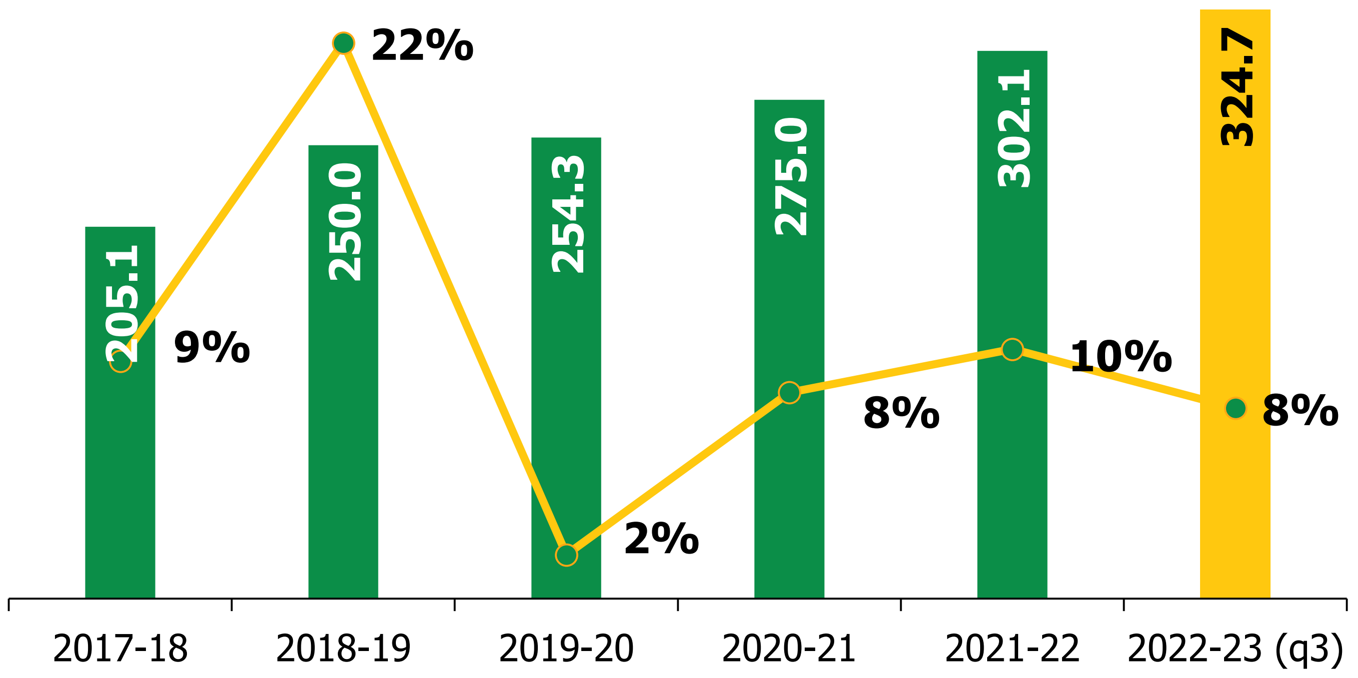
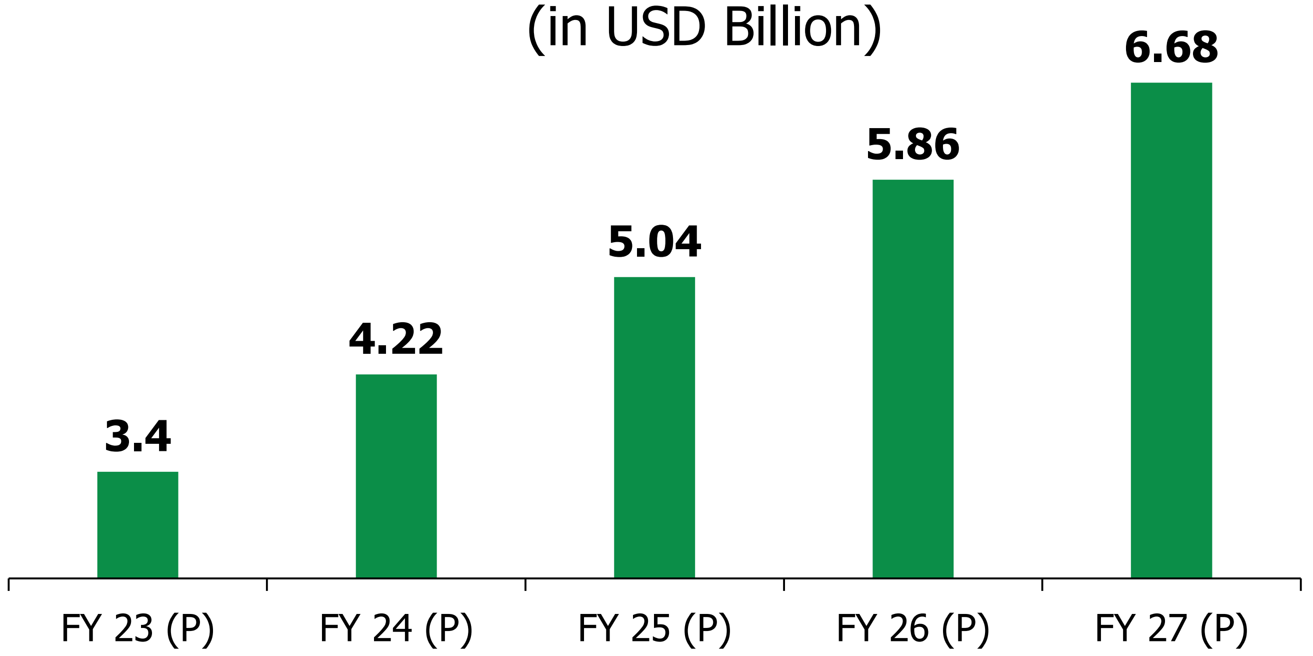
Pharma Market size in BDT Billion & YOY Growth Rate in %



Projected Pharma Market size
(in USD Billion)



Source: BBS

- Pharma market size as of Q3, FY 2022-23 stands at **USD 3.32 Billion** (BDT 324.7 Billion) with a YOY growth of 8%
- Pharma market contributes to around **1%** of total GDP
- The lowest growth was seen on the year FY 2019-20 due to COVID-19 outbreak
- The projected market size of the industry by the end of the FY 2022-23 is **USD 3.40 Billion** with a YOY growth of 11%
- The projected market size of the industry by 2027 is **USD 6.68 Billion** with an average growth of 8% every year

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National Regulatory Board & Association

Directorate General of Health Services

A Bangladesh government directorate under the Ministry of Health and Family Welfare responsible for health services in Bangladesh, founded in 1978

Directorate General of Drug Administration

Principal drug regulatory agency in Bangladesh under the Ministry of Health and Family Welfare, founded in 1976

Bangladesh Association of Pharmaceutical Industries (BAPI)

The apex body representing the pharmaceutical companies of Bangladesh, founded in 1972

Bangladesh Pharma Sector Dominators

Square Pharmaceuticals Ltd
Market Size: **5,404 BDT Crore**
Market Share: 17.63%

Incepta Pharmaceuticals
Market Size: **3,634 BDT Crore**
Market Share: 11.85%

Beximco Pharmaceuticals Ltd.
Market Size: **2,918 BDT Crore**
Market Share: 9.52%

Healthcare Pharmaceuticals Ltd
Market Size: **2,217 BDT Crore**
Market Share: 7.23%

Renata Ltd
Market Size: **1,507 BDT Crore**
Market Share: 4.89%

Opsonin Pharma
Market Size: **1,391 BDT Crore**
Market Share: 4.54%

Aristopharma Ltd
Market Size: **1,248 BDT Crore**
Market Share: 4.07%

Radiant Pharmaceuticals Ltd
Market Size: **1,190 BDT Crore**
Market Share: 3.88%

Eskayef Pharmaceuticals Ltd
Market Size: **1,166 BDT Crore**
Market Share: 3.80%

The ACME Laboratories Ltd
Market Size: **1,136 BDT Crore**
Market Share: 3.70%

Source: IQVIA, MAT Q2, 2023

Drug & Vaccine Market of Bangladesh

Preventing Diseases, Protecting Public Health

Medicine Kind & Registered Drugs

01
Homeopathic

Manufacturer: 71
Registered Drugs: 2,478
Retail Pharmacy: 4,031

02
Allopathic

Manufacturer: 295
Registered Drugs: 34,101
Total Generic: 3,657
Retail Pharmacy: 1,61,481

03
Unani

Manufacturer: 284
Registered Drugs: 6,630
Retail Pharmacy: 907

04
Ayurvedic

Manufacturer: 205
Registered Drugs: 4,916
Retail Pharmacy: 604

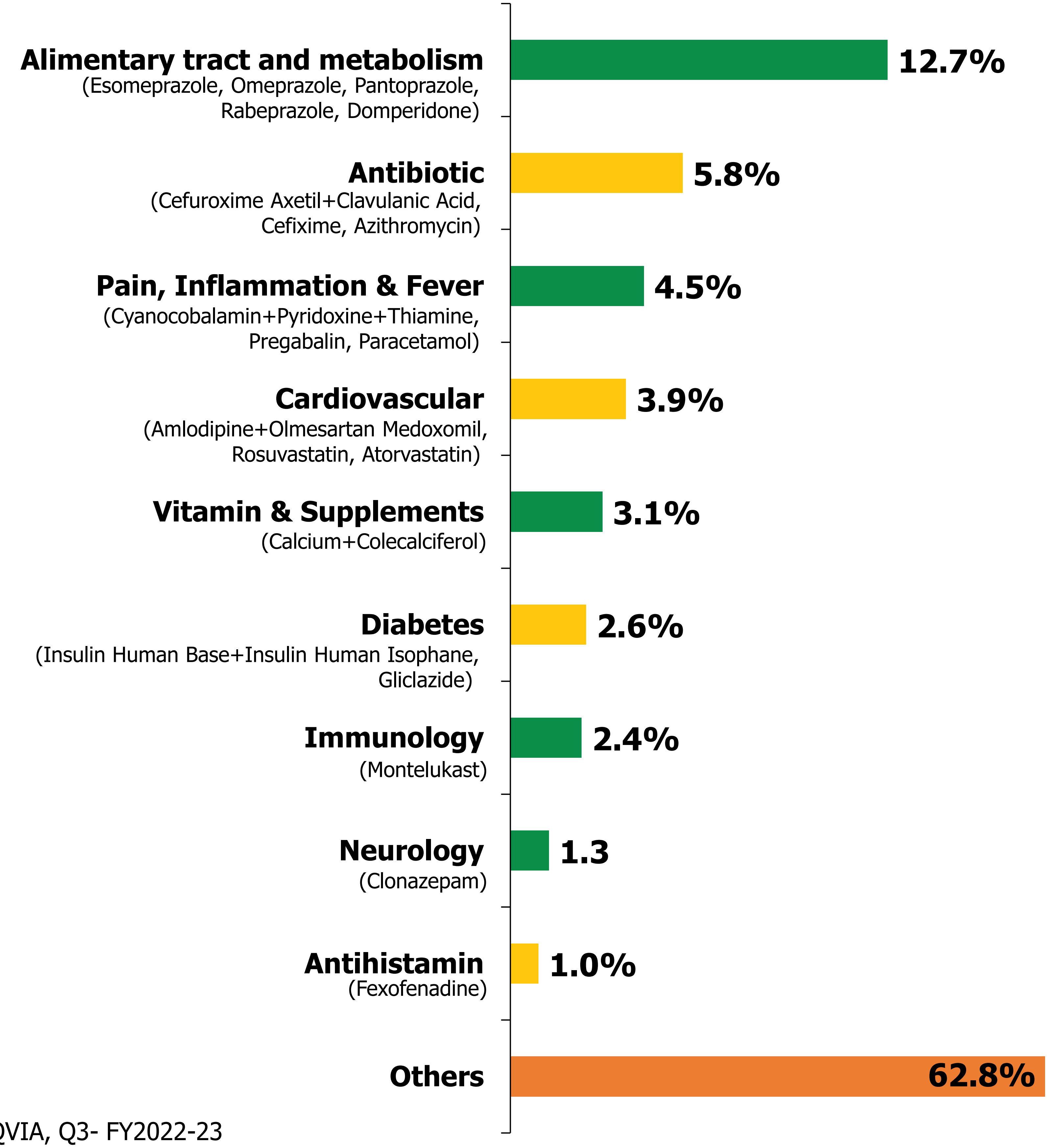
05
Herbal

Manufacturer: 38
Registered drugs: 834
Retail Pharmacy: 74

Source: DGDA

Category-wise Most Selling Drugs

(With Generic)



Source: IQVIA, Q3- FY2022-23

- Total Drug Market size of Bangladesh is BDT **294.59** Billion (as of Q3, FY2022-23)
- Top 20 drug generics holds **37.20%** of total market share with a market of BDT 109.71 Billion
- **ESOMEPRAZOLE** generic as an Alimentary tract & metabolism kind drug has generated **highest revenue** with a market size of BDT 21.46 Billion.
- **PREGABALIN** generic as a Pain, Inflammation & Fever kind drug has gained highest growth rate of **43.20%** with a market size of BDT 4.38 Billion.

Vaccine Market

The market size of vaccines in Bangladesh is around
BDT 1,000 million

- Three local pharmaceutical companies- Incepta Pharmaceuticals, Popular Pharmaceuticals and Globe Biotech are involved in the manufacturing of more than **14 types** of vaccines.
- Incepta is the **Leading** Vaccine manufacturing company of all.
- Beximco Pharma was the **highest importer** of COVID-19 vaccines during the COVID pandemic.
- Bangladesh brought 360 Million doses of COVID vaccines worth BDT **400** Billion during the covid-19 pandemic of which WHO Donated around worth BDT 200 Billion.

Source: DGDA, EPB, BAPI, BBS, MOHFW, DGHS

Vaccine Manufactured in Bangladesh

- Rabies vaccine (human)
- Typhoid polysaccharide vaccine
- Varicella vaccine
- Adsorbed Tetanus Toxoid vaccine
- Cholera Vaccine
- Hepatitis A vaccine
- Hepatitis -B vaccine
- Human Papillomavirus Vaccine (rDNA)
- Influenza Vaccine
- Measles and Rubella Vaccine
- Meningococcal Polysaccharide Vaccine
- Pneumococcal Polysaccharide Vaccine

API Industry in Bangladesh

Growing at **2% Annually**

14 firms manufacture APIs for their own use

Local Production BDT **4-5 billion**

Domestic demand worth **BDT 70 billion**

15 local firms produce 40 APIs

Government aims to produce **370** APIs by 2032

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API Park

The project is being implemented on **200 acres** of land

API Industrial Park is being set up by the Government at **Munshiganj**, 37 Km from the capital city Dhaka

42 plots in which Pharmaceutical Ingredient Manufacturing Industrial units will be set up

About **25,000 people** will get employment opportunities in the project

All infrastructural facilities including **Common Effluent Treatment Plant (CETP) and waste Dumping Yard** will be available in this project

Export & Import

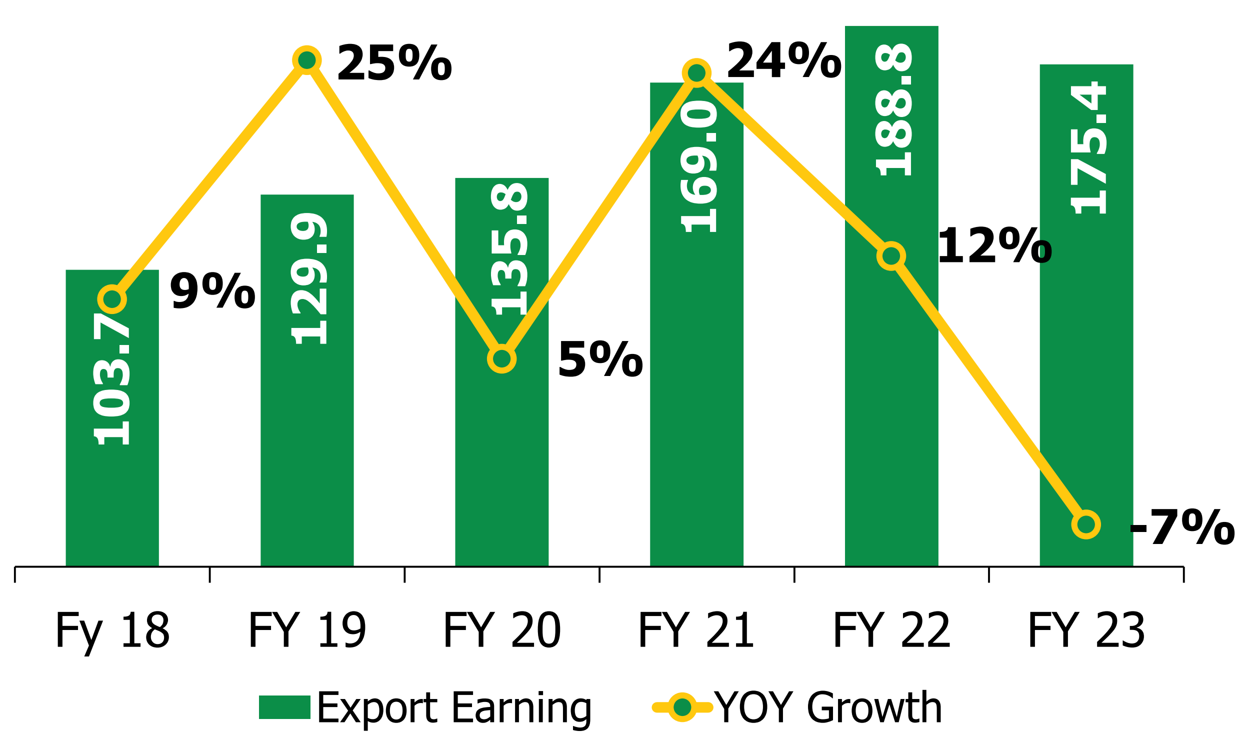
The Barter System of Pharmaceutical Trading

Export

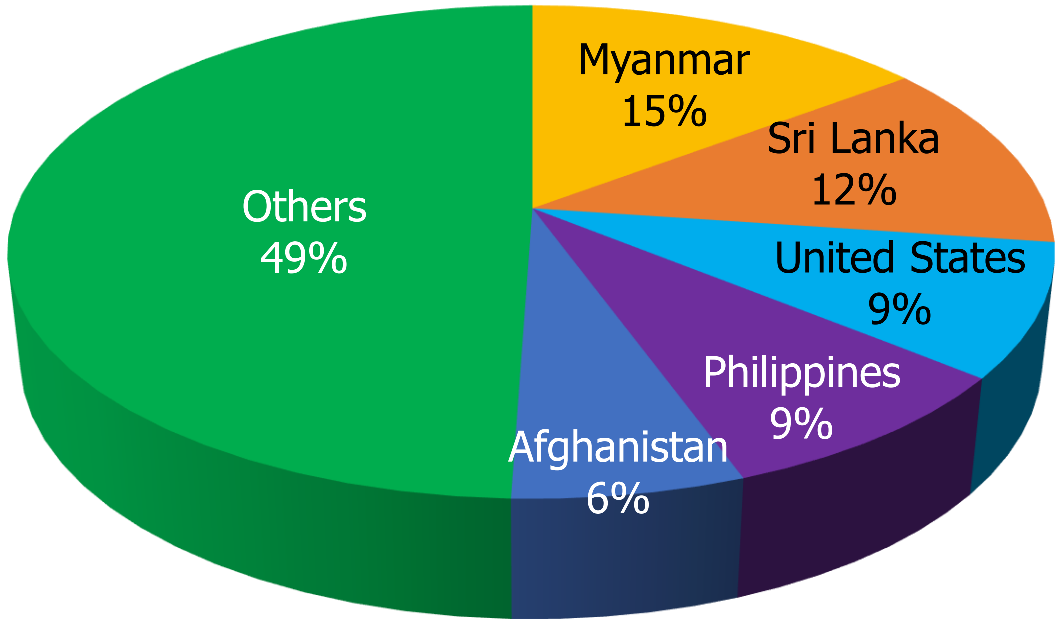
- Bangladesh exports total amount of **USD 175.42 Million** pharmaceutical products in FY23
- It ranked **67th** in the global pharma export market in FY22
- Bangladesh pharma export earning is only **0.31%** of Total USD **55.55** Billion export earning in FY23
- Bangladesh export earning growth has declined **7%** than FY22 due to **dollar shortage** and **global economic crisis**
- **02** major pharmaceutical companies Square and Reneta earned USD 17.1 Million and USD 14.06 Million respectively in export revenue for FY22
- Bangladesh exports pharmaceutical products to **157** countries and in FY23 Bangladesh exported pharmaceutical products to **131** countries
- **51%** of total export was made to 05 countries
- Of total medicines, **antibiotic** and **oncology** products account for **50%**
- Bangladesh mainly exports medicine related to malaria, tuberculosis, cancer, leprosy, kidney dialysis, homeopathy, biochemicals, ayurvedic and hydrocele alongside penicillin, streptomycin and anti-hepatic ones.

Source: BBS, EPB

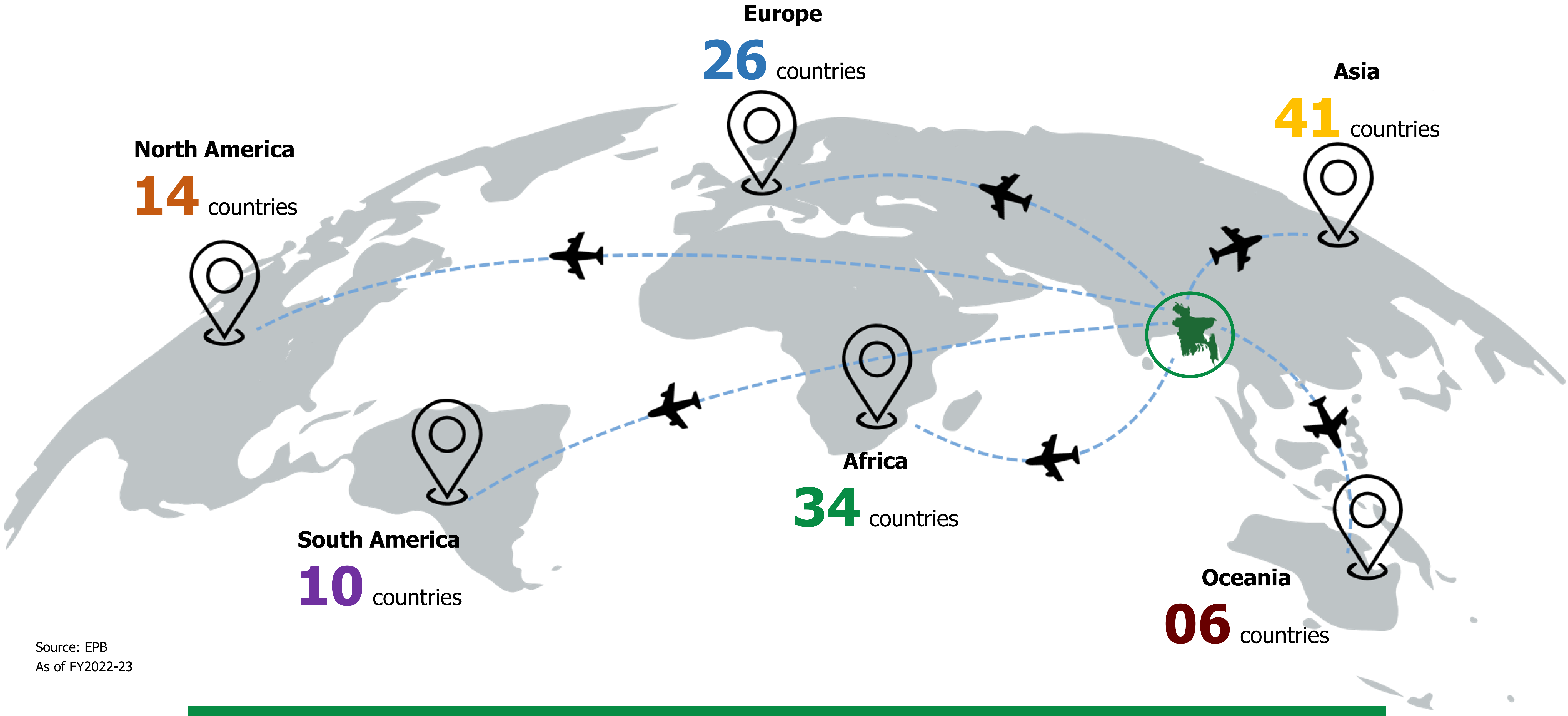
Pharma Export Earning & YOY Growth
(in USD Million)



Pharmaceutical Export to different countries



Bangladesh Pharma Export Destinations

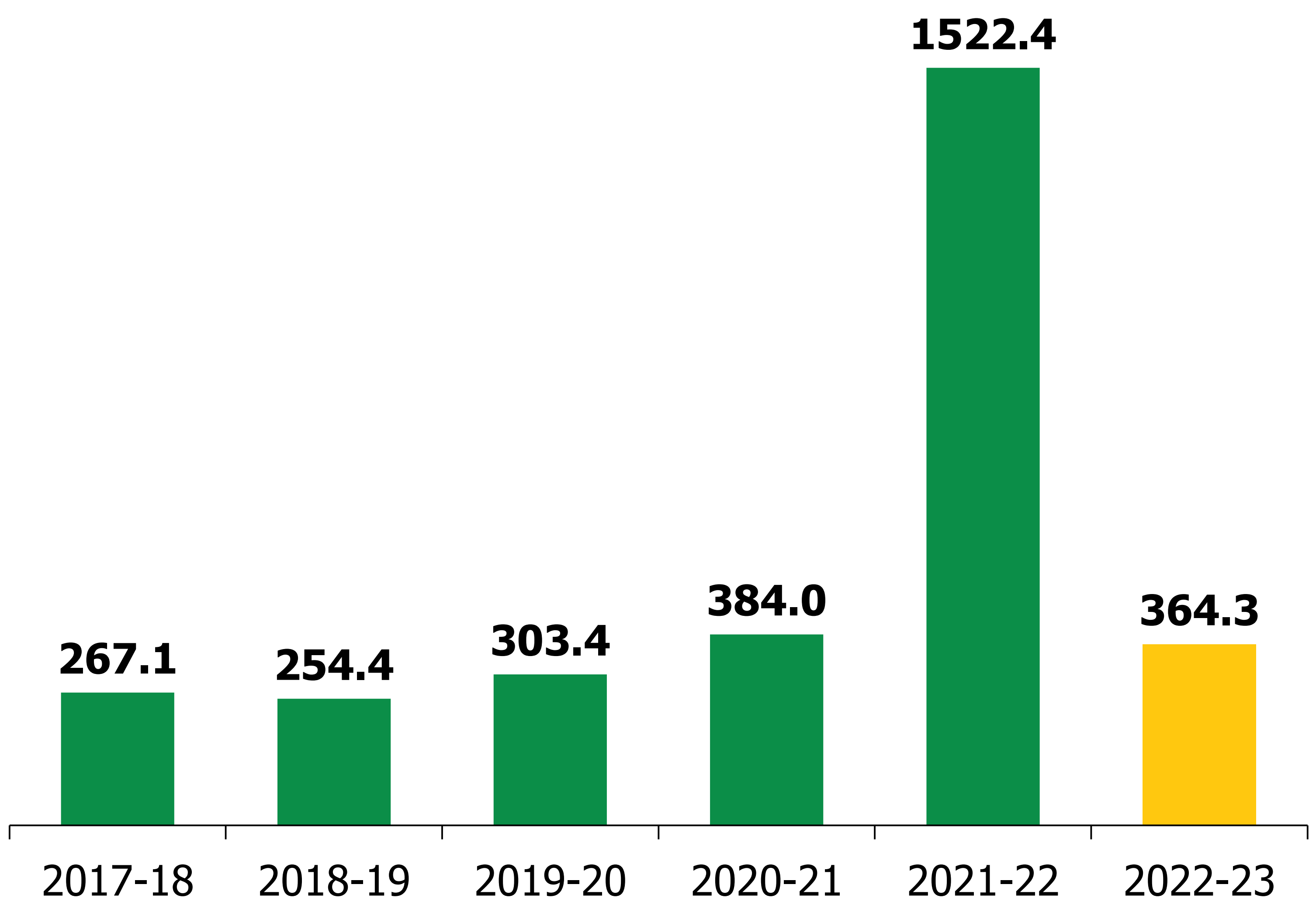


Source: EPB
As of FY2022-23

Import

- Total import of pharmaceutical such as raw material, API & vaccines of FY 2022-23 is estimated as USD **364.30 Million**.
- In FY22 the import of Pharmaceutical products was **5 times** more than FY21 due to the import of **COVID-19 vaccines**
- Bangladesh imports most of its pharmaceutical materials from **India**, **China** and **Germany**
- **85%** of total APIs' is imported by the Pharma industry of Bangladesh
- The majority of Bangladesh's imported medicines are used to treat critical diseases like cancer, heart disease, kidney disease, and neurological disorders.

Pharma Import to Bangladesh
(In USD Million)



Source: BBS, BB

FDI Inflow of Pharma & Chemicals Sector

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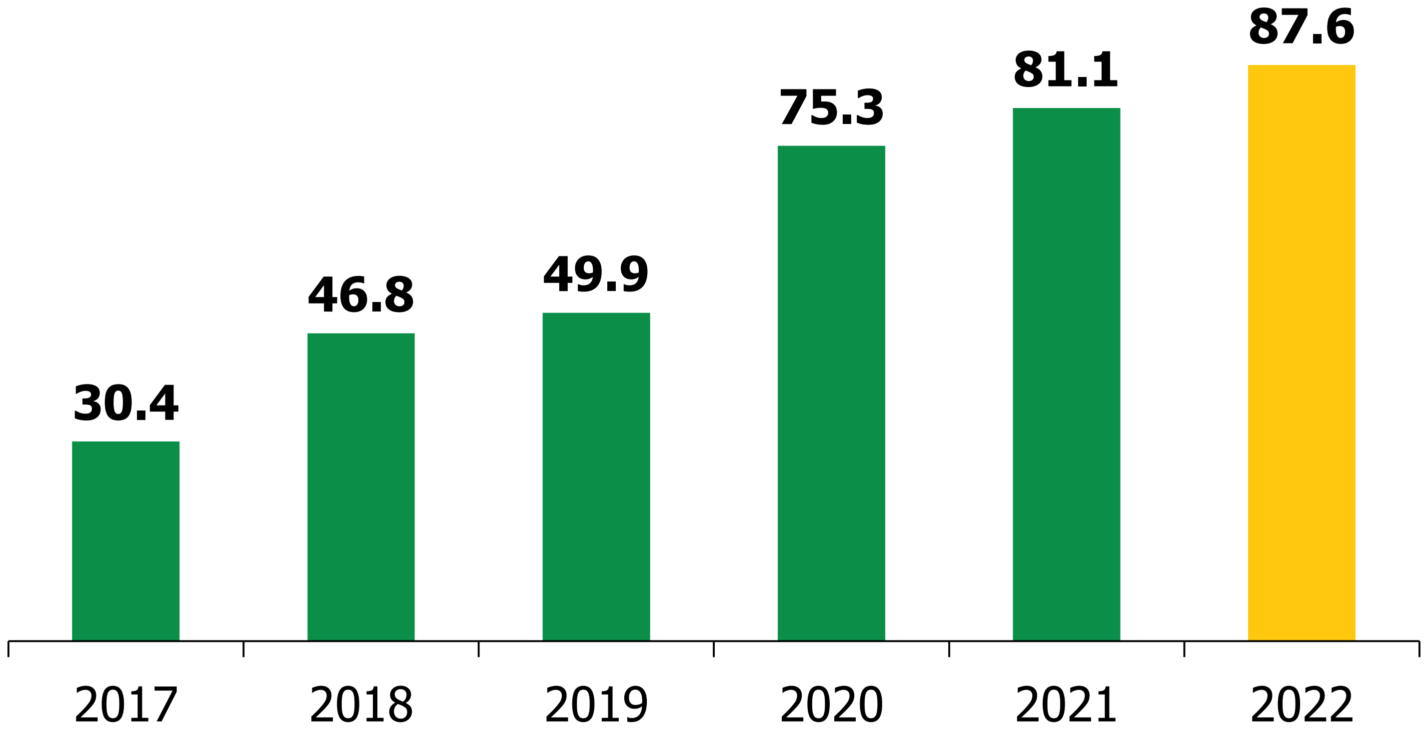
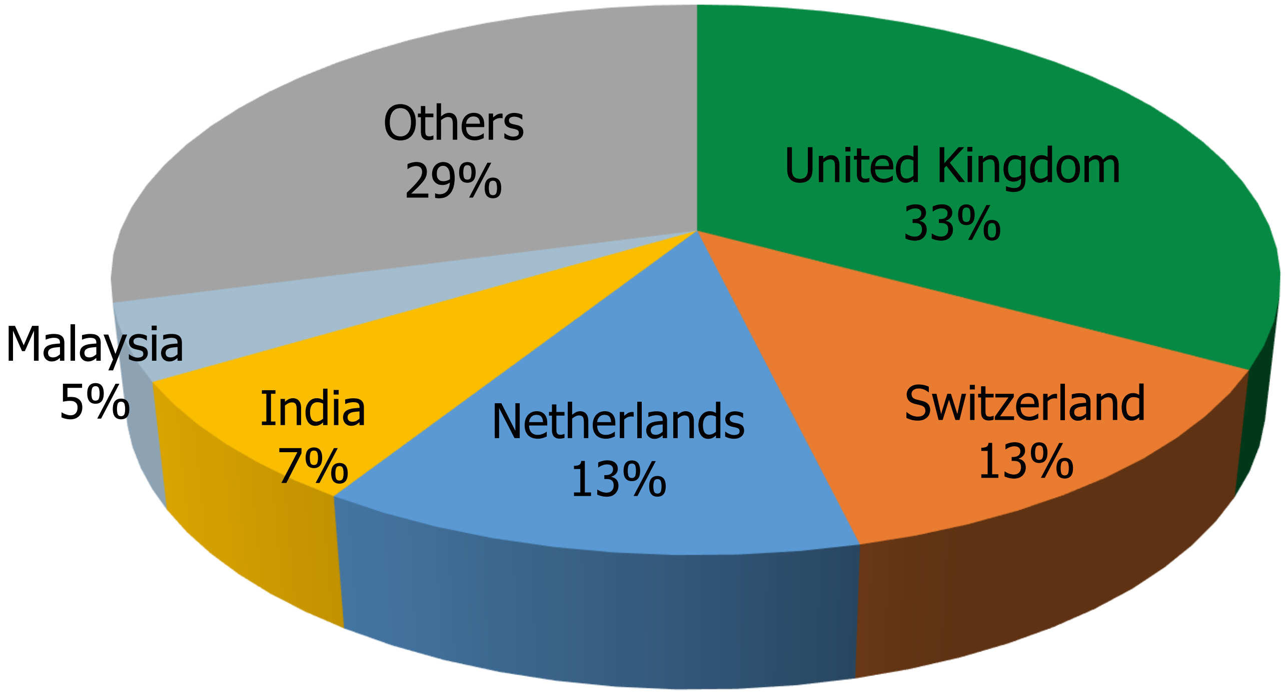
FDI of Pharmaceutical Sector
(in USD Million)



- As compared to the prior year, net FDI inflow increased by **6%** in the year 2022
- The **global economic crisis** is causing FDI inflow to expand at a steadily growing rate than anticipated

Pharma Net FDI Inflow
(by Countries)



- Most FDI was contributed by **5** countries with a share of **71%**
- The **United Kingdom** alone holds one-third of all nations' stakes in BD.

Source: BBS, BB

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Veterinary (Animal) Pharma Industry

- The market for veterinary medicine in Bangladesh is worth **BDT 30 Billion**.
- About **60-70%** of the demand for veterinary medicine is being supplied by local manufacturers.
- Bangladesh imports the remaining **30-40%**.
- The market for veterinary medicine is growing at a rate of **8-12%** per year.
- Of the **24** different varieties of animal vaccinations that are available in Bangladesh, **15** are imported, and the other types are locally produced.

Source: AHCAB, MOHFW

Healthcare Scenario of Bangladesh

Healthcare Insights

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Population:
169.8 Million
(as of 2022)

Mortality Rate:
5.8 per 1000 People
(as of 2022)

Doctor to People Ratio:
5.26 Per 10,000 People
(as of 2019)

ICU :
1500 Total ICUs'
(as of 2022)

Nurse to People Ratio:
3 Per 10,000 People
(as of 2023)

Hospitals:
Government - **654**
Private - **5,055**
(as of 2022)

Hospital Bed:
Government - **51,316 beds**
Private – **1,05,183 beds**
(as of 2022)

HealthCare Budget
BDT **380.5** Billion
(as of FY 2023-24 proposed)

Per capita Healthcare Expenditure
USD 50.66
(as of 2022)

Per capita Expenditure on Medicine
USD 19.65
(as of 2020)

Out of Pocket Health Expenditure Sector
64.60% on Medicine, **13.40%** on Outpatient center
(as of 2020)

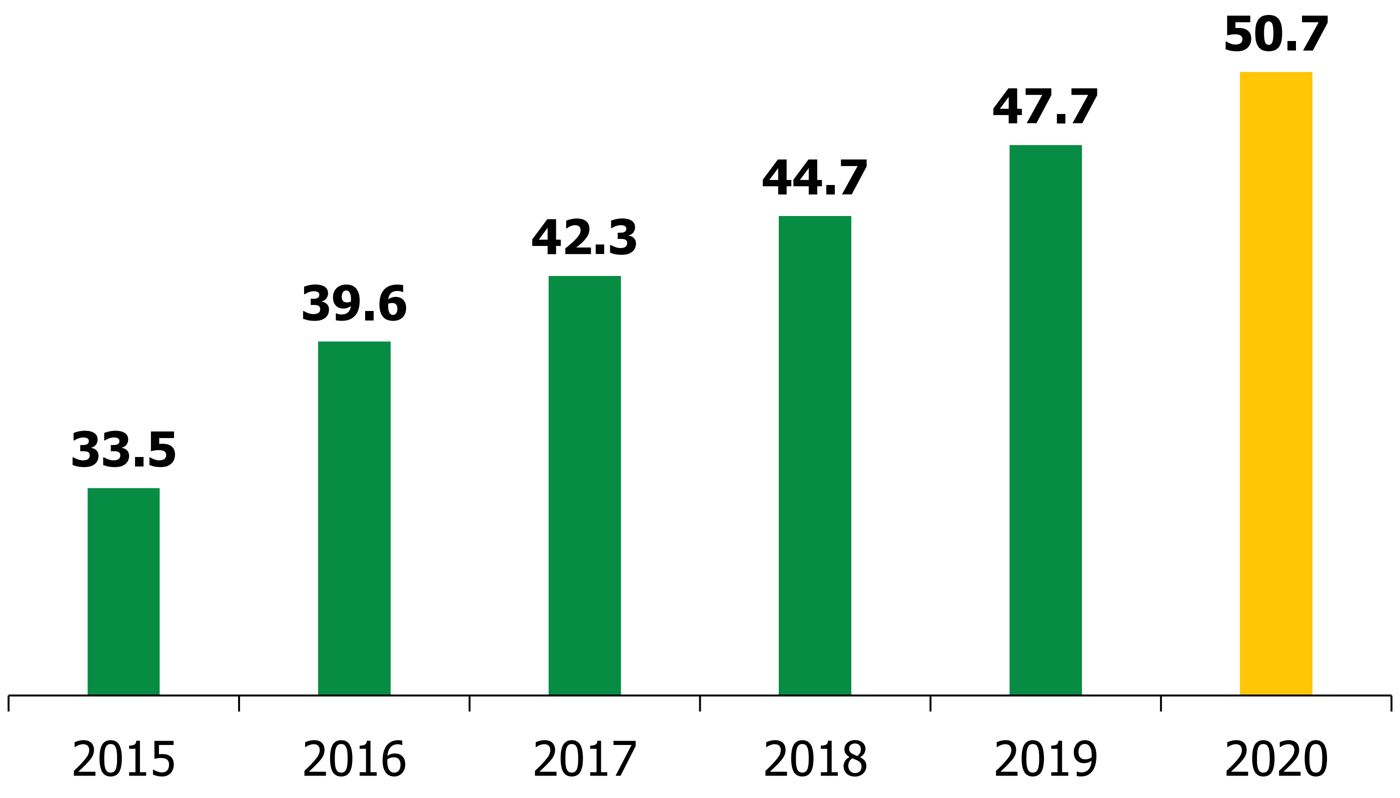
Healthcare Financing by Sector
68% by Household, **23%** by government
(as of 2020)

Highest Per capita Health Expenditure by division
Residents of Dhaka **BDT 7,039**
(as of 2020)

Source: DGDA, EPB, BAPI, BBS, BSPH, MOHFW

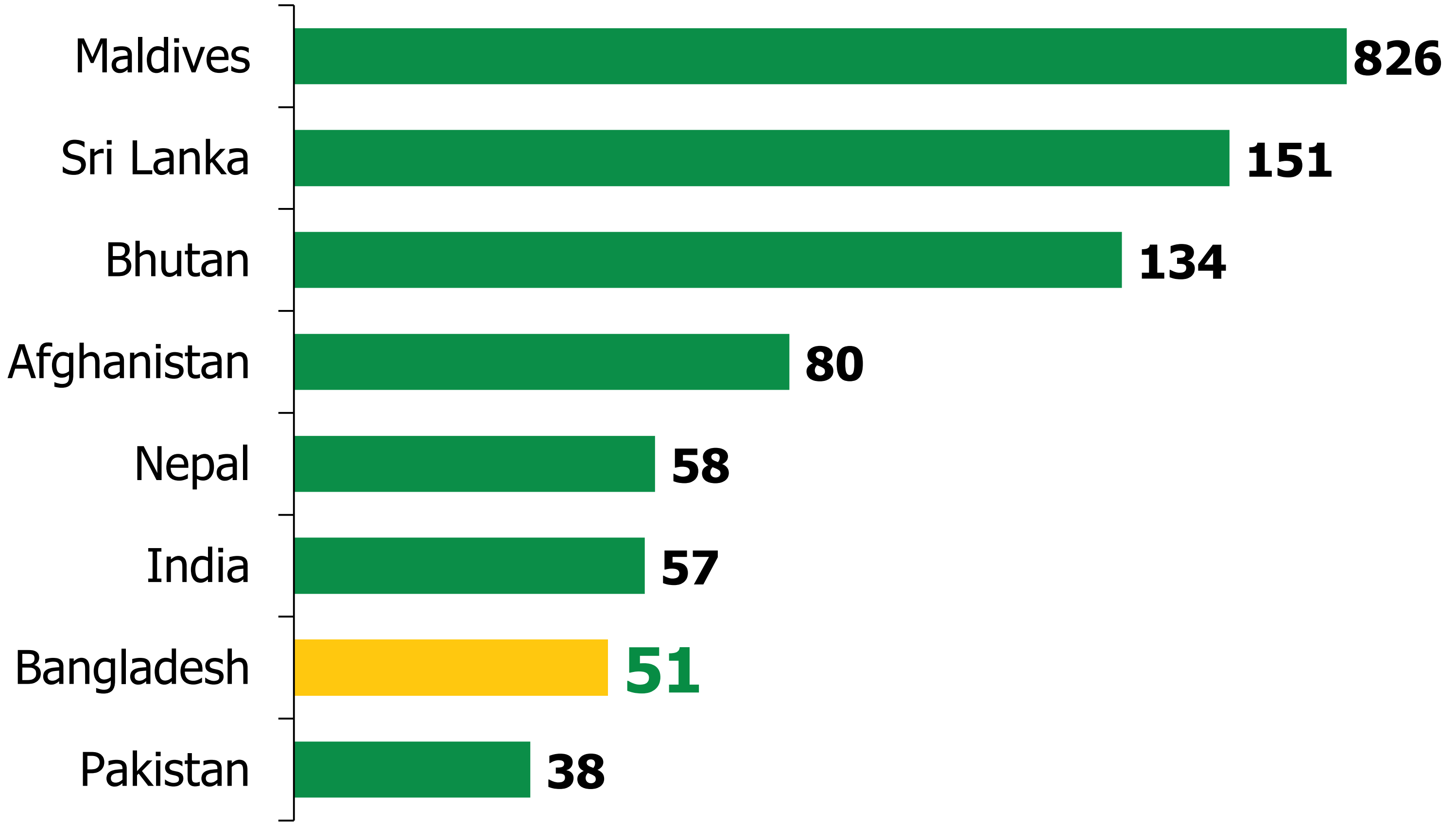
Per Capita Healthcare Expenditure

BD Per Capita Expenditure in Health
(in USD)



- Per capita expenditure in Health was recorded USD **50.66** in 2020
- Bangladesh has an average of 8% YOY increased growth for Per capita Health Expenditure

Per Capita Expenditure in Health By SAARC Nations
(as of 2020, in USD)



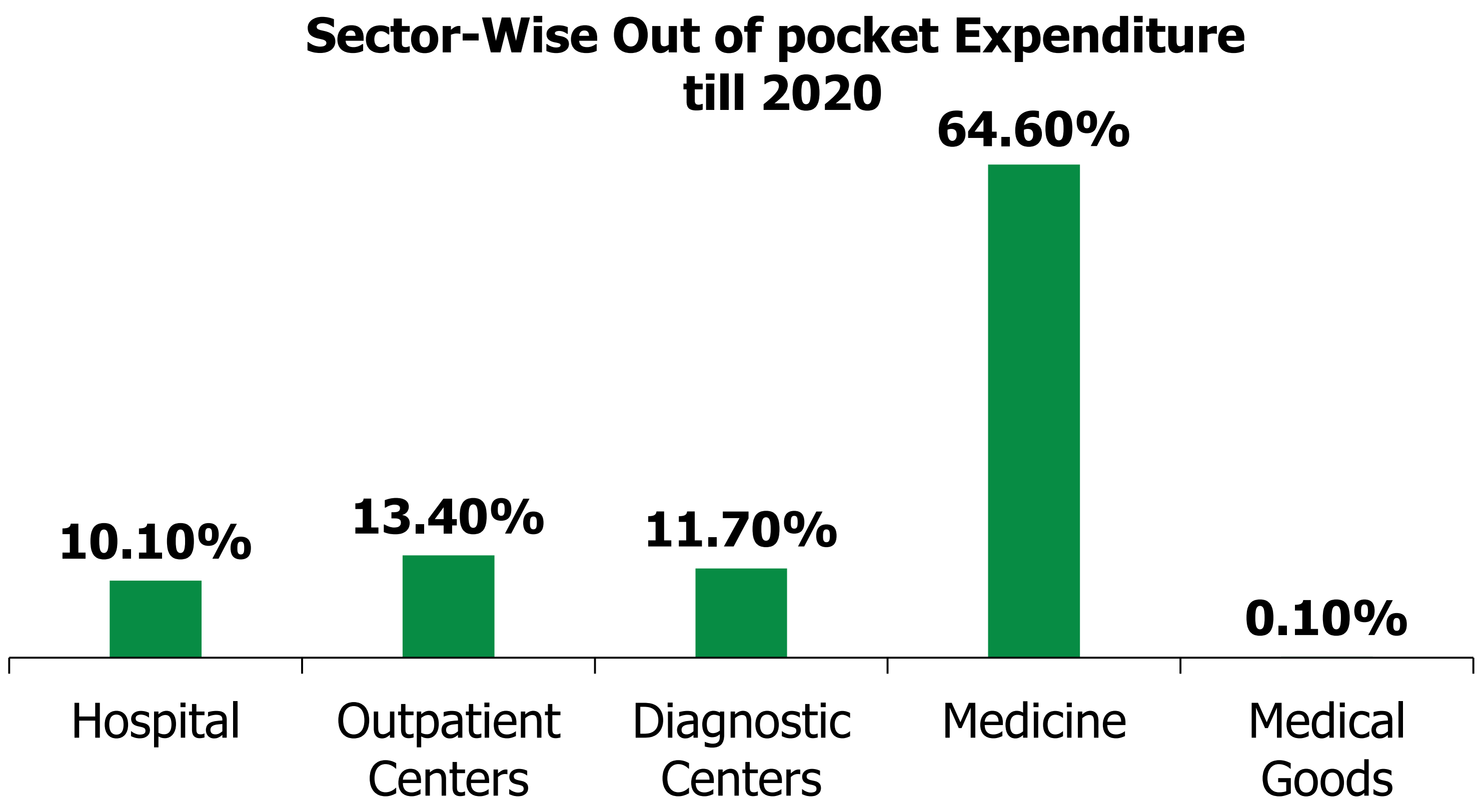
- Maldives, Sri Lanka & Bhutan has the most per capita health expenditure among these eight nations.
- Only Pakistan has less per capita expenditure in health among all the SAARC nations than Bangladesh.

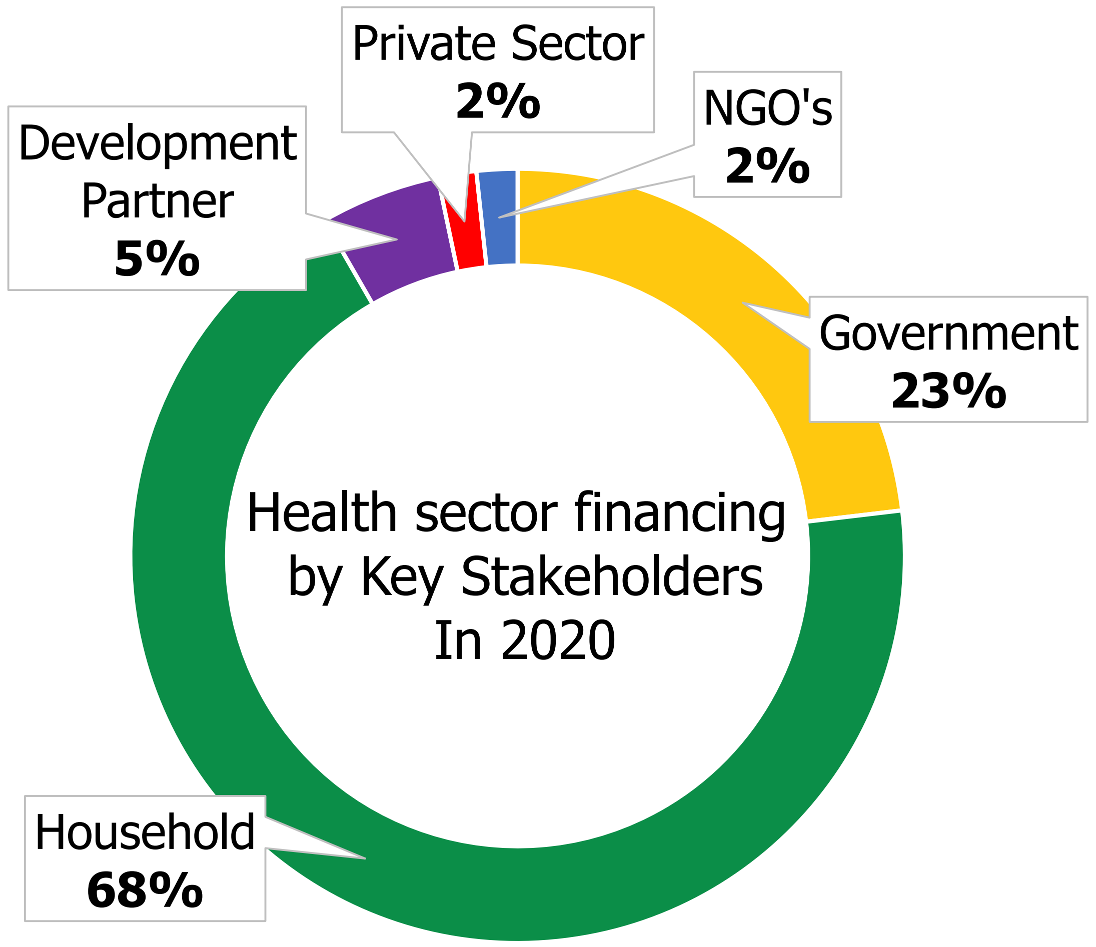
Source: BNHA, World Bank

Out-of-Pocket Expenditure

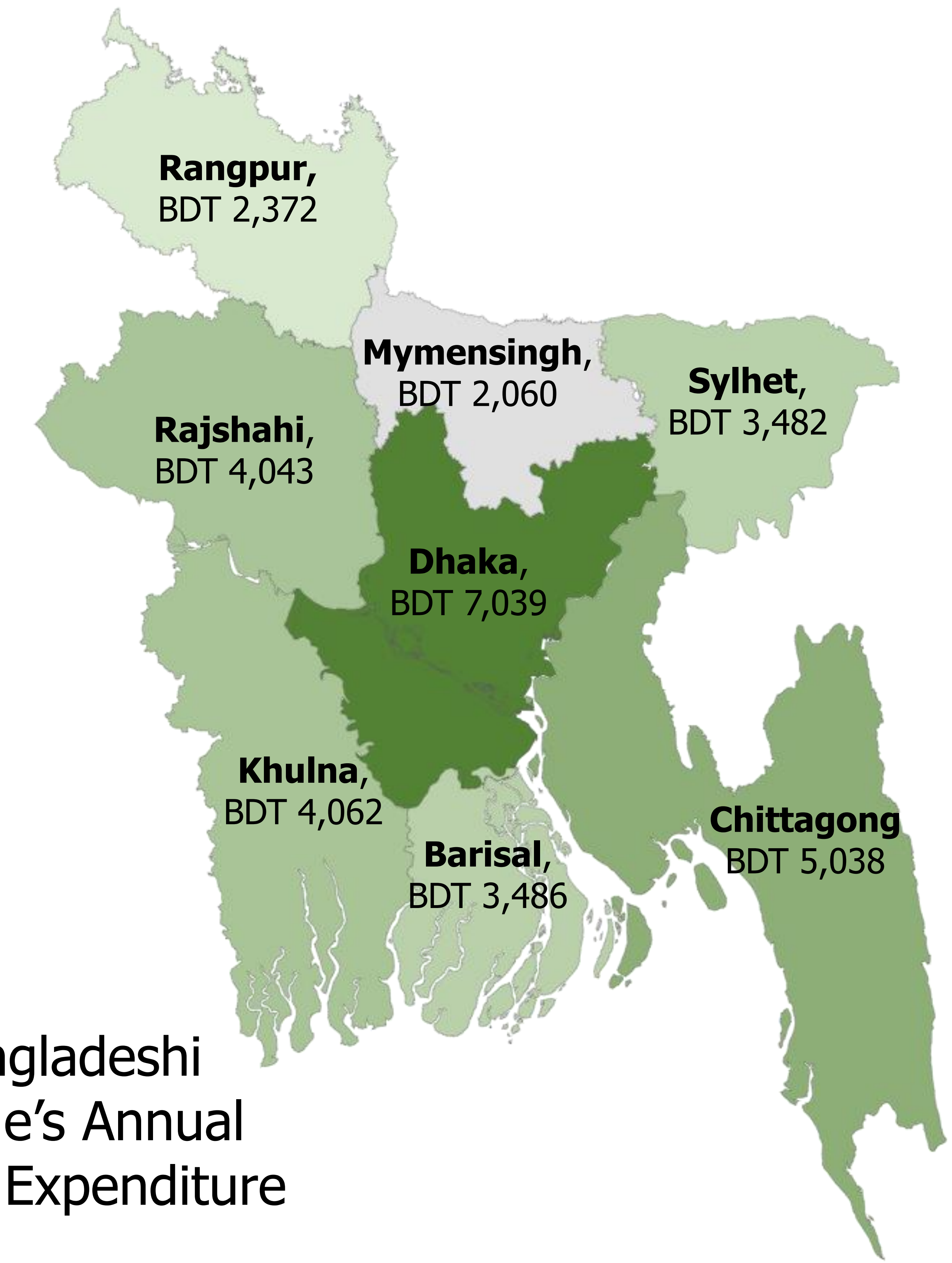
- Per capita OOP payment made by household for health was **USD 37.49** in 2020 where per capita health expenditure was USD 50.66.
- OOP payments by households are largely made at **pharmacies/retail drug outlets** of **BDT 344 billion** & on **ambulatory medical service providers** of BDT **72** billion in 2020
- Under the SDG monitoring framework, OOP payments as % of total household expenditure **outside** of the range **10%-25%** is considered as **catastrophic** whereas, Bangladesh OOP expenditure was recorded **74%** in 2020.
- Households health sector financing in 2020 is **BDT 533 billion** which is **68%** of total health expenditure
- Government is financing **2.9** times less than household which is one of the lowest in the world

Source: BNHA





Division wise Out-of-Pocket Expenditure



Bangladeshi People's Annual Health Expenditure

- On an average people of Bangladesh's annual healthcare expenditure was **BDT 4,578** in 2020
- Resident of **Dhaka** had the highest expenditure with an average of BDT 7,039 which is **37.70%** and **Mymensingh** had the Lowest with an average of **BDT 2,060** which is **3.20%** of all
- The top **20% richest** spend **BDT 223.1 billion** (**42%** of total) on health care, based on household OOP expenditure statistics.
- The poor living in city corporation areas spend around BDT **606 million** on health which is **2.7%** of their total consumption expenditure.

Source: BNHA

Country wise Out-of-Pocket Expenditure

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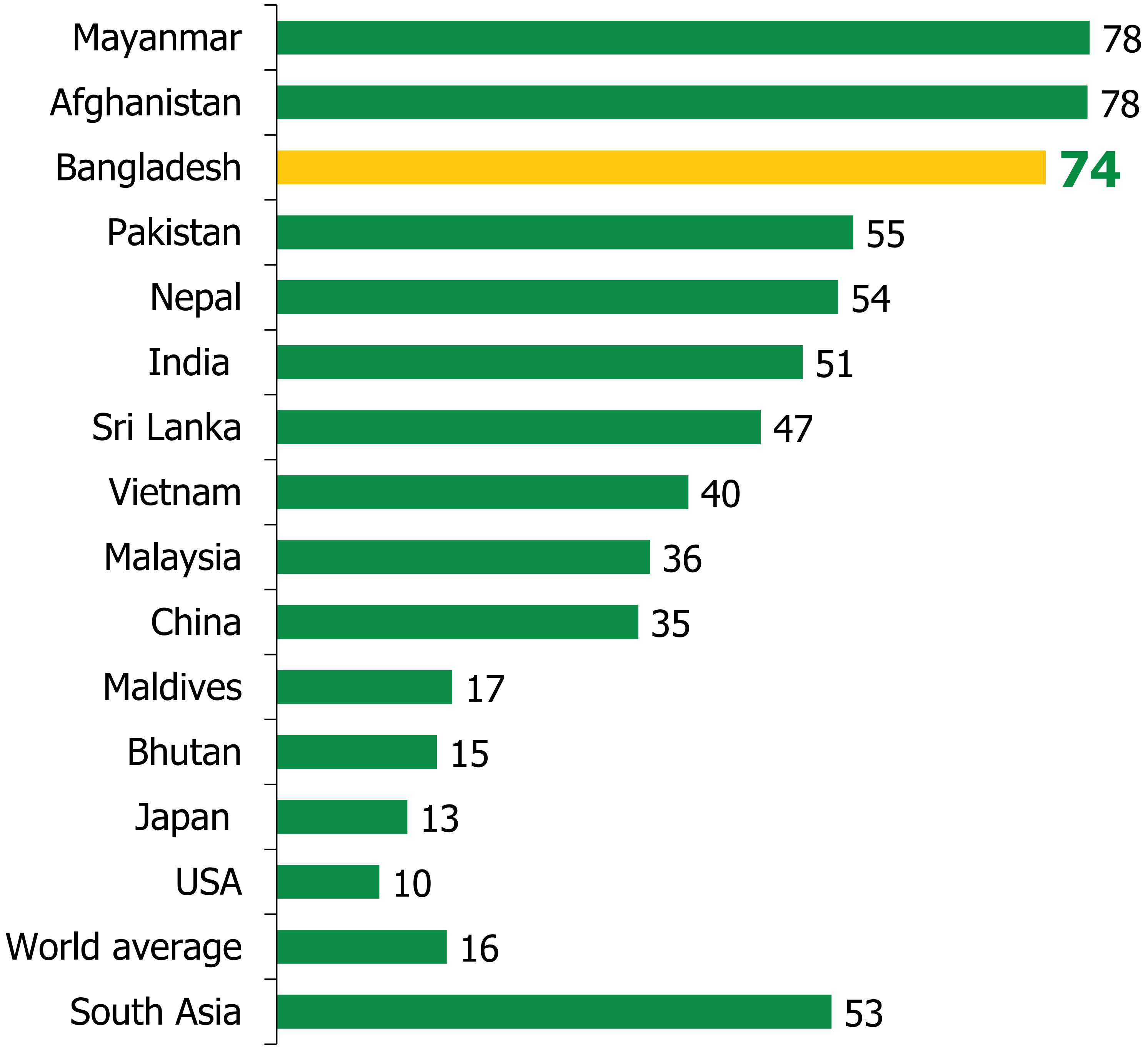
OOP as % of Current Health Expenditure till 2020

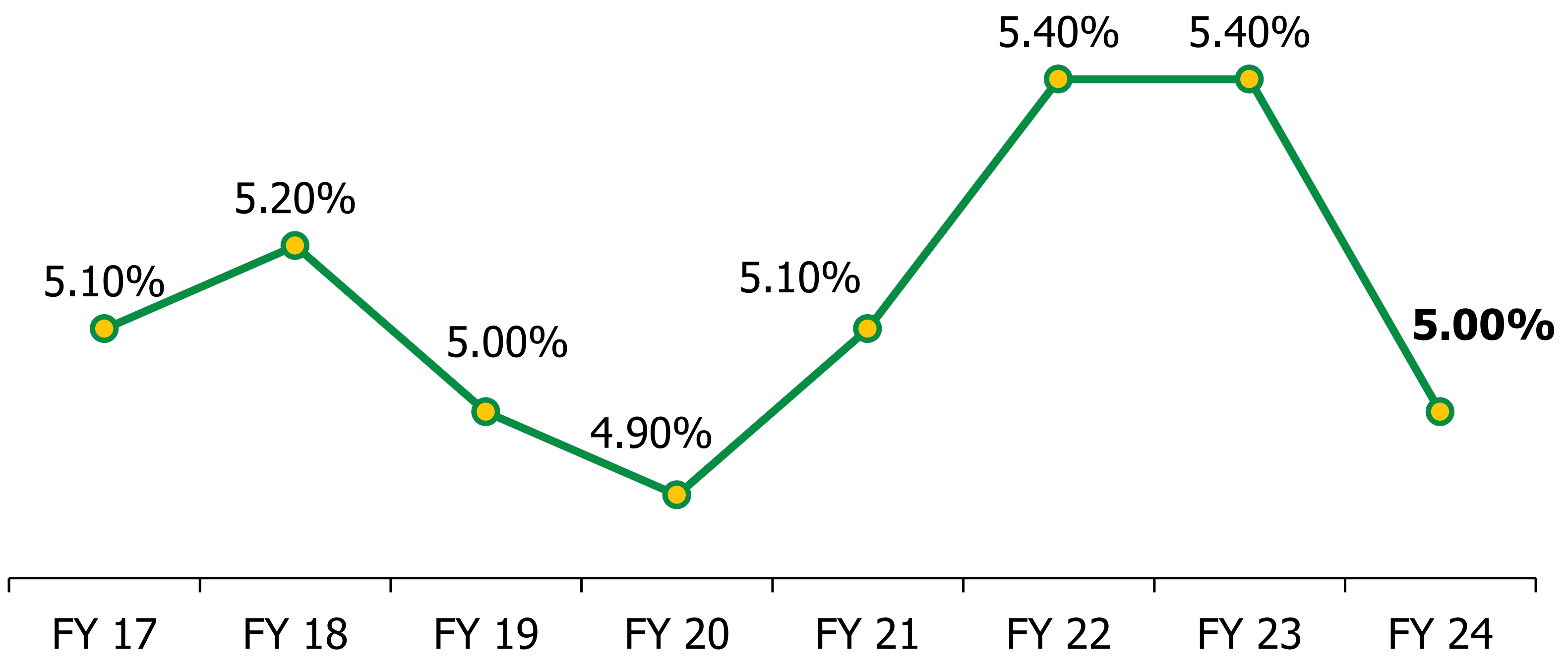


- **World Average** OOP expenditure is **16%,** Average of **South Asian** OOP expenditure is **53%**
- **Afghanistan** (78%) & **Myanmar** (78%) among most of the south Asian countries has more household OOP expenditure than Bangladesh.
- **Maldives (17%)** and **Bhutan (15%)** among all other SAARC nation countries has an OOP not in catastrophic stage
- USA, Japan, Germany along with maximum of the European and North American Countries has a balanced OOP expenditure.
- Countries like Vietnam, Malaysia, Sri Lanka, Pakistan, China are in much better position in case of household OOP expenditure compared to Bangladesh.

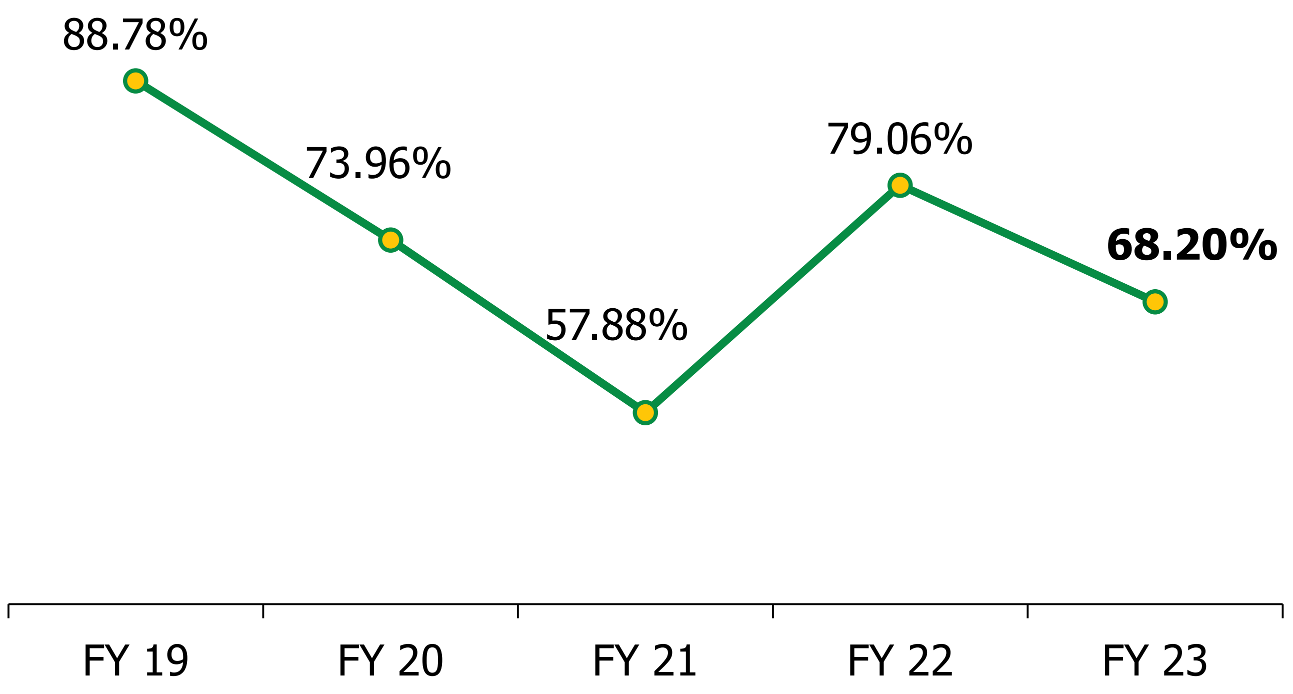
Source: World Bank
(As of 2020)

Healthcare Budget

Proposed Budget Allocation on Health of total Budget



Health Ministries ADP Implementation



Budget & ADP Implementation

- Total proposed budget of **FY23-24** is BDT **7,617.85** Billion of which healthcare budget is BDT **380.52** Billion (**0.40%** less than FY22-23)
- The reduced COVID pandemic situation is what caused this year's health budget allocation to be lower than it was in the previous two years.
- ADP implementation is decreased By **11.4%** in last Fiscal Year
- The ministry had fallen behind by at least **7.0%** points on an average from the overall ADP implantation rate during the last one decade

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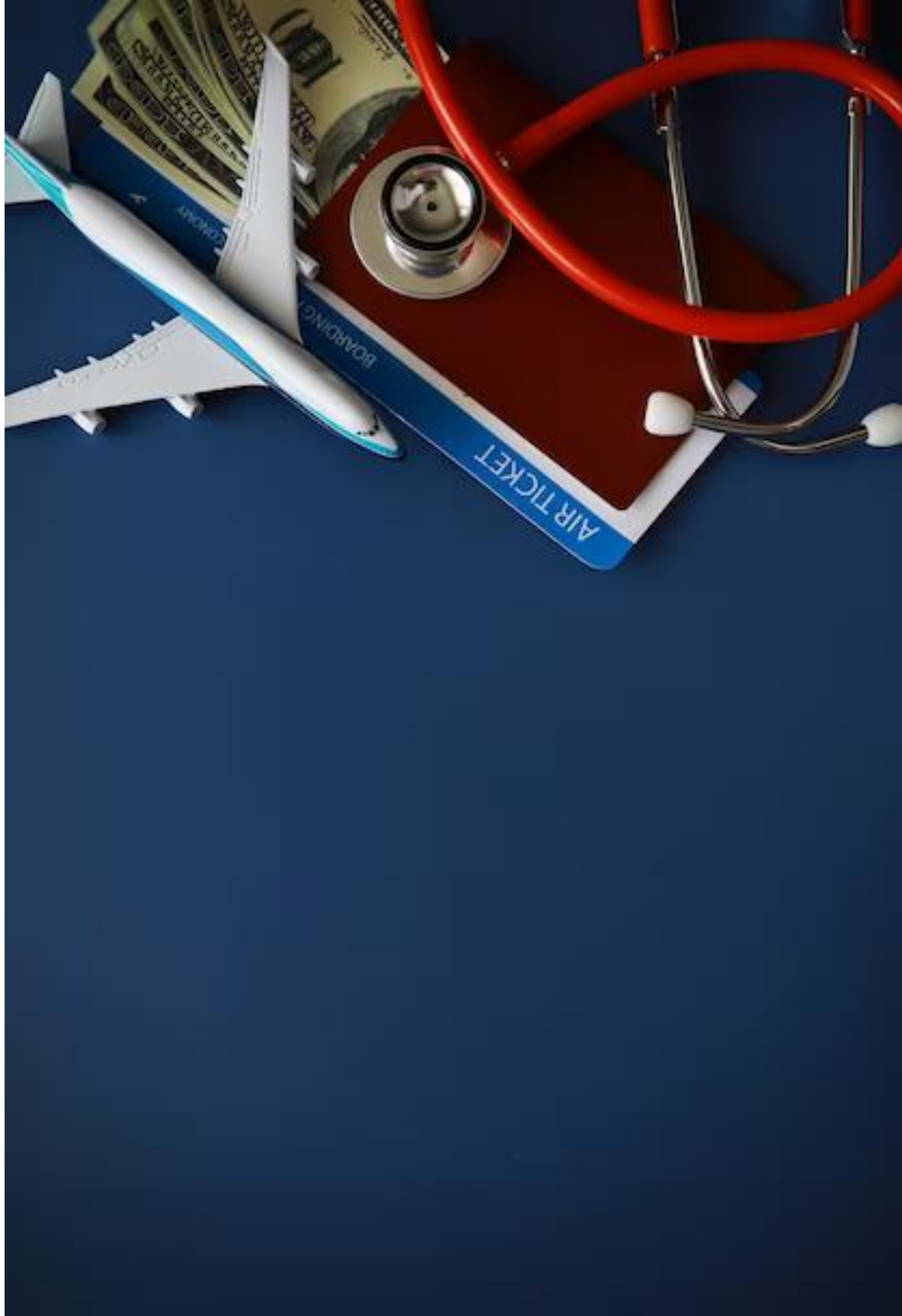
Availing Cross-Border Medical Facilities

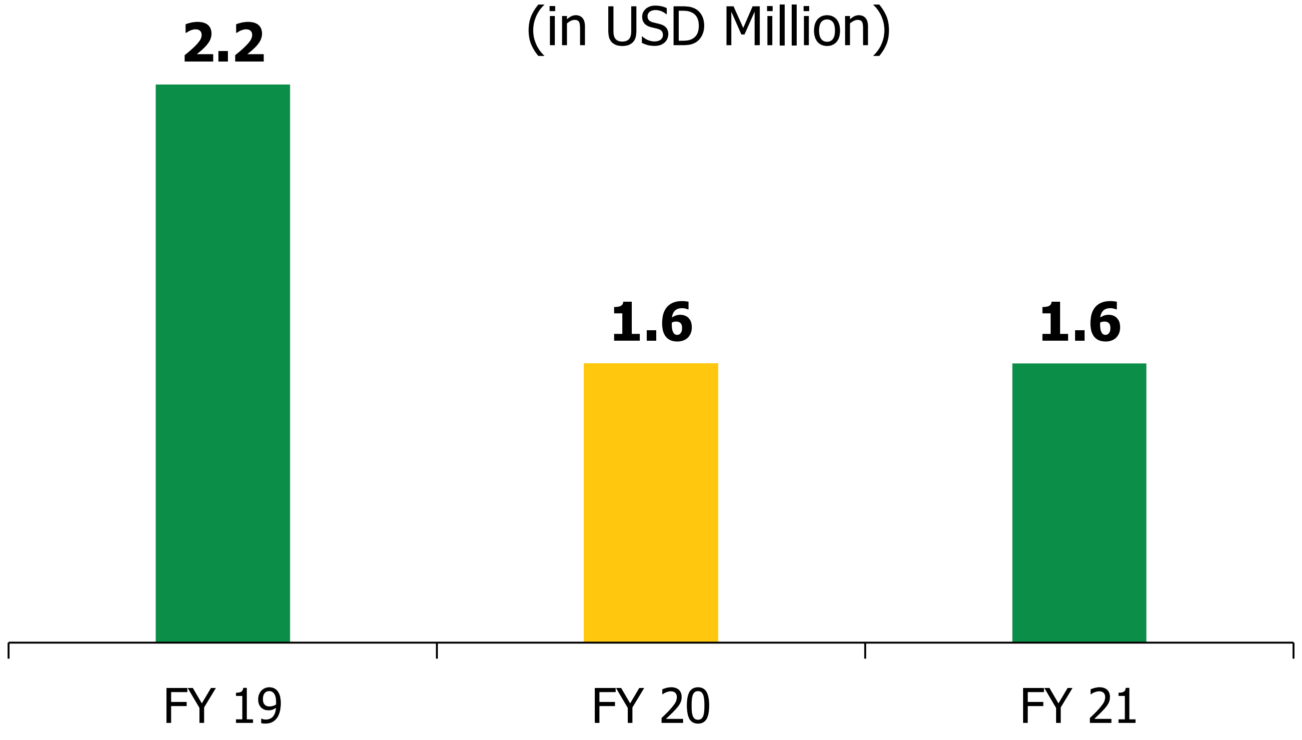


Cross-Border Medical Facilities

Leaning for International Medical Services

- Around 7,00,000 Bangladeshis travel overseas for medical care each year.
- According to the Bangladesh Bank, Bangladeshis spent USD 2.2 million in FY19, USD 1.6 million in FY20, USD 1.6 million in FY21, and **USD 0.5 million** during the July-September period of the FY23 for treatment in abroad.
- **29%** of the total Bangladeshi tourists spent money on receiving treatment in different countries.
- **India** tops the list of medical tourism destinations followed by other countries like Singapore, Thailand, Malaysia, and the UAE from Bangladesh.
- More than half of the medical tourists in India are from Bangladesh and the number has risen by **83%** to 2021 from 2019.
- The reasons for this trend range from a lack of trust in the local healthcare system to a desire for more advanced medical facilities.

Bangladeshis' Expenditure in Treatment Abroad
(in USD Million)



- Factors including unprofessional behavior from healthcare professionals, misdiagnosis, lack of clear explanations of health conditions, and the tendency of doctors to recommend unnecessary tests and drugs play a key role in patients going abroad.
- Another major factor is many patients feel that the cost of medical treatment in Bangladesh is higher compared to other countries.

Source: BBS, BB, Times of India, Ministry of Tourism (India), The Daily Star, The Business Standard, The Financial Express

Health Insurance Sector of Bangladesh

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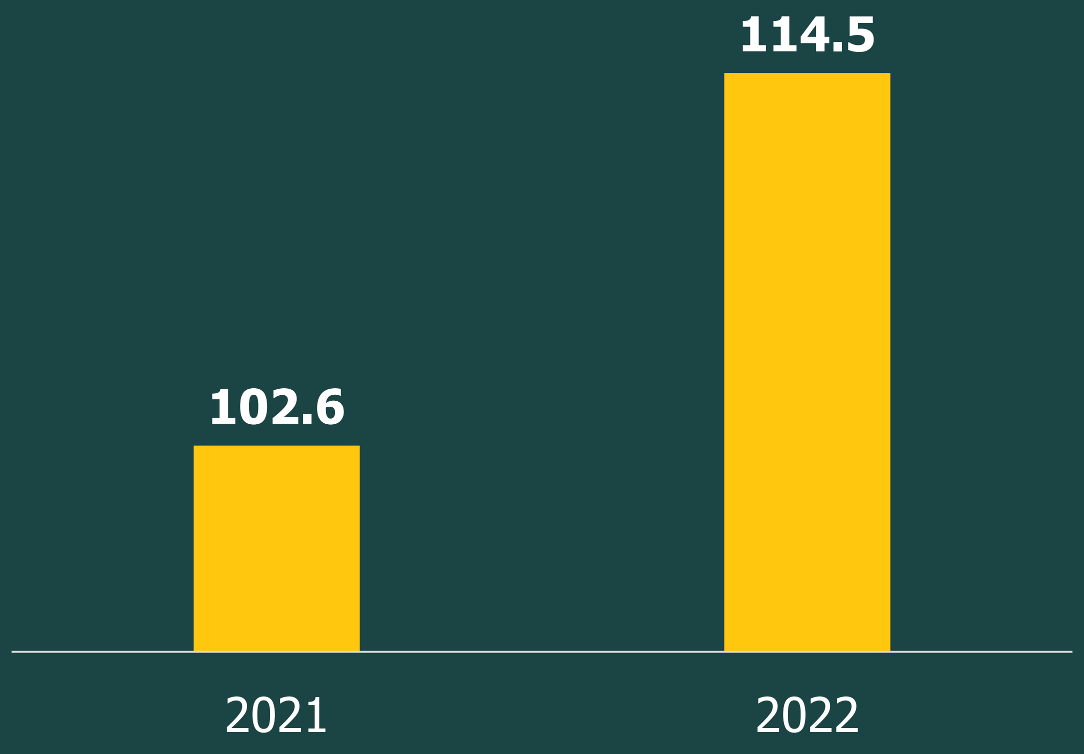
The life insurance premium was worth **BDT 114.02 billion** while the non-life insurance premium was **BDT 47.45 billion** in 2022

Life insurance Share Comparison



(in BDT Billion)

Contribution to GDP (as of 2022)
0.04%

Insurance Penetration (as of 2021)
0.56%

81 insurance companies operating in Bangladesh, including **35 life insurance** and **46 non-life insurance** companies

Patients have to dip into their savings to pay for **three-fourths** of medical expenses

Among 170 million people, only **10%** have life insurance, **60%** are insurable

Source: IDRA

Graduating LDC & Bangladesh Pharma Sector

Graduating LDC & Bangladesh Pharma Sector

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The pharmaceutical industry of Bangladesh has been one of the major beneficiaries of the **patent waiver** dedicated towards the LDCs

Among the LDCs worldwide, Bangladesh exported the highest amount of pharma products, accounting for about **55.4%** of the total

According to International Trade Center (ITC), the global export of pharmaceutical products was worth **USD 818.4 billion** in 2021 while the pharmaceutical product export for LDCs was worth USD 168.2 million

Downsides of Graduating

Losing LDC status in 2026, Bangladesh pharmaceutical industry will stop enjoying patent waiver seven years before the expiry of the stipulated transition period – meaning in **2026 instead of 2033**

A distinct transition period for Intellectual Property Rights (IPR) related to pharmaceutical products will be in existence until 2033 for LDCs. But, once LDCs graduate from the category, **they will not be entitled with these benefits**

After LDC graduation, Bangladesh will face a higher tariff regime ranging from **8%-15%** in the export market which may decline export earnings by **14.28% equivalent to USD 5.73 billion**

- According to Dhaka Chamber

Sustainable Development Goals (SDG)

SDG Implementation on Pharma and Health

SDG 12:
Responsible Consumption & Production

The efficient management of our shared natural resources, and the way we dispose of toxic waste and pollutants, are important targets to achieve this goal

SDG 9:
Industry, Innovation & Infrastructure

Promoting sustainable industries, and investing in scientific research and innovation, are all important ways to facilitate sustainable development

SDG 3:
Good Health and Wellbeing

Ensuring healthy lives and wellbeing for all by 2030. It also aims to achieve universal health coverage and provide access to safe and effective medicines and vaccines for all

SDG 6:
Clean Water and Sanitization

Safe and affordable drinking water for all by 2030 requires we invest in adequate infrastructure, provide sanitation facilities, and encourage hygiene

SDG 8:
Decent Work & Economic Growth

The goal is to achieve full and productive employment, and decent work, for all women and men by 2030

Our Main SDG:
Good Health and Wellbeing (SDG 3)

SDG 3 aspires to ensure healthy lives and wellbeing for all by 2030. It aims to achieve universal health coverage and provide access to safe and effective medicines and vaccines for all

Bangladesh Government has been working to implement the national health Strategic Plan 2011-2030 aimed at achieving the target of SDG 3.

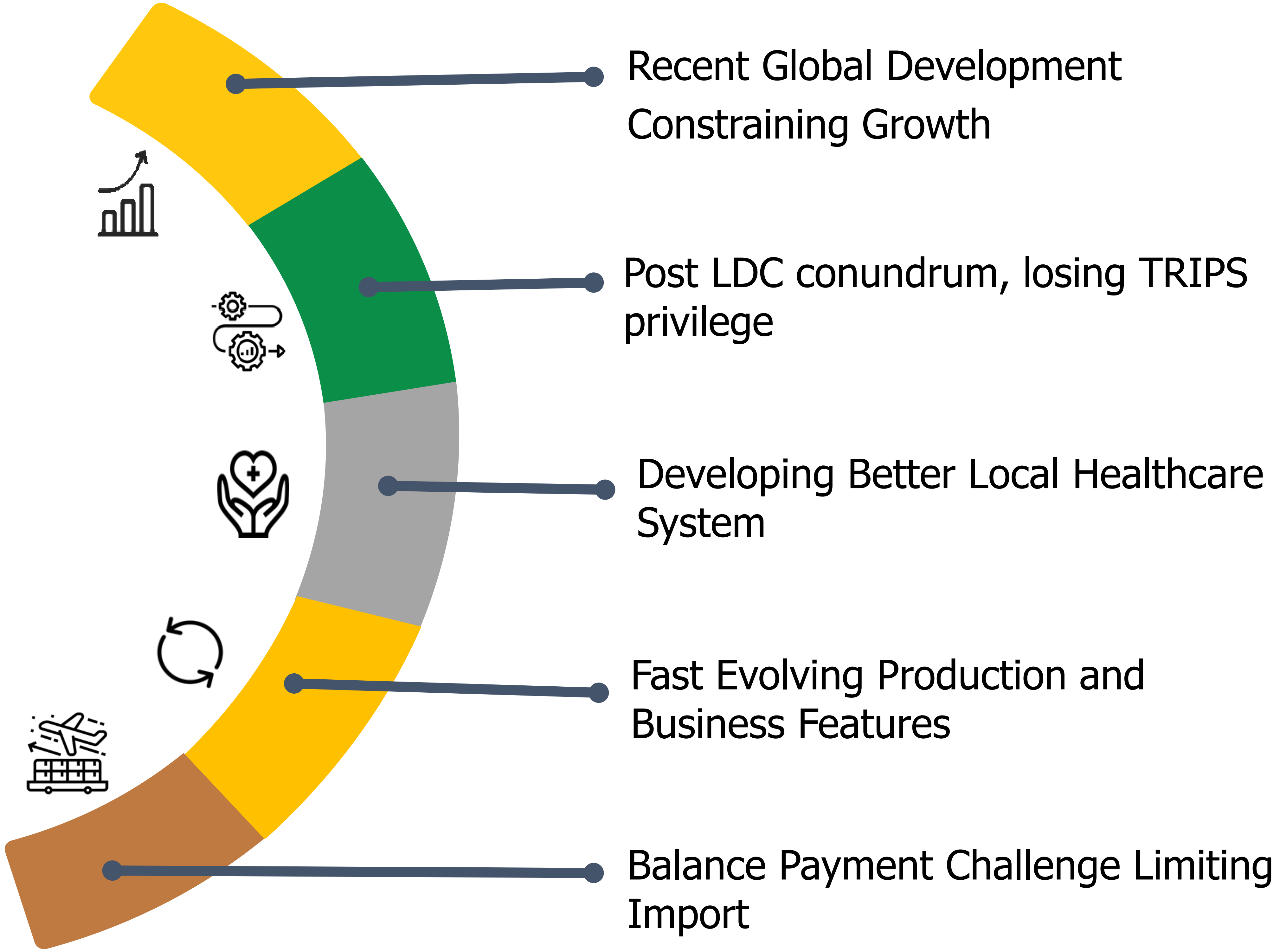
Emphasis has been given on research on producing Covid and other vaccines in the country, while a vaccine manufacturing plant is being set up at Gopalganj with the technical support of the US.

Infectious diseases were once the main health problem in Bangladesh. It achieved remarkable success in preventing such diseases due to the construction of necessary health facilities and various steps taken at both the public and private levels

Bangladesh remains committed to implementing the UN Sustainable Development Goals including SDG-3 despite the challenges posed by the Covid pandemic, Ukraine war and global crisis.

Challenges Facing

Uncertainties on the Boom of Pharma Industry



Bangladesh has to depend on imports to meet around **85%** of requirements for APIs. This costs the country about **USD 1.3 billion** annually

The increase in the prices of **electricity and fuel** has also added to the country's rising production costs. These are the major reasons why it is currently experiencing a very tough time.

Source: BAPI

Steps Ahead

For Enhanced Pharma and Health

- Development of own patents and modernizing the Patent Law System
- Developing advanced medical services to reduce the expenditure of the natives
- Global partnership will be important as trend changes very rapidly
- Formulating Post-LDC Sector Strategy
- Betterment of the utilization rate of the health budget
- A burn rate tracking system from the national level and its proper navigation
- Efficiency and shared responsibility among relevant stakeholders

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Government Incentives for Pharmaceuticals Sector

Tax Incentives Under API Policy

Active Pharmaceuticals Ingredients (API) and laboratory reagent producers will enjoy tax holiday from 2023-2032 if they could produce API molecules domestically:

- For 5 API molecules producers will get **100%** tax holiday
- For 3 API molecules producers will get **75%** tax holiday

No AIT will be applicable for API producers on import of chemical compounds (Technical Grade/Chemically pure)

Export/Cash Incentives

20% export subsidy on exporting Active Pharmaceuticals Ingredients (API) from Bangladesh

7% export subsidy on exporting pharmaceuticals products

Eligible Industry

- API and radio-pharmaceuticals
- Pharmaceuticals
- Barrier contraceptive and rubber latex

Tax Exemption

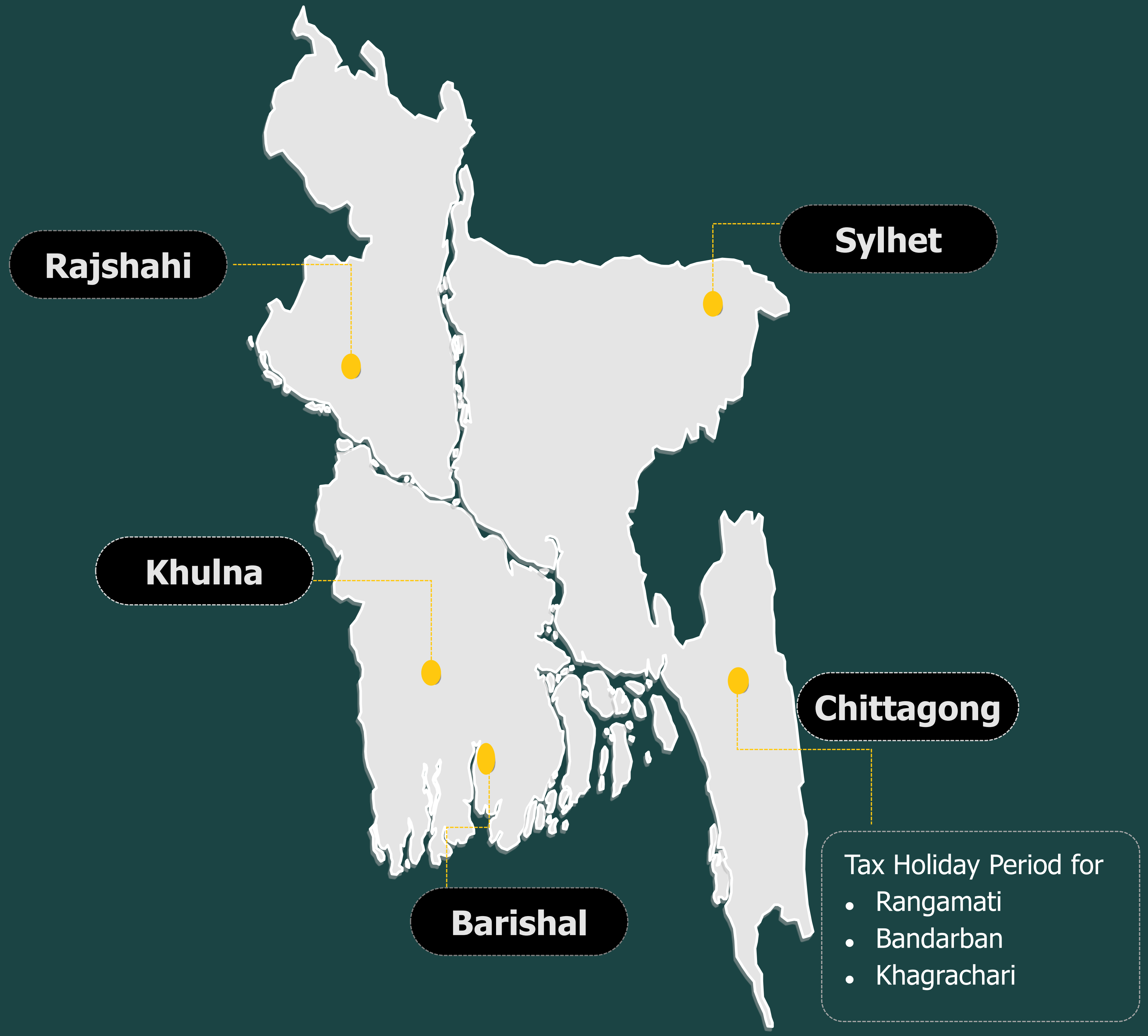
Newly established firms between July 1, 2019 and June 30, 2024 belonging to the pharmaceutical sectors are eligible for reduced income taxes

Five-year tax exemption is offered to businesses in these divisions, the period of tax exemption is for five years, which will begin in the month of commencement of commercial production at the following rate.

Period of Exemption	Rate of Exemption
For the 1st year	90% of income
For the 2nd year	80% of income
For the 3rd year	60% of income
For the 4th year	40% of income
For the 5th year	20% of income

Excluding the districts of
- Dhaka
- Narayanganj
- Gazipur

Excluding the districts of
- Chattogram
- Rangamati
- Bandarban
- Khagrachari



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Tax Exemption

Ten-year tax exemption is offered to businesses located in these divisions, but excluding areas under the city corporations.

Period of Exemption	Rate of Exemption
For the 1st and 2nd year	90% of income
For the 3rd year	80% of income
For the 4th year	70% of income
For the 5th year	60% of income
For the 6th year	50% of income
For the 7th year	40% of income
For the 8th year	30% of income
For the 9th year	20% of income
For the tenth year	10% of income

To enjoy tax exemption or benefits,

- Register investments with BIDA
- Apply to National Board of Revenue (NBR) and
- Receive a certificate from NBR within 45 days of the application

Healthcare Finance Strategy 2012-2032

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Aims to introduce social health protection schemes for the poor and for formal sector employees and to move towards provision for the entire population.

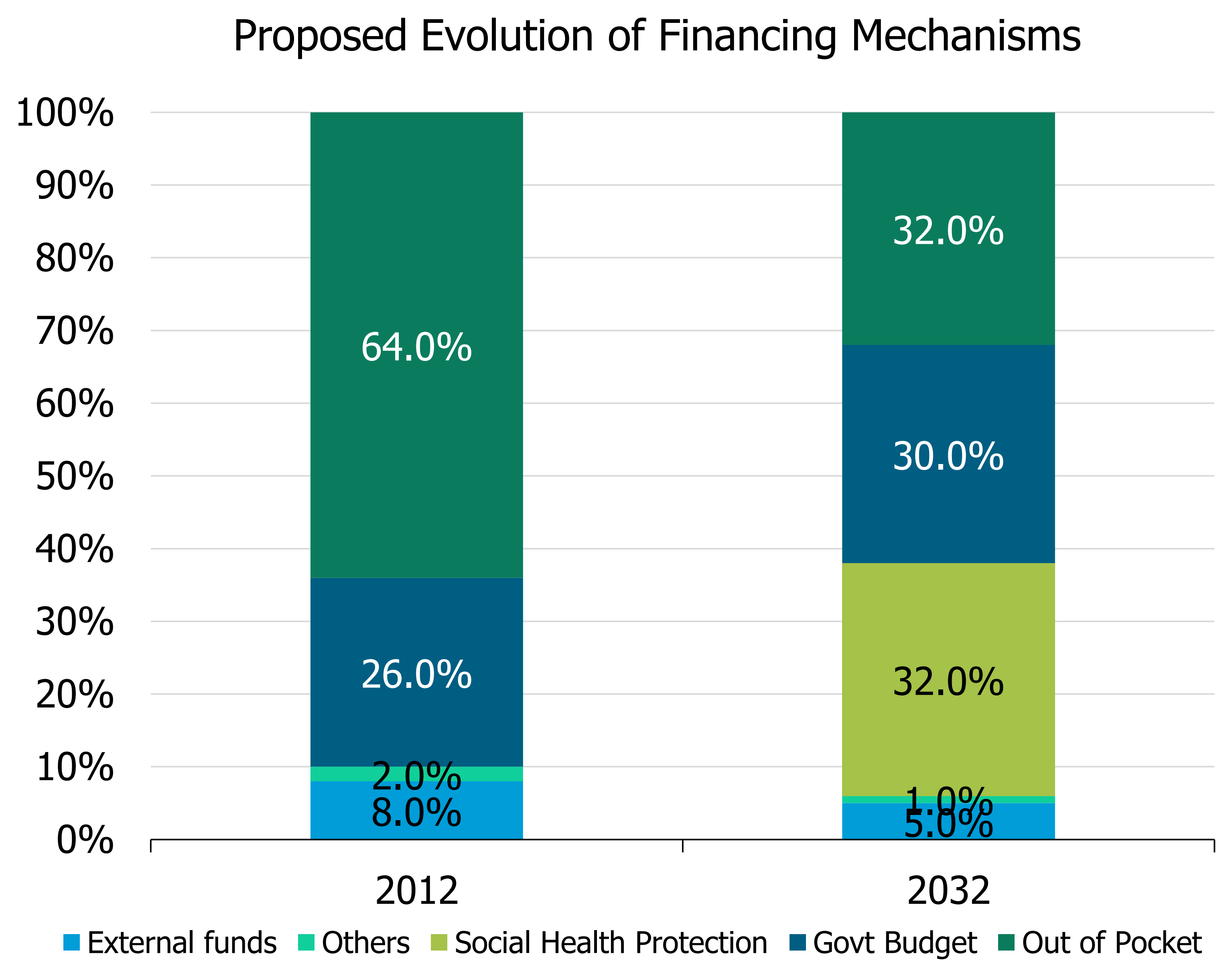
Aligned with the vision of the Health, Population and Nutrition Sector Development Program (HPNSDP), the universal coverage as defined by WHO and the National Health Policy 2011

Challenges posed by health financing in Bangladesh:

- Inadequate health financing
- Inequity in health financing and utilization
- Inefficient use of existing resources

Three **strategic objectives** that are proposed:

- Generate more resources for effective health services
- Improve equity and increase health care access especially for the poor and vulnerable
- Enhance efficiency in resource allocation and utilization



The heavy reliance on OOP payments has the most impact on the poor. Therefore, the target of the strategy is to halve OOP expenditures for health from the current level of 64% of total health expenditure to 32% by 2032. But in 2023, OOP has increased to 74%. Therefore, this strategy needs to be implemented more efficiently.

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Future Prospects

Market strength will raise from the population, a demographic dividend

There lies a prospect of 15% growth in the pharmaceutical sector in Bangladesh

Production capability will get increased due to sophistical production and analytical equipment and apparatus

Exports will be of large volumes in international market

Graduation from LDC will integrate Bangladesh with advanced medical market

Recent partnership is helping to reduce cost and boost in medicine export in Bangladesh

Creating New World Class Treatment Facilities in Bangladesh

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7 local firms in collaboration with International hospital chains with Apollo, Evercare, Green Hospital Supply of Japan, and Thonburi Healthcare Group of Thailand to establish World class treatment facilities in Bangladesh

Joint Venture investment **BDT 5,000 Million** to add

3,000
more beds

15,000
job opportunities

700,000 Bangladeshis travel overseas for medical care each year

29% of total outbound visits in FY22 were for medical purposes

New Hospitals	Chain	Local Partner	Location	Beds	Launching Year
Ship Aichi Cancer Hospital & Research Centre	Green Hospital Supply of Japan	Aichi Medical Group	Purbachal, Dhaka	1,000	2026
Ship International	Green Hospital Supply of Japan	Aichi Medical Group	Turag, Dhaka	650	2023
Evercare Hospital Chittagong	Evercare	-	Chattogram	470	2022
Apollo Imperial Hospital	Apollo	Imperial Hospital	Chattogram	375	2022

Future of AI Applications in Pharma Sector

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Drug Discovery

- Medical literature analysis,
- devising chemical Compounds for specific targets

Drug Marketing

- Finding new customers
- Price suggestion for drugs

Drug Manufacturing

- Drug quality control
- predictive maintenance facilitation
- Material waste reduction

Dosage Optimization

- Analyzing patient medical data and drug parameters to adjust dosage for different patient groups

Market Expansion and Opportunities

Joint investment from Bangladesh and Saudi Arabia

Beximco Pharmaceuticals is set to start producing medicines in the kingdom from 2024, prime minister's private industries and investment adviser said on March 11, 2023

MoU on Pharmaceutical Co-operation

The Arab Union of Manufacturers of Pharmaceuticals and Medical Appliances (AUPAM) and the Bangladesh Association of Pharmaceutical Industries (BAPI) sign this MoU in Amman, Jordan on July 18, 2023

Contribution to Kyrgyzstan's pharmaceutical sector

Citing Bangladesh's potential in the pharmaceutical industry Foreign Minister expressed Bangladesh's interest in contributing to Kyrgyzstan's pharmaceutical sector to the Kyrgyz Foreign Minister on CICA Summit on October 13, 2022

GDC Analyst Remarks

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Price competitiveness is crucial for generic pharmaceutical exports, especially in APIs. Bangladesh imports 95% of APIs, mainly from India and China. To be competitive in the market, cheap labor and API Park are two potential options. To expand export markets, Bangladesh needs to manufacture selected APIs on its own and establish a dedicated bioequivalence facility through direct government patronage. Prioritizing the production of biologic drugs alongside general medicines, Bangladesh has the potential to raise export earnings to USD 5 billion annually in the next five years from USD 200 million.

Product registration is a critical and mandatory issue for exporting pharmaceuticals. Product registration involves non-refundable registration costs and long waiting times. Also, in many cases, representatives from importing countries visit the production facilities. Therefore, managing all these things is difficult for small and medium-sized companies. It would be convenient if the government supports the registration process through different schemes. We can take the example from the Indian government regulated Pharmexcil (Pharmaceutical Export Promotion Council) to promote our exports in various countries.

For global pharmaceutical business operations, currency transfer is an important issue as product registration, office setup and maintenance, salary of the employees, marketing investment, promotional activities and other expenditures are involved. However, our central bank has set a limit for maximum remittances in each year, which is inadequate and needs to be increased.

For pharmaceutical export, country image is very crucial as it directly involves human health. It is encouraging that our image with pharmaceuticals is comparatively better and has the scope to improve. Our foreign missions, important personalities, different delegates, and diplomatic missions in Bangladesh can play significant roles here. Bangladesh need to target the regulated market for a large volume of exports, as 60% of the total pharmaceutical imports are done by nine regulated countries. Therefore, increasing our USFDA and other strict regulatory-compliant facilities is important.

GDC Analyst Remarks

At the present time, getting the right distributor in the importing countries is important, as multidimensional issues include liaisons with local regulatory bodies and medical professionals. The diplomatic missions of Bangladesh in the concerned countries and different international organizations can assist in getting the appropriate distributor. This may also create opportunities for the local production of Multinational Companies' (MNCs) products for the global market. Notably, Bangladesh is in an advantageous position with competitive labor and other utility costs, compared to its rivals.

Attempts should be made to retain the TRIPS terms till 2033 through the World Trade Organization (WTO). In addition, this sector should be given more facilities like the RMG sector, update relevant laws, etc. If Bangladesh can take even 5% of the global pharma market, it will have another sector like the RMG. Besides, the global generic drug market is worth USD 400 billion, of which if we can grab even 1%, our exports will go up to USD 4 billion. And if we can grab 10%, it will be USD 40 billion.

Assuring professional behavior from healthcare professionals, record of no misdiagnosis, clear explanations of health conditions, and the common practice of physicians not recommending unnecessary tests and drugs, as well as the implementation of law with close monitoring of government organizations, can encourage people to use Bangladesh healthcare facilities, saving a lot of foreign currency.

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Performing in the Capital Market of Bangladesh

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Position of Pharmaceuticals & Chemicals in DSE

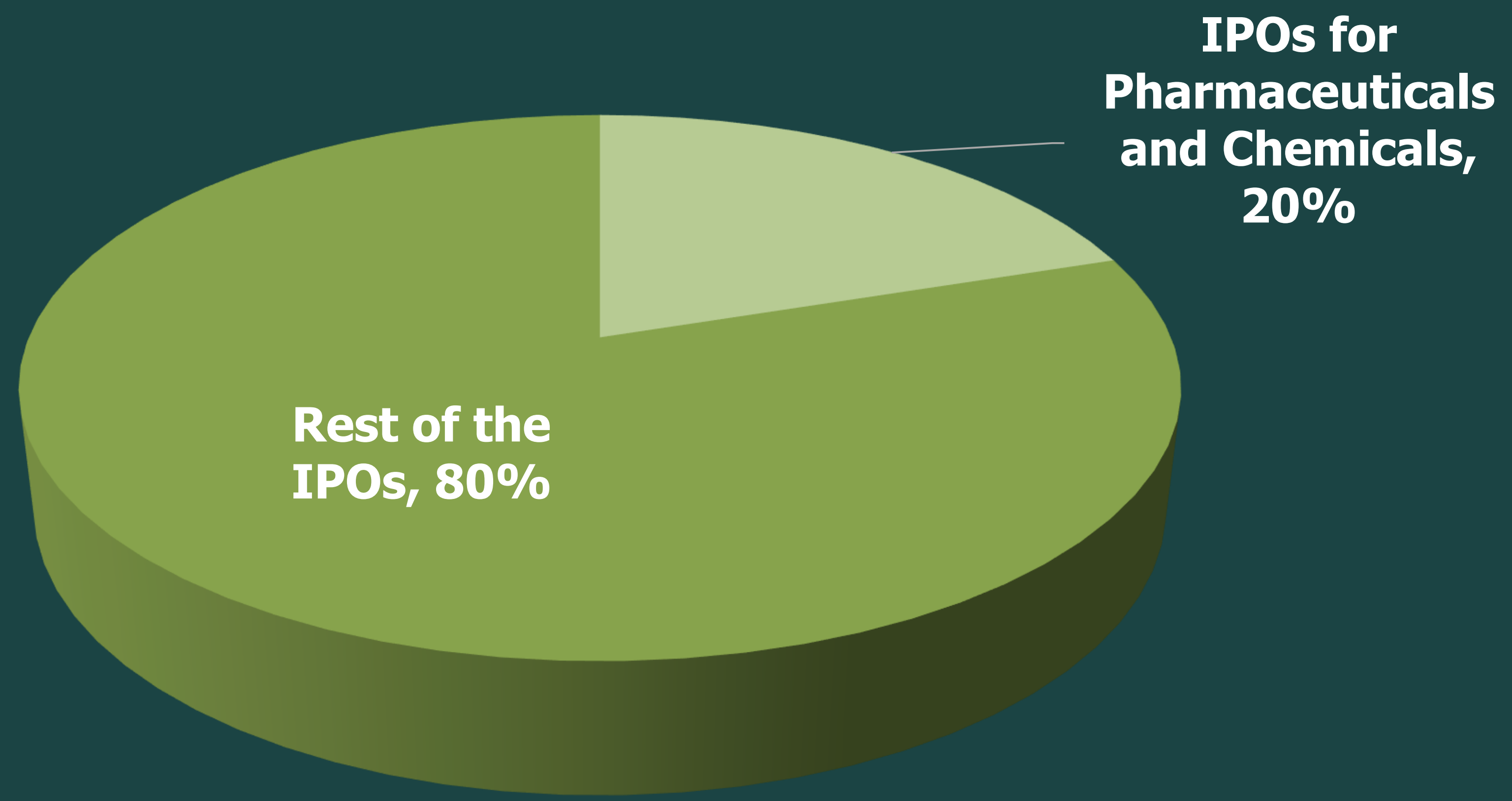
Total **34** companies are listed in Pharmaceuticals & Chemical Sector

Pharma Sector Market Capitalization is
BDT 723,130 million

Sector PE is
17.65

Pharmaceuticals & Chemicals sector holds **15.4%** of the Total Market Capitalization

In 2022,
Navana Pharmaceuticals Limited and
JMI Hospital Requisite Manufacturing Limited
enlisted through IPO in DSE

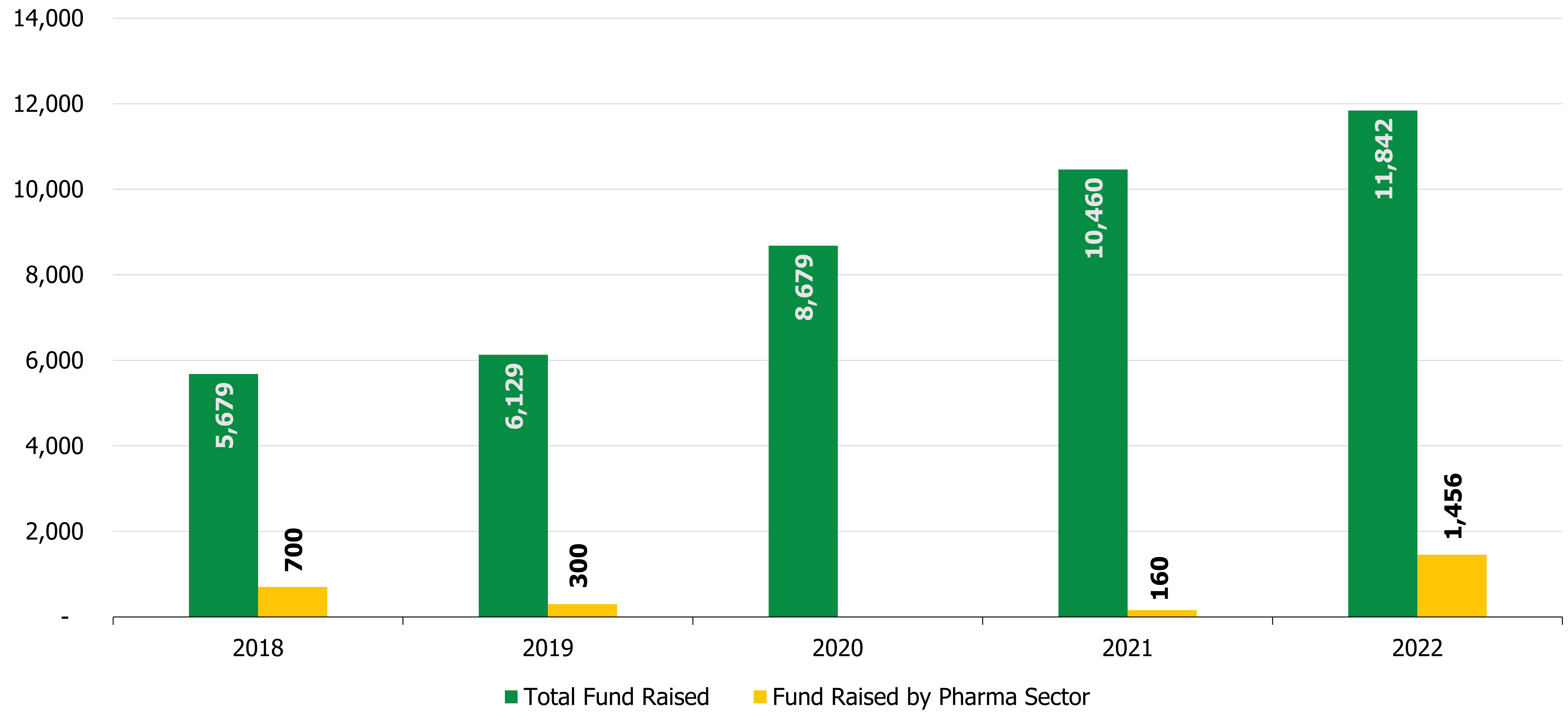


A total of 10 companies came through IPO in 2022. Nonetheless, these 2 pharmaceutical companies raised fund of **BDT 1,455 billion.**

Source: GDCL Research
(As of August 31, 2023)

Total Fund Raised through IPO

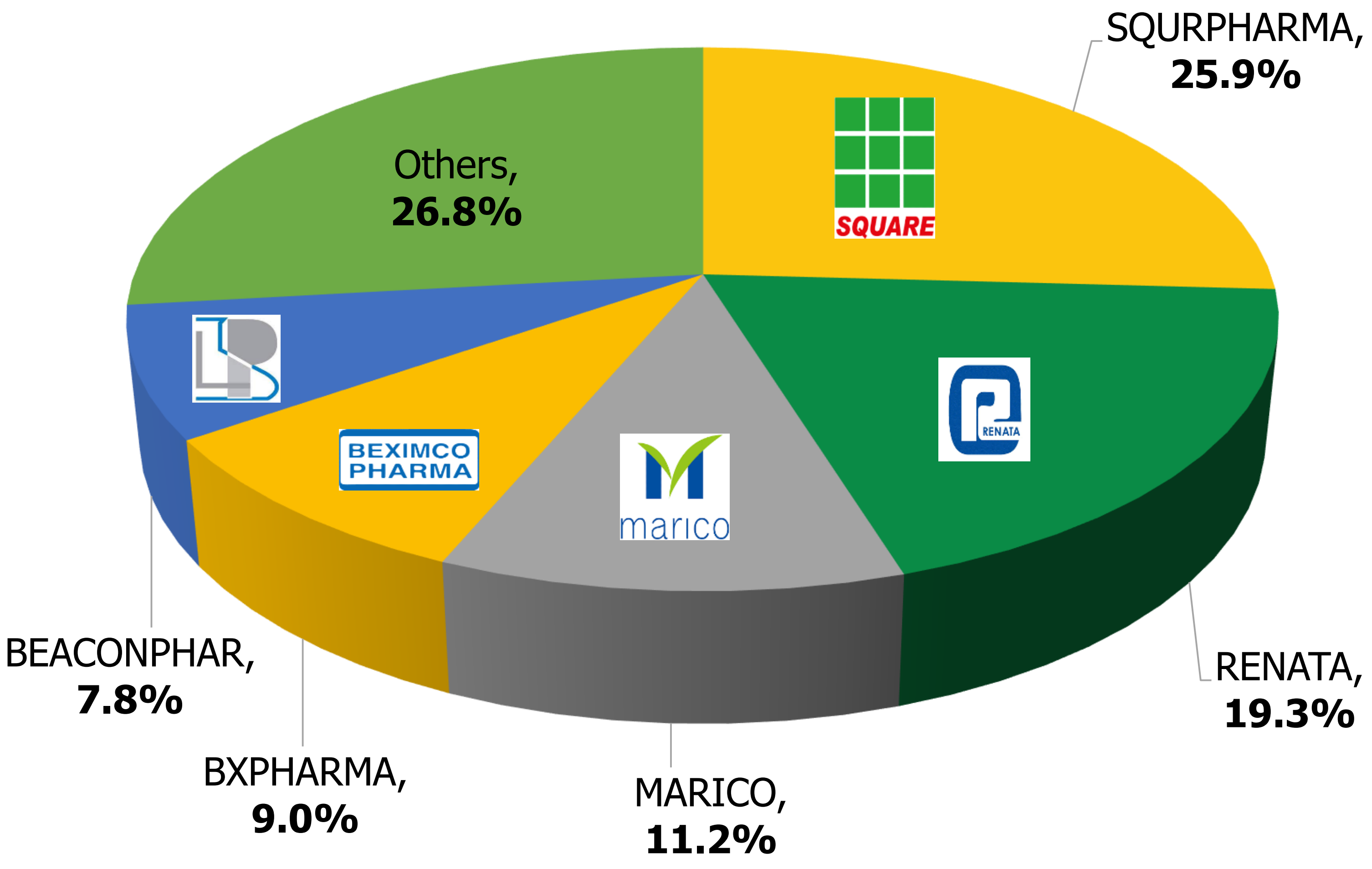
Over the last five years (In BDT Million)



Source: GDCL Research

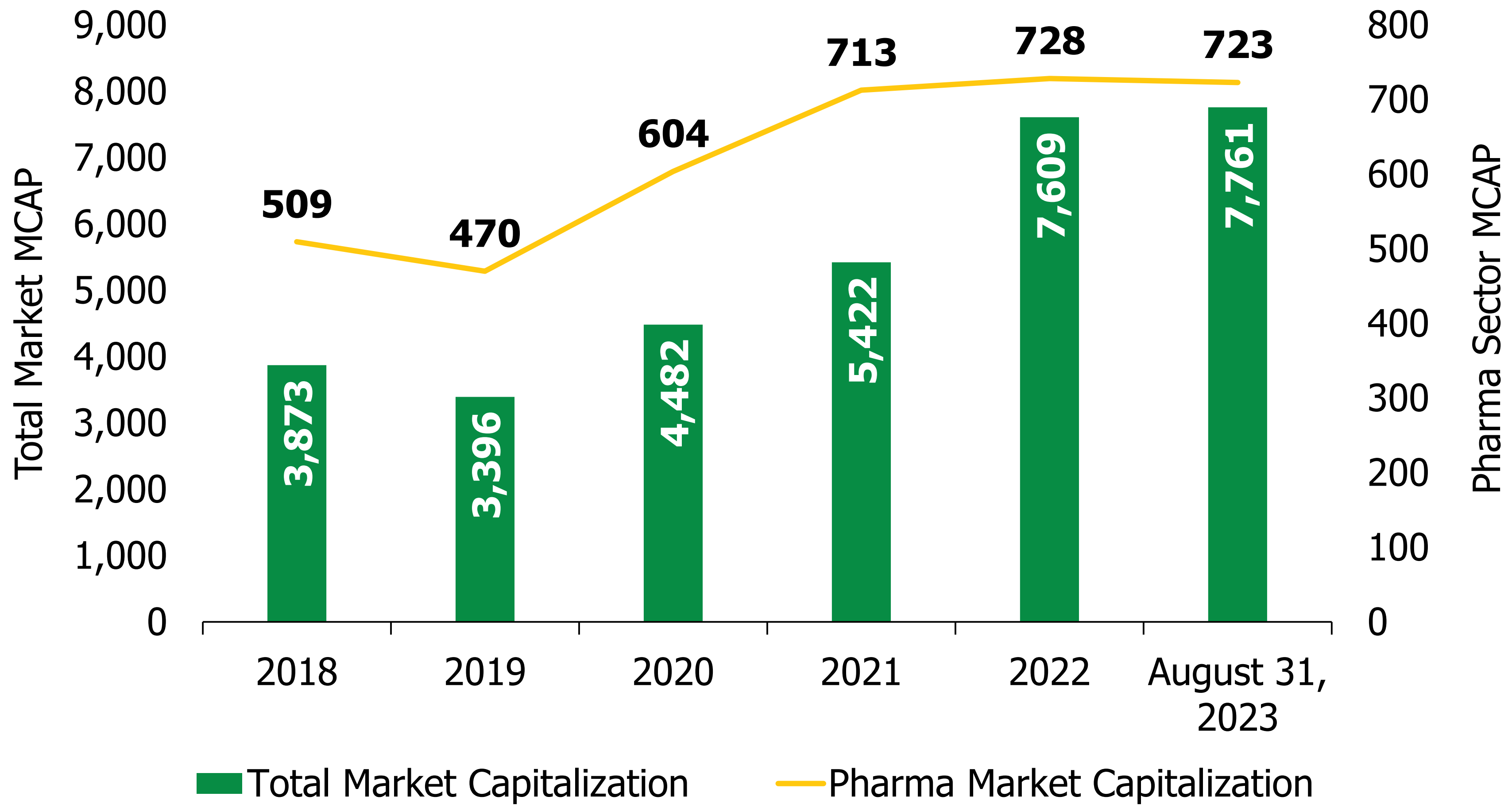
Pharma Sector Performance

Top Performers in DSE



Total Market Cap to Pharma Market Cap

(In BDT billion)



As of August 2023, the top 5 companies has covered almost 73% of the pharmaceutical sector (based on market capitalization). Whereas, Square Pharmaceuticals holds majority of market shares, which is 26%. Renata is on the second position holding 19%.

Pharmaceuticals & Chemical sector has always been stable sector in DSE. From 2019, the total market capitalization has increased gradually. It is also going along with this trend in this year 2023.

Source: GDCL Research
(As of August 31, 2023)

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Global Pharmaceutical Market

International Regulators

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U.S. FOOD & DRUG ADMINISTRATION

Federal agency of the Department of Health and Human Services

MHRA
Regulating Medicines and Medical Devices

Executive agency of the Department of Health and Social Care in the UK

World Trade Organization

Intergovernmental organization that regulates and facilitates international trade

Pan American Health Organization

International health agency for the Americas and the Regional Office of the World Health Organization

World Health Organization

Specialized agency of the United Nations responsible for international public health

WIPO
WORLD INTELLECTUAL PROPERTY ORGANIZATION

Global forum for intellectual property policy, services, information and cooperation

ICH
harmonisation for better health

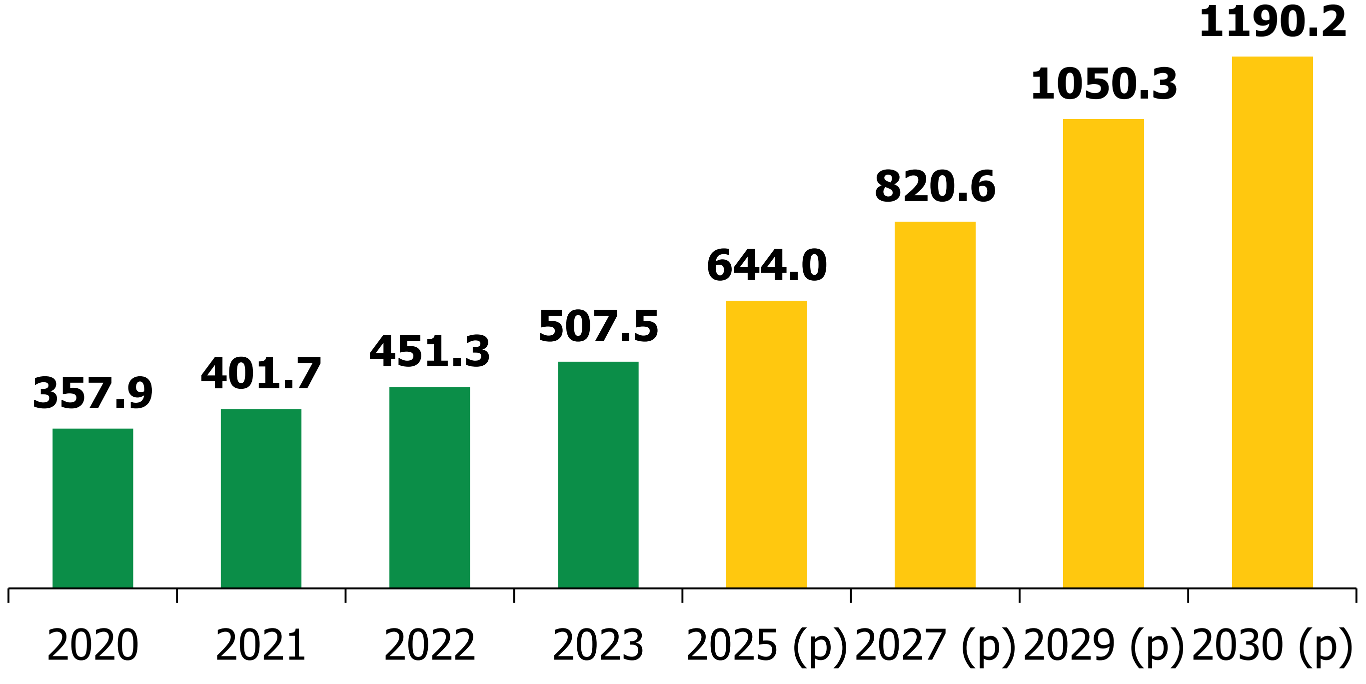
Organization for resolving scientific and technical aspects of pharmaceuticals

Future of Global Pharmaceutical Market

- Global pharmaceutical market is estimated to expand the net cumulative pharmaceutical market by USD 500 billion from 2020 through 2027. And is expected to reach over 1 Trillion by 2029.
- Highest volume growth is expected in Latin America, Asia and Africa, driven by a mix of population growth and expanded access. North America and Europe will see very low growth
- Demand for innovative drugs will drive oncology spending to approximately USD 370 billion by 2027, almost double the current level is expected to grow 13–16% CAGR through to 2027 as novel treatments continue to be launched for the treatment of cancer.
- Biotech will represent 35% of spending globally in 2027 and will include both breakthrough cell and gene therapies, as well as a maturing biosimilar segment
- China as the world's second largest country by pharmaceutical spending, will increase volume by 8% in aggregate over five years, while spending will increase 19%, a more modest rate than in the prior years and still embedding a focus on expanding access to novel drugs via the National Reimbursement Drug List (NRDL).

Pharmaceutical Manufacturing Market Size with Projection

(in USD Billion)

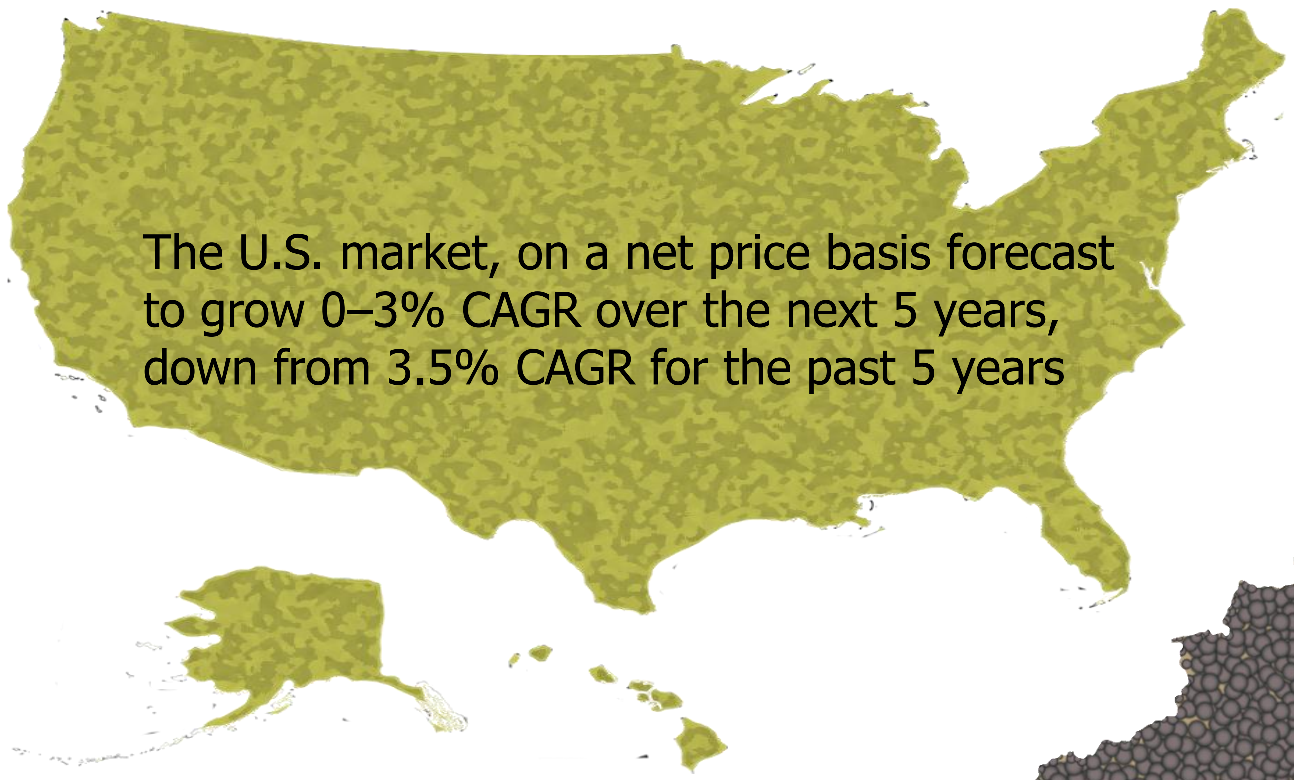


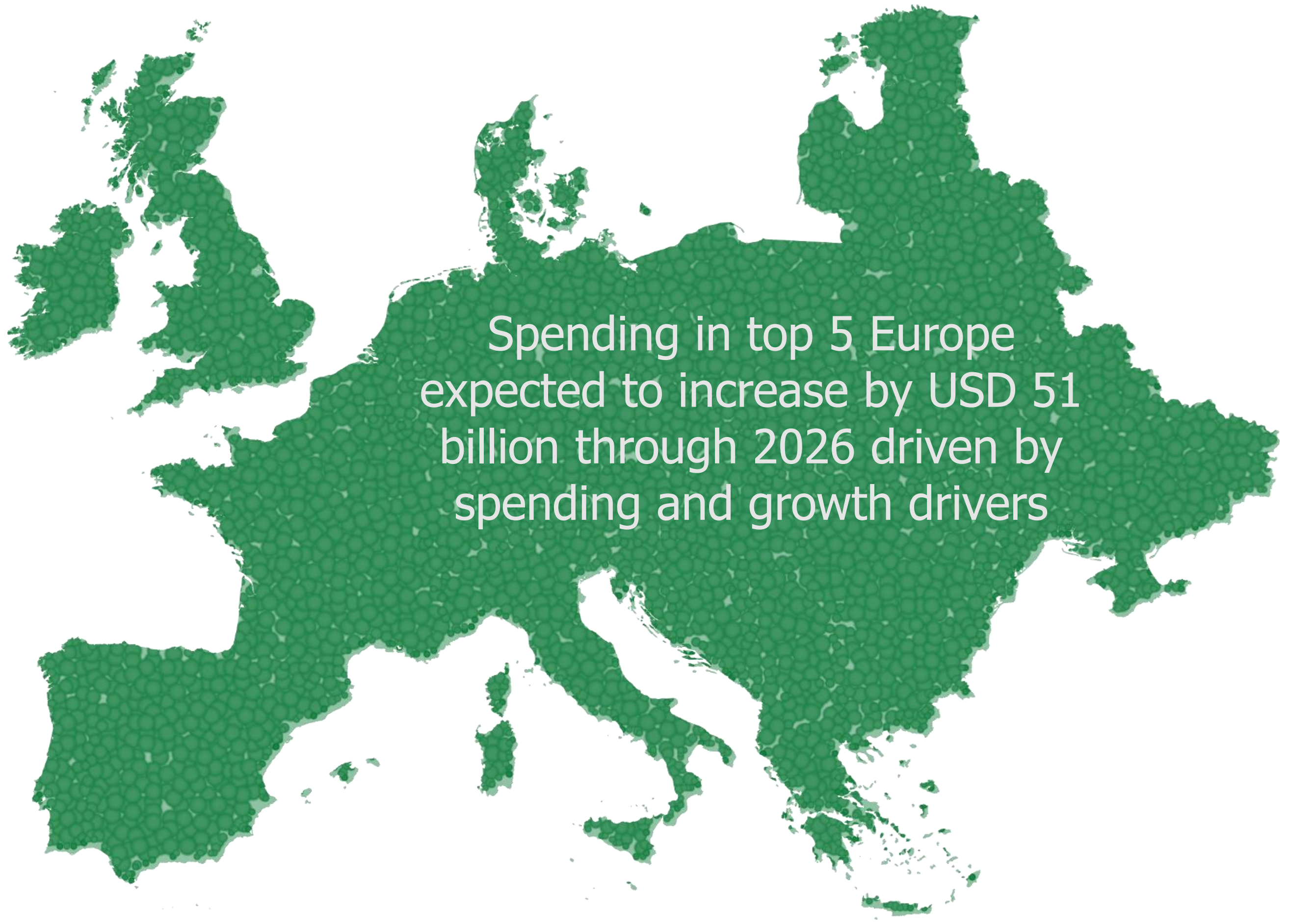
- The therapy areas with the highest forecast spending in 2027 are oncology, immunology, and anti-diabetics, followed by cardiovascular.
- Countries in Latin America, Asia-Pacific, and Africa and the Middle East are expected to grow more than 10% by volume over the five years to 2027, while spending growth will increase by over 30%, indicating both population-driven volume growth and a shift in the mix of products to more expensive products.

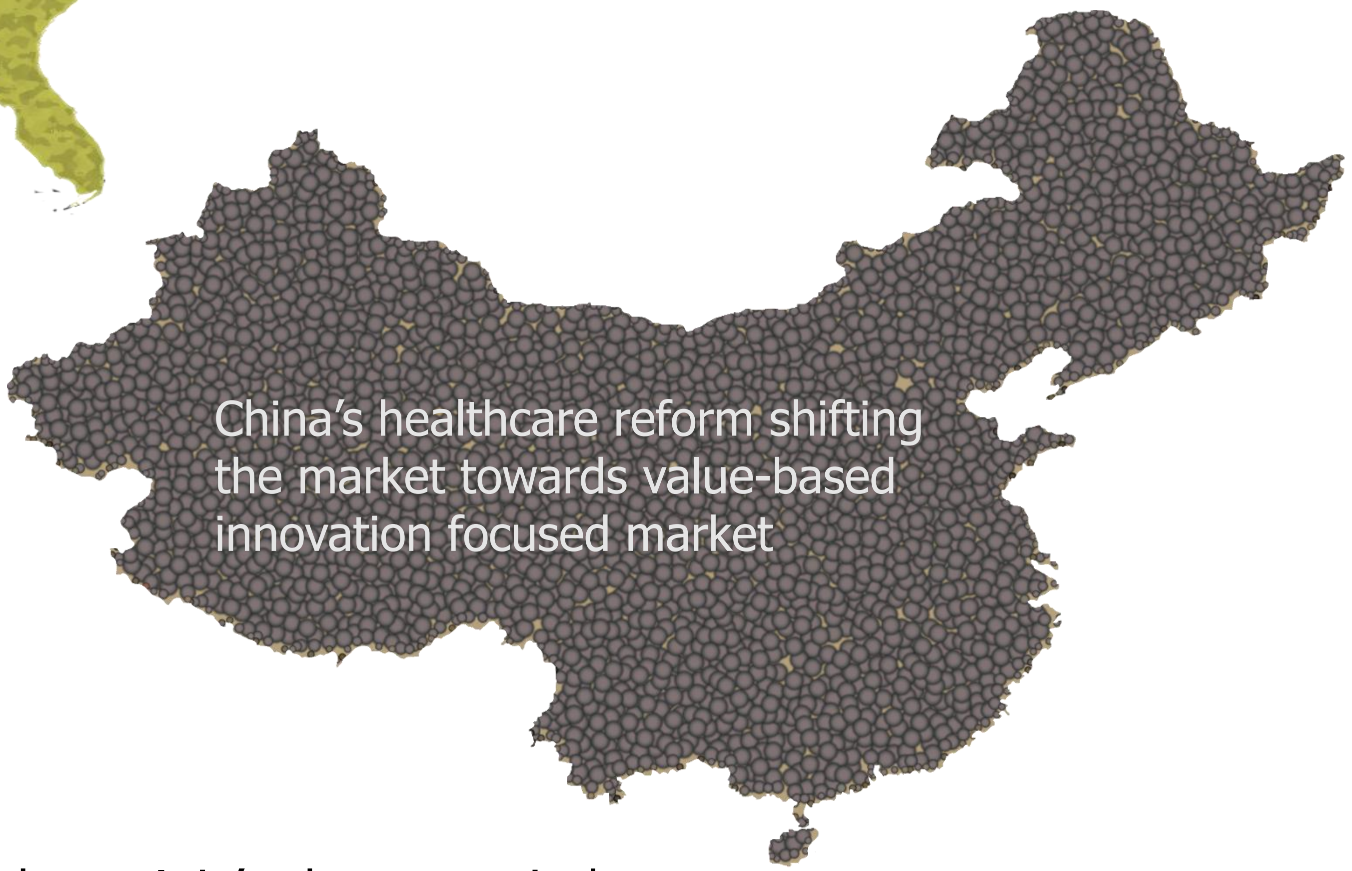
Source : IQVIA, Precedence Research

Global Forecasting

Guide to the Probable Growth Ahead







Southeast Asia's pharmaceutical industry, most advanced pharma manufacturing hub, expected to grow by 13% annually from 2021-2027, achieving a total market size of USD 29.1 billion

While top-line spend remains flat, continued growth expected in Japan from existing brands and contribution from new brands by 2026

Source: IQVIA

Global Pharma Dominators

- Johnson & Johnson — **USD 510.84 billion** (Market size)
- abbvie — **USD 287.45 billion** (Market size)
- AstraZeneca — **USD 234.33 billion** (Market size)
- Pfizer — **USD 226.96 billion** (Market size)
- NOVARTIS — **USD 212.59 billion** (Market size)
- SANOFI — **USD 142.83 billion** (Market size)

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Abbreviation

ADP: Annual Development Plan
AHCAB: Animal Health Companies Association of Bangladesh
AIT: Advance Income Tax
API: Active Pharmaceutical Ingredient
AUPUM: Arab Union of the Manufacturers of Pharmaceuticals and Medical Appliances
BAPI: Bangladesh Association of Pharmaceutical Industries
BB: Bangladesh Bank
BBS: Bangladesh Bureau of Statistics
BDT: Bangladeshi Taka
BIDA: Bangladesh Investment Development Authority
CETP: Common Effluent Treatment Plant
CICA: Conference on Interaction and Confidence Building Measures in Asia
DGDA: Directorate General of Drug Administration
DGHS: Directorate General of Health Services
DSE: Dhaka Stock Exchange
EPB: Export Promotion Bureau
FDI: Foreign Direct Investment
FY: Fiscal Year
GDP: Gross Domestic Product
HPNSDP: Health, Population and Nutrition Sector Development Program
IDRA: Insurance Development and Regulatory Authority
IPO: Initial Public Offering
IPR: Intellectual Property Rights
IQVIA: IMS Health & Quintiles
ITC: International Trade Center
LDC: Least Developed Country
MOHFW: Ministry of Health and Family Welfare
NBR: National Board of Revenue
NGO: Non Government Organization
OOP: Out of Pocket
PHE: Public Health Expenditure
Q3: Quarter 3
SAARC: South Asian Association for Regional Cooperation
SDG: Sustainable Development Goals
USD: United States Dollar

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