ICRA

October 2019

Flexible Packaging Industry: Disciplined capacity additions to keep margins healthy in the near term

K Ravichandran
+91 44 4596 4301
ravichandran@icraindia.com

Prashant Vasisht
+91 124 4545322
prashant.vasisht@icraindia.com

Varun Gogia
+91 124 4545373
varun.gogia@icraindia.com

Flexible packaging is any package or any part of a package whose shape can be readily changed and includes bags, envelopes, pouches, sachets etc. There are many polymers used in the flexible packaging industry, the most common being polypropylene (PP), polyethylene (PE), and polyvinyl chloride (PVC). The advantages of flexible packaging include lighter weight and spatial economy, ability to innovate in packaging structure, better barrier properties and cost efficiency in comparison to rigid packaging. Owing to these advantages the flexible packaging industry has witnessed robust growth in the past few years both globally and domestically. The flexible packaging industry has grown at a CAGR of 5% for the last five years, in the Asia-Pacific region with China and India leading the growth. This note captures the credit outlook for the Indian flexible packaging manufacturers.

Rising consumerism, preference for packaged goods, growing e-commerce and modern retail driving demand for packaging products

The demand for flexible packaging is driven by rising preference for packaged foods & beverages (F&B), rising penetration of the organised retail and e-commerce, and growth in the pharmaceutical sector. Globally, the F&B segment contributes to ~70% of the packaging demand and the segment is expected to grow at double-digit rates in the near to medium term, as the consumption is non-discretionary in nature. The growth will be mainly driven by the rising preference for packaged foods and growth in food delivery services, which require significant amount of packaging material. Besides the F&B segment, the spread of organised retail and growth in e-commerce have also contributed to the demand for flexible packaging. In 2017, the share of e-commerce and modern trade was around 17% of the total $795 billion retail market, which is expected to rise to 22%-25% by 2021 with the total retail market expanding to $1.2 trillion with a concomitant increase in demand for flexible packaging. Another driver for the flexible packaging industry is the pharmaceutical sector which requires high quality packaging that can provide barrier properties and avoid contamination as a regulatory requirement. Additionally, pharmaceutical companies use packaging for labeling of products, to comply with regulatory requirements.

Plastic films form the backbone of the packaging film industry

Global flexible packaging industry stands at around $700 billion with plastic packaging forming nearly 42% of the total industry. Plastic packaging is also the fastest growing segment in the global packaging industry with a CAGR of 5.5% over the period CY2011-2016 while the overall packaging market grew at a CAGR of 3.6%. The key raw materials for plastic packaging are plastic films specifically Bi-axially Oriented Poly-Ethylene Terephthalate (BOPET) and Bi-Axially oriented Polypropylene (BOPP) films. These films are manufactured by extruding molten polyethylene terephthalate (PET) or polypropylene (PP) onto a roll and then biaxially orienting the films by drawing i.e. stretching the film in both machine and transverse direction. The bi-axial orientation of the polymer chains provides high strength, stiffness and excellent clarity to BOPET and BOPP films. These films account for nearly 23% of the overall plastic packaging market while remaining packaging includes paper, cardboard etc.

Exhibit 1: Packaging film properties and applications

BOPP Films

- ***Properties***
  - *Moisture, vapour and gas barrier, high density leading to higher yield*
  - *High machinability, optical properties and printability*
- ***Applications***
  - *Self-adhesive tapes*
  - *Medical grade plastics*
  - *Food containers*
  - *Packaging labels*

BOPET Films

Properties

- *Heat resistance, liquid barrier, aroma barrier and stiffness*
- *Stable through high speed printing and lamination*

- Applications

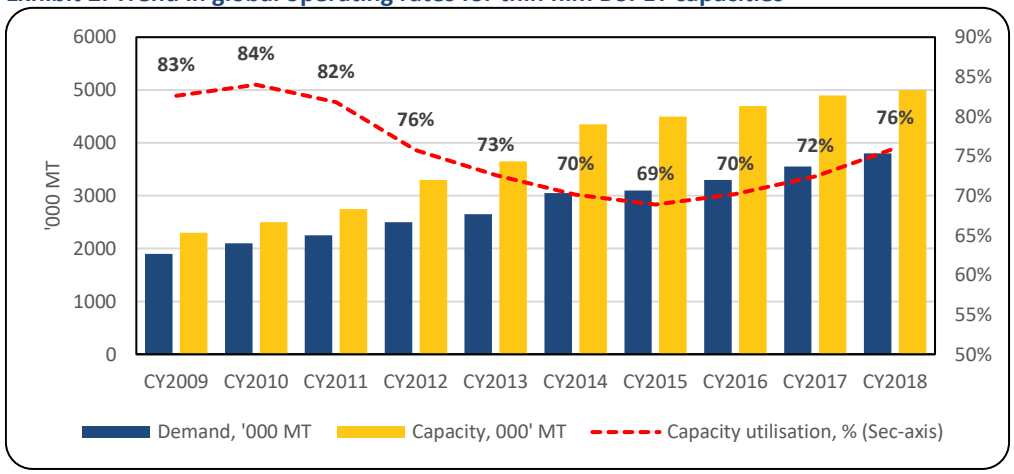
- *Flexible packaging with direct food contact*
- *Food packaging to avoid aroma loss*
- *Electrical insulation material*
- *Films used as solar curtains*
- *Carrier for flexible printed circuits*

Source: ICRA research

Global BOPET film industry is re-balancing as the industry remains cautious in capacity addition

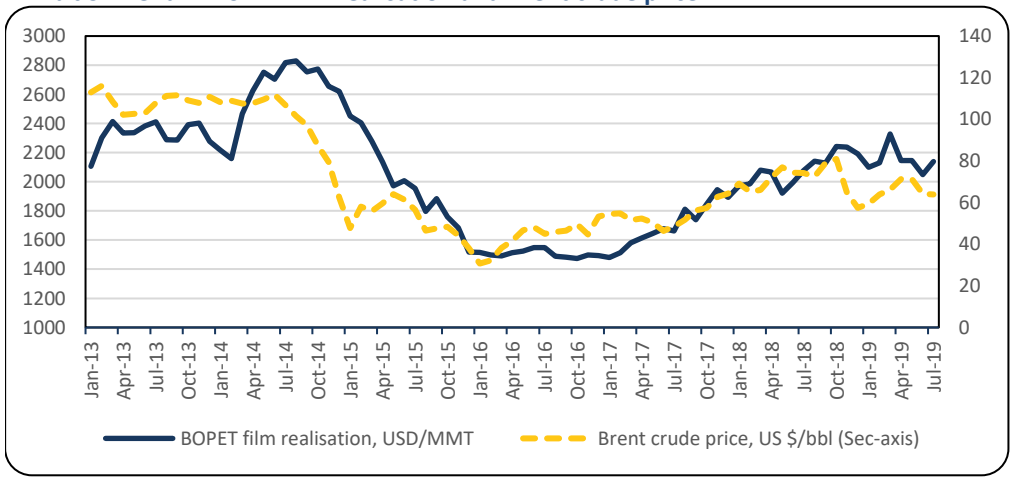
BoPET films are widely used for packaging owing to its strength, lightweight, clarity chemical resistance properties and high resistance to surface abrasion. The film also holds on to its dimensions in wide variety of temperatures and provides a strong barrier to atmospheric gases. Owing to the favorable properties of BOPET films, the global BoPET film industry has witnessed a healthy CAGR of 9% for the period of CY2007-2018. The global capacity utilisation for the industry remained healthy in the period of CY2007-2010 peaking at 84% but declined thereafter owing to capacity additions happening primarily in China and India. However, post CY2015, the pace of global capacity additions slowed down even as the demand continued to grow at a decent pace resulting in an improvement in the operating rates.

Exhibit 2: Trend in global operating rates for thin film BoPET capacities



Source: Industry data, ICRA research

Exhibit 3: Trend in BoPET film realisation and Brent crude price



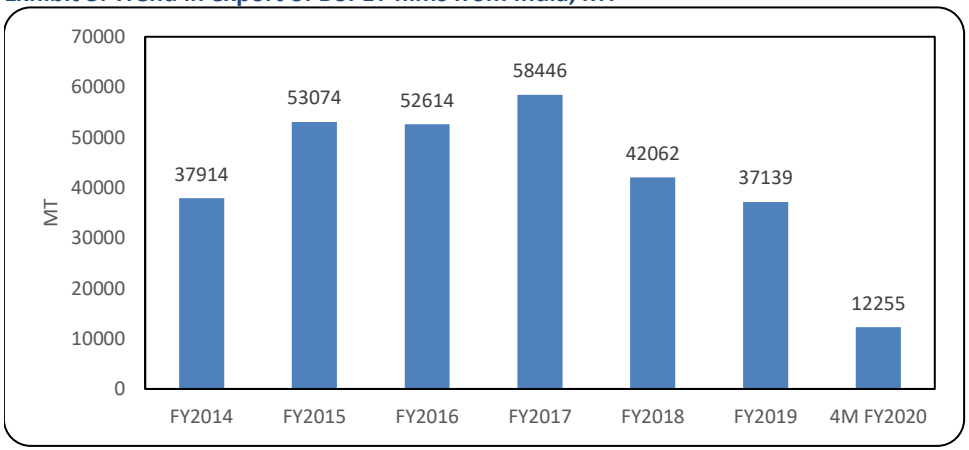
Source: Industry data, ICRA research

The key raw materials for manufacturing of BoPET films i.e. Pure Terephthalic Acid (PTA) and Mono-Ethyl Glycol (MEG) are derivatives of crude oil. International price of BoPET films declined precipitously in CY2015 driven by large overcapacity and decline in crude oil prices and remained low until the middle of CY2017. The realisation for BoPET films recovered thereafter, due to slowdown in the capacity additions, healthy demand growth and recovery in the price of crude oil. Currently new capacities are under construction in Hungary and Thailand in the international market while one line of 30,000 MTPA was recently commissioned in June 2019 in India. Apart from these, no major capacity additions have been announced so far and any new capacity announced now will take at least two years to come online from the date of announcement. With oil prices expected to remain rangebound in the near-term and limited capacity expansion in the near to medium term coupled with the expected demand growth for films in high single digits, the BoPET film realisations are expected to remain stable. Accordingly, the outlook for the BoPET film industry remains stable given the stable demand growth being witnessed along with limited capacity additions.

Indian BOPET film industry performance on an uptrend since FY2018 driven by healthy demand growth and pause on capacity additions

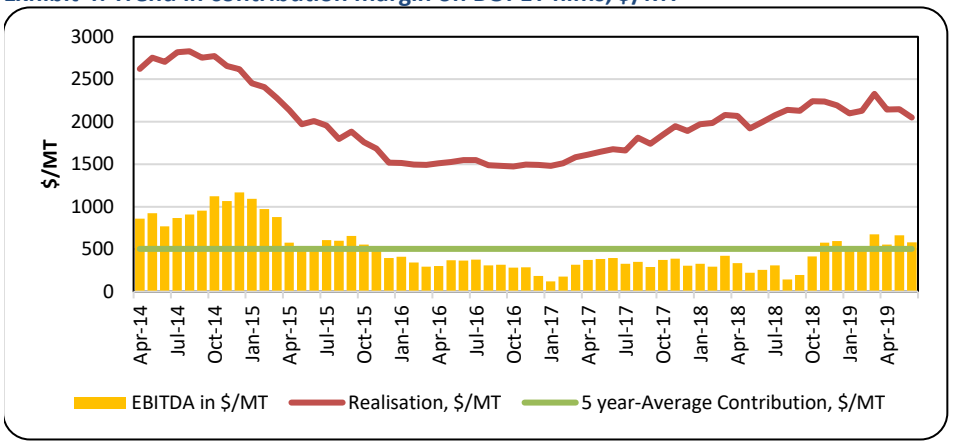
The Indian BOPET film industry has grown at a rapid pace over the last decade and spread its manufacturing footprint across the globe. Currently, the Indian companies contribute around 18% of the total global output in the BOPET film space. Currently, the Indian BOPET film industry remains in a state of over-capacity with the domestic demand standing at around 480,000 MT against the domestic capacity of 725,000 MTPA. In order to maintain healthy capacity utilisation levels, industry players resort to exports with Europe being the biggest market for domestic producers followed by Africa and the US. The exports from domestic producers peaked at 58,446 tonnes in FY2017 but has been on a downtrend since then.

Exhibit 5: Trend in export of BoPET films from India, MT



Source: Industry data, ICRA research

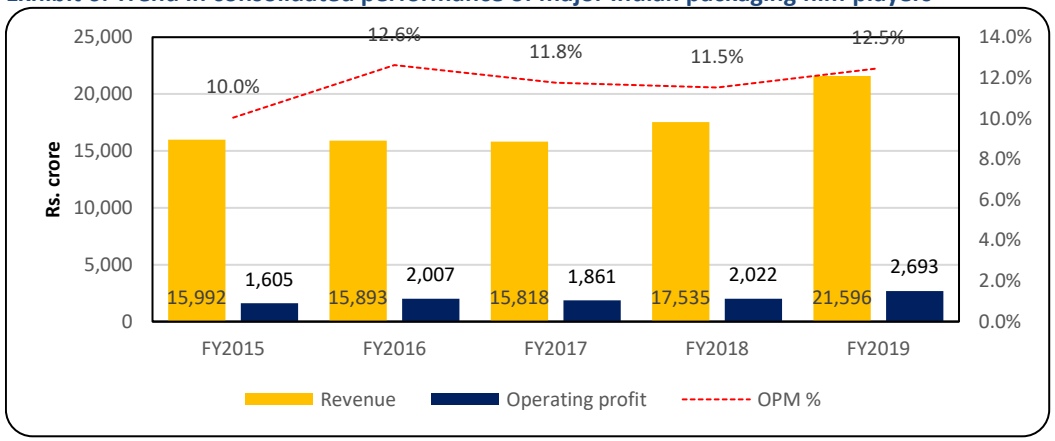
Exhibit 4: Trend in contribution margin on BOPET films, $/MT



Source: Industry data, ICRA research; Note Contribution margin= Realisation-Cost of PTA and MEG

The downtrend in the exports has been on account of healthy demand growth in India amid no capacity additions in FY2018 and FY2019 leading to higher domestic consumption. In tandem with higher capacity utilisations, the contribution margins on the BoPET films have improved resulting in better profitability for the players and improving cash generation. As can be seen in, Exhibit-4 the contribution margin for the PET films declined materially in FY2016 and FY2017 resulting in weak performance and started recovering towards the end of FY2018.

Exhibit 6: Trend in consolidated performance of major Indian packaging film players



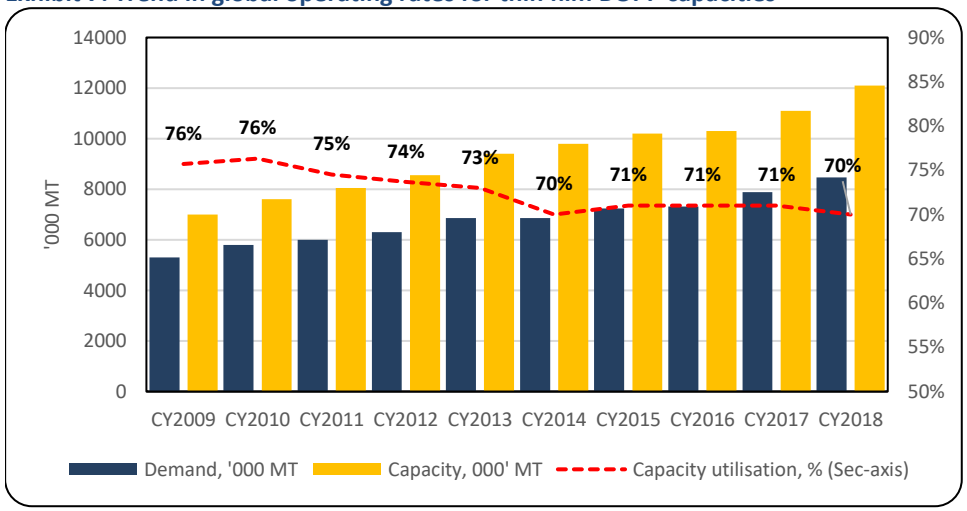
Source: Industry data, ICRA research; Note Includes financials of 7 listed packaging film manufacturers

After a hiatus of a couple of years in the capacity additions, a 30,000 MTPA of BoPET capacity was commissioned in mid CY2019 in India. While the capacity addition being lumpy, the contribution margins are expected to be impacted in the near term, nevertheless with the demand growing at a healthy rate of 8-10% p.a., the new capacity is expected to be absorbed within 6-8 months. As a result, the contribution on BoPET films is expected to remain stable in the near to medium term given the healthy demand growth for the BoPET films.

Global BOPP industry remains oversupplied driven by major capacity additions

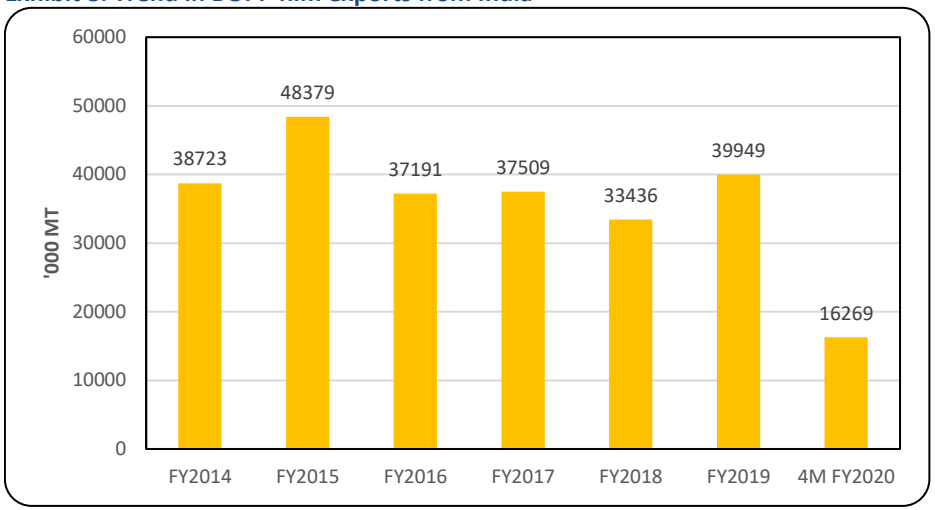
BOPP films are used for packaging owing to its high tensile strength, moisture resistance, high transparency, resistance to oil and grease and good performance while printing. As a result of its aforementioned properties, the global BOPP market has grown to about 8,500,000 MT by the end of CY2018 and is expected to grow at a CAGR of around 5-6% going forward in the near to medium term. China is the major producer and consumer of BOPP films. The operating rates for the global BOPP industry have declined from ~75% in CY2011 to ~70% in CY2014 owing to a spate of capacity additions. However, the operating rates have remained stable since CY2014 with the incremental demand and supply additions balancing out.

Exhibit 7: Trend in global operating rates for thin film BOPP capacities



Source: Industry data, ICRA research

Exhibit 8: Trend in BOPP film exports from India



Source: Industry data, ICRA research

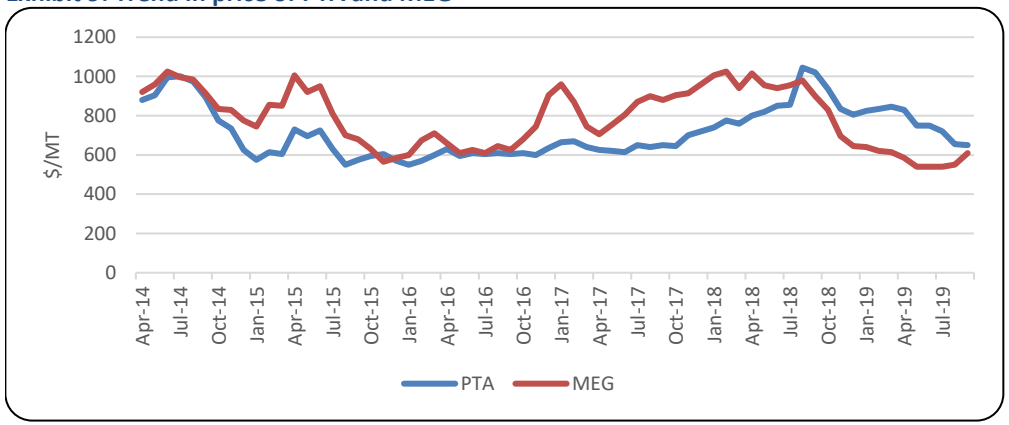
The key raw material used for manufacturing BOPP films is polypropylene granules which is a crude oil derivative. Accordingly, the realisations for BOPP films move in line with crude oil prices. The realisations for BOPP films declined sharply in the beginning of CY2015 owing to the steep decline in the crude oil prices. With the prices bottoming out in October 2015, the recovery in realisations has been driven by the recovery in the crude oil prices over the last couple of years. The overcapacity in the industry is expected to continue in the near term which will weigh on the performance of the BOPP manufacturers. Additionally, a few capacities are expected to be added in the near to medium term in Eastern Europe which may prevent the overcapacity situation in the film industry from improving. Thus, it will be imperative for the global players to show restraint in capacity additions going forward to allow the demand-supply of the industry to rebalance.

Profitability of the Indian BoPP players continues to be plagued by overcapacity The Indian BOPP film industry had witnessed large capacity additions over the last few years resulting in significant overcapacity. The demand growth lagged the capacity additions. Currently the BOPP film capacity in India stands at around 763,000 MT as against the domestic demand of 447,000 MT, indicating a capacity surplus of 41%. In order to maintain high operating rates, Indian entities resort to exports. The exports absorb ~7-8% of the total domestic capacity. Owing to the overcapacity situation, the industry has faced pressure on the margins. In Q1 FY2020, the gross margins on BOPP films improved to around Rs. 10-12/Kg vis-à-vis Rs. 5/kg earlier. The improvement was driven by healthy demand growth and a pause in capacity additions. However, the margins remain lower than the historical levels of around Rs. 20 per Kg. Going forward, the margins are expected to remain below the historical levels given the overcapacity situation. However, with no capacity additions announced, the capacity surplus is expected to reduce somewhat, going forward.

Crude oil price continues to be the major driver of prices for the raw material; Industry remains exposed to raw material price volatility

The key raw material used for manufacturing BOPET films is PET (Polyethylene Terephthalate) chips and for BOPP films, Polypropylene (PP) granules. PTA and MEG are the key inputs for producing PET chips and propylene is the key input for making polypropylene granules, all of these being derived from crude oil. The volatility in the crude oil prices leads to the volatility in the price of these inputs and given the high competitive intensity of the industry, the incumbents sometimes find it difficult to pass on the impact of raw material price increase fully to the customers. Prices of MEG have been on a downtrend for most of FY2019 falling nearly 33% in H2 FY2019. The price decline has been on account of large-scale imports into Asia from the Middle East leading to high inventory levels in China. PTA prices stabilized after falling from a peak of $1063/MT in September 2018 to $650/MT by the end of September 2019. PTA prices follow crude oil prices and have remained stable since the beginning of CY2019.

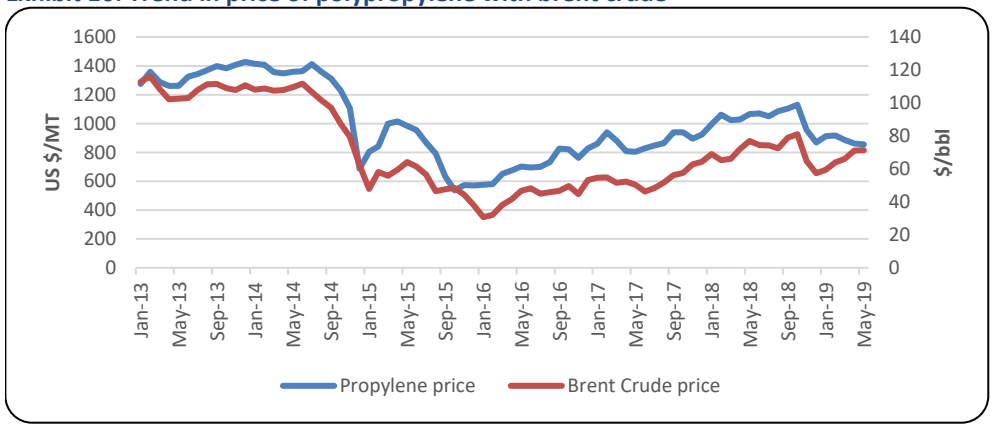
Exhibit 9: Trend in price of PTA and MEG



Source: Industry data, ICRA research

Polypropylene prices had been on an uptrend since January 2016 reaching a high of US $1,131/MT in October 2018 from a low of US $537/MT in October 2015 moving in tandem with the crude oil prices. Going forward the polypropylene prices will continue to move in-line with crude oil prices.

Exhibit 10: Trend in price of polypropylene with brent crude



Source: Industry data, ICRA research

BOPET and BOPP film industry expected to remain unaffected by the ban on single use plastic

The Government of India (GoI) was mulling a ban on Single use Plastic items like straws, spoons, dishes, plastic bags, dishes and certain sachets which has been deferred as of now. Nevertheless, given that most of the BOPET and BOPP films are used for the manufacture of multi-layer packaging for which there are no cost-effective substitutes these are unlikely to be banned. Going forward, the possibility of a complete ban on the usage of packaging films remains highly unlikely, though GoI may limit the allowable thickness of the films that can be used for certain applications. Thus, ICRA does not expect material impact on the BOPET and BOPP film industry

owing to the expected ban on single use plastics, though long-term risks remain owing to environmental concerns.

Outlook: Stable

The packaging industry continues to grow at a brisk pace driven by the rising preference for packaged foods, growing e-commerce and organised retail and rising population. Going forward the domestic industry is expected to witness steady improvement in the performance owing to limited capacity additions in the near term and healthy demand growth. ICRA expects the packaging film industry to continue posting healthy profits in the near term as witnessed over the last one and a half years, albeit BOPP films should exhibit relatively lower margins due to over-capacity. While environmental concerns remain regarding the use of plastics, in the near to medium term packaging film industry is not expected to face headwinds given the lack of availability of reliable and cost-effective alternatives.

ICRA
A MOODY'S INVESTORS SERVICE COMPANY

ABOUT ICRA

ICRA Limited (formerly Investment Information and Credit Rating Agency of India Limited) was set up in 1991 by leading financial/investment institutions, commercial banks and financial services companies as an independent and professional investment Information and Credit Rating Agency.

Today, ICRA and its subsidiaries together form the ICRA Group of Companies (Group ICRA). ICRA is a Public Limited Company, with its shares listed on the Bombay Stock Exchange and the National Stock Exchange.

Alliance with Moody's Investors Service

The international Credit Rating Agency Moody's Investors Service is ICRA's largest shareholder. The participation of Moody's is supported by a Technical Services Agreement, which entails Moody's providing certain high-value technical services to ICRA. Specifically, the agreement is aimed at benefiting ICRA's in-house research capabilities, and providing it with access to Moody's global research base. The agreement also envisages Moody's conducting regular training and business seminars for ICRA analysts on various subjects to help them better understand and manage concepts and issues relating to the development of the capital markets in India. Besides this formal training programme, the agreement provides for Moody's advising ICRA on Rating-products strategy, and the Ratings business in general.

The ICRA Factor

Our services are designed to

- Provide information and guidance to institutional and individual investors/creditors;
- Enhance the ability of borrowers/issuers to access the money market and the capital market for tapping a larger volume of resources from a wider range of the investing public;
- Assist the regulators in promoting transparency in the financial markets;
- Provide intermediaries with a tool to improve efficiency in the funds raising process.

ICRA
A MOODY'S INVESTORS SERVICE COMPANY

Business Contacts

Mr. L. Shivakumar
E-mail: shivakumar@icraindia.com
Tel: +91 22 6114 3406 / +91 98210 86490

Mr. Jayanta Chatterjee
E-mail: jayantac@icraindia.com
Tel: +91 80 4332 6401/ +91 98450 22459

Media and Public Relations

Ms. Naznin Prodhani
E-mail: communications@icraindia.com
Tel: +91 124 4545 860

Registered Office:

1105, Kailash Building, 11th Floor,
26, Kasturba Gandhi Marg,
New Delhi - 110 001
Tel: + 91 11 2335 7940-45

Corporate Office:

Building No.8, 2nd Floor,
Tower A, DLF Cyber City Phase II,
Gurgaon- 122 002
Tel: +91 124 4545300

Ahmedabad

907 & 908, Sakar – II,
Ellisbridge, Opp. Town Hall,
Ahmedabad - 380 006
Tel: +91 79 4027 1500/01

Bengaluru 1

'The Millenia', Tower- B, Unit No. 1004,
10th Floor,1 & 2 Murphy Road,
Bengaluru - 560 008
Tel: +91 80 4332 6400

Bengaluru 2

2nd Floor, Vayudooth Chamber,
15-16, Trinity Circle, M.G. Road,
Bengaluru - 560 001
Tel: +91 80 4922 5500

Chennai

5th Floor, Karumuttu Centre,
634, Anna Salai, Nandanam
Chennai - 600 035
Tel: +91 44 4596 4300

Hyderabad 1

No. 7-1-58, 301, 3rd Floor, 'CONCOURSE',
Above SBI-HPS Branch, Ameerpet,
Hyderabad - 500 016
Tel: +91 40 4920 0200

Hyderabad 2

4A, 4th Floor, SHOBHAN,
6-3-927, A&B Somajiguda,
Raj Bhavan Road,
Hyderabad – 500082
Tel: +91 40 40676500

Kolkata

A-10 & 11, 3rd Floor,
FMC Fortuna 234/3A,
A.J.C. Bose Road,
Kolkata -700 020
Tel: +91 33 7150 1100/01

Mumbai

3rd Floor, Electric Mansion
Appasaheb Marathe Marg,
Prabhadevi,
Mumbai - 400 025
Tel: +91 22 6169 3300

Pune

5A, 5th Floor, Symphony,
S. No. 210 CTS 3202 Range Hills Road,
Shivajinagar,Pune - 411 020
Tel: +91 20 2556 0194, 020 6606 9999

Email: info@icraindia.com
Helpdesk: 124 3341580
Website: www.icra.in/ www.icraresearch.in