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Industry Research Report On FIBC Industry – Global Flexible Intermediate Bulk Packaging Industry

July 2024

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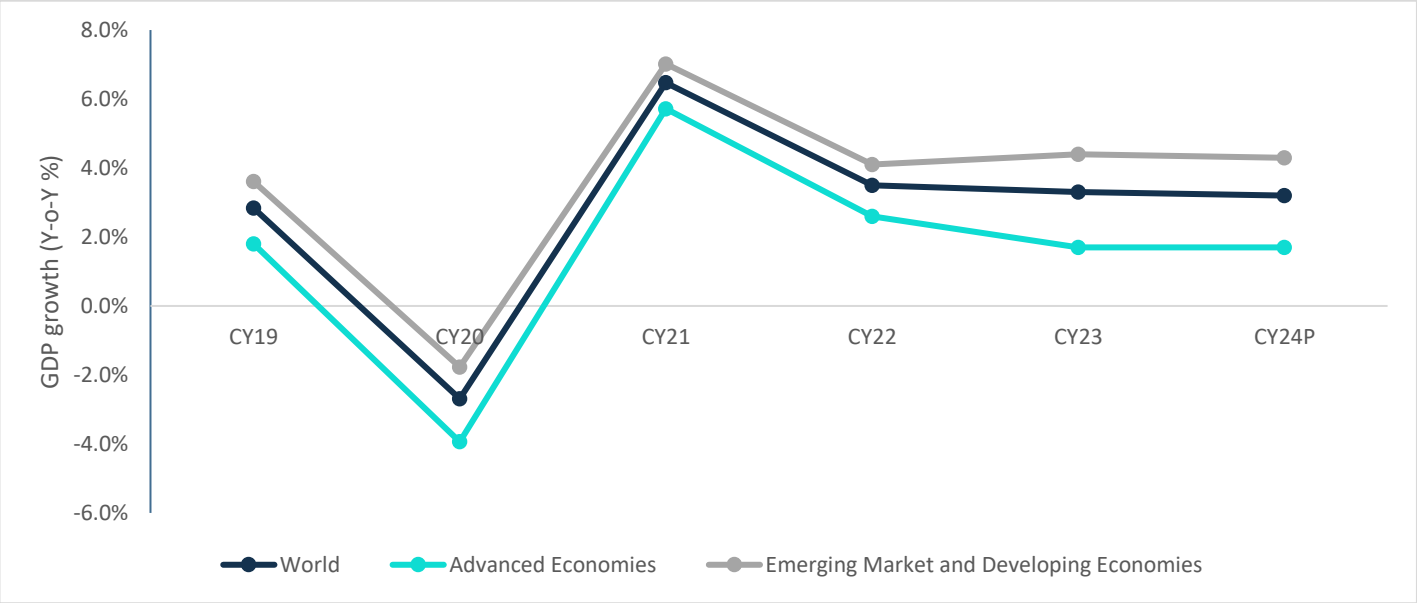
1. Economic Outlook

1.1 Global Economy

Global growth, which stood at 3.3% in CY23, is anticipated to fall to 3.2% in CY24. The CY24 forecast has remained same compared to the April 2024 World Economic Outlook (WEO) Update, and increased by 0.1 percentage point compared to the January 2024 WEO. Despite this, the expansion remains historically low, attributed to factors including sustained high borrowing costs, inflation woes, reduced fiscal support, lingering effects of Russia's Ukraine invasion, Iran–Israel Cold War, sluggish productivity growth, and heightened geo-economic fragmentation.

Chart 1: Global Growth Outlook Projections (Real GDP, Y-o-Y change in %)



Notes: P-Projection; Source: IMF – World Economic Outlook, July 2024

Table 1: GDP growth trend comparison - India v/s Other Economies (Real GDP, Y-o-Y change in %)

	Real GDP (Y-o-Y change in %)				
	CY20	CY21	CY22	CY23	CY24P
India	-5.8	9.7	7.0	8.2	7.0
China	2.2	8.5	3.0	5.2	5.0
Indonesia	-2.1	3.7	5.3	5.0	5.0
Saudi Arabia	-3.6	5.1	7.5	-0.8	1.7
Brazil	-3.3	4.8	3.0	2.9	2.1
Euro Area	-6.1	5.9	3.4	0.5	0.9
United States	-2.2	5.8	1.9	2.5	2.6

P- Projections; Source: IMF- World Economic Outlook Database (July 2024)

Advanced Economies Group

Advanced economies are expected to experience a gradual increase in growth, remaining same at 1.7% in CY23 and CY24.

The **United States** is expected to see growth rise to 2.6% in CY24. The CY24 projection has been revised downward by 0.1 percentage points since the April CY24 WEO Update. This revision primarily reflects carryover effects from stronger-than-expected growth in the fourth quarter of CY23, with some of this momentum expected to continue into CY24.

The **Euro Area's** growth is anticipated to rebound from its sluggish rate of 0.5% in CY23, mainly influenced by significant exposure to the conflict in Ukraine. Projections indicate an increase to 0.9% in CY24. This recovery is driven by stronger household consumption, as the impact of elevated energy prices diminishes and declining inflation bolsters real income growth. Additionally, strong momentum in services, higher than expected net exports, and higher investments have further driven this growth. But, countries like Germany are expected to have a sluggish recovery on account of weak manufacturing growth.

Emerging Market and Developing Economies Group

Emerging market and developing economies are forecasted to maintain stable growth at 4.3% in CY24. This forecast has been revised upwards by 0.1 percentage point as compared to the April 2024 WEO update on account of stronger activity in Asia, particularly China and India. Growth prospects in economies across the Middle East and Central Asia continue to be weighed down by oil production and regional conflicts. Growth forecast of sub-Saharan Africa has also been revised downward on account of weak economic activity. Low-income developing countries are anticipated to experience a gradual growth uptick, starting at 3.9% in CY23 and climbing to 4.4% in CY24, as certain constraints on near-term growth begin to ease.

The economic forecast for emerging and developing Asia reveals a modest deceleration in growth, with projections indicating a decline from 5.7% in CY23 to 5.4% in CY24. **China's** trajectory reflects a slowdown, transitioning from 5.2% in CY23 to 5.0% in CY24 due to fading post-pandemic stimuli and ongoing property sector challenges. In contrast, **India's** growth remains robust, with anticipated rates of 7.0% in CY24 bolstered by resilient domestic demand and a burgeoning working-age populace.

The **Indonesian** economy is expected to register growth of 5.0% in CY24 with a strong domestic demand, a healthy export performance, policy measures, and normalization in commodity prices. **Saudi Arabia's** growth slowed at -0.8% in CY23 attributed to lower oil production. CY24 is predicted to see a revamp in the growth rates to 1.7% on account of Vision 2030 reforms that helped advance the country's economic diversification agenda, including through reduced reliance on oil. The forecast for CY24 has been revised downward as compared to the April 2024 WEO update on account of extension of oil production cuts. On the other hand, **Brazil's** growth is projected to ease to 2.1% in CY24, driven by fiscal consolidation, the lingering impact of tight monetary policies, and reduced contributions from the agricultural sector. There has been a downward revision in forecast for CY24 compared to April 2024 WEO update on account of the near-term impact of flooding.

Despite Covid-19's impact, high inflationary environment and interest rates globally, and the geopolitical tensions in Europe, India has been a major contributor to world economic growth. India is increasingly becoming an open economy as well through growing foreign trade. Despite the global inflation and uncertainties, Indian economy continues to show resilience. This resilience is mainly supported stable financial sector backed by well-capitalized banks and export of services in trade balance. With this, the growth of Indian economy is expected to fare better than other economies majorly on account of strong investment activity bolstered by the government's capex push and buoyant private consumption, particularly among higher income earners.

Indian Economic Outlook

1.1.1 GDP Growth and Outlook

Resilience to External Shocks remains Critical for Near-Term Outlook

India's real GDP grew by 7.0% in FY23 and stood at ~Rs. 161 trillion, as per the First Revised Estimate, despite the pandemic in previous years and geopolitical Russia-Ukraine spillovers. In Q1FY24, the economic growth accelerated to 8.2%. The manufacturing sector maintained an encouraging pace of growth, given the favorable demand conditions and lower input prices. The growth was supplemented by a supportive base alongside robust services and construction activities. This momentum remained in the range in the Q2FY24 with GDP growth at 8.1%, mainly supported by acceleration in investments. However, private consumption growth was muted due to weak rural demand and some moderation in urban demand amid elevated inflationary pressures in Q2FY24. The GDP growth number improved for Q3FY24 at 8.6%.

India's GDP at constant prices surged to Rs. 47.24 trillion in Q4FY24 from Rs. 43.84 trillion in Q4FY23, marking a 7.8% growth rate. This upswing was fueled by robust performances in construction, mining & quarrying, utility services, and manufacturing sectors and investment drove the GDP growth, while both private and government consumption remained subdued.

Real GDP in the year FY24 is estimated to grow at 8.2% at Rs. 173.82 trillion as per provisional estimate of the Ministry of Statistics and Programme Implementation. It is expected that domestic demand, especially investment, to be the main driver of growth in India, amid sustained levels of business and consumer confidence.

GDP Growth Outlook

- Driven by fixed investment and improving global environment, domestic economic activity continues to expand. The provisional estimates (SAE) placed real GDP growth at 8.2% for FY24.

- Industrial activity led by manufacturing continues its momentum on the back of strengthening domestic demand. The eight core industries also show healthy growth. Moreover, services sector shows exhibit broad based buoyancy. The purchasing managers' index for both manufacturing and services continues to exhibit a sustained and healthy expansion.

- The outlook for agriculture and rural activity appears bright owing to good rabi wheat crop and expected improvements in kharif crop due to expected normal south-west monsoon. This combined with increasing rural demand on the back of improving farm activity, improvement in informal activity, improving employment condition, and alleviating inflationary pressures are expected to boost private investment.

- Investment activity is also expected to be further supported by sustained and robust government spending, strong financial positions of banks and corporations, increasing capacity utilization, and rising business confidence as indicated by surveys. Additionally, improving global economic growth and trade prospects are expected to boost external demand for goods and services.

1.1.2 Gross Value Added (GVA)

Gross Value Added (GVA) is the measure of the value of goods and services produced in an economy. GVA gives a picture of the supply side whereas GDP represents consumption.

Industry and Services sector leading the recovery charge

• The gap between GDP and GVA growth turned positive in FY22 (after a gap of two years) due to robust tax collections. Of the three major sector heads, the service sector has been the fastest-growing sector in the last 5 years.

• The **agriculture sector** was holding growth momentum till FY18. In FY19, the acreage for the rabi crop was marginally lower than the previous year which affected the agricultural performance. Whereas FY20 witnessed growth on account of improved production. During the pandemic-impacted period of FY21, the agriculture sector was largely insulated as timely and proactive exemptions from COVID-induced lockdowns to the sector facilitated uninterrupted harvesting of rabi crops and sowing of kharif crops. However, supply chain disruptions impacted the flow of agricultural goods leading to high food inflation and adverse initial impact on some major agricultural exports. However, performance remained steady in FY22.

In FY23, the agriculture sector performed well despite weather-related disruptions, such as uneven monsoon and unseasonal rainfall, impacting yields of some major crops and clocked a growth of 4% y-o-y, garnering Rs. 22.3 trillion.

In Q1FY24, this sector expanded at a slower pace of 3.7% y-o-y growth compared to y-o-y growth a quarter ago. This further stumbled to 1.7% in Q2FY24.Further, it experienced y-o-y growth of 0.4% in Q3 and 0.6% in Q4. leading to expectations of a modest 1.4% rise for the full year, contrasting sharply with the 4.7% growth recorded in FY23. In the Interim Budget 2024-25, the government plans to boost private and public investment in post-harvest activities and expand the application of Nano-DAP across agro-climatic zones. Strategies for self-reliance in oilseeds and dairy development are to be formulated, alongside ramping up the Pradhan Mantri Matsaya Sampada Yojana and establishing Integrated Aquaparks. Allocation for PM-Formalisation of Micro Food Processing Enterprises scheme has increased from Rs. 639 in FY24 to Rs. 880 crores in FY25.

Going forward, rising bank credit to the sector and increased exports will be the drivers for the agriculture sector. However, a deficient rainfall may have impact on the reservoir level, weighing on prospects of Kharif sowing. Considering these factors, the agriculture sector is estimated to attain Rs. 23.7 trillion and mark 1.4% y-o-y growth for complete FY24.

• From March 2020 onwards, the nationwide lockdown due to the pandemic significantly impacted the **industrial sector**. In FY20 and FY21, this sector felt turbulence due to the pandemic and recorded a decline of 1.4% and 0.9%, respectively, on a y-o-y basis. With the opening up of the economy and resumption of industrial activities, it registered 11.6% y-o-y growth in FY22, albeit on a lower base.

The industrial output in FY23 grew by only 2.1% with estimated value Rs. 44.74 trillion owing to decline in manufacturing activities.

The industrial sector grew by 6.0% in Q1FY24, while Q2FY24 growth was up by 13.6% owing to positive business optimism and strong growth in new orders supported manufacturing output. The industrial growth was mainly supported by sustained momentum in the manufacturing and construction sectors. Within manufacturing, industries such as pharma, motor vehicles, metals, petroleum and pharma witnessed higher production growth during the quarter. The construction sector (13.6% growth in Q2FY24) benefited from poor rainfall during August and September and higher implementation of infrastructure projects. This was reflected in robust cement and steel production and power demand in Q2FY24. Overall, H1FY24 picked up by 9.3% with manufacturing and construction activities witnessing significant acceleration. In Q3FY24, growth rate slowed down to 10.5%. It further fell down to 8.4% in Q4FY24.

India's industrial sector is experiencing strong growth, driven by significant expansion in manufacturing, mining, and construction. This growth is supported by positive business sentiment, declining commodity prices, beneficial government policies like production-linked incentive schemes, and efforts to boost infrastructure development. These factors collectively contribute to the sustained buoyancy in industrial growth due to which the industrial growth is estimated at 9.5% on y-o-y basis registering the value of Rs. 48.9 trillion in FY24.

• The **Services sector** was the hardest hit by the pandemic and registered an 8.2% y-o-y decline in FY21. The easing of restrictions aided a fast rebound in this sector, with 8.8% y-o-y growth witnessed in FY22.

Overall, in FY23, benefitting from the pent-up demand, the service sector was valued at Rs. 80.6 trillion and registered growth of 10.0% y-o-y.

In Q1FY24, the services sector growth jumped to 10.7%. Within services, there was a broad-based improvement in growth across different sub-sectors. However, the sharpest jump was seen in financial, real estate, and professional services. Trade, hotels, and transport sub-sectors expanded at a healthy pace gaining from strength in discretionary demand. The service sector growth in Q2FY24 moderated to 6.0% partly due to the normalization of base effect and some possible dilution in discretionary demand. Considering these factors, service sector marked 8.3% growth in H1FY24. In Q3FY24 growth increased to 7.1% compared to 7.2% last year in the same quarter. In Q4FY24, growth declined to 6.7% compared to 7.2% last year in the same quarter.

With this performance, steady growth in various service sector indicators like air passenger traffic, port cargo traffic, GST collections, and retail credit are expected to support the services sector. With this, the growth of service sector is estimated at Rs. 86.7 trillion registering 7.6% growth in FY24 overall.

Table 2: Sectoral Growth (Y-o-Y % Growth) - at Constant Prices

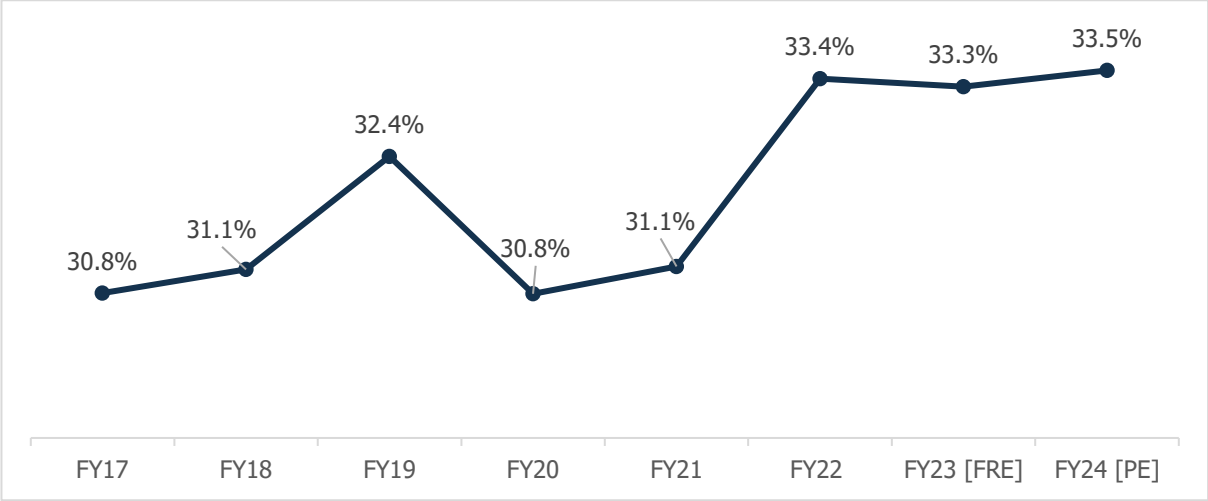
At constant Prices	FY19	FY20	FY21	FY22	FY23 (FRE)	FY24 (PE)
Agriculture, Forestry & Fishing	**2.1**	**6.2**	**4.1**	**3.5**	**4.7**	**1.4**
Industry	**5.3**	**-1.4**	**-0.9**	**11.6**	**2.1**	**9.5**
Mining & Quarrying	-0.9	-3.0	-8.6	7.1	1.9	7.1
Manufacturing	5.4	-3.0	2.9	11.1	-2.2	9.9
Electricity, Gas, Water Supply & Other Utility Services	7.9	2.3	-4.3	9.9	9.4	7.5
Construction	6.5	1.6	-5.7	14.8	9.4	9.9
Services	**7.2**	**6.4**	**-8.2**	**8.8**	**10.0**	**7.6**
Trade, Hotels, Transport, Communication & Broadcasting	7.2	6.0	-19.7	13.8	12.0	6.4
Financial, Real Estate & Professional Services	7.0	6.8	2.1	4.7	9.1	8.4
Public Administration, Defence and Other Services	7.5	6.6	-7.6	9.7	8.9	7.8
GVA at Basic Price	**5.8**	**3.9**	**-4.2**	**8.8**	**6.7**	**7.2**

Note: FRE – First Revised Estimates, PE – Provisional Estimate; Source: MOSPI

1.1.3 Investment Trend in Infrastructure

Gross Fixed Capital Formation (GFCF), which is a measure of the net increase in physical assets, witnessed an improvement in FY22. As a proportion of GDP, it is estimated to be at 33.4%, which is the highest level in 5 years (since FY17). In FY23, the ratio of investment (GFCF) to GDP remained flat at 33.3%. Continuing in its growth trend, this ratio has reached 33.5% in FY24.

Chart 2: Gross Fixed Capital Formation (GFCF) as % of GDP (At constant prices):



Note: 3RE – Third Revised Estimate, 2RE – Second Revised Estimates, 1RE – First Revised Estimates, PE – Provisional Estimate, FAE- First Advance Estimate; Source: MOSPI

Overall, the support of public investment in infrastructure is likely to gain traction due to initiatives such as Atmanirbhar Bharat, Make in India, and Production-linked Incentive (PLI) scheme announced across various sectors.

1.1.4 Industrial Growth

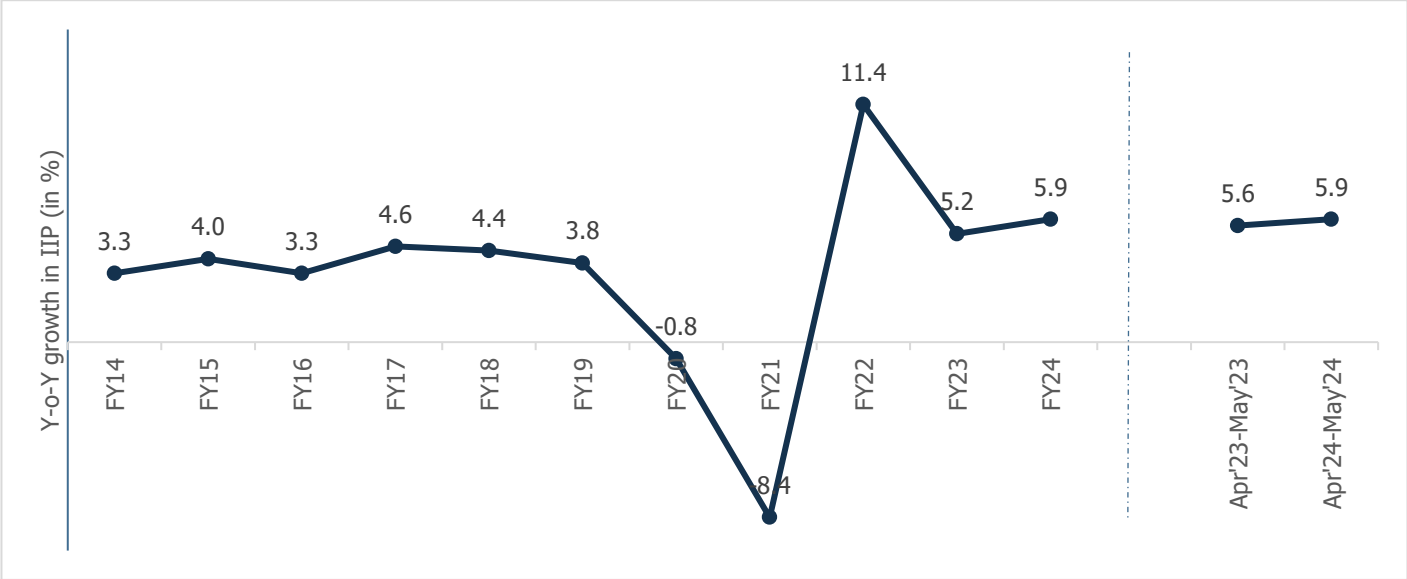
Improved Core and Capital Goods Sectors helped IIP Growth Momentum

The Index of Industrial Production (IIP) is an index to track manufacturing activity in an economy. On a cumulative basis, IIP grew by 11.4% y-o-y in FY22 post declining by 0.8% y-o-y and 8.4% y-o-y, respectively, in FY20 and FY21. This high growth was mainly backed by a low base of FY21. FY22 IIP was higher when compared with the pre-pandemic level of FY20, indicating that while economic recovery was underway.

During FY23, the industrial output recorded a growth of 5.2% y-o-y supported by a favorable base and a rebound in economic activities. The period April 2024 – May 2024, industrial output grew by 5.4% compared to the 5.1% growth in the corresponding period last year. For the month of May 2024, the IIP growth increased to 5.9% compared to the last year's 5.7%, on account of growth in mining and electricity. The manufacturing sector grew modestly with the top three contributors being Manufacture of basic metals, Manufacture of pharmaceuticals, medicinal, chemical, and botanical products, and Manufacture of electrical equipment.

So far in the current fiscal, the government's spending on infrastructure has been strong, but private investment hasn't picked up significantly yet. Consumer durables production increased due to favorable conditions, while non-durables saw a slight decline. Urban demand is driving consumption, while rural demand is still recovering. Good monsoon forecasts are positive, but high unemployment and food inflation pose challenges. Infrastructure/construction output is growing well due to government spending. Private investment and manufacturing capacity utilization are increasing, supporting hopes for private sector growth. Good monsoon could boost rural demand, but food inflation remains a concern. Overall, sustained improvements in consumption and private investment are crucial for industrial performance.

Chart 3: Y-o-Y growth in IIP (in %)



Source: MOSPI

1.1.5 Consumer Price Index

India's consumer price index (CPI), which tracks retail price inflation, stood at an average of 5.5% in FY22 which was within RBI's targeted tolerance band of 6%. However, consumer inflation started to upswing from October 2021 onwards and reached a tolerance level of 6% in January 2022. Following this, CPI reached 6.9% in March 2022.

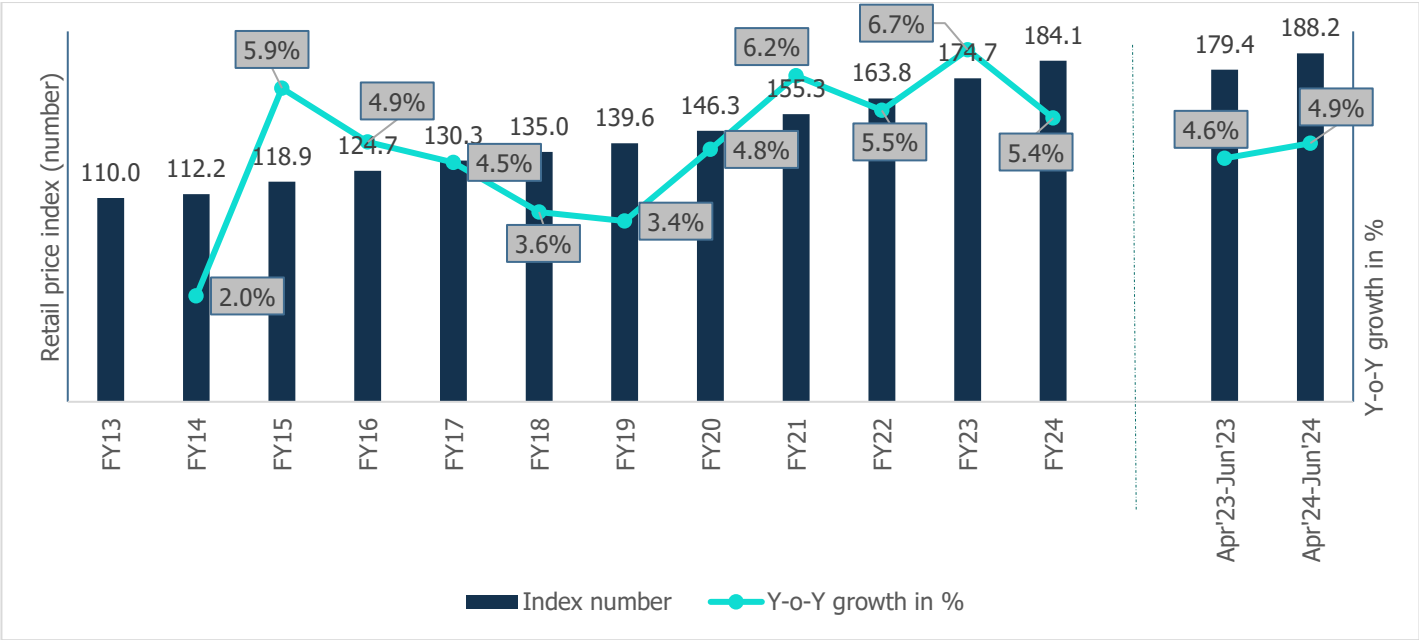
CPI remained elevated at an average of 6.7% in FY23, above the RBI's tolerance level. However, there was some respite toward the end of the fiscal wherein the retail inflation stood at 5.7% in March 2023, tracing back to the RBI's tolerance band. Apart from a favorable base effect, the relief in retail inflation came from a moderation in food inflation.

In FY24, the CPI moderated for two consecutive months to 4.7% in April 2023 and 4.3% in May 2023. This trend snapped in June 2023 with CPI rising to 4.9%. In July 2023, the CPI had reached its highest point at 7.4%, this was largely due to increase in food prices. The notable surge in vegetable prices and in other food categories such as cereals, pulses, spices, and milk have driven this increase. In August 2023, the food inflation witnessed some moderation owing to government's active intervention. This was further moderated for second consecutive month in September 2023 to 5%, led by a sharp correction in vegetables prices and lower LPG prices. Helped by deflation in the fuel and light category, the retail inflation in October 2023 softened at 4.9%. This trend revsered in November 2023 due to spike in certain vegetable prices as well as sticky inflation in non-perishable food items such as cereals, pulses and spices and the CPI rose to 5.6%. In the month of December 2023, elevated food prices and an unfavourable base drove headline inflation to a four-month peak of 5.7%. However in the month of January and February, food prices softened and the inflation was reported at 5.1% for both the months. March witnessed furthur softning of prices registering 4.9% growth. For FY24 inflation moderated to 5.4% which are within the boundaries set of 2% to 6% by the RBI.

High inflation in specific food items poses inflation risk, even though normal monsoon forecasts are improving the food inflation outlook. This makes it crucial to monitor monsoon distribution. Government measures like the Open Market Sale Scheme (OMSS) and export restrictions aim to stabilize food prices. Additionally, recent move to cut LPG cylinder prices have sustained deflation in fuel and light category. While government initiatives are expected to mitigate upward price pressure, external risks from geopolitical tensions may affect supply chains and commodity prices. The numbers for April

2024-June 2024 show an increase in inflation growth y-o-y to 4.9% as compared to inflation growth y-o-y of 4.6% in April 2023-June 2023 period.

Chart 4: Retail Price Inflation in terms of index and Y-o-Y Growth in % (Base: 2011-12=100)

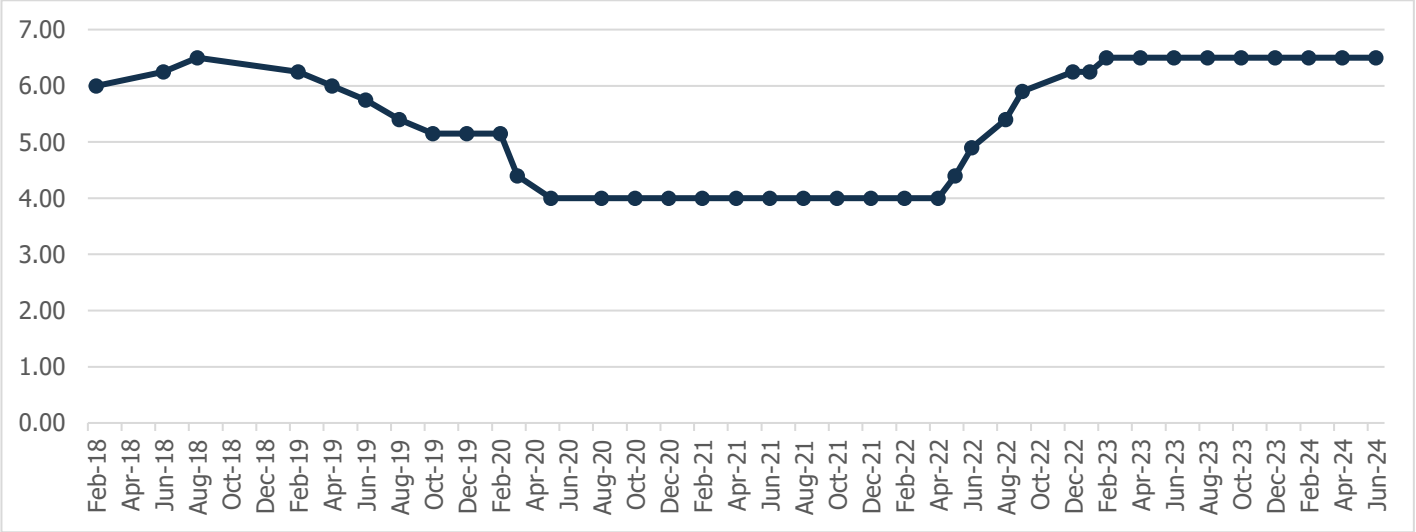


Source: MOSPI

The CPI is primarily factored in by RBI while preparing their bi-monthly monetory policy. At the bi-monthly meeting held in June 2024, RBI projected inflation at 4.5% for FY25 with inflation during Q1FY25 at 4.9%, Q2FY25 at 3.8%, Q3FY25 at 4.6% and Q4FY25 at 4.5%.

Considering the current inflation situation, RBI has kept the repo rate unchanged at 6.5% again in the June 2024 meeting of the Monetary Policy Committee.

Chart 5: RBI historical Repo Rate



Source: RBI

In a meeting held in June 2024, RBI also maintained the liquidity adjustment facility (LAF) corridor by adjusting the standing deposit facility (SDF) rate of 6.25% as the floor and the marginal standing facility (MSF) at the upper end of the band at 6.75%.

Further, the central bank continued to remain focused on the withdrawal of its accommodative stance. While headline inflation has started easing due to softening in core component and economic activity has been resilient supported by domestic and investment demand, volatility in food proces due to adverse weather conditions pose a risk to the path of disinflation. Given the uncertainities in food prices that might derail the path to bring down inflation, the Central Bank has decided to be vigilant and maintain an active disinflationary stance to ensure complete transmission of past rate cuts and anchoring of inflation expectations until a better alignment of the headline CPI inflation with the target is achieved.s

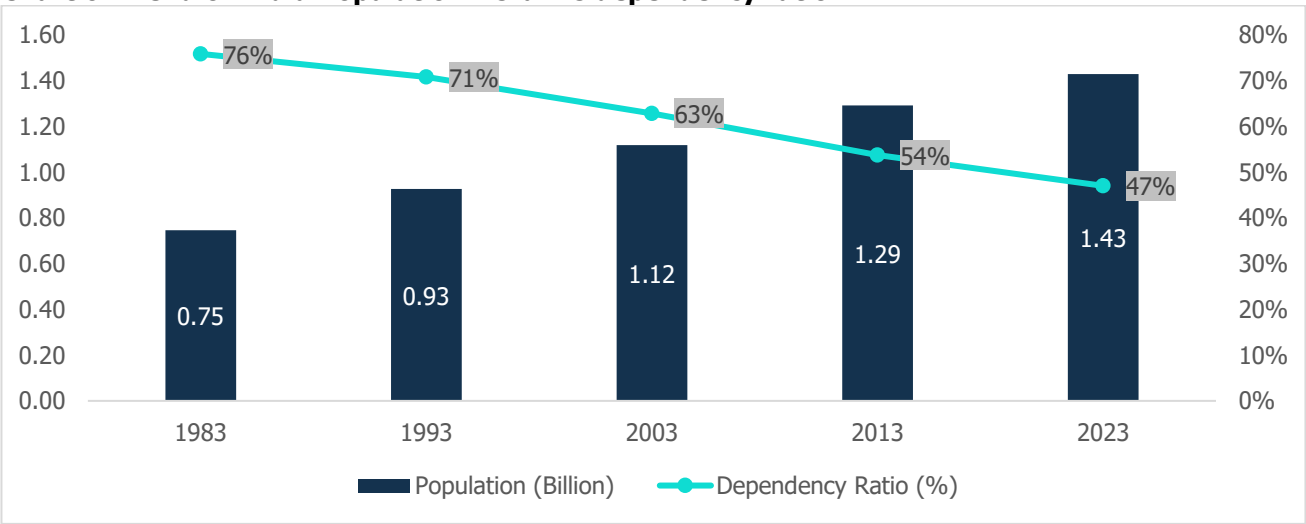
1.1.6 Overview on Key Demographic Parameters

- **Population growth and Urbanization**

The trajectory of economic growth of India and private consumption is driven by socio-economic factors such as demographics and urbanization. According to the world bank, India's population in 2022 surpassed 1.42 billion slightly higher than China's population 1.41 billion and became the most populous country in the world.

Age Dependency Ratio is the ratio of dependents to the working age population, i.e., 15 to 64 years, wherein dependents are population younger than 15 and older than 64. This ratio has been on a declining trend. It was as high as 76% in 1983, which has reduced to 47% in 2023. Declining dependency means the country has an improving share of working-age population generating income, which is a good sign for the economy.

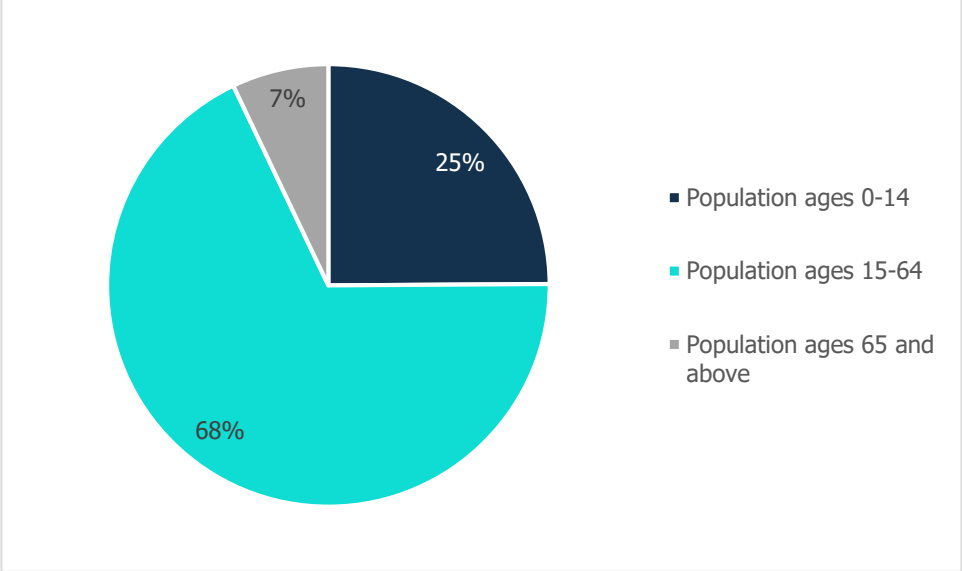
Chart 6: Trend of India Population vis-à-vis dependency ratio



Source: World Bank Database

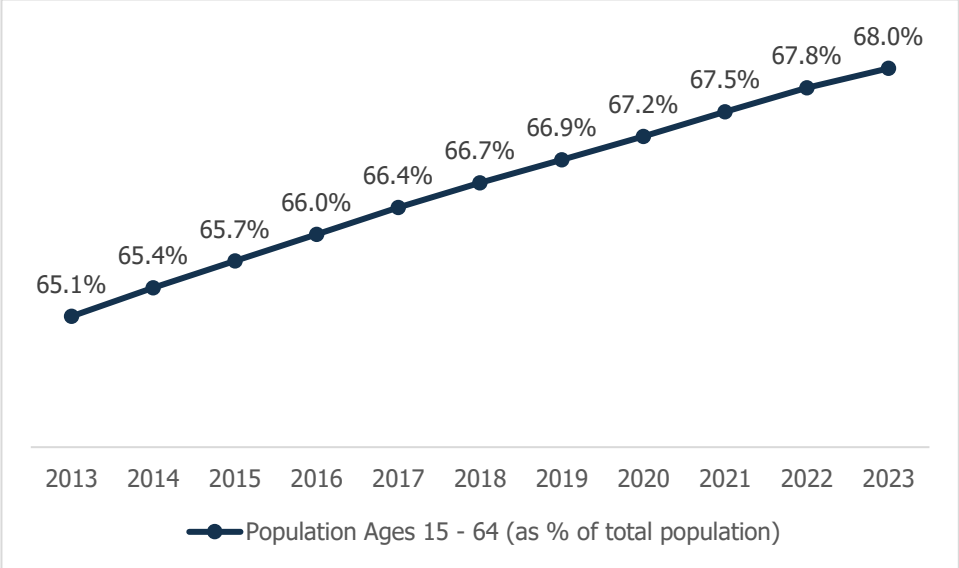
With an average age of 29, India has one of the youngest populations globally. With vast resources of young citizens entering the workforce every year, it is expected to create a 'demographic dividend'. India is home to a fifth of the world's youth demographic and this population advantage will play a critical role in economic growth.

Chart 7: Age-Wise Break Up of Indian population



Source: World Bank Databas

Chart 8: Yearly Trend - Young Population as % of Total Population

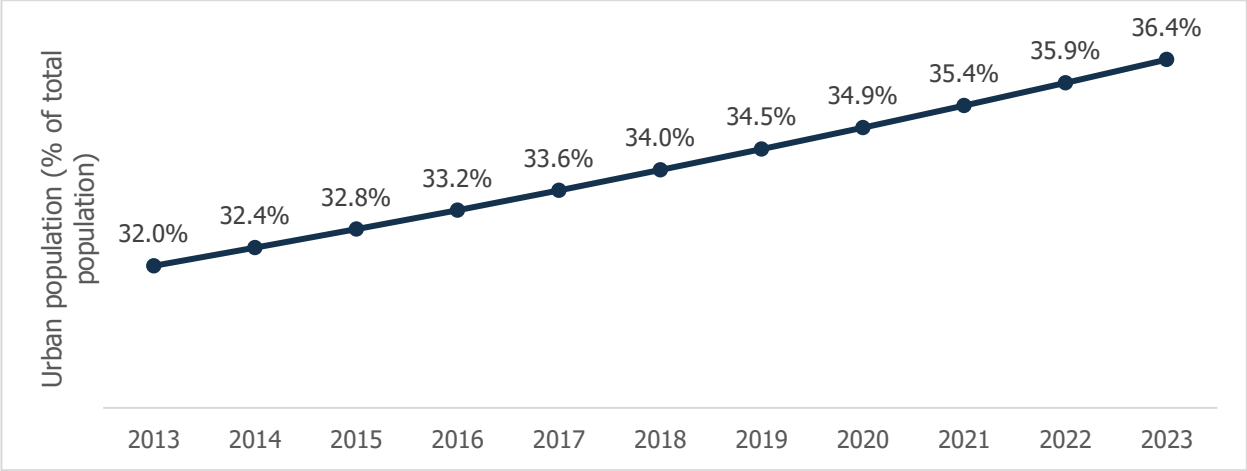


Source: World Bank database

- **Urbanization**

The urban population is significantly growing in India. The urban population in India is estimated to have increased from 413 million (32% of total population) in 2013 to 519.5 million (36.4% of total population) in the year 2023. People living in Tier-2 and Tier-3 cities have greater purchasing power.

Chart 9: Urbanization Trend in India



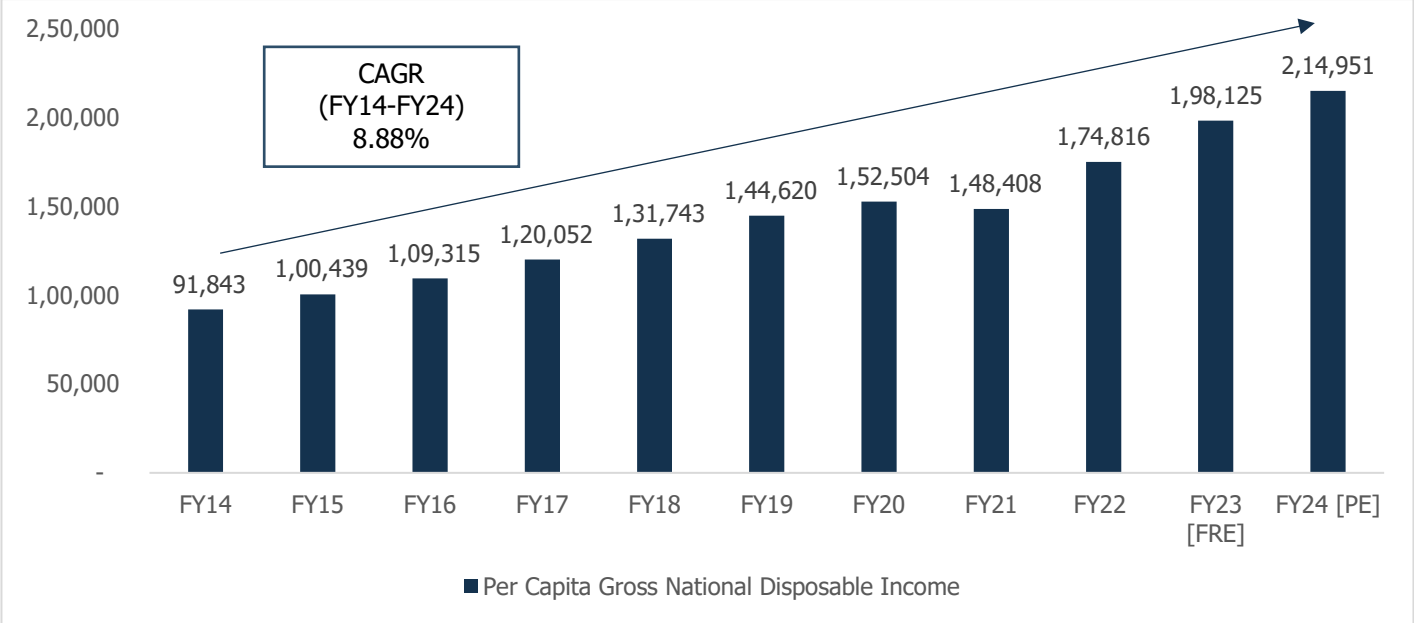
Source: World Bank Database

- **Increasing Per Capita Disposable Income**

Gross National Disposable Income (GNDI) is a measure of the income available to the nation for final consumption and gross savings. Between the period FY14 to FY24, per capita GNDI at current prices registered a CAGR of 8.88%. More disposable income drives more consumption, thereby driving economic growth.

The chart below depicts the trend of per capita GNDI in the past decade:

Chart 10: Trend of Per Capita Gross National Disposable Income (Current Price)

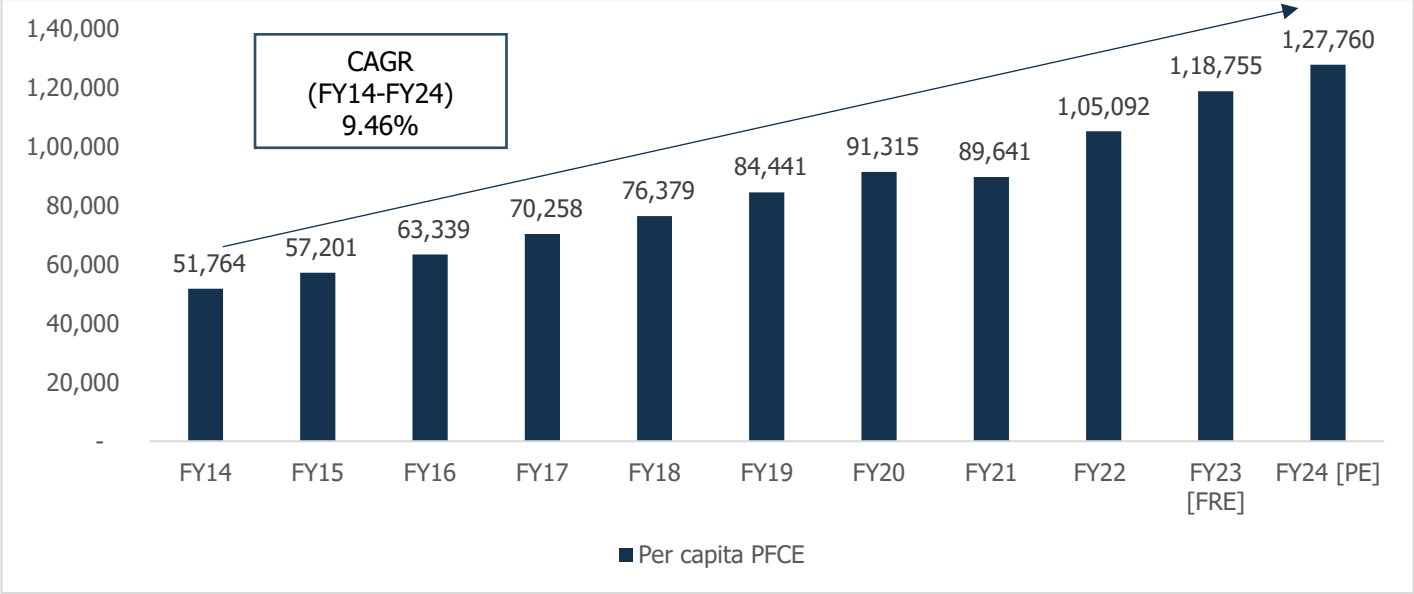


Note: 3RE – Third Revised Estimate, 2RE – Second Revised Estimates, 1RE – First Revised Estimates, PE – Provisional Estimate; Source: MOSPI

- **Increase in Consumer Spending**

With increase in disposable income, there has been a gradual change in consumer spending behaviour as well. Private Final Consumption Expenditure (PFCE) which is measure of consumer spending has also showcased significant growth in the past decade at a CAGR of 9.46%. Following chart depicts the trend of per capita PFCE at current prices:

Chart 11: Trend of Per Capita Private Final Consumption Expenditure (Current Price)



Source: MOSPI

1.1.7 Concluding Remarks

The major headwinds to global economic growth are escalating geopolitical tensions, volatile global commodity prices, high interest rates, inflation woes, and a shortage of key inputs. Despite the global economic growth uncertainties, the Indian economy is relatively better placed in terms of GDP growth compared to other emerging economies. According to IMF's forecast, it is expected to be 7% in CY24 compared to the world GDP growth projection of 3.2%. The bright spots for the economy are continued healthy domestic demand, support from the government towards capital expenditure, moderating inflation, investments in technology and improving business confidence.

Likewise, several high-frequency growth indicators including the purchasing managers index, auto sales, bank credit, and GST collections have shown improvement in FY23. Moreover, normalizing the employment situation after the opening up of the economy is expected to improve and provide support to consumption expenditure.

The India Meteorological Department (IMD) has made a significant forecast, predicting "above normal" rainfall for the upcoming monsoon season, marking the first time in a decade that such an optimistic outlook has been declared at the initial stage. This forecast, coupled with an anticipated eight-year-high rainfall, offers promising prospects for the agrarian economy and inflation. The weakening of El Nino to a neutral stage in the early monsoon season, followed by the likely development of La Nina conditions in the later part, adds to the positive outlook. El Nino typically leads to suppressed rainfall during the Indian monsoon, whereas La Nina tends to enhance rainfall activity. IMD's more optimistic prediction is expected to bolster agricultural growth and incomes, while also potentially alleviating stubborn food inflation pressures.

At the same time, public investment is expected to exhibit healthy growth as the government has allocated a strong capital expenditure of about Rs. 11.11 lakh crores for FY25. The private sector's intent to invest is also showing improvement as per the data announced on new project investments and resilience shown by the import of capital goods. Additionally, improvement in rural demand owing to good rabi crop and an expected normal monsoon will aid the investment cycle in gaining further traction.

2. Global Flexible Intermediate Bulk Packaging Industry

2.1 Overview

The flexible intermediate bulk container (FIBC) industry encompasses the production, sale, and purchase of flexible intermediate bulk containers. FIBCs are large, flexible bags used to transport or store bulk materials, such as powders, granules, flakes, minerals, chemicals, and food products. Further, FIBCs are also classified as bulk transporting packaging made of flexible and foldable fabric materials woven together. They are widely used in the transportation, storage, and protection of dry products and contents. They are lightweight, recyclable, and environmentally friendly. In addition, FIBCs can be transported with the assistance of pallets fitted below them, making them easier to lift and handle. As a result, they are a versatile and efficient packaging solution for the transportation and storage of bulk materials.

Figure 1: Flexible Intermediate Bulk Packaging

Source: CareEdge Research, Maia Research

The global Flexible Intermediate Bulk Packaging (FIBC) industry has undergone an evolution. They have become ubiquitous in the industrial world for storing and transporting a wide range of products. The exact origins of FIBCs remain somewhat unclear, with estimates placing their initial development sometime between the 1940s and 1950s. Early models were made from materials like PVC rubber, offering limited flexibility and strength compared to today's FIBCs. They were primarily used for transporting carbon black in the rubber processing industry. They likely emerged between 1955 and 1965, gaining popularity in Japan and Europe before reaching the U.S. The invention of polypropylene in the 1960s marked a turning point for FIBCs. This durable and chemically resistant material provided the necessary strength and flexibility for FIBCs to handle a broader range of products. This led to their adoption by various industries, including oil and chemicals, for storing and moving fine powders.

The 1970s saw the global expansion of the FIBC industry, driven by factors such as the oil crisis and increasing international trade. A crucial turning point came during the 1973 oil crisis, when FIBCs proved the most economical solution for transporting massive amounts of cement to oil-producing countries. The need to transport large quantities of materials efficiently and cost-effectively made FIBCs a preferred solution. This period also saw the development of specialized FIBC designs for specific applications, like food-grade FIBCs for transporting sensitive food products. Several features contribute to their enduring popularity, including their customizability, foldability, lightweight nature, ease of use, and disposal/recycling options. The success of bulk bags has led to the development of sub-types like super sacks, designed to hold even more material, and sand bags, specifically used for transporting masonry sand and dirt. Today,

these versatile and economical containers are used worldwide for storing and transporting a wide range of dry and flowable products, from food and chemicals to construction materials and minerals. The 21st century has witnessed technological advancements in the FIBC industry. New materials and manufacturing techniques have improved the strength, durability, and safety of FIBCs. Additionally, the industry has embraced sustainability initiatives, with a focus on using recycled materials and reducing the environmental impact of FIBC production and disposal.

Accordingly, FIBCs are widely used in a variety of industries, including food & beverage, chemicals, construction, pharmaceutical, and manufacturing. The flexible intermediate bulk container (FIBC) industry growth is influenced by industrialization, infrastructure development, trade activities, and specific industry requirements. As a result, the FIBC industry is highly competitive, with numerous manufacturers and suppliers operating on a regional or international scale.

2.1.1 Global FIBC Consumption Market Size and Outlook

The global FIBC consumption market was valued at USD 4,856 million in 2023 and is expected to grow to USD 5,117 million in 2024. The market growth is attributed to the rising need to reduce the weight of bulk packaging, the thriving food and pharmaceutical industries, and the expanding manufacturing and construction sectors in developing regions.

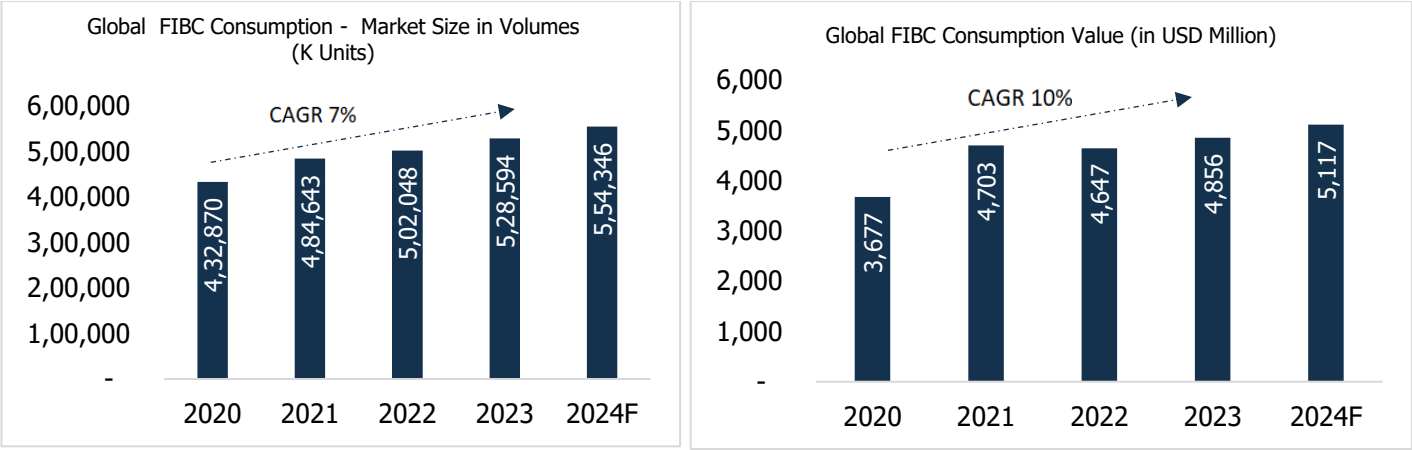
Flexible intermediate bulk containers (FIBCs) are used in a wide range of end-use industries, including food, chemicals, pharmaceuticals, building & construction, mining, manufacturing, agriculture, and waste handling. The expansion of the pharmaceutical industry is resulting to a high demand for FIBCs, as they are an efficient and cost-effective way to transport and store pharmaceutical products. Additionally, FIBCs can be folded and pressed together to save space, making them a popular choice for businesses that need to store large quantities of bulk materials.

The other factors driving the flexible intermediate bulk container (FIBC) market growth include the capacity of FIBCs to hold large amounts of weight, the ability of FIBCs to store a wide range of dry & flowable products, the use of FIBCs to manage finished granules and small-size materials in industrial premises, and the low cost, low weight, and easy handling of FIBCs. Additionally, technological advancements in packaging components, technologies, and applications offer market growth opportunities.

However, the need to install specified liners in flexible intermediate bulk containers (FIBCs) for certain applications and their use only in a single type of material are among the challenges that the FIBC market faces. Also, during COVID-19, FIBC manufacturers encountered challenges in importing and shipping raw materials and finished products alongside meeting the demand for bulk bags. Similarly, the COVID-19 crisis and the subsequent international lockdowns had an unprecedented impact on lead times for factories, distributors, and end-users, resulting to uncertainties in product deliveries. Accordingly, in the aftermath of the pandemic, manufacturers adopted strategic measures to recover from these losses and introduced innovative FIBCs to better serve the needs of end-users.

Overall, the global FIBC consumption market is expected to witness strong growth in the coming years. The increasing inclination of end-users to opt for FIBC instead of traditional packaging and transport methods is a key driver of this trend. While the demand for enhanced durability had a relatively minor impact on the adoption rate of FIBC, manufacturers are now diversifying their product lines to meet the rising demand from end-users. The market size of global FIBC industry is depicted below:

Chart 12: Global FIBC Consumption Market Size by Value and Volume



Source: CareEdge Research, Maia Research

Note: The year mentioned in this chart and subsequent sections is calendar year; F- Forecasted

2.1.2 Market Analysis by Types and Applications

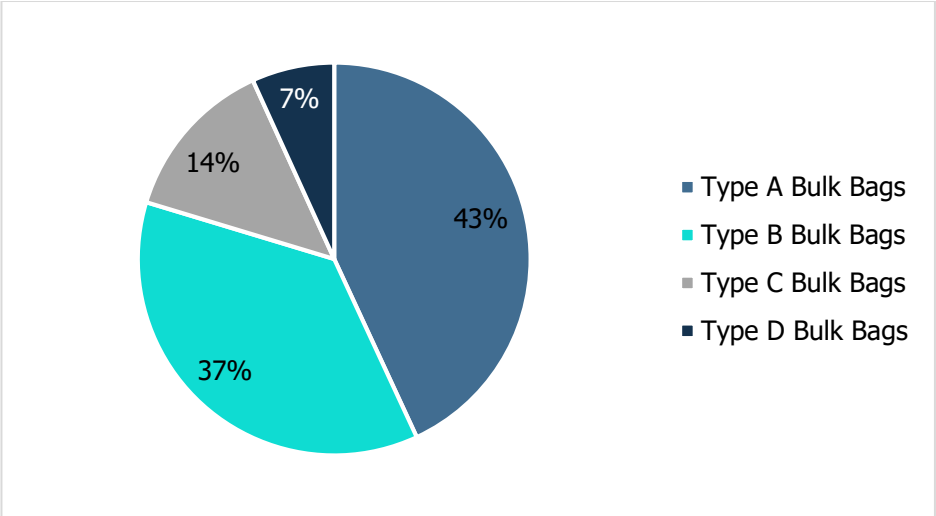
Flexible intermediate bulk containers (FIBCs) are made from flexible woven materials, usually polypropylene (PP), and have the capability to accommodate weights ranging from 500 kg to 2,000 kg. These containers are frequently employed for the storage of dry and pourable materials, including grains, seeds, salts, chemicals, sands, clays, cement, and various other substances.

The various types of FIBC market are described below:

Types	Description
Type A Bulk Bags	These FIBCs are made from non-conductive fabric and do not provide any static protection. They are suitable for non-flammable materials that do not pose a risk of electrostatic discharge.
Type B Bulk Bags	Type B FIBCs are made from antistatic fabric designed to prevent the buildup of electrostatic charges. However, they do not provide full protection against sparks and incendiary discharges.
Type C Bulk Bags	Also known as "grounded" FIBCs, Type C bags are made from electrically conductive fabric. They are equipped with grounding mechanisms to safely dissipate static charges, making them suitable for flammable materials.
Type D Bulk Bags	Type D FIBCs use static dissipative fabric to prevent the occurrence of incendiary sparks. They do not require grounding and offer protection against hazardous charges for both flammable and non-flammable materials.

Under the global FIBC market, Type A Bulk Bags stand at 43% market share followed by Type B Bulk Bags, Type C Bulk Bags, and Type D Bulk Bags, which account for 37%, 14% and 7% respectively in 2023. The global market share of FIBC by types in 2023 (calendar year) is depicted below:

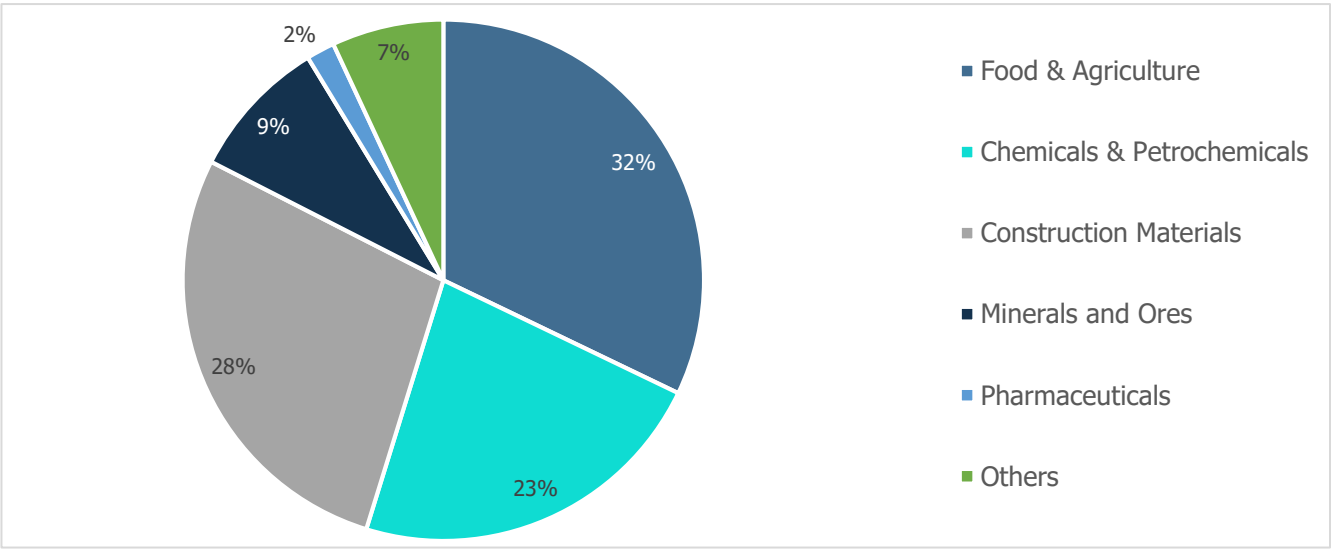
Chart 13: Global FIBC Market Share by Types in 2023



Source: CareEdge Research, Maia Research

FIBCs are utilized across a range of industries, including food, chemicals, pharmaceuticals, construction, mining, and more. Bulk bags and containers are largely used for storing and transporting large quantities of solid and semi-solid substrates such as mining, chemicals, and agriculture products. The high-quality propylene bags and containers are extremely useful for pharmaceuticals and food storage, which ensures optimum freshness of the consumable products. Accordingly, it can be applied to food & agriculture, chemicals, petrochemicals, construction materials, minerals and ores, and pharmaceuticals. The global market share of FIBC market by application in 2023 is depicted below:

Chart 14: Global FIBC Market Share by Applications in 2023



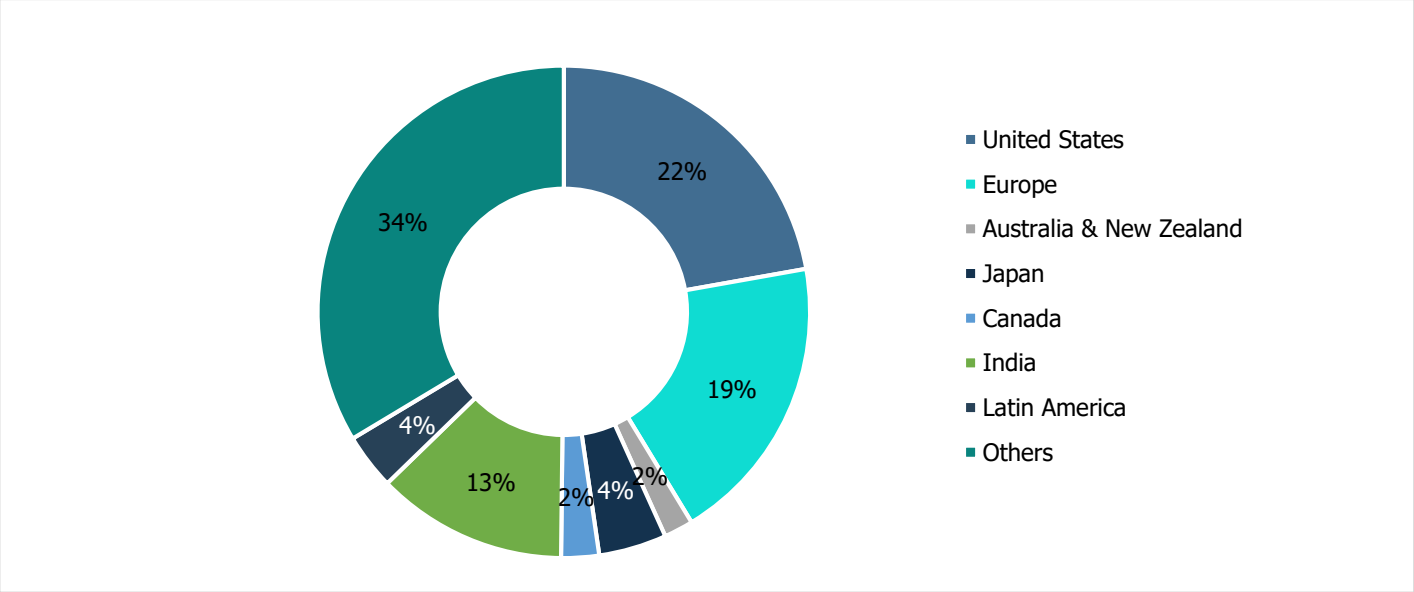
Source: CareEdge Research, Maia Research

2.1.3 Region-Wise Market Size

The FIBC market is expected to witness growth in the coming years, driven by the increasing demand from various industries and the thriving e-commerce industry. The United States is the largest market for FIBCs, followed by Europe. The United States FIBC market growth is attributed to the increasing demand from the food & beverage, chemicals, and construction industries. Whereas the Europe FIBC market growth is driven by the increasing demand from the food & beverage, chemicals, and pharmaceutical industries. Further, the increasing demand for flexible intermediate bulk containers in developed nations such as the United States, Japan, Germany, France, etc., primarily stems from the growing pharmaceutical sector, driven by an ageing population. Moreover, the Asia-Pacific FIBC market growth is accredited to the increasing demand from the food & beverage, chemicals, and construction industries in developing countries such as Japan and India.

The global FIBC market consumption share by regions in 2023 is depicted below: -

Chart 15: Global FIBC Consumption Market Share by Regions in 2023



Source: CareEdge Research, Maia Research
Note: The year mentioned in this chart and subsequent sections is calendar year; F- Forecasted

- **America Market**

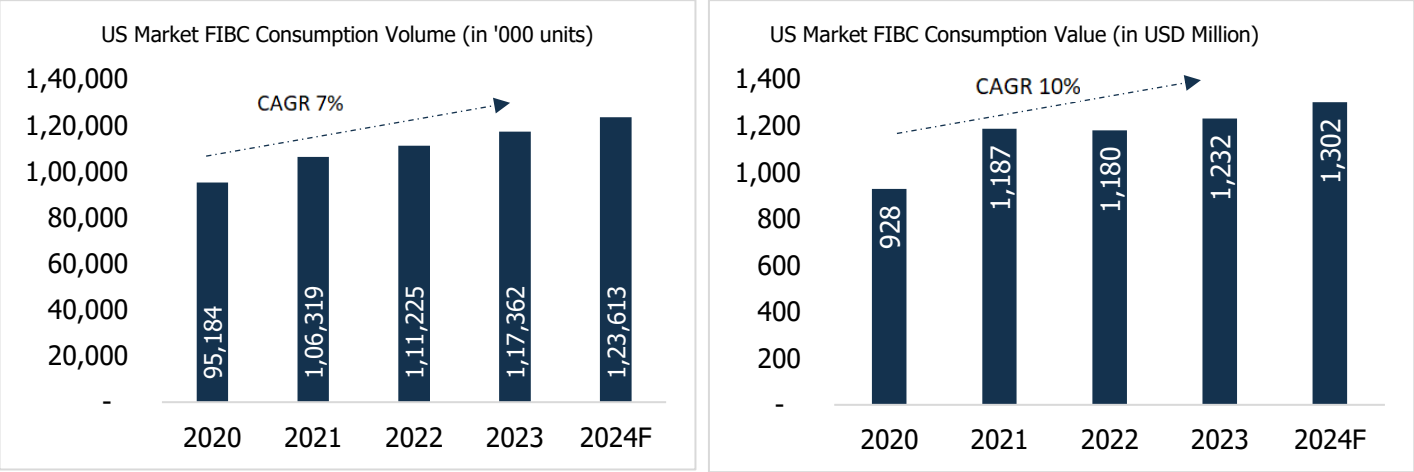
The America FIBC consumption market was valued at 1,232 USD million in 2023 and is expected to grow further. This growth is attributed to the increasing demand for FIBC from various industries such as food & beverage, chemicals, and construction. Additionally, the change in the distribution of industrial products such as chemicals and electronics contributes to the growth of bulk packaging in the United States. The primary growth drivers of this segment are the convenience of transport compared to inflexible bulk packaging and the superior alternative it offers to smaller bags.

Moreover, the United States is the largest market for FIBC in the world, accounting for over 22% of the global market share. The country has a large and growing manufacturing sector, which is the primary driver of the demand for FIBC. Further, the food & beverage industry is the largest consumer of FIBCs in the United States, accounting for over 25% of the total market consumption. The industry utilizes FIBC to transport and store various products such as flour, sugar, and rice. Whereas the chemicals industry is the second-largest consumer of FIBCs, accounting for over 20% of the total market consumption. The industry uses FIBC to transport and store various chemicals in agricultural sectors such as

fertilizers, pesticides, and herbicides. The construction industry is the third-largest consumer of FIBCs, accounting for over 15% of the total market consumption. The industry uses FIBC to transport and store various construction materials such as cement, sand, and gravel.

Accordingly, the FIBC market in the United States is highly competitive, with a number of domestic and international players operating in the market. However, economic growth or recession can impact the demand for FIBCs, especially in the construction and manufacturing industries. On the other hand, the growing e-commerce industry is also expected to boost the demand for FIBC in the United States followed by increasing demand from the food & beverage and chemicals industries and the rising demand for sustainable packaging solutions.

Chart 16: America FIBC Consumption Market Size by Volume and Value



Source: CareEdge Research, Maia Research

Note: The year mentioned in this chart and subsequent sections is calendar year; F- Forecasted

- **Europe Market**

The Europe FIBC consumption market is valued at 1,008 USD million in 2023 and it grew at a CAGR of 8.8% over the period, 2020-2023. The market growth is accredited to the increasing demand from various industries such as food & beverage, chemicals, construction, and pharmaceuticals, as well as the growing e-commerce industry. The surging demand for secure bulk transportation of industrial chemicals and mining products has led to increased production of bulk bags, encompassing varieties like antistatic bags and cross-corner bags in the Europe region. Moreover, the escalating need for high-quality, contamination-free solutions for delivering food and agricultural products is driving the widespread adoption of certified food bags and bulk bags. The expanding utilization of such bags across diverse industrial sectors is propelling sales in Europe.

Further, the demand for bulk shipping and storage of industrial chemicals and materials in distribution centers and warehouses is creating opportunities for bulk bag sales in Europe. Several industries are increasingly favoring bulk bags for transporting the majority of their materials. Notably, the chemicals, fertilizers, food products, and agriculture sectors have remained key end-users of bulk bags, and demand from these industries is expected to remain steady, contributing to the overall market expansion.

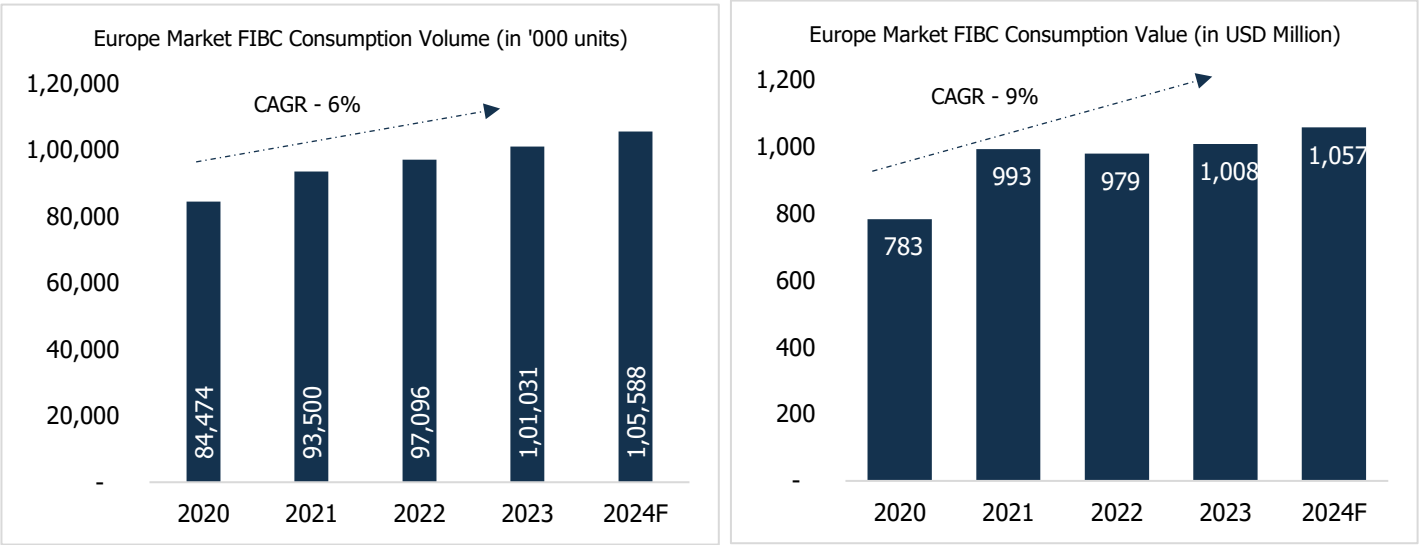
Furthermore, the growing need for versatile and spill-proof delivery solutions propels the demand for bulk bags, as they are considered ideal for safeguarding shipments against unexpected incidents. End-users are striving to address both cost-effective transportation and efficient storage of bulk products, resulting to the growing popularity of flexible and

collapsible bulk bags. Moreover, added benefits, such as reduced shipping costs during return trips and confirmed product quality, are further fueling growth.

In the European market, industrial food products, chemicals, fertilizers, and agriculture industries are anticipated to hold a good amount of share in the expansion of the FIBC market. The increasing trade of pharmaceutical products and chemical materials among various European countries has been registering growth. The e-commerce industry is also expected to drive the demand for FIBCs in the coming years, as they are widely used for the packaging and transportation of goods and a cost-effective and efficient way to handle large quantities of goods.

There is a growing demand for sustainable FIBCs made from recycled materials or biodegradable materials in Europe. Accordingly, technological advancements in the FIBC industry are resulting to the development of new and innovative FIBCs with improved features, such as strength, durability, ease of handling environmental concerns, and sustainability. Such factors influence the FIBC market in Europe, resulting to the development of more environmentally friendly materials and manufacturing processes. The trend toward sustainability is likely to continue, resulting to increased demand for eco-friendly FIBCs and recycling solutions. Overall, the European FIBC market is expected to perform well in the coming years, driven by the increasing demand from various industries and the growing e-commerce industry.

Chart 17: Europe FIBC Consumption Market Size by Volume and Value



Source: CareEdge Research, Maia Research

Note: The year mentioned in this chart and subsequent sections is calendar year; F- Forecasted

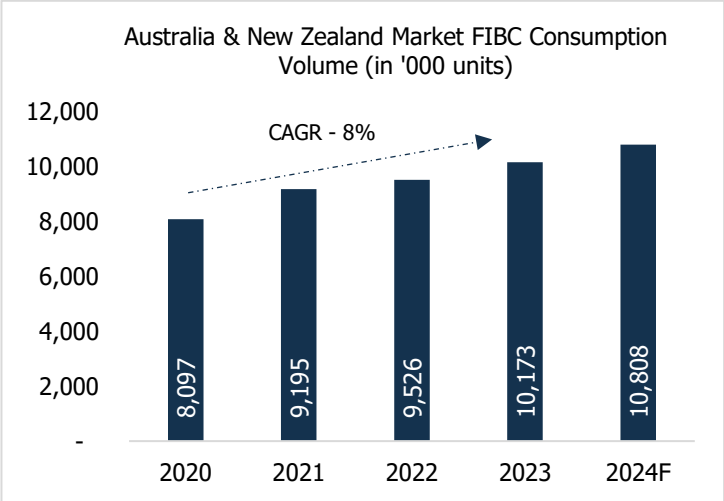
- **Australia and New Zealand Market**

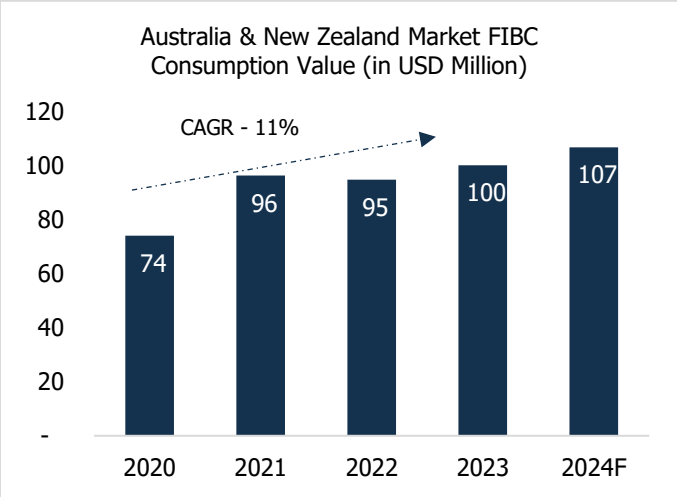
The Australia and New Zealand FIBC consumption market was valued at 100 USD million in 2023 and it grew at a CAGR of 10.6% during 2020-2023. The FIBC market in Australia and New Zealand is relatively small compared to larger global markets but has been experiencing steady growth. These containers are used in various industries, including agriculture, mining, chemicals, and construction.

Sustainability concerns are influencing the FIBC market growth in Australia and New Zealand, prompting to the development of more environmentally friendly materials and production processes. In line with the continuous commitment to environmental sustainability, the Australia and New Zealand market is emphasizing the production of sustainable FIBC products in order to contribute positively to the environment and end-use industries.

In addition, the Australia and New Zealand FIBC market has been advancing efforts to boost recycling rates, with investments in recycling technology coming from major waste processors and recyclers. Concurrently, local plastic manufacturers are making investments to prepare for the utilization of recycled plastics and incorporate recycled content. Every type of FIBC configuration is seamlessly shifting to the new Green Bag, in every industry like mining, manufacturing, construction, chemicals, dairy, and other food processing industries.

Chart 18: Australia & New Zealand FIBC Consumption Market Size by Volume and Value





Source: CareEdge Research, Maia Research

Note: The year mentioned in this chart and subsequent sections is calendar year; F- Forecasted

- **Canada Market**

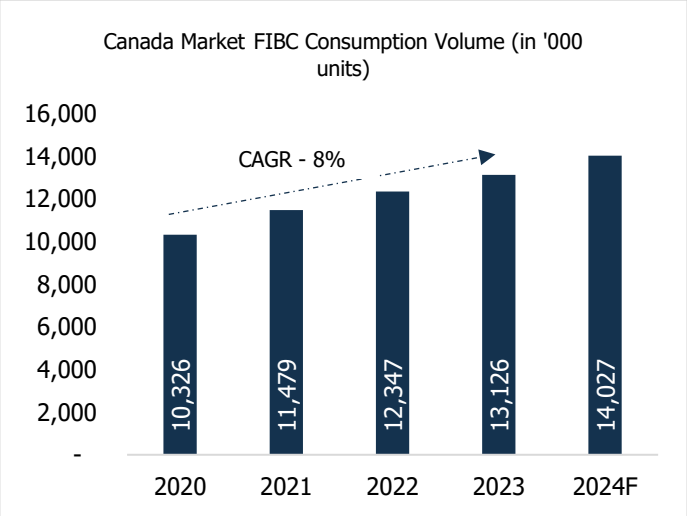
The Canada FIBC consumption market was valued at 131 USD million in 2023 and it grew at a CAGR of 11% during the period of 2020-2023. The FIBC market in Canada is subject to various influences, including industrial production, manufacturing activities, and the growing demand for bulk packaging solutions. While it may be considered relatively smaller compared to larger economies, its significance spans across multiple sectors. Within this region, a diverse array of packaging materials and products finds applications in industries such as food & beverage, healthcare, personal care, and e-commerce.

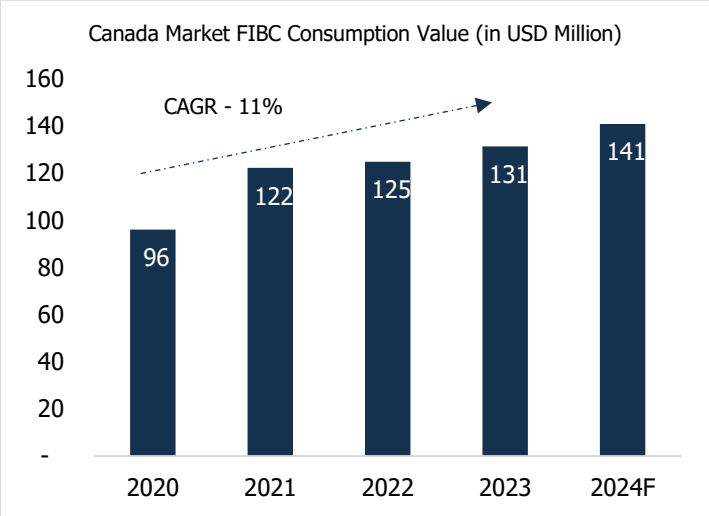
Of these, the food & beverage industry stands as the largest end-user. This sector has experienced robust growth in recent years, driven by changing lifestyles, an increased appetite for processed foods, a growing population, and the widespread adoption of e-retail throughout Canada. Besides, Canada's robust economy also presents a dependable market for cosmetics and personal care products. As a result, the heightened awareness of personal health and safety is expected to boost the personal care market's growth in the foreseeable future.

Accordingly, improved living standards and high disposable income levels in Canada are further propelling the personal care industry's expansion, consequently driving demand for plastic packaging to preserve the quality of packaged cosmetic and household items. Furthermore, FIBC produced through the extrusion process, offers exceptional convenience, adaptability, and product shelf life during the transportation of pharmaceuticals, tablets, powders, and bulk liquids. The burgeoning pharmaceutical market in Canada, combined with substantial export volumes, is fueling the need for flexible packaging solutions. This, in turn, is poised to benefit the growth of the extrusion technology segment in the coming years.

Moreover, the increasing adoption of convenient and lightweight packaging solutions alongside the thriving end-use industries propel the expansion of the FIBC market in Canada. Similarly, the strengthening of plastic recycling infrastructure worldwide and growing investments in bioplastic research & development activities are expected to lead to the emergence of more eco-friendly plastic packaging options in the near future.

Chart 19: Canada FIBC Consumption Market Size by Volume and Value





Source: CareEdge Research, Maia Research

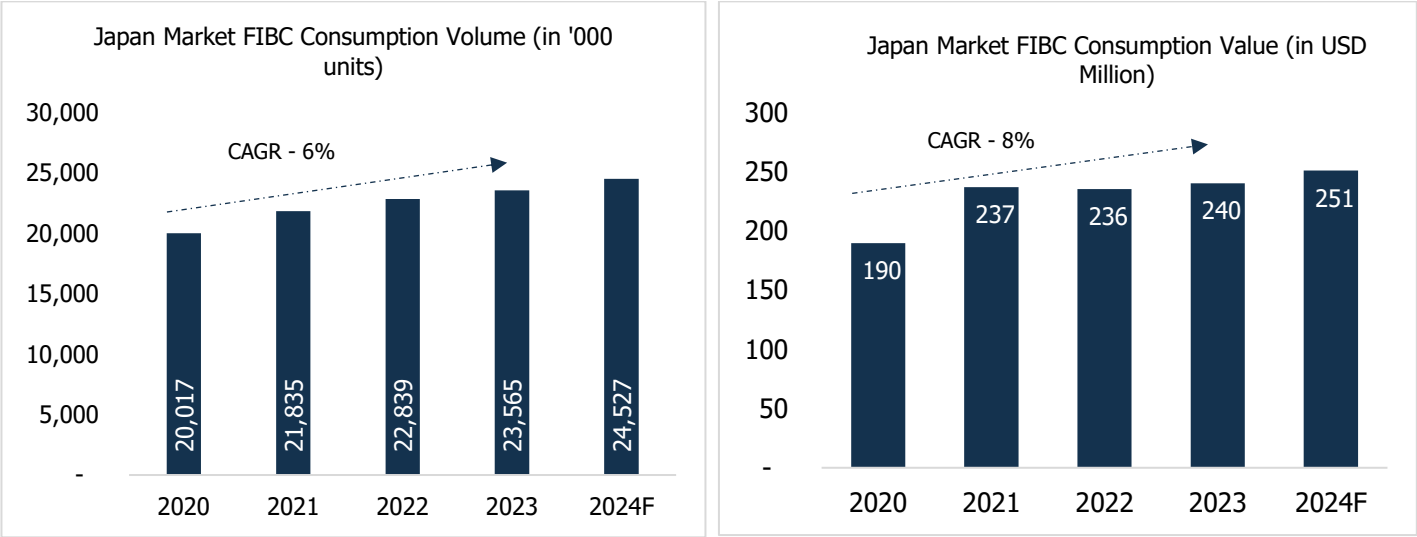
Note: The year mentioned in this chart and subsequent sections is calendar year; F- Forecasted

- **Japan Market**

The Japan FIBC Consumption market was valued at 240 USD million in 2023 and it grew at a CAGR of 8.2% during the period, 2020-2023. The Japan FIBC market growth is influenced by industrial production, manufacturing activities, and the rising need for bulk packaging solutions. The anticipated growth in the pharmaceutical and agricultural industries is expected to further drive the market in Japan. Whereas, Japan's demand for flexible intermediate bulk containers is primarily propelled by the expanding pharmaceutical sector due to the increasing ageing population.

Furthermore, in Japan, the flourishing pharmaceutical industry remains a key driver for the demand for flexible intermediate bulk containers, primarily attributed to the ageing demographic. Additionally, the increasing investments in e-commerce businesses are expected to stimulate demand within the FIBC market. Moreover, the shifting consumer preferences toward reusable packaging, driven by a heightened awareness of environmental protection and waste reduction, is also anticipated to bolster the demand for FIBC in this region.

Chart 20: Japan FIBC Consumption Market Size by Volume and Value



Source: CareEdge Research, Maia Research

Note: The year mentioned in this chart and subsequent sections is calendar year; F- Forecasted

- **Latin America Market**

The Latin America FIBC market was valued at 166 USD million in 2023 and it grew at a CAGR of 10.3% during the period, 2020-2023. The substantial surge in demand for FIBCs in Latin America is due to the increased requirement for food products across various sectors. The growing adoption of these containers in the chemical industry is another growth driver.

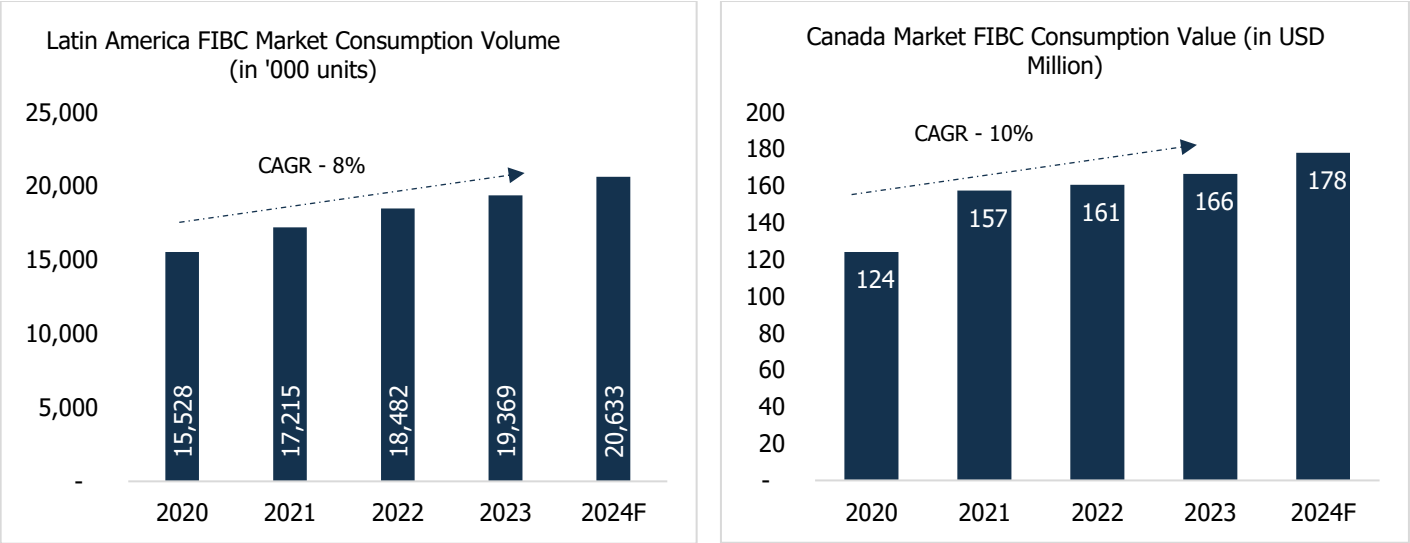
FIBCs are highly suitable for the transportation and storage of chemicals due to their ability to withstand harsh conditions such as high temperatures and exposure to chemicals. Another prominent trend driving the market is the escalating utilization of these containers within the food and agriculture industries. FIBCs are commonly employed for transporting and storing grains, cereals, and other food items. This preference is partly due to their capacity to shield the contents from moisture and other environmental factors, alongside the added stability offered by the four-loop design. Further, innovations within the FIBC product realm represent a trend in the Latin America FIBC market. Anticipated to have a positive impact on the industry, these innovations encompass alterations in product shape, enhanced handling convenience, and advancements in the properties of the raw materials used in FIBC manufacturing.

Similarly, cost-effectiveness is a pivotal driver propelling the growth of the Latin American FIBC market. The usage of FIBCs allows end-users to attain the same storage capacity as rigid bulk storage products, like drums, but at a reduced cost. This reduction in cost aids end-users in minimizing their overall expenses related to bulk packaging. Further, owing to their flexibility and lightweight nature, FIBCs possess a higher truckload capacity compared to rigid bulk storage products.

Furthermore, sustainability has emerged as a critical factor for both businesses and consumers. As environmental concerns continue to heighten, FIBC manufacturers and marketers in Latin America are adapting to meet the rising demand for eco-friendly packaging solutions. Accordingly, it is anticipated that FIBC market will prominently showcase sustainable materials, including recycled or biodegradable fabrics, and emphasize the recyclability or reusability of FIBCs.

Marketing strategies will likely revolve around highlighting the reduced carbon footprint and waste reduction achieved by utilizing FIBCs as compared to traditional packaging alternatives.

Chart 21: Latin America FIBC Consumption Market Size by Volume and Value



Source: CareEdge Research, Maia Research

Note: The year mentioned in this chart and subsequent sections is calendar year; F- Forecasted

2.1.4 Growth & Opportunities in FIBC Industry

- **Rapid Industrialization**

One of the primary drivers of growth in this industry is the rapid pace of industrialization worldwide. FIBCs are increasingly being adopted by manufacturers in the chemical and agriculture sectors for the transportation of various commodities, including grains, rice, potatoes, cereals, and liquid chemicals. Additionally, these bags are used to store and transport construction supplies such as carbon black, steel, alloys, minerals, cement, and sand.

Moreover, the FIBC market is expanding due to growing environmental concerns and the rising demand for lightweight, biodegradable bulk packaging materials, particularly in the pharmaceutical sector. Pharmaceutical-grade FIBCs play a crucial role in the storage and prevention of contamination for a wide range of medical products. Innovations in product development, such as the introduction of FIBC variations designed for hygienic packaging solutions, are further contributing to the industry's growth.

- **Cost Effective for End-Use Industries**

Flexible Intermediate Bulk Containers (FIBCs) offer cost-effectiveness, efficient load handling, ease of use, and chemical resistance, making them a swift replacement for alternative bulk packaging options such as paper-based products. Additionally, FIBCs contribute to weight reduction, resulting in lower transportation costs.

Beyond the surging demand anticipated in the Asia-Pacific (APAC) region, particularly in the food & beverage industry, other key end-use sectors including chemicals, pharmaceuticals, construction, metals & mining, among others, are progressively transitioning to FIBCs due to their advantages, such as cost-efficiency and enhanced handling convenience.

- **Growing Pharmaceutical Product and Chemical Material Trade among European Countries**

Flexible Intermediate Bulk Containers (FIBCs) are United Nations-certified high-quality, non-polluting transport solutions. The growing demand for industrial chemicals and pharmaceuticals in Europe and the growing trade volume among European countries are driving the development of this industry market. According to the Federation of European Pharmaceutical Industry Associations, Germany exported nearly 15% of its medicines globally in 2019. Whereas,

according to the European Chemical Industry Council, the chemical industry is the second-largest manufacturing industry in the UK, with revenues of $74.6 billion and value-added of $22.8 billion in 2019, followed by the food and beverage processing industry. Furthermore, the UK's chemical industry is active in all key sectors, including petrochemicals, basic inorganic substances, agrochemicals, polymers, paints, and industries including fuel additives, lubricants, construction chemicals, and more. The increased use of products in the industrial sector thus drives sales in Europe.

- **Growing Demand for Cereals boosts New Zealand Market**

Flexible intermediate bulk container bags (FIBC) are widely used in agricultural applications, where these bags can be used to maintain the freshness of agricultural products and extend their shelf life. Also, a wide variety of FIBCs can fulfil the transportation needs of a variety of different items. For example, Baffle bags and circular FIBCs are ideal for storing dry grainy produce like legumes, beans, and rice and Fine powders like salt.

Whereas giant bags are ideal for handling livestock feed and pet food, as they help maintain the nutritional value of the product. According to the U.S. Department of Agriculture, New Zealand's grain and feed import volumes in 2022 rose to the highest level ever, importing 3.7 million metric tons (MMT), up 13% from the previous year. National grain and feed demand continue to outstrip domestic supply by nearly double, with New Zealand producing 2.1 MMT in 2022, but consuming an estimated 5.8 MMT.

- **Cost-Effectiveness of FIBCs**

Flexible intermediate bulk containers reduce the total weight of bulk packaging due to their negligible weight. They can also be stored in a small space by folding and pressing multiple container bags together. Container bags are made of flexible woven fabrics, usually polypropylene (PP), and can hold a weight of 500 kg to 2,000 kg. These flexible intermediate containers are commonly used to store dry and mobile products such as grains, seeds, salt, chemicals, sand, clay, cement, etc.

In addition, due to container bags' low cost and lightweight, forklift trucks can be used for mechanical processing, which is very convenient to handle. Besides, the adoption rate is higher than that of corrugated paper packaging, which is widely used in the pharmaceutical, chemical, and food industries. Moreover, since container bags are light in weight and can be used multiple times, they have packaging costs and transportation costs. At the same time, with the substitutes made of metal materials, the production process is complex with associated production costs. Therefore, cost-effectiveness is one of the driving factors of the FIBC market.

- **Rising Online Sales**

With the rapid development of online e-commerce, the traditional offline B2B model has been broken, and more and more B2B websites have facilitated procurement among enterprises. Flexible intermediate bulk containers, which provide products for various industrial food industries, can also use online distribution channels to improve their sales efficiency and use the convenience of the network to better meet the customization needs of consumers.

2.1.5 Constraints and Limitations of FIBC Industry

- **High Labour Costs in Developed Areas**

Labour costs play an important role in the flexible medium bulk container industry. In addition, the larger the per capita GDP of developed countries, the higher the per capita labour remuneration and the higher the labour price level. Also, due to the aggravation of the global ageing trend, especially in developed countries, the labour market is projecting a

shortage trend, which further raises global labour costs. Further, COVID-19 exacerbated labour market imbalances. For example, according to an authoritative report of Japan, by 2030, Japan's labour gap will reach 6.44 million people, facing a serious labour shortage problem[1]. Whereas Japan's ageing population is a substantial social problem alongside fewer children. Therefore, the rising labour costs may limit the development of the FIBC market.

- **Supply Side Challenges**

A supply shock is an event that may cause changes in production capacity and production cost, thus affecting the stability of the entire supply chain and causing price fluctuations. Supply shocks can be divided into favourable shocks and unfavourable shocks. The events that form the supply shock are not only short-term accidental events but also the events formed by the system reform. The biggest and most long-term influencing factor is the economic system itself. The most profound challenge to supply is policy.

In countries such as Europe and New Zealand, the industry is facing the challenge of plastic restriction orders. According to the Proposal for Revision of EU Legislation on Packaging and Packaging Waste, as with the current Directive, the Proposed Regulation places obligations on Member States to reduce packaging waste generation per capita by 5% by 2030, 10% by 2035, and 15% by 2040, all compared to 2018 levels. Also, the regulation proposes to set up return, collection, and recovery systems. Further, plastic bags, commonly used for vegetables and fruit, are banned in New Zealand. Recyclable, biodegradable or plant-based plastic bags are also included in the ban.

- **Fluctuations in Raw Material Prices**

The primary raw materials employed in the manufacturing of FIBCs are PP (Polypropylene) and PE (Polyethylene), and their prices exhibit volatility. Any increase in crude oil prices directly impacts the pricing structure of FIBCs since these polymers are derived from petroleum.

For instance, oil price is a commodity with financial value, subject to multiple influences, such as supply & demand, the impact of international environmental policies, and so on. During COVID-19 and the Russia-Ukraine war, the price of crude oil has fluctuated greatly. Accordingly, affected by the fluctuation of oil prices, manufacturing costs and gross profit changed greatly in the FIBC market.

- **Labour-Intensive Process**

Labour costs contribution has dissuaded bulk packaging manufacturers in developed regions with elevated labour costs from venturing into the FIBC segment. Consequently, there has been a heavy reliance on the Asia-Pacific (APAC) region to meet the demand for FIBCs. However, the growing popularity of FIBCs in countries like India, China, and Southeast Asia has led to reduced export volumes from the APAC region. This shift in export quantities may potentially influence the pricing dynamics for buyers in developed regions.

2.1.6 Potential legal challenges and Changes in Legislation for the FIBC Industry

The FIBC industry faces several potential legal challenges and changes in legislation that could impact its future operations. These include:

1. Environmental Regulations:

Stricter regulations on plastic use and waste disposal: Governments worldwide are enacting stricter regulations on plastic use and waste disposal, aiming to reduce plastic pollution and promote sustainability. This could lead to increased restrictions on the use of FIBCs, particularly those made from virgin plastic materials.

[1] https://asia.nikkei.com

Extended Producer Responsibility (EPR) schemes: EPR schemes are being implemented in various countries, holding manufacturers responsible for the end-of-life management of their products. This could require FIBC manufacturers to invest in recycling and recovery infrastructure, potentially increasing operational costs.

2. Safety Regulations:

Increased scrutiny of safety standards: Regulatory bodies may impose stricter safety standards for FIBCs, particularly for those used to transport hazardous materials. This could lead to higher manufacturing costs and stricter testing requirements.

Regulations on reuse and reconditioning: Regulations on the reuse and reconditioning of FIBCs may become more stringent, requiring manufacturers to design FIBCs for longer lifespans and ensure proper handling and maintenance during reuse.

3. Trade Regulations:

Increased trade barriers: Trade conflicts and protectionist policies could lead to increased tariffs and import restrictions on FIBCs, disrupting global supply chains and impacting the industry's competitiveness.

Regulations on recycled content: Some countries may implement regulations requiring a minimum recycled content in FIBCs, potentially impacting manufacturers who rely on virgin materials.

4. Product Liability Claims:

Increased risk of product liability lawsuits: If FIBCs fail to meet safety standards or cause product damage, manufacturers may face an increased risk of legal claims and financial liabilities.

Need for robust quality control and compliance systems: To mitigate product liability risks, manufacturers will need to implement robust quality control and compliance systems to ensure their products meet all regulatory requirements.

5. Emerging Technologies:

Rise of alternative packaging solutions: The development and adoption of alternative packaging solutions, such as reusable containers or bulk shipping systems, could challenge the dominance of FIBCs in certain markets.

Need for innovation and adaptation: FIBC manufacturers will need to continuously innovate and adapt their products and technologies to remain competitive in the face of emerging trends and disruptions.

Potential Changes in Legislation:

- **Harmonization of international regulations:** Efforts to harmonize international regulations for FIBCs could lead to a more streamlined and predictable regulatory environment for manufacturers and exporters.
- **Incentives for sustainable practices:** Governments may offer incentives to FIBC manufacturers who adopt sustainable practices, such as using recycled materials or implementing energy-efficient production processes.
- **Investment in research and development:** Increased government funding for research and development in the FIBC industry could lead to new technologies and innovations that improve the safety, sustainability, and performance of FIBCs.

Overall, the FIBC industry faces a dynamic regulatory landscape with both challenges and opportunities. Staying updated on emerging regulations, adapting to changing market trends, and investing in sustainability will be crucial for the industry's success in the future.

2.1.7 FIBC Industries Policies

The industry has to follow several policies across the regions. Some of them are: -

- **ISO 21898:2004**

Packaging Flexible intermediate bulk containers (FIBCs) for non-dangerous goods ISO 21898:2004 specifies materials, construction and design requirements, type test, certification and marking requirements for flexible intermediate bulk containers (FIBCs) intended to contain non-dangerous solid materials in powder, granular or paste form, and designed to be lifted from above by integral or detachable devices.

- **DOT HM 181E - International Bulk Containers for Hazardous Materials**

This amendment revises a final rule published in the Federal Register under Docket HM 181E (59 FR 38040, July 26, 1994) in response to a number of petitions for reconsideration. This document also clarifies and makes corrections to the final rule. That final rule established requirements for the construction, maintenance and use of intermediate bulk containers (IBCs) for the transportation of hazardous materials. These changes respond to petitions for reconsideration regarding IBC authorizations, design, construction and use, an d align requirements for IBCs with revisions in the 8th edition of the U.N. Recommendations on the Transport of Dangerous Goods and the 27th revision of the International Maritime Organization's International Maritime Dangerous Goods (IMDG) Code.

- **IEC 61340 4 4 ed2.0**

IEC 61340 4 4:2018 is also available as IEC 61340 4 4:2018 RLV which contains the International Standard and its Redline version, showing all changes of the technical content compared to the previous edition. IEC 61340 4 4:2018 specifies requirements for flexible intermediate bulk containers (FIBC) between 0,25 m3 and 3 m3 in volume, intended for use in hazardous explosive atmospheres. The explosive atmosphere can be created by the contents in the FIBC or can e xist outside the FIBC. The requirements include: classification and labelling of FIBC; classification of inner liners; specification of test methods for each type of FIBC, inner liner, labels and document pockets; design and performance requirements for FIBC, inner liners, labels and document pockets; safe use of FIBC (including those with inner liners) within different zones defined for explosion endangered environments, described for areas where combustible dusts are, or can be, present (IEC 60079 102), and for explosive gas atmospheres (IEC 60079 101); procedures for type qualification and certification of FIBC, including the safe use of inner liners. This third edition cancels and replaces the second edition, published in 2012, and Amendment 1:2014. This edition constitutes a technical revision. This edition includes the following technical changes with respect to the previous edition:

a) in light of experimental evidence, the maximum resistance to ground limit for Type C FIBC, and corresponding resistance limits for inner liners used in Type C FIBC has been increased from 10 M ohms to 100 M ohms;
b) the classification of Type L1 inner liners has been revised and extended to include Type L1C inner liners made from multi-layer materials with a conductive internal layer;
c) a labelling requirement to include a reference to IEC TS 60079 32 1 for guidance on earthing has been added

- **21 CFR 177.1520**

The olefin polymers listed in paragraph (a) of this section may be safely used as articles or components of articles intended for use in contact with food, subject to the provisions of this section.

a) For the purpose of this section, olefin polymers are basic polymers manufactured as described in this paragraph, so as to meet the specifications, when tested by the methods described in paragraph (d) of this section.

    i. Polypropylene consists of basic polymers manufactured by the catalytic polymerization of propylene.

ii. Propylene homopolymer consists of basic polymers manufactured by the catalytic polymerization of propylene with a metallocene catalyst.

b) Olefin basic copolymers manufactured by the catalytic polymerization of ethylene and octene 1, or ethylene, octene. 1, and either hexene 1, butene 1, propylene, or 4 methylpentene 1 shall contain not less than 80 weight percent of polymer units derived from ethylene.

c) The basic olefin polymers identified in paragraph (a) of this section may contain optional adjuvant substances required in the production of such basic olefin polymers. The optional adjuvant substances required in the production of the basic olefin polymers or finished food contact articles may include substances permitted for such use by applicable regulations in parts 170 through 189 of this chapter, substances generally recognized as safe in food and food packaging, substances used in accordance with a prior sanction or approval.

3. Global FIBC Production

3.1 Top 5 Exporting Countries – Past 5 Years Trend in Export Volume and Value

Over the past five years, there has been an increase in the export of FIBs from various regions. Among the top five exporters, India accounts for almost 72% of overall exports (in 2023), followed by China (21%), and South East Asia (3%). In addition to ranking highly in exports, India also manufactures the most FIBCs as compared to China, Southeast Asia, Bangladesh, and Europe.

Table 3: Top 5 Countries with Export- Volume Figures

Volume (000' Units)	2020	2021	2022	2023
India	59,729	70,033	69,243	75,203
China	19,725	19,945	21,807	21,721
South East Asia	2,959	2,992	3,271	3,258
Bangladesh	1,973	1,994	2,181	2,172
Europe	1,789	2,749	1,798	2,570

Source: Maia Research, CareEdge Research

Note: The year mentioned in the respective chart and subsequent sections is calendar year; F- Forecasted

Table 4: Top 5 Countries with Export- Value Figures

Value (USD million)	2020	2021	2022	2023
India	404	562.94	495	517
China	163	186.2	198	199
South East Asia	23	26.79	28	27
Bangladesh	13	15.88	15	15
Europe	16	28.89	18	25

Source: Maia Research, CareEdge Research

Note: The year mentioned in the respective chart and subsequent sections is calendar year; F- Forecasted

Further, the value of FIBC's total export sales from China increased by 22% from 2020- 2023 and touched 199 USD million in 2023. This rise will mostly be supported by the expanding industries that make fertilizers, pharmaceuticals, chemicals, and food and agricultural products. Accordingly, the market's increasing demand and ongoing investments in LC Packaging's sales & distribution operations in Europe and other regions will serve as the primary drivers of the expansion.

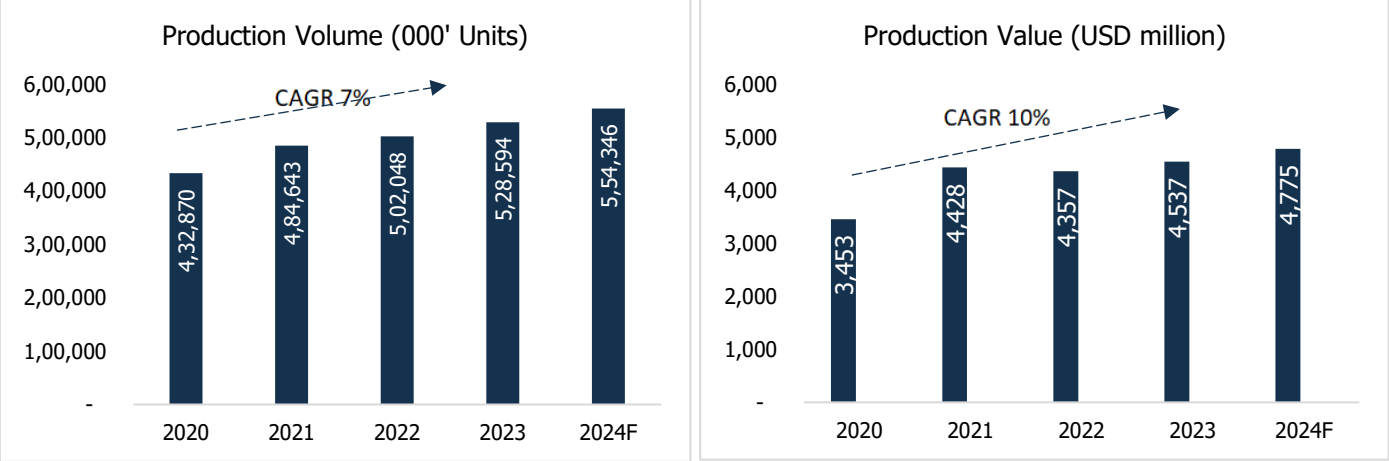
Furthermore, in India, the government's supportive policies and the rising global trade fueled industrialization, driving up the demand for FIBC for efficient product storage and transportation. Besides, numerous manufacturing businesses have been established in India, accredited to the Make in India initiative and sector-specific incentives, which has further raised the demand for FIBCs.

As a result, it is anticipated that the Indian FIBC market will grow and play a vital role in the delivery and storage of goods for numerous end-user industries.

3.2 World Production in Volume and Value

Over the period of 2020 to 2023, global FIBC output increased by 7%. The product base of FIBCs has the potential to grow with the demand coming from both local and foreign industries, driven by lightweight, customized product features, user-friendly, sustainability advantages, and improved packaging alternatives. During COVID-19, the global production took a hit due to restricted demand. Post-pandemic, given the reopening of the economy, the production level crossed the pre-pandemic figures.

Chart 22: World Production in Volume & Value



Source: Maia Research

Note: The year mentioned in the respective chart and subsequent sections is calendar year; F- Forecasted

Accordingly, the FIBC market is expected to grow strongly on a global scale due to demand from emerging markets in Latin and Central America, Eastern Europe, and some regions of Africa. Additionally, the pharmaceutical and food industries' increased acceptance and utilization will have a favorable effect on the world at large. The agriculture, mineral, petrochemical, and other industries that use FIBC as a packaging option are also expected to improve the industry's sales in the market.

Further, sustainability and environmentally friendly materials are becoming increasingly important in the packaging business everywhere, including Japan. Manufacturers of FIBCs have been investigating the use of recyclable and biodegradable materials in their products to meet customer and environmental demands in Japan. Automation and technology have been used in FIBC production in various economies to increase productivity, lower costs, and improve product quality. The enormous demand for consistently high-quality FIBCs can also be met with the aid of automation. Several variables, including industrial demand, economic conditions, and local manufacturing capacities, impact the world production of FIBCs.

A few important details regarding FIBC manufacturing globally:

Global Manufacturing Centres: The manufacturing of FIBC was dispersed over a number of nations, with a few of them having a large presence in the sector. China, India, the United States, Japan, and European nations are among the major FIBC producers. A major producer, India plays a key role in the production of FIBCs because of its considerable manufacturing capabilities and affordable prices.

Demand by Area: The demand for FIBCs varies by area and sector. FIBCs are widely used in the mining, construction, chemical, food, agriculture, and other industries. Production facilities frequently meet regional and local needs.

Customizable: To fulfil the unique needs of various industries, FIBC manufacturers all over the world provide customizable possibilities. Size, design, material choice, and features like liners, coatings, and discharge spouts are all customizable.

Quality & Standards: FIBC producers put a strong emphasis on upholding international laws and quality standards. Industry norms, including ISO 21898, offer recommendations for FIBC testing, labelling, and design.

Eco-Friendly Practices: To fulfil the rising demand for packaging options that are environmentally responsible, certain FIBC producers started using eco-friendly components and sustainable manufacturing techniques. Initiatives for global sustainability have a big impact on this trend.

Automation and technology are employed more and more in FIBC production to boost productivity and product consistency. In some facilities, automated sewing machines, cutting tools, and quality control procedures are used.

Research and Innovation: Some FIBC manufacturers engaged in research and development (R&D) activities to create novel products, advance material science, and improve manufacturing procedures.

- **Economic Factors affecting the industry-**

The FIBC industry may be impacted by variables like foreign exchange risk, single geography risk, and raw material price volatility. Unexpected events may have an unfavorable effect on a firm and reduce revenue and capital, depending on the laws, and/or state of the economy. In an industry that requires a lot of capital, every decline in revenue has the possibility to negatively impact earnings. The interest rate has an effect on the industry as well. For instance, in India, the Reserve Bank of India's hike in the repo rate is what drives up financing costs.

In terms of raw- material prices- various materials such as plastic, glass, metal, and paper are utilized in food packaging. For instance, raw or recycled fiber is used to make the cartons used in food packaging. For end users like carton makers, the prices of raw and recycled fiber are prone to frequent fluctuations. The fluctuations in raw material prices can lead to higher manufacturing costs and lower profit margins. The geopolitical realignment of western and eastern nations, the crisis between Russia and Ukraine, and Russian sanctions also contribute to further increases in raw material prices.

In developed economies, GDP is primarily composed of consumption. Consumption usually contributes the most when it grows faster than GDP. Furthermore, as GDP (current income) is a key factor in determining consumption, an increase in income will be followed by an increase in consumption: a positive feedback on the FIBC industry.

3.3 Region-Wise Production in Volume and Value

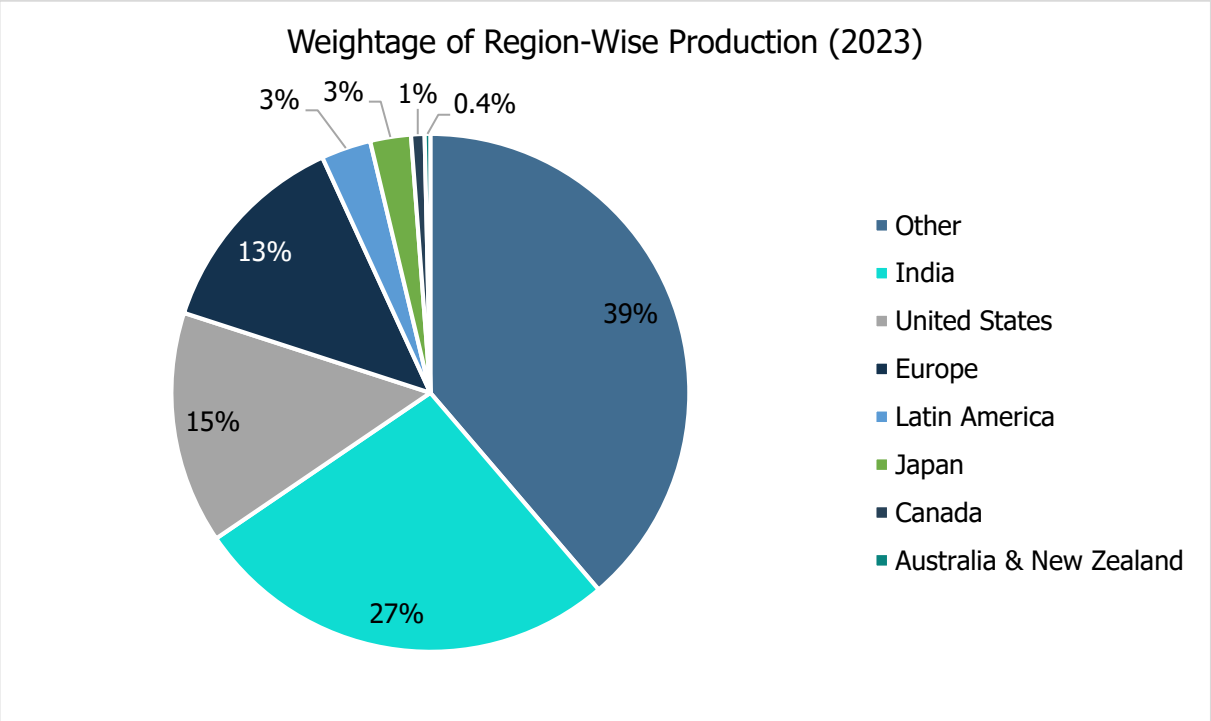
In industrialized countries like the United States, Japan, Canada, Australia, and others, the need for flexible intermediate bulk containers is rising mostly due to the expanding pharmaceutical industry, further fueled by an ageing population.

The FIBC market has tremendous growth potential because of increasing exports, particularly from the chemical, pharmaceutical, and food processing industries. However, as more foreign FIBC producers enter each demography, the level of competition has increased, making it harder for businesses to flourish. Thus, in this labor-intensive industry, the company also places a great value on staff retention. Production can be disrupted by employee turnover, and recruiting and training new hires can be expensive.

In terms of production volume in 2023, India held a large share of 27%, followed by the United States (15%) and Europe (13%).

The following graph shows the production share of the worldwide FIBC market by regions:

Chart 23: Weightage of Region-Wise Production (2023)

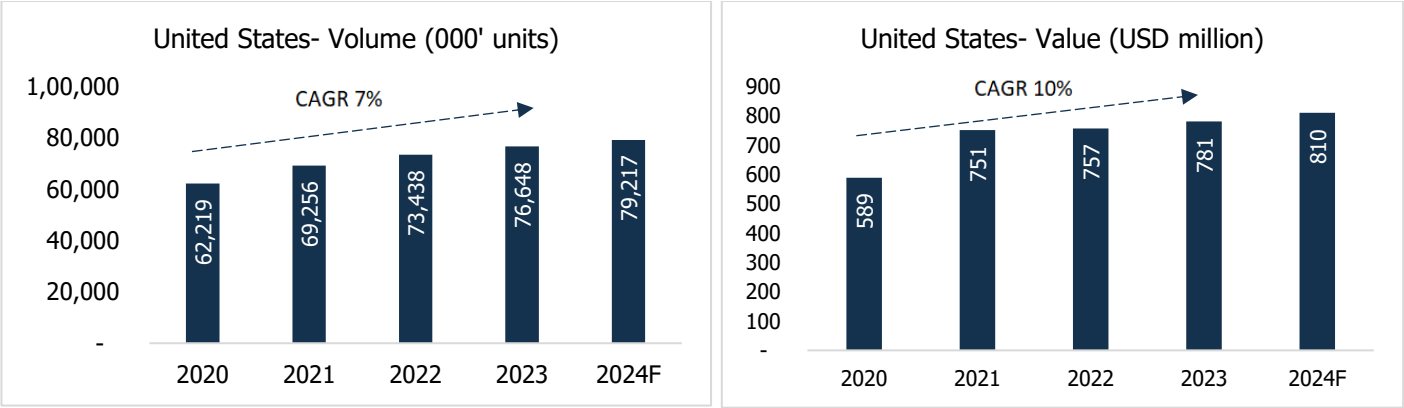


Source: Maia Research
Note: The year mentioned in the respective chart and subsequent sections is calendar year

- **United States:**

With a CAGR of 10%, the United States market for flexible intermediate bulk containers reached 781 USD million in 2023 from 590 USD million in 2020. The advantages of bulk bags over alternative packaging materials, cost savings associated with using FIBCs, and their capacity to be recycled and reused all act as market drivers. One of the key factors propelling the North America FIBC market growth over the coming years, is new advancements in FIBCs. Additionally, there will be an increase in demand due to the usage of bio-based raw materials and the adoption of liners in FIBCs.

Chart 24: United States Production in Volume & Value



Source: Maia Research

Note: The year mentioned in the respective chart and subsequent sections is calendar year; F- Forecasted

- **Europe:**

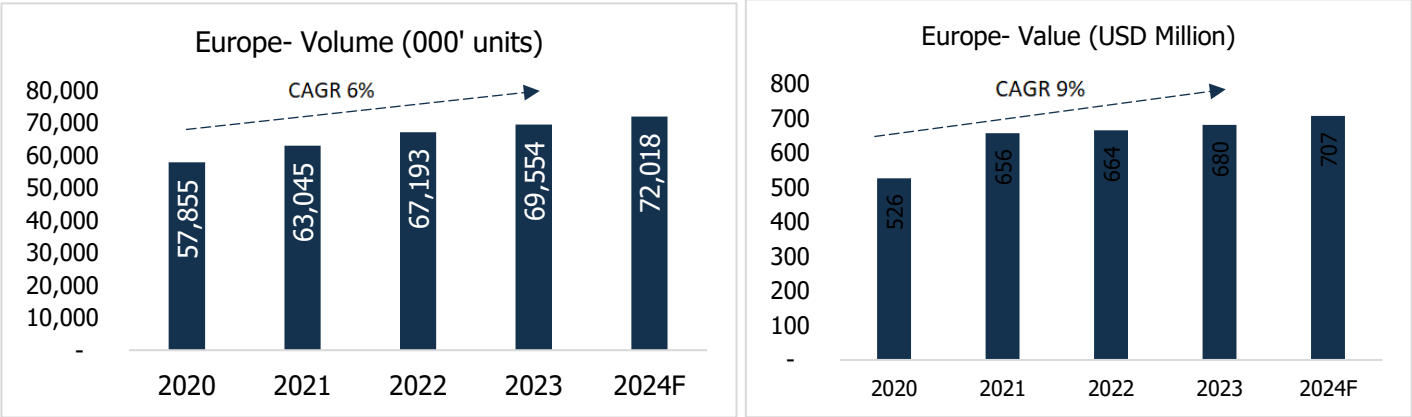
The manufacturing of flexible intermediate bulk containers (FIBCs) is primarily driven by Europe, which accounts for about 13% of the market.

The chemical industry is expected to emerge as the prime one among the different end-use industries in Europe that use bulk bags. The potential for expansion of the European market will be substantially improved by the chemical industry growth.

Further, reusable bulk bags are yet another element that will influence the bulk container market growth in Europe. In addition, Flexible Intermediate Bulk Container (FIBC) bags are frequently used in agricultural applications because they can be utilized to keep agricultural products fresher longer and increase their shelf life.

FIBCs and baffle bags are perfect for keeping dry, gritty foods like rice, beans, and lentils and fine particles like salt. In order to preserve the nutritional integrity of the product, giant bags are used for handling pet food and livestock feed.

Chart 25: Europe Production in Volume & Value



Source: Maia Research

Note: The year mentioned in the respective chart and subsequent sections is calendar year; F- Forecasted

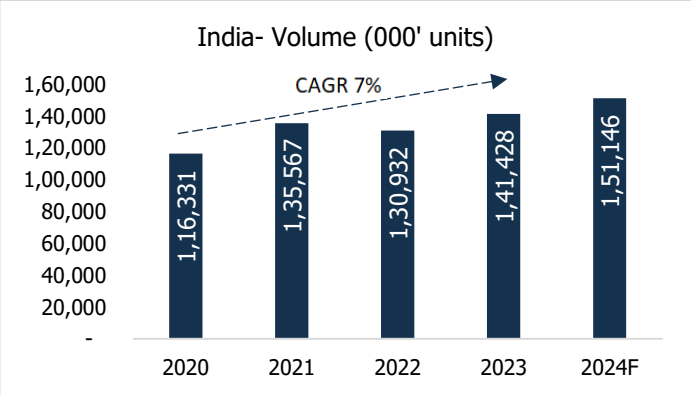
- **India:**

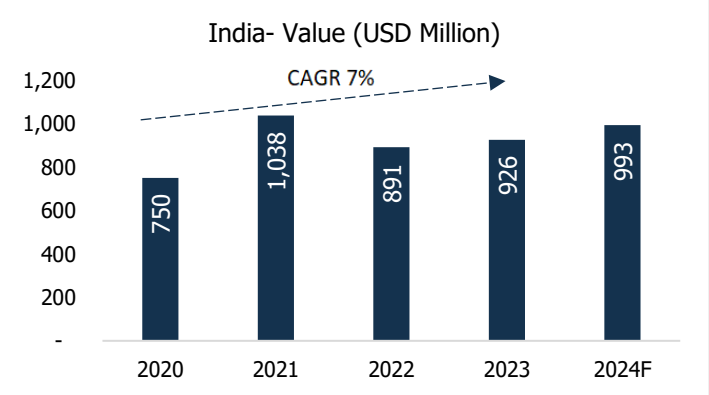
In India, rigid plastics continue to be a major force behind food packaging due to consumers' rising preference for portability and convenience. The use of rigid plastics in the cosmetics and toiletry sector continues to be reliant on the requirements for comfort, mobility, and tensile strength.

The previous three years have seen a notable expansion of the Indian FIBC market. India produced 1,41,428 thousand units of FIBCs overall in 2023, as compared to 1,16,331 thousand units in 2020. This expansion can be majorly attributed to expanding businesses such as food and agriculture, medicinal products, and chemicals and fertilizers.

Furthermore, the food and agricultural industries are developing along with the growing population. FIBCs are used to transport grains, rice, and other food items. Hence, the market is prepared to profit from this expansion. Moreover, construction, mining, and the manufacture of chemicals are among the few industries that find FIBC packaging to be a popular choice, since it offers economical bulk packaging options.

Chart 26: India Production in Volume & Value





Source: Maia Research

Note: The year mentioned in the respective chart and subsequent sections is calendar year; F- Forecasted

4. Indian FIBC Industry

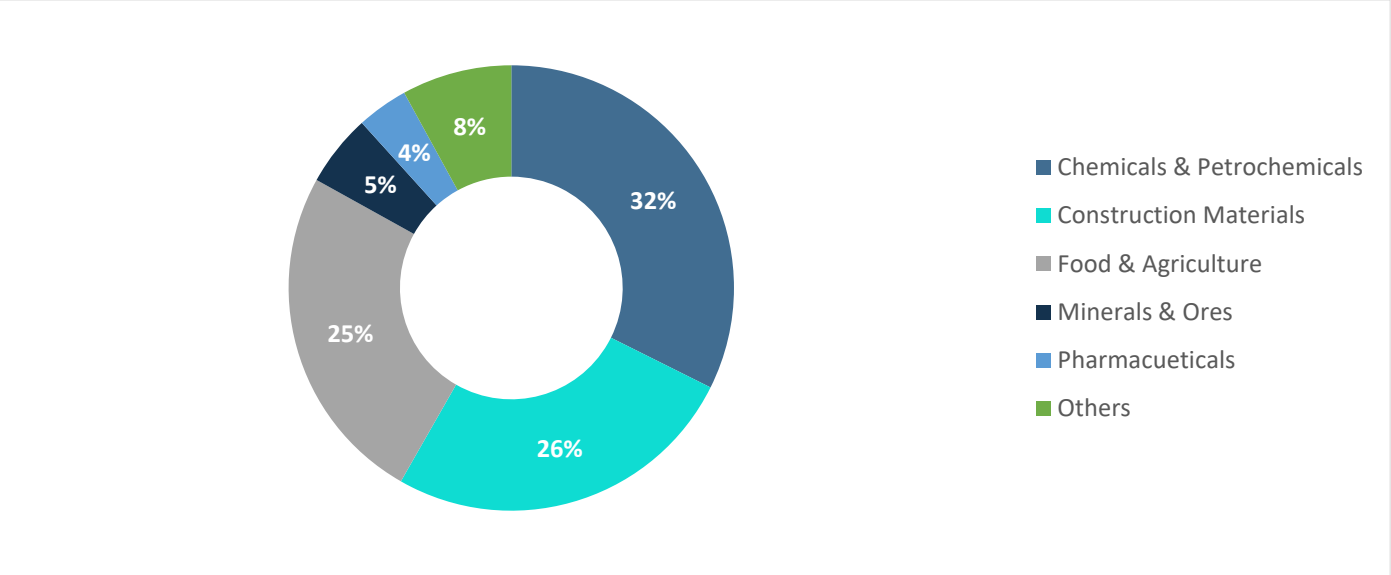
Flexible intermediate bulk containers (FIBCs) were first introduced in India in the early 1990s. Since then, India has developed into one of the world's key producers. Accordingly, the country is eager to globalize and export FIBC goods, given its sustainably expanding sizable local market.

For a nation, participating in international trade has its own advantages. These include studying best practices, foreign exchange, manufacturing efficiency, and undiscovered markets. The Indian exchequer benefits in terms of foreign exchange profits.

According to IFIBCA (Indian Flexible Intermediate Bulk Container Association), nearly 85% of production in the industrial sector is exported, with acceptance for exports in close to 65 nations across 6 continents. It is anticipated that domestic demand and exports will both see exponential growth throughout the ten-year period from 2020 to 2030.

The industries where FIBCs are widely used are Chemicals, Food Products, Pigments, Waste Management, Pharmaceuticals & Aggregates, Fertilizers, etc. Food products include grains and seeds, among others. These are also used in the mining and construction industries. In 2023, chemicals and petrochemicals accounted for around 32% of the market share, while construction materials stood at around 26%, and food and Agriculture stood at around 25%.

Chart 27: India Flexible Intermediate Bulk Container (FIBC) Market Downstream Market Share 2023



Source: CareEdge Research, Maia Research

Moreover, the growth of several sectors and rising trade activities are driving up the demand for FIBCs. Food and agricultural goods, medicines, chemicals, and fertilizers are just a few of the industries that have undergone industrialization. This is due to expanded international trade and various helpful government policies in India.

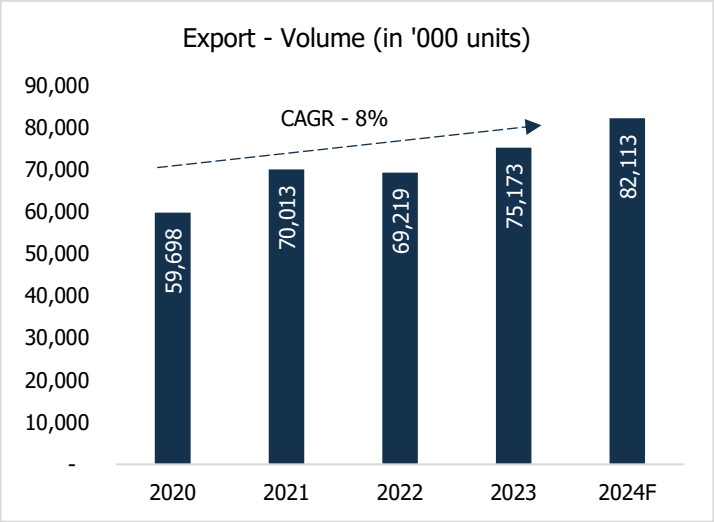
Furthermore, several manufacturing businesses are springing up in India accredited to Make-in-India initiatives and sector-specific incentives. With the expansion of end-user industries, the need for FIBC for efficient product storage and transportation is rising.

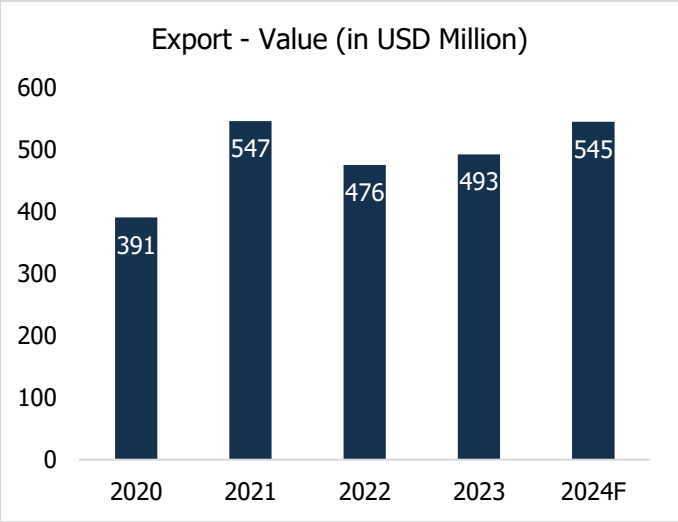
4.1 Indian FIBC Export

According to IFIBCA, India has a 75% share in European FIBC imports and a 72% share in the US import market. India's dominance in the export market is attributable to a growing focus on quality, excellent engineering capabilities, backward integration, and ethical business practices. Further, the growth is supported by the increasing demand from sectors like food and agriculture, chemical and petrochemicals, construction materials, etc.

The exports of the FIBC industry grew by 8.6% y-o-y in 2023, however it had marginally declined around 1.1% y-o-y in 2022. It is expected to reach around 82.1 million units by the end of 2024. Over 50% of the units produced in India are exported. The top five countries are the United States, Germany, the United Kingdom, France, and Spain. The export numbers grew at a CAGR of 8% during 2020-2023 and reached around USD 493 million in 2023.

Chart 28: Indian Export in Volume & Value





Source: CareEdge Research, Maia Research

Note: The year mentioned in the respective chart and subsequent sections is calendar year; F- Forecasted

Accordingly, Indian exporters have a number of competitive advantages such as:

- **Cost-Competitiveness:** Indian FIBC exporters are able to offer their products at competitive prices due to the lower cost of labour and other inputs in India.
- **Product Quality:** Indian FIBC exporters offer high-quality products that meet international standards.
- **Government Support:** The Indian government is supporting the growth of the FIBC industry through various initiatives, such as export subsidies and tax incentives, making Indian FIBC exports more competitive.

In addition, the following may also contribute to the increase in Indian FIBC exports in the coming years:

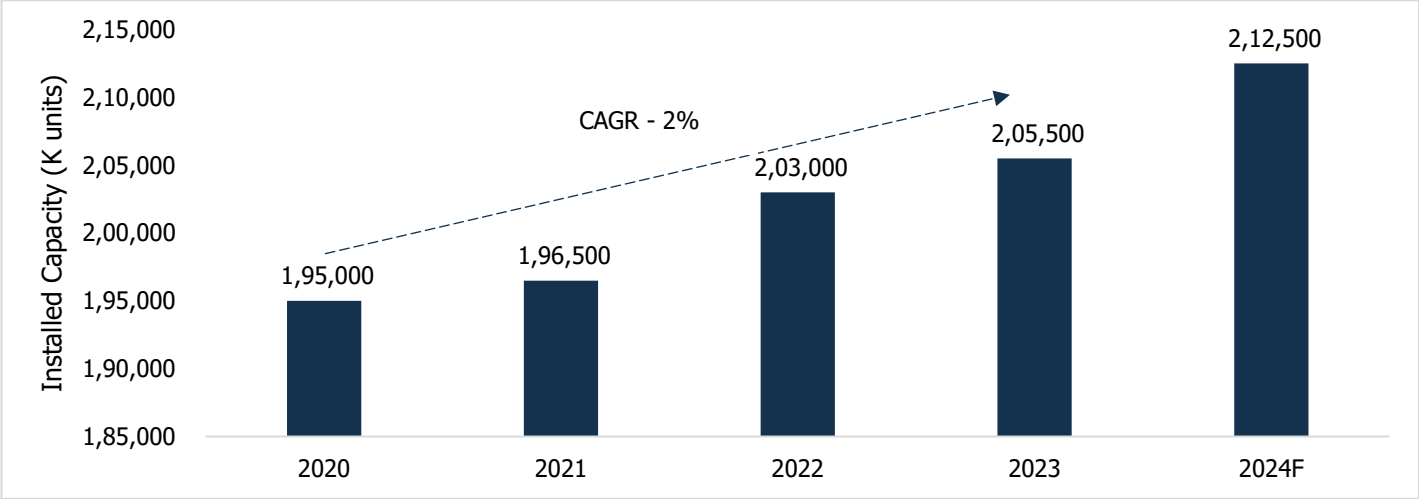
- **Growing Trade Agreements:** India is entering into more free trade agreements with other countries. This minimizes trade barriers, making Indian FIBC exports more competitive in overseas markets.
- **Improved Logistics Infrastructure:** The Indian government is investing in improving the country's logistics infrastructure. This will make it easier and more cost-effective for Indian FIBC exporters to ship their products to overseas markets.

- **Increasing Awareness of Indian FIBC Brands:** Indian FIBC brands are becoming increasingly well-known in overseas markets. This is due to the efforts of Indian FIBC exporters to participate in international trade shows and promote their brands through digital marketing channels.

4.2 Indian trend in Installed Capacity

The installed capacity of the FIBC Industry grew by around 3.4% y-o-y (year-on-year) in 2023. It is expected to reach around 212.5 million units by the end of 2024. Growing demand over the years, especially from the chemicals, construction, and food agriculture sectors has helped the FIBC sector reach healthy capacity utilization levels resulting in players going for capacity expansion. In addition, steady export growth has further supported this capacity expansion. The United States, Germany, and the United Kingdom are a few of the countries importing FIBCs from India.

Chart 29: Indian trend in Installed Capacity



Source: CareEdge Research, Maia Research

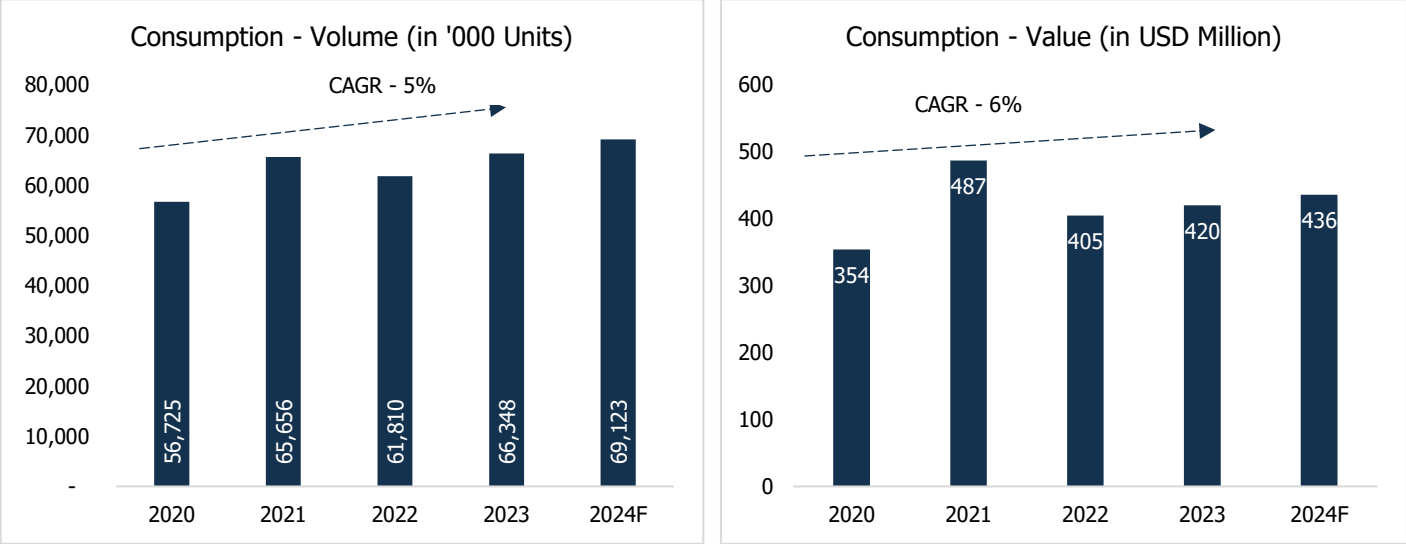
Note: The year mentioned in the respective chart and subsequent sections is calendar year; F- Forecasted

Further, the FIBC industry grew at a CAGR of 1.8% during 2020-2023, owing to continuous innovations and process improvement across the value chain and steady traction due to continuous improvement in product quality. This growth will be further driven by continued demand from the construction and chemicals & petrochemicals sectors, increased exports, new market ventures, and rising awareness about the usage of sustainable products.

4.3 Indian FIBC Consumption

The consumption of the FIBC Industry improved by around 7.3% y-o-y in 2023. It is expected to reach around 69.1 million units by the end of 2024. In 2022, there was a decline in the consumption pattern on account of the high base effect in the pharmaceutical industry. The chemical & petrochemicals sector had around 31.6% market share in 2022. The subdued demand was on account of geopolitical tensions as it increased the raw material costs for many chemicals, increased inflation, and lower margins as chemical prices declined globally due to increased competition from China post-revival of the economy. Additionally, the exports from China have increased over the period– a cause of concern for Indian manufacturers.

Chart 30: Indian Consumption in Volume & Value



Source: CareEdge Research, Maia Research
Note: The year mentioned in the respective chart and subsequent sections is calendar year; F- Forecasted

Further, the food grade FIBCs are becoming an ideal choice for the commercial food industries. The food & agriculture sector had around 25% market share in 2023. The low demand was attributed to disrupted food supply chains due to the pandemic, climatic changes like heat waves damaging the crops and decreasing the yields, low rainfall owing to low production, and increasing cost of inputs like fertilizers and fuel.

The minerals and ores sector had seen a y-o-y increase of 3.1% in 2023 after a y-o-y decline of around 9.5% in 2022 due to a decline in exports. The fall in exports was mainly observed during the months of June-November 2022 because of the imposition of export duties. For instance, in May 2022, the duty on iron ore concentrates was increased to 50% from 30%. This duty was subsequently reversed in November 2022.

The iron ore produced in India is primarily used for domestic steel production and India's steel production has increase from 2023 backed by infrastructure growth in the country. Also, increased activities in the construction sector alongside the thriving real estate and automobile sectors are expected to boost the demand from this sector.

Moreover, the FIBC industry's consumption is likely to reach 69 million units at the end of the 2024. It has been growing at a CAGR of 5% during 2020-2023, owing to the increasing consumption from the chemicals & petrochemicals, food & agriculture, construction & mining sectors. In addition, the government has included the chemicals sector as a priority sector under the ambitious 'Make in India' initiative of the government.

'Make in India' has played a pivotal role in driving some of the key initiatives to stimulate growth in the chemicals industry (organic and inorganic). The government has already taken some crucial steps to create favourable conditions, in terms of policies and infrastructure, to attract global and domestic investments in the Indian chemicals industry. Similarly, likely growth in various industries in the domestic market is expected to support the inorganic chemicals market going forward.

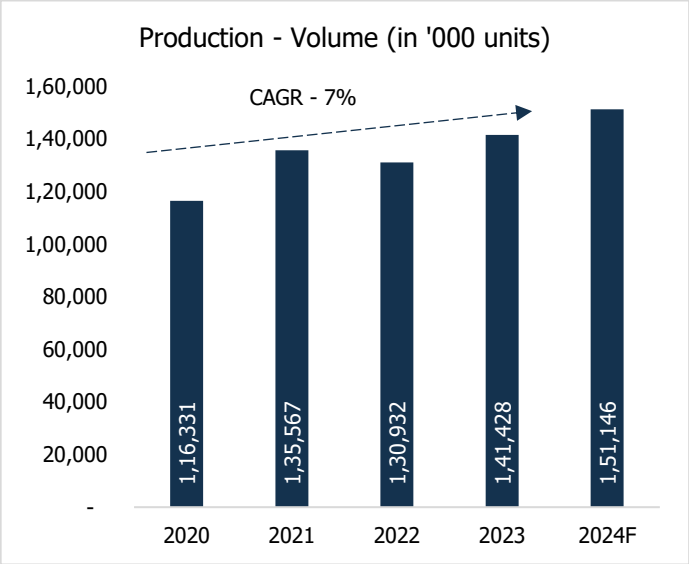
Furthermore, the retail industry is developing in Tier-1 and Tier-2 cities, in addition to major cities and metros in the country. The growing retail sector in India will increase the demand for flexible packaging. Additionally, transitioning demographic profiles, rising disposable incomes, growing urbanization, and changing consumer tastes & preferences are

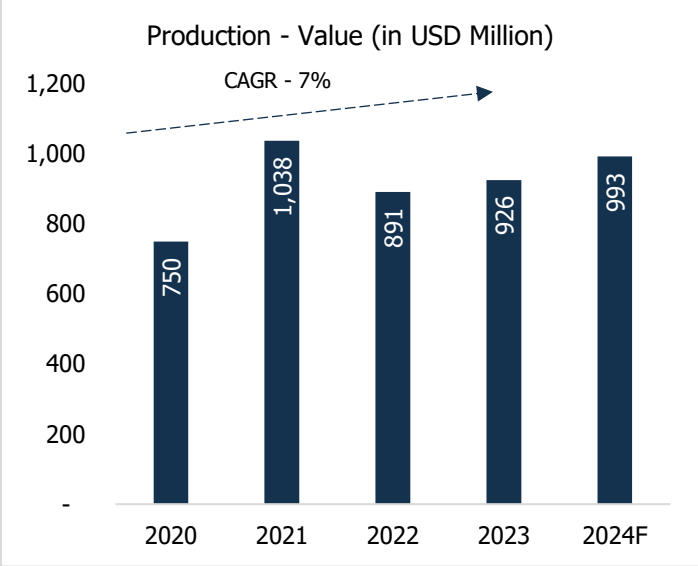
driving the growth of the organized retail market in India. Besides, the disposable income in India has increased at a CAGR of 10.7% in the last decade and is exhibiting a good growth trajector

4.4 Indian FIBC Production

According to IFIBCA, the FIBC market in India has grown by almost 38% in the last 10 years. FIBCs offer a convenient way to store and transport food products. This is because they are lightweight, easy to handle, and can be stacked to save space. India is a major exporter of food products. Food-grade FIBCs are used to transport food products to overseas markets. However, the production of the FIBC industry declined by around 3.3% y-o-y in 2022 but increased by 8% y-o-y in 2023. It is expected to reach around 151.1 million units by the end of 2024. The FIBC market was valued at 926 USD million in 2023 and has grow at a CAGR of 6.7% during the period, 2020-2023.

Chart 31: Indian Production in Volume & Value





Source: CareEdge Research, Maia Research

Note: The year mentioned in the respective chart and subsequent sections is calendar year; F- Forecasted

Food-grade FIBCs are typically used to transport dry, flowable food products, such as flour, sugar, rice, and cereal. They are also used to store food products in bulk quantities. The food-grade FIBC Production was nearly 28% of the total production of FIBC in India in 2021.

Food-grade FIBCs, also known as food contact FIBCs, are bulk bags specifically designed for the storage and transportation of food products. They are made from virgin polypropylene resin and manufactured in clean & hygienic facilities. Food-grade FIBCs are also subject to rigorous testing and certification to ensure that they meet the highest safety and quality standards. Another growth driver is the surging e-commerce, which has led to an increased demand for food delivery services.

Moreover, the food-grade FIBC grew at a CAGR of 11.5% during 2017-2021. The growth is attributable to rapidly growing Indian and global food industries, driven by population growth and rising incomes.

India has taken over China to become the most populous country in the world. Food is a basic human necessity. As a result, the growing food demand has raised the demand for food packaging. Besides, there is a rising awareness about food hygiene and safety among consumers. Furthermore, technological advancements in FIBC manufacturing are giving rise to the development of stronger, lighter, and more durable FIBCs. This is making FIBCs more attractive to users and is expected to drive demand. Similarly, the FIBC industry is attracting increased investment from both domestic and

foreign investors. This is expected to lead to the expansion of existing production facilities and the establishment of new ones.

4.5 Key Growth Drivers of India FIBC Market

1) Lower production cost in Domestic Market

India is a major FIBC manufacturer and exporter registering rapid growth. However, the FIBC industry is labour-intensive due to customization requirements. In recent years, global economic developments have resulted in increasing labour costs year by year. Whereas the price of raw materials has fluctuated. In India, one of the key factors contributing to lower production costs is the relatively low labour costs. India has a large workforce, which translates into a vast pool of skilled and semi-skilled labourers available at competitive wage rates. This abundant labour force allows FIBC manufacturers to keep their production costs in check. Further, production costs are higher in key FIBC production locations like Turkey, European countries, and the United States. Accordingly, Indian enterprises are expanding their production capacity to meet the global FIBC market demands. As a result, the shift in procurement from high-cost production regions to India, a low-cost production hub, is driving the industry growth.

2) Growing Potential and Acceptance of Indian Products

The FIBC market in India has great potential for growth due to the following factors:

- Increasing exports from India, particularly in food processing, pharma, and chemical, require customized bulk packaging solutions.
- Improving transportation and storage infrastructure in India.
- Government policies encourage the use of recyclable packaging materials, which FIBCs comply with.
- Increased demand for customized storage and transportation solutions in various industries.
- Shortage of skilled labor in India, which makes FIBCs more attractive as they are easy to handle and cost-effective.

In addition, the FIBC utilization rate in India is lower than in the European and American markets, which provides further room for growth.

3) Increasing Demand from End-Use Industries

FIBCs are used in a wide range of industries, including food & beverage, pharmaceutical, chemical, construction, and agriculture. The growth prospects of these industries further raise the demand for FIBCs. FIBCs are also used to package a variety of food and beverage products, such as rice, wheat, sugar, flour, and milk powder, pharmaceutical products, such as tablets, capsules, and powders, and chemical products, such as fertilizers, pesticides, and herbicides. Accordingly, the increasing volume of global trade is also driving the demand for FIBCs, as they are a cost-effective and efficient way to transport bulk goods.

4) Growing Demand for Sustainable Packaging Solutions

FIBCs are a more sustainable packaging solution than traditional packaging materials, such as drums and sacks. FIBC bags are reusable, recyclable, lightweight, and efficient. Further, FIBC bags are made from polypropylene, which is a recyclable material. This means that FIBC bags can be recycled at the end of their life, which further reduces wastage. In addition, these bags are lightweight and efficient for transportation, which can help reduce greenhouse gas emissions. The increasing awareness about sustainability is thus expected to drive the demand for FIBCs.

4.6 Key Challenges of India FIBC Market

1) Low Entry Barriers

The Indian FIBC industry is fragmented due to a large number of small-scale players with insufficient R&D and technical capabilities. This leads to product homogeneity and fierce market competition, rendering profit margins low.

2) Intense Competition

The entry of international FIBC manufacturers into the Indian market has further intensified competition, making it even more difficult for domestic players to thrive. Accordingly, worker retention is a top priority for the company in this labor-intensive industry. Losing workers can disrupt production and incur the costs of hiring and training new ones.

3) Fluctuating Raw Material Prices

Due to fluctuating raw material prices, dynamic changes in regulatory standards, growing environmental concerns, limited effective recycling of mixed plastic waste, ineffective plastic recycling, and lack of modern and advanced packaging machinery in India, the market is expected to face major challenges in the supply side chain. Due to the ongoing geopolitical tensions, the raw material prices are further expected to be volatile, which might impact the Indian FIBC industry.

4.7 Government Policies and Regulations

Several rules and regulations apply to the Flexible Intermediate Bulk Packaging (FIBC) industry in India. These regulations aim to ensure the safety, quality, and environmental impact of FIBCs manufactured, imported, and used within the country. Here are some key regulations:

- **Bureau of Indian Standards (BIS):**

  - **IS 16875:** This standard specifies the construction, materials, dimensions, performance, and testing requirements for FIBCs. It is mandatory for all FIBCs manufactured in India.

  - **IS 17810:** This standard covers the safety requirements for the transportation of dangerous goods in FIBCs. It is mandatory for all FIBCs used to transport hazardous materials.

- **Central Pollution Control Board (CPCB):**

  - **Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016:** These rules regulate the use and disposal of FIBCs used for hazardous materials. They require proper labeling, handling, and disposal of these FIBCs to minimize environmental impact.

- **Directorate General of Foreign Trade (DGFT):**

  - **Import Policy:** The DGFT regulates the import of FIBCs into India. Importers must comply with specific regulations and obtain necessary clearances before importing FIBCs.

- **Other regulations and guidelines:**

  - **Ministry of Food Processing Industries (MOFPI):** Guidelines for the use of FIBCs for storing and transporting food products.

- **Ministry of Environment, Forests and Climate Change (MoEFCC):** Regulations on the use of recycled materials in the manufacturing of FIBCs.

- **Testing and certification:**

All FIBCs manufactured in India must be tested and certified by an accredited laboratory to ensure compliance with BIS standards. FIBCs used for transporting dangerous goods must also be tested and certified for specific hazard types. The Bureau of Indian Standards (BIS) is responsible for enforcing compliance with BIS standards for FIBCs. The Central Pollution Control Board (CPCB) and the Directorate General of Foreign Trade (DGFT) are responsible for enforcing their respective regulations related to FIBCs.

There are various initiatives by the Government of India in order to boost FIBC market in India.

- Since 2014, the government has taken the following actions to increase India's exports. On April 1st, 2015, a new Foreign Trade Policy (FTP) 2015–20 was introduced. The strategy, among other things, rationalized the former export promotion programmes and created two new programmes: the "Services Exports from India Scheme" (SEIS) and the "Merchandise Exports from India Scheme" (MEIS), which are both aimed at boosting service exports. These systems made the duty credit stamps they issued freely transferable. The Foreign Trade Policy (2015–20) had a midterm review in 2017, and corrective actions were performed.

- Due to the COVID-19 pandemic situation, the Foreign Trade Policy (2015–20) has been prolonged by one year, or up to March 31st,2022. The Department of Commerce established a new Logistics Division for integrated development of logistics sector. With the introduction of the Interest Equalisation Scheme on April 1st, 2015, exporters could now obtain credit at lower rates for pre- and post-shipment rupee export credits.

- The government began implementing the Niryat Bandhu Scheme with the goal of reaching out to new and potential exporters, including exporters from Micro, Small & Medium Enterprises (MSMEs), and mentoring them on various aspects of foreign trade through orientation programmes, counselling sessions, one-on-one facilitation, etc. This will help them enter the global market and increase India's exports.

- Market Access Initiatives (MAI) and Trade Infrastructure for Export Scheme (TIES) are two of the programmes that aid promote exports. To encourage agricultural exports, a comprehensive "Agriculture Export Policy" was introduced on December 6th, 2018. For the purpose of reducing the freight disadvantage for the export of agricultural products, a Central Sector Scheme called "Transport and Marketing Assistance for Specified Agriculture Products" was established. With effect from January 1st,2021, the Remission of Duties and Taxes on Exported Products (RoDTEP) scheme and the Rebate of State and Central Levies and Taxes (RoSCTL) plan have been put into place.

- In order to improve trade and the use of the Free Trade Agreement (FTA) by exporters, the Common Digital Platform for Certificate of Origin has been developed. For the purpose of promoting and diversifying services exports through the implementation of targeted action plans, 12 Champion Services Sectors have been designated. Districts as Export Hubs has been established by identifying items in each district with export potential, eliminating exporting bottlenecks for these products, and assisting local exporters and manufacturers to create jobs in the district. Indian embassies now play a more proactive role in promoting India's commerce, tourism, technology, and investment objectives abroad. A package of actions has been issued in light of the COVID pandemic to boost domestic industry through different banking and financial sector relief measures, particularly for MSMEs, which account for good amount of portion of exports.

5. Product Details on Flexible Intermediate Bulk Packaging Industry

1. Container Liners

Container liners are put into containers and secured with webbing or ties. Container liners can be used to carry dry bulk items including sand, soda ash, silica, agricultural seeds, cereals, petrochemicals, urea, and fertilisers. Utilising container liners is a convenient, labor-saving, and cost-effective packing solution due to its unique qualities and benefits. Bulk With automated equipment like a belt thrower, conveyor, or gravity-fed setup, container liners may be loaded and discharged quickly and simply. As a result, handling time for such shipping containers is drastically decreased.

Container liners are made from a variety of materials, including:

- **Polyethylene (PE):** PE liners are the most common type of container liner. They are lightweight, durable, and waterproof.
- **Polypropylene (PP):** PP liners are similar to PE liners, but they are more resistant to chemicals and heat.
- **Aluminum:** Aluminum liners are used to transport sensitive or hazardous materials. They are expensive, but they offer excellent protection against moisture, oxygen, and light.

2. BOPP printed small Bags

BOPP printed small bags are a type of flexible packaging made from biaxially oriented polypropylene (BOPP). BOPP is a durable and lightweight material that is well-suited for a variety of packaging applications.The printed small bags are typically used to package food, snacks, and other small consumer goods. They are also used for promotional and marketing purposes. They can be printed with a variety of designs and colors, making them ideal for branding and product recognition. They can also be printed with nutritional information, barcodes, and other important information.

BOPP printed small bags offer a number of benefits, including:

1. **Durability:** BOPP is a strong and tear-resistant material, making it ideal for packaging fragile products.
2. **Lightweight:** BOPP is a lightweight material, which can help to reduce shipping costs.
3. **Transparency:** BOPP is a transparent material, which allows consumers to see the product inside the bag.
4. **Printability:** BOPP can be printed with high-quality graphics and text.
5. **Versatility:** BOPP printed small bags can be used to package a wide variety of products.

3. Special PP woven Bags

Special PP woven bags are polypropylene woven bags that have been modified or enhanced to provide additional features or benefits. Some common examples of special PP woven bags include:

- **UV-resistant PP woven bags:** These bags are treated with a special coating that protects them from the harmful effects of ultraviolet (UV) rays. This makes them ideal for storing and transporting products that are sensitive to UV light, such as food, pharmaceuticals, and chemicals.
- **Anti-static PP woven bags:** These bags are treated with an anti-static coating that prevents the buildup of static electricity. This makes them ideal for packaging and transporting flammable or explosive materials.

- **Food-grade PP woven bags:** These bags are made from food-grade materials and are designed to come into direct contact with food products. They are often used to package rice, flour, sugar, and other dry food products.

- **Heavy-duty PP woven bags:** These bags are designed to withstand heavy loads and harsh conditions. They are often used to package construction materials, chemicals, and other industrial products.

- **Custom-printed PP woven bags:** These bags can be printed with custom logos, designs, and information. This makes them ideal for branding and marketing purposes.

Special PP woven bags offer a number of advantages over traditional PP woven bags, including:

- **Improved performance:** Special PP woven bags are designed to meet specific needs and applications. This means that they can offer improved performance in terms of strength, durability, resistance to chemicals and UV light, and other factors.

- **Greater versatility:** Special PP woven bags can be used to package a wider range of products, including food, pharmaceuticals, chemicals, and industrial products.

- **Enhanced branding and marketing:** Custom-printed PP woven bags can help to promote your brand and increase product awareness.

- **Special PP woven bags:** These are a popular choice for businesses that need packaging that is durable, versatile, and customizable. They are used in a wide range of industries, including food, pharmaceuticals, chemicals, construction, and manufacturing.

Here are some examples of special PP woven bags that are used in specific industries:

- **Food industry:** UV-resistant PP woven bags are used to package food products that are sensitive to UV light, such as rice, flour, sugar, and tea. Food-grade PP woven bags are used to package food products that come into direct contact with the bag, such as bread, snacks, and frozen food.

- **Pharmaceutical industry:** UV-resistant PP woven bags are used to package pharmaceuticals that are sensitive to UV light. Anti-static PP woven bags are used to package pharmaceuticals that are flammable or explosive.

- **Chemical industry:** Anti-static PP woven bags are used to package chemicals that are flammable or explosive. Heavy-duty PP woven bags are used to package chemicals that are corrosive or hazardous.

- **Construction industry:** Heavy-duty PP woven bags are used to package construction materials, such as cement, sand, and gravel.

- **Manufacturing industry:** Heavy-duty PP woven bags are used to package industrial products, such as machinery, parts, and components.

4. Bags made from Recycled PP

Bags made from recycled PP (polypropylene) are a sustainable and environmentally friendly alternative to traditional plastic bags. PP is a durable and lightweight material that can be recycled multiple times. Recycled PP bags are typically made from post-consumer waste, such as used food packaging and shopping bags. Recycled PP bags offer a number of advantages over traditional plastic bags, including:

- **Reduced environmental impact:** Recycled PP bags help to reduce the amount of plastic waste that ends up in landfills and incinerators. They also help to conserve natural resources and reduce greenhouse gas emissions.
- **Improved performance:** Recycled PP bags are just as durable and strong as traditional plastic bags. They are also water-resistant and tear-resistant.
- **Versatility:** Recycled PP bags can be used for a variety of purposes, including shopping, carrying groceries, and storing items.
- **Affordability:** Recycled PP bags are typically less expensive than traditional plastic bag.

6. Large Global and Domestic Players in the Industry

Global Top 10 FIBC players	FY23	
	Revenue (M USD)	% Share
Grief, Inc	293.14	6.46%
LC Packaging International BV	122.82	2.71%
FlexiTuff International Limited	90.93	2.00%
Plastene India Limited	53.74	1.18%
FIBC Vietnam	50.57	1.11%
Shankar Packagings Limited	47.8	1.05%
Rishi FIBC Solutions Private Limited	46.8	1.03%
Jianyuanchun	43.44	0.96%
SafeFlex International Limited	42.85	0.94%
Quick Way FIBC	38	0.84%
Total	**4537.39**	**18.29%**

Source: CareEdge Research, Maia Research

Indian Top 10 FIBC players	FY23	
	Revenue (M USD)	% Share
FlexiTuff International Limited	90.93	9.80%
Plastene India Limited	53.74	5.80%
Shankar Packagings Limited	47.8	5.20%
Rishi FIBC Solutions Private Limited	46.8	5.10%
SafeFlex International Limited	42.85	4.60%
Kanpur Plastipack Limited	35.19	3.80%
Emmbi Industries Limited	35.85	3.90%
Virgo Polymer India Limited	22.73	2.50%
Jai Corp Limited	14.58	1.60%
Jumbo Bag Limited	14.75	1.60%
Total	**925.91**	**43.80%**

Source: CareEdge Research, Maia Research

7. Competitive Profile

➢ **Kanpur Plastipack Limited**

Kanpur Plastipack Limited (KPL) is manufacturer and exporter of bulk bags or Flexible Intermediate Bulk Containers (FIBCs) and other industrial packaging products. Located in Kanpur, KPL delivers quality products like FIBC, PP Multifilament Yarn, UV Masterbatch and Sulzer Fabric based on customer demands and requirements. Having more than 5 decades of experience, their vision is to enhance the lives of business communities through technologically advanced packaging solutions and a value-driven partnership. Their aim is to produce 15 million FIBC's per year.

Table 5: Kanpur Plastipack Limited – Company Profile

Information	Description
Company Name	Kanpur Plastipack Limited
Establishment Year	1972
Sales Region	Mainly in America, Europe and India

Source: www.kanplas.com, Maia Research Analysis

Table 6: Kanpur Plastipack Limited - Operational Indicator

Manufacturing Unit	5 units in Kanpur
Production	9+ million per annum

Source: www.kanplas.com

Table 7: Kanpur Plastipack Limited – Financial Information (Consolidated)

Particulars	Unit	FY21	FY22	FY23	FY24
Revenue	USD Million	61.9	85.6	59.9	61.5
Operating Profit	USD Million	7.8	7.3	2.1	3.7
Net Profit	USD Million	4.1	3.5	0.5	0.1
Operating Margin	%	12.58%	8.55%	3.45%	6.13%
Net Profit Margin	%	6.60%	4.11%	0.76%	0.16%
Return on Capital Employed	%	25.0	20.4	6.1	6.1
Current Ratio	Times	1.3	1.3	1.2	1.1
Debt to Equity	Times	0.5	0.5	0.5	1.2

Source: Company Reports

➢ **Commercial Syn Bags Limited**

Commercial Syn Bags Limited (CSBL) is involved into manufacturing and exporting of diverse range of industrial bags. Situated in Indore, their product range includes FIBC, Poly Tarpaulin, PP fabric/ PP woven sacks, PP Fabric/HDPE Fabric and Container Bags. Having more than 3 decades of experience, they focus on providing customer with the best possible solution for his packing needs within a specific time frame. They approximately produce 4-5 million Big Bags annually.

Table 8: Commercial Syn Bags Limited – Company Profile

Information	Description
Company Name	Commercial Syn Bags Limited
Establishment Year	1984
Sales Region	Mainly in Europe and India

Source: www.comsyn.com, Maia Research Analysis

Table 9: Commercial Syn Bags Limited - Operational Indicator

Manufacturing Unit	5 units in Pithampur
Production Capacity	24,530 MT per annum

Source: www.comsyn.com

Table 10: Commercial Syn Bags Limited - Financial Information (Consolidated)

Particulars	Unit	FY21	FY22	FY23	FY24
Revenue	USD Million	28.8	43.8	36.3	34.8
Operating Profit	USD Million	3.5	4.9	3.1	3.6
Net Profit	USD Million	1.6	2.5	1.0	0.9
Operating Margin	%	12.31%	11.41%	8.64%	10.43%
Net Profit Margin	%	5.61%	5.61%	2.77%	2.72%
Return on capital employed	%	11%	15%	8%	11%
Current Ratio	Times	1.4	1.7	1.9	1.3
Debt to Equity	Times	0.9	0.6	0.5	0.8

Source: Company Reports

➢ **Safeflex International Limited**

Safeflex International Limited is involved into manufacturing and exporting of diverse range of poly-wovens and poly-knits. Starting its first plant in Indore, the company has 4 manufacturing units, 3 for FIBCs and 1 for knitted and poly woven products spread across the country. Having more than 15 years of experience, they believe in the process of innovation, manufacturing and delivering good quality products.

Table 11: Safeflex International Limited – Company Profile

Information	Description
Company Name	Safeflex International Limited
Establishment Year	2006
Sales Region	World wide

Source: www.safeflex.org, Maia Research Analysis

Table 12: Safeflex International Limited - Operational Indicator

Manufacturing Unit	4 units
Production	19+ million per annum

Source: www.comsyn.com

Table 13: Safeflex International Limited - Financial Information (Consolidated)

Particulars	Unit	FY20	FY21	FY22	FY23
Revenue	USD Million	28.5	44.9	52.1	40.5
Operating Profit	USD Million	4.3	5.6	7.8	6.7
Net Profit	USD Million	1.5	2.2	4.2	3.5
Operating Margin	%	14.97%	12.53%	15.12%	16.62%
Net Profit Margin	%	5.29%	4.98%	8.20%	8.66%
Return on capital employed	%	19%	24%	30%	17%
Current Ratio	Times	1.3	1.1	1.3	1.3
Debt to Equity	Times	0.5	0.5	0.6	0.8

Source: Company Reports

- **Rishi Techtex**

With over 30 years of operation, Rishi Techtex Limited is a reputable public limited company. Under the Woven Division, it produces PP/HDPE woven fabrics and sacks, and under the Knitted Division, it produces shading nets. In addition, the company has a BIS certificate and is authorized by MSME to manufacture high-quality items for their customers.

Table 14: Rishi Techtex – Company Profile

Information	Description
Company Name	Rishi Techtex
Establishment Year	1984
Sales Region	World wide (USA, Qatar, Netherlands, South Africa, New Zealand, UAE, UK, Nigeria, Saudi Arabia, Oman and Guatemala).

Source: www.rishitechtex.com

Table 15: Rishi Techtex - Operational Indicator

Manufacturing Unit	2 units in Daman and Vapi
Production Capacity	Knitted Division: 3000 MT per annum Woven Division: 5000 MT per annum

Source: www.rishitechtex.com

Table 16: Rishi Techtex - Financial Information (Consolidated)

Particulars	Unit	FY21	FY22	FY23	FY24
Revenue	USD Million	10.9	13.6	13.3	13.5
Operating Profit	USD Million	0.7	0.9	0.8	0.9
Net Profit	USD Million	0.1	0.2	0.14	0.16
Operating Margin	%	6.31%	6.53%	6.01%	6.80%
Net Profit Margin	%	0.52%	1.30%	1.04%	1.20%
Return on capital employed	%	8.64%	11.28%	10.30%	12.94%
Current Ratio	Times	1.5	1.5	1.4	1.4
Debt to Equity	Times	0.7	0.7	0.9	0.8

Source: Company Reports

- **Emmbi Industries**

Emmbi Industries was established in 1994. It creates and produces FIBC bags, often known as weaved sacks and liners, for a range of uses. Their goods are used in furniture covers, car covers, man-made water bodies, irrigation canals, and containers. More than thirty percent of the polypropylene used by Emmbi Industries comes from recycled sources, and the company makes its products in compliance with British government laws mandating recyclable and reusable plastic packaging.

Table 17: Emmbi Industries – Company Profile

Information	Description
Company Name	Emmbi Industries
Establishment Year	1994
Sales Region	World wide

Source: emmbi.com

Table 18: Emmbi Industries - Operational Indicator

Manufacturing Unit	6 units
Production Capacity	27,440 MT per annum

Source: emmbi.com

Table 19: Emmbi Industries - Financial Information (Consolidated)

Particulars	Unit	FY21	FY22	FY23	FY24
Revenue	USD Million	33.2	52.7	44.9	45.6
Operating Profit	USD Million	3.5	6.0	4.5	4.5
Net Profit	USD Million	0.9	2.3	1.0	1.2
Operating Margin	%	10.45%	11.29%	10.12%	9.93%
Net Profit Margin	%	2.80%	4.37%	2.23%	2.63%
Return on capital employed	%	9.76%	17.82%	11.68%	11.61%
Current Ratio	Times	1.55	1.49	1.48	1.3
Debt to Equity	Times	1.01	0.94	0.91	0.92

Source: Company Reports

8. Company Profile - Shree Tirupati Balajee Agro Trading Company Private Limited

8.1 Background

Shree Tirupati Balajee Agro Trading Company Private Limited was established on October 23, 2001. This company is engaged in the business of manufacturing and supply of Flexible Intermediate Bulk Container (FIBC) Jumbo Bag types, including Type D bags (static dissipative), Type C bags (conductive), UN Certified bags for hazardous goods transportation, food-grade and superior category bags, form-stable bags, sift- proof bags, multi-layer liner bags, hard-walled/self-standing bags, anti-rodent bags, flame-retardant bags, drum bags, thermal insulated bags, patented Aeropolymesh bags, and asbestos bags. In addition to that, they also produce container liner bags, bags made from recycled PP (Post Industrial Recyclate), specialized PP woven bags, and BOPP printed small bags, catering to a diverse range of customer needs.

Flexible Intermediate Bulk Containers (FIBC) produced by the company, are designed to handle loads ranging from 500 kg to 2500 kg. These bags play a crucial role in various industries, including construction, agriculture, industrial products, chemicals, fertilizers, cement, mining, animal feed, processed food, and more. They provide a labor-saving alternative for packaging and transportation, making loading and unloading of vessels, containers, or trucks more efficient. Initially the focus was primarily on the domestic Indian market. However, the company experienced growth year after year and eventually expanded its operations to include international exports. In terms of competition, Shree Tirupati Balajee's core competencies include a wide product range, multi-location facilities, recurring orders, global presence, scale of production, technical expertise, environmental contribution, and recycling efforts.

Operating and Financial Profile

The company manufactures small PP woven bags, including BOPP laminated bags. Additionally, they manufacture various FIBC varieties, such as tubular cross corner bags, U panel bags, 4 panel bags, single loop and two-loop bags, tunnel lift bags, and more, with a pending patent for unique weaving process to increase strength in FIBC with single and double loop jumbo bags by using Mesh technology without increasing GSM and also for shape holding bag made of polypropylene woven material. In 2006, the company diversified into the production and export of FIBC Jumbo bags. Their manufacturing facility also boasts an in-house testing laboratory, ensuring that their products meet international quality standards. With its Research and Development team, the company holds one granted patent and has two pending patents, demonstrating their commitment to innovation.

Table 20: Installed Capacity - Shree Tirupati Balajee Agro Trading Company Private Limited

Product Name	Units	Actual			
		FY21	FY22	FY23	FY24
Manufacturing Unit I (units p.a.)	MT (PA)	20,000	20,000	20,000	20,000
Manufacturing Unit II (units p.a)	MT (PA)	4,000	8,000	8,000	8,000

Source: Company Reports

Table 21: Financial and Operating parameters (Consolidated) - Shree Tirupati Balajee Agro Trading Company Private Limited

Particulars	Unit	FY21	FY22	FY23	FY24
Revenue	USD Million	46.9	60.9	59.5	66.8
Operating Profit	USD Million	4.5	5.4	6.3	9.1
Net Profit	USD Million	1.6	1.8	2.6	4.4
Operating Margin	%	9.62%	8.93%	10.61%	13.58%
Net Profit Margin	%	3.49%	3.01%	4.33%	6.53%
Return on capital employed	%	19%	18%	23%	27%
Current Ratio	Times	1.4	1.4	1.5	1.6
Debt to Equity	Times	2.3	2.6	2.0	1.4

Source: Company Reports

Contact

Tanvi Shah	Director – Advisory & Research	tanvi.shah@careedge.in	022 6837 4470
Vikram Thirani	Director – Business Development	vikram.thirani@careedge.in	022 6837 4434

CARE Analytics and Advisory Private Limited

(Wholly-owned subsidiary of CARE Ratings Ltd.)
A-Wing, 1102-1103, Kanakia Wall Street, Chakala, Andheri-Kurla Road, Andheri East, Mumbai- 400093
Phone: +91-22-68374400

Connect:

About:

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