



# Paper & Packaging

## Sector Study



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# Introduction

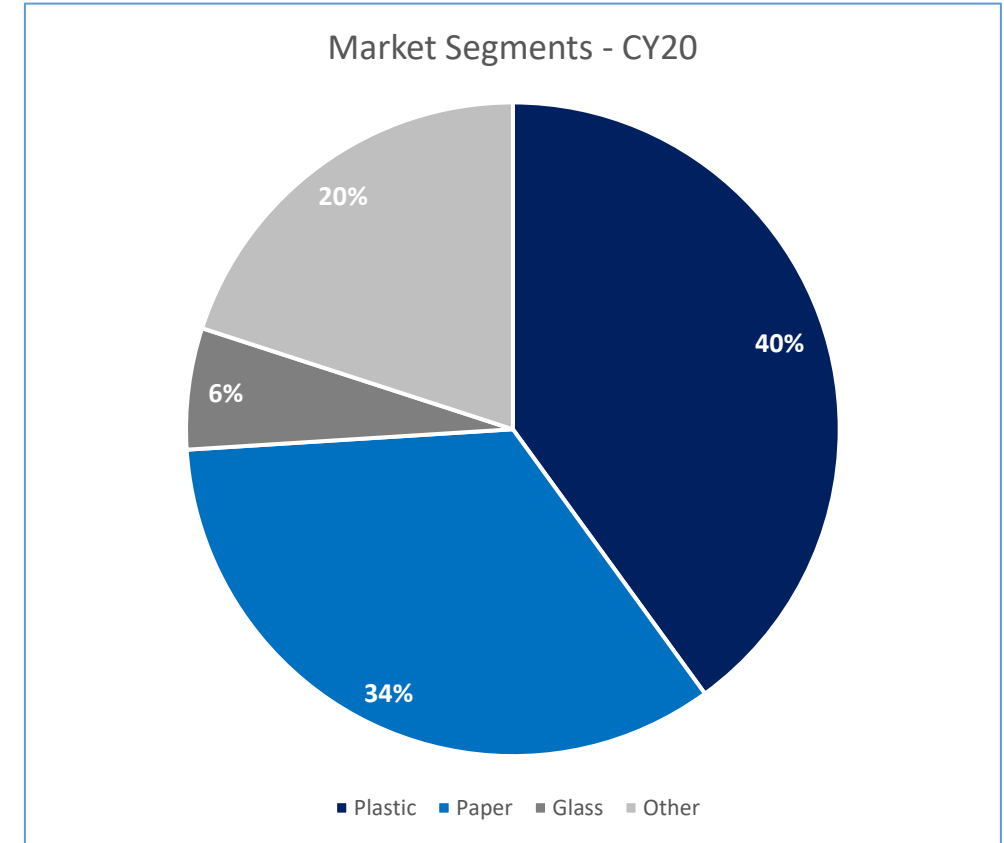
- Packaging refers to the enclosing or protecting of goods for the purpose of distribution, storage, sale and use.
- The packaging industry is mostly segmented according to the type of material used:
  1. Paper & Cardboard:  
Includes cartons, corrugated boxes, bags and paper sacks.
  2. Plastic:  
Includes PET bottles, plastic boxes, plastic films such as BOPP film, CPP film & BOPET film, and flexible packaging such as plastic bags, pouches etc. Plastic packaging can also be segmented as flexible or rigid depending on the materials characteristics.
  3. Metal:  
Includes cans, foils and drums made from materials such as tinplate and aluminum.
  4. Glass:  
Includes glass bottles and jars.





## Overview

- The estimated market size of the global packaging industry is expected to be USD~1,012bln by the end of CY21.
- The demand for the global packaging industry is forecasted to reach USD~1,050bln by CY24 with Asia Pacific having the largest share attributable to growing demand for labeled and dairy products in the region.
- There had already existed a growing market for food packaging, including delivery and takeaway packaging due to the increase in global urbanization, fast-paced consumer lifestyles and adoption of e-commerce. The COVID-19 pandemic and resulting restrictions have led to a further increase in demand from these sectors.
- Greater consumer awareness regarding the harmful environmental impact of plastic packaging may create challenges for the industry. Various regulations have already been implemented such as the ban on single use plastics in various countries. As a result, the industry is moving towards more innovative and environmental friendly packaging solutions.
- The largest segment within the global industry is plastic which occupies 40% of the packaging market. Paper and glass have market shares of ~34% and ~6%, respectively, while tinsplate and others have a combined share of 20%.



# Paper & Packaging | Local Industry

## Overview

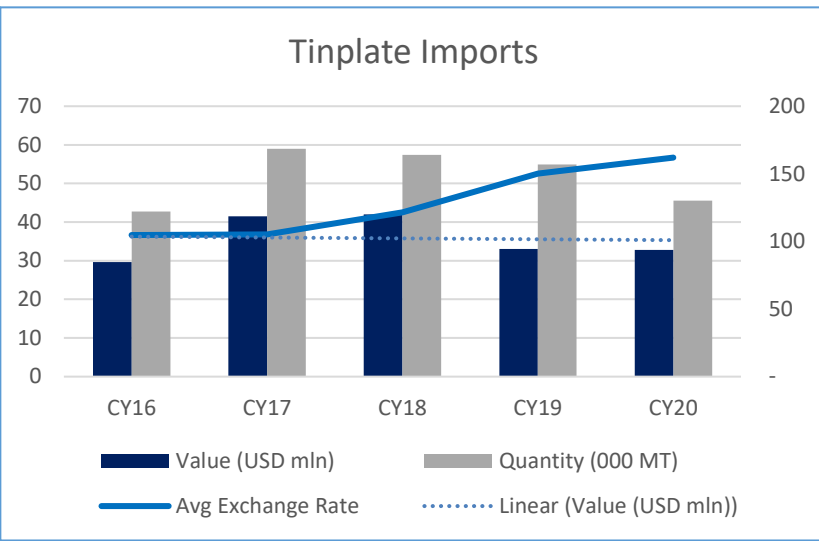
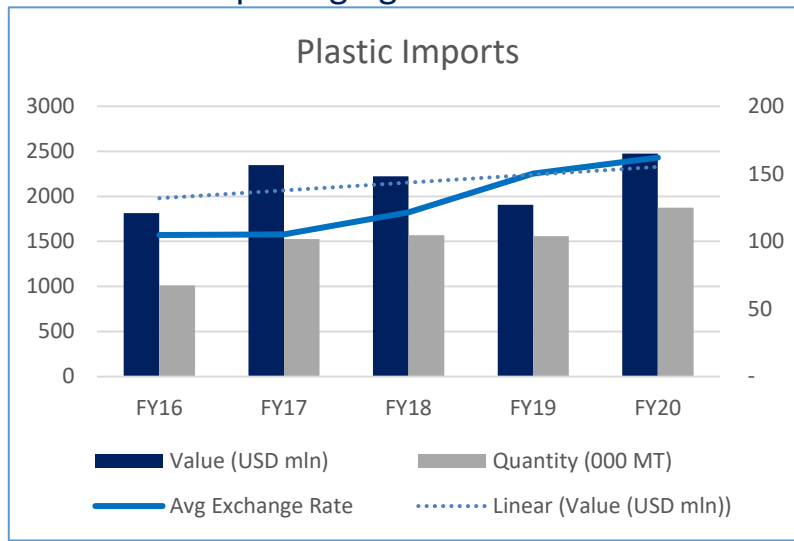
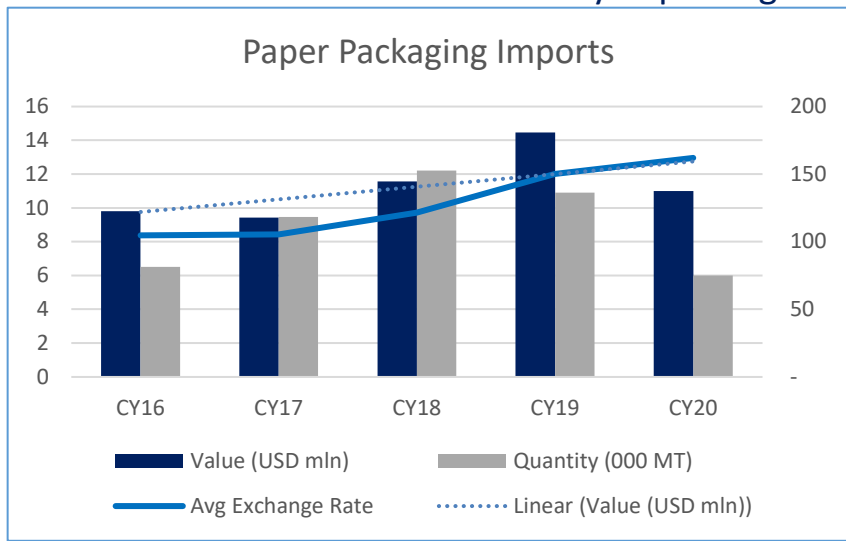
- Pakistan’s packaging industry consists of four major segments, paper, plastic, tinfoil and glass.
- Paper and plastic segments occupy the major share in total market, while other materials such as tinfoil and glass have relatively smaller size.
- In the tinfoil packaging sector, as there is only one local manufacturer, approximately 70% of the demand is met through imports which stood at USD~33mln (PKR~5,307mln) during CY20.

Segment	Paper	Plastic	Tinfoil	Glass
Types	Paper & Board	PET bottles and CPP, BOPP & BOPET film	Tinfoil	Glass
Demand	Used in a large variety of retail and consumer products	PET bottles: Beverages & Pharmaceuticals Film: Consumer goods such as snacks and confectionary items	Edible Oil, Ghee, Canned Food & Paints	Mainly used for glass bottles in beverage & pharmaceuticals
Market Structure	Oligopoly	Oligopoly	Monopoly	Oligopoly
	5 listed players	6 listed players	1 listed player	5 listed players

# Paper & Packaging | Local Industry

## Imports

- PAPER:** The imports of paper packaging grew consistently until CY19, before the COVID-19 pandemic hit the world. Resultantly, the imports declined by ~24% in CY20 and stood at USD~11mIn (PKR~1,781mIn) as compared to USD~14mIn (PKR~2,172mIn) in CY19. Overall, the imports experienced a CAGR of 2% during a five year period.
- PLASTIC:** Similarly there was a decline of ~44% in imports of plastic packaging during CY20, which clocked in at USD~29mIn (PKR~4,696mIn) as compared to USD~52mIn (PKR~7,827mIn) during CY19. However, the termination of anti-dumping duty on imports of BOPP film is expected to support the growth of imports.
- TINPLATE:** Meanwhile, imports of tinplate showed a different trend and grew slightly by ~1% during CY20, clocking at USD~33mIn (PKR~5,307mIn). This is due to the reopening of restaurants and resumption of large gatherings that increased the demand for oil and ghee, which is the largest demand driver for tinplate packaging.
- China is the most common country importing these three kinds of packaging materials in Pakistan.

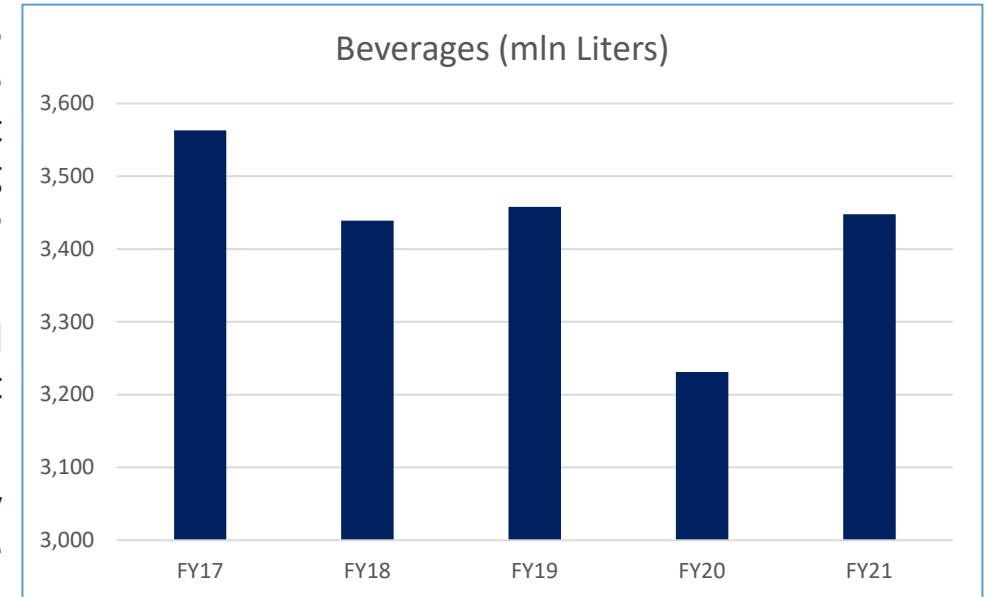




# Paper & Packaging | Local Industry

## Business Risk | Plastic

- The packaging industry derives its demand from various industries. One of the major sources of demand for plastic packaging is the food and beverage industries. The adjacent graph shows production levels of beverages in the last five fiscal years. Beverage production declined by ~7% in FY20 after having relatively consistent level of production in prior two years. In FY21, the production levels were restored close to pre-pandemic levels.
- The price of major raw material in plastic segment is correlated to international oil prices and therefore, volatility in oil prices and exchange rates is a significant source of risk.
- Moreover, many beverage players have set up their own bottling plants and only purchase PET Preform from the market. Therefore, margins are likely to be under pressure as Preform is a comparatively low margin product.
- In recent years there has been greater concern regarding usage of plastic due to environmental factors. The government has also introduced a ban on single use plastic, however, this is not strictly enforced. Moreover, a suitable alternative does not exist as the local industry has limited innovation and is slow to adopt environmentally friendly practices.



## Revenue Estimate of PET Preform & Bottles

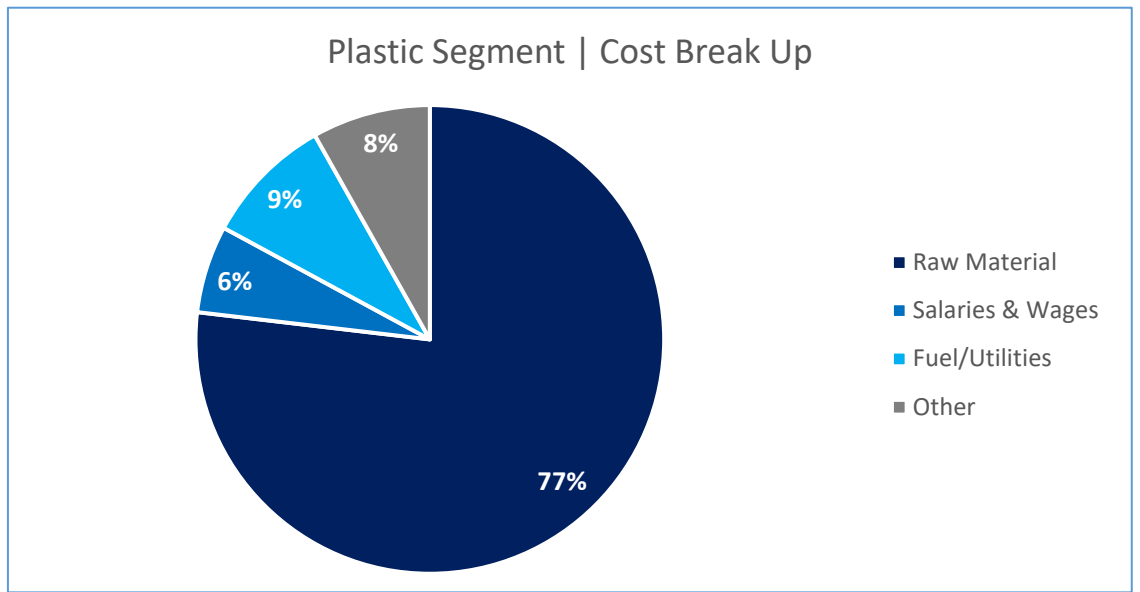
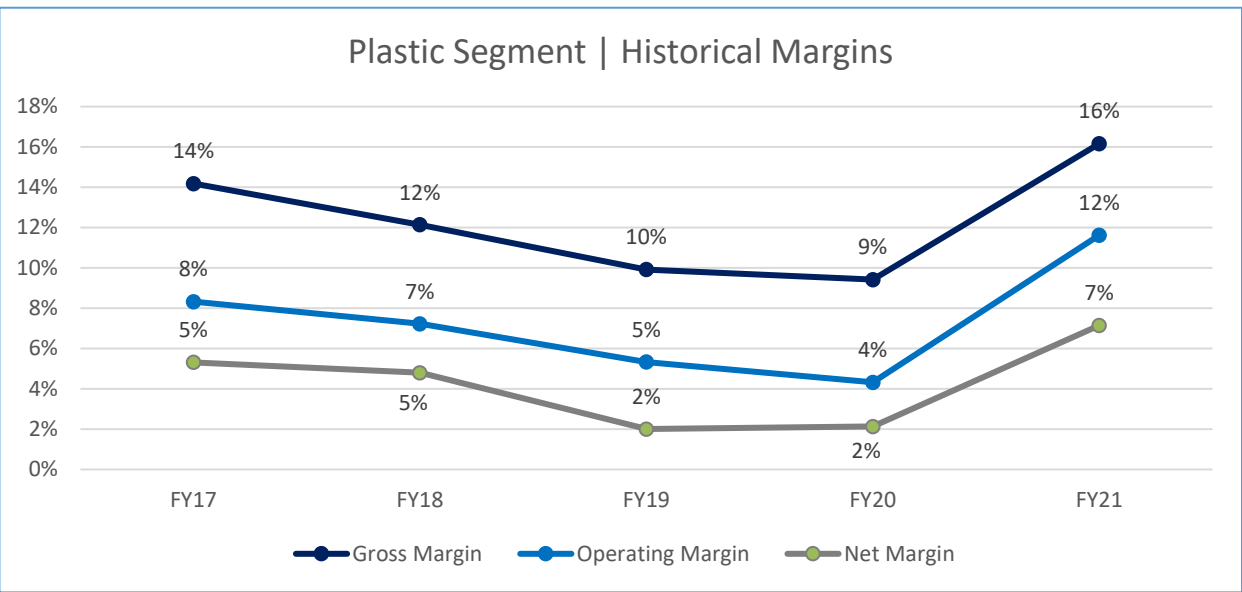
Description	FY17	FY18	FY19	FY20	FY21
Anticipated Demand for Bottle Beverage Industry (Mln Units)	3,537	3,872	4,825	4,302	3,822
Growth Rate	-	9%	25%	-11%	-11%
<b>PREFORMS</b>					
Outsourced Preform Market (Mln units)	2,917	3,195	4,107	3,657	3,250
Weighted Average PET Resin Rate per KG	115	149	180	156	180
Average Preform Size (gms)	35	35	35	35	33
PET Resin cost per Preform (PKR)	4.02	5.25	6.3	5.46	6
Average Fabrication Price per Preform (PKR)	1.34	1.51	2.1	1.82	2
Total Price per Preform (PKR)	5.36	6.76	8.4	7.28	8
<b>Total Revenue of Preform Market (PKR mln)</b>	<b>15,635</b>	<b>21,598</b>	<b>34,499</b>	<b>26,622</b>	<b>25,155</b>
<b>BOTTLES</b>					
Outsourced Bottle Market (Mln Units)	620	677	718	645	572
Weighted Average PET Resin Rate per KG	115	149	180	156	180
Average Bottle Size (ms)	35	35	35	35	33
PET Resin Cost per Bottle (PKR)	4.02	5.25	6.3	5.46	6
Average Fabrication Price per Bottle (PKR)	6.87	5.83	5.15	4.47	4.86
Total Price per Bottle (PKR)	10.89	11.08	11.45	9.93	10.8
<b>Total Revenue of Bottle Market (PKR mln)</b>	<b>6,752</b>	<b>7,501</b>	<b>8,224</b>	<b>6,406</b>	<b>6,178</b>



# Paper & Packaging | Local Industry

## Margins & Cost Structure | Plastic

- The segment’s direct costs consist largely of imported raw materials (~77%). Therefore, volatility in exchange rates and international price trends hold an impact on costs and ultimately on the profitability of the sector.
- The average margins of the plastic packaging segment have observed a declining trend from FY16 to FY20, with average gross margins falling from ~14% in FY16 to ~9% in FY20. However, the gross margins increased to ~16% in FY21. This was primarily because of revenue growth along with reduction in energy costs following the removal of GIDC by the Supreme Court in Aug’20.
- Net margins also improved to ~7% in FY21 from ~2% in FY20. Better margins were majorly a result of gradual hike in demand after the lockdown was lifted and a full-year impact of reduction in interest rates by 625bps.

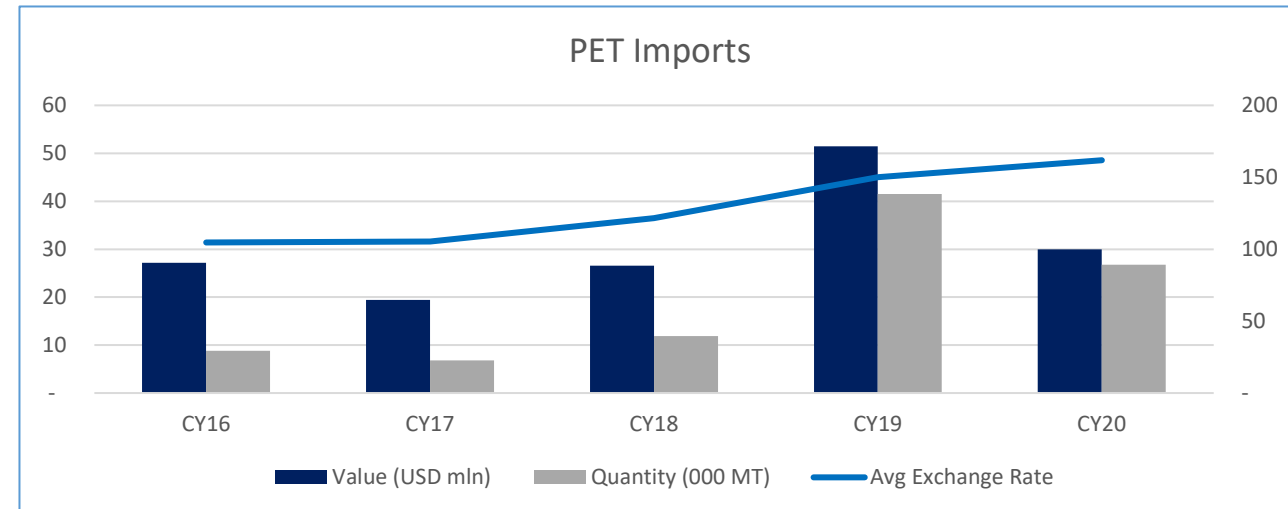
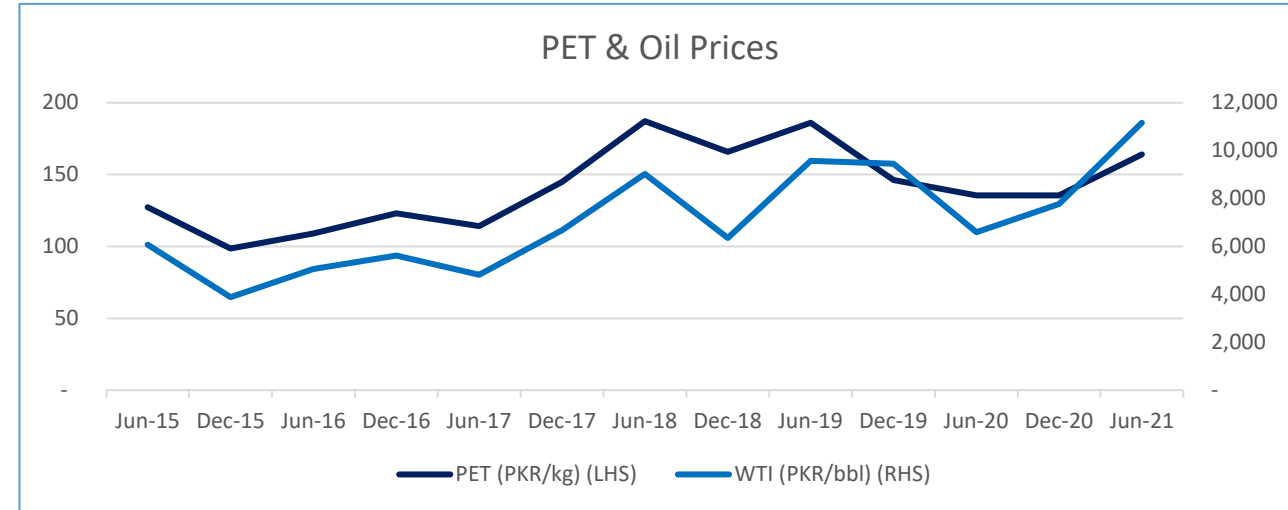


\*Cost break up and margins are representative of 6 listed companies.

# Paper & Packaging | Local Industry

## Raw Materials | Plastic

- One of the main raw materials in producing plastic bottles, films and other plastic packaging is PET Resin. It is produced from derivatives of crude oil and as seen in adjacent price graph, the prices of both follow a similar trend.
- Oil prices increased from USD~39/bbl at End-FY20 to USD~71/bbl at End-FY21, demonstrating a hike of 69%. This was majorly due to the strengthened demand and supply cuts by OPEC as the lockdown-related travel restrictions began to ease.
- The import of PET Resin increased from USD~27mIn (PKR~2,848mIn) in CY16 to USD~30mIn (PKR~4,860mIn) in CY20.
- Pakistan is almost entirely reliant on imports of PET Resin as there is only one major local supplier.

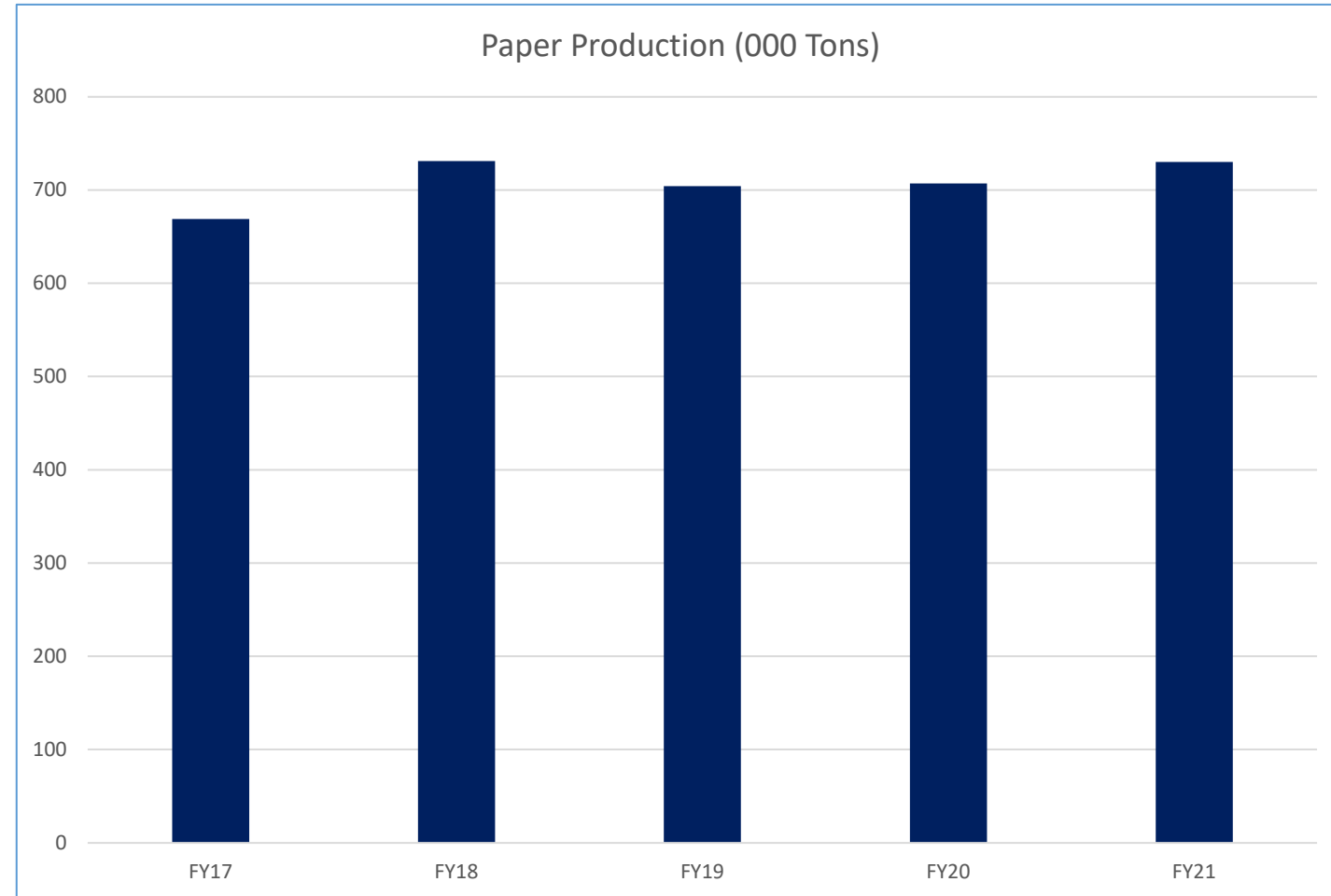




# Paper & Packaging | Local Industry

## Business Risk | Paper

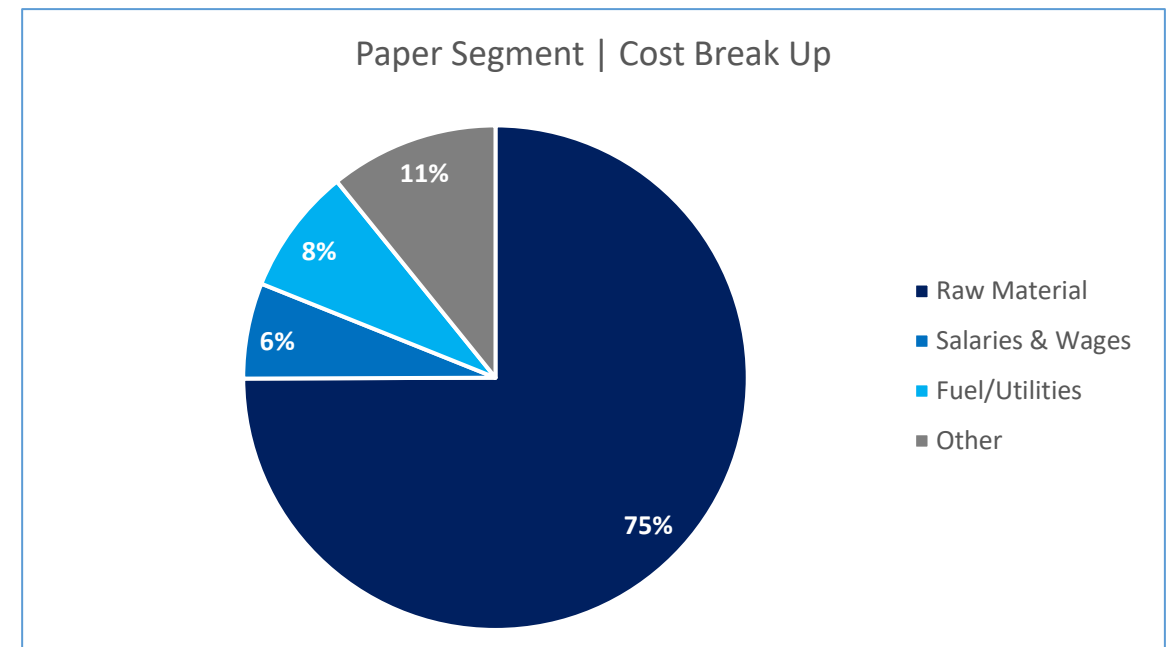
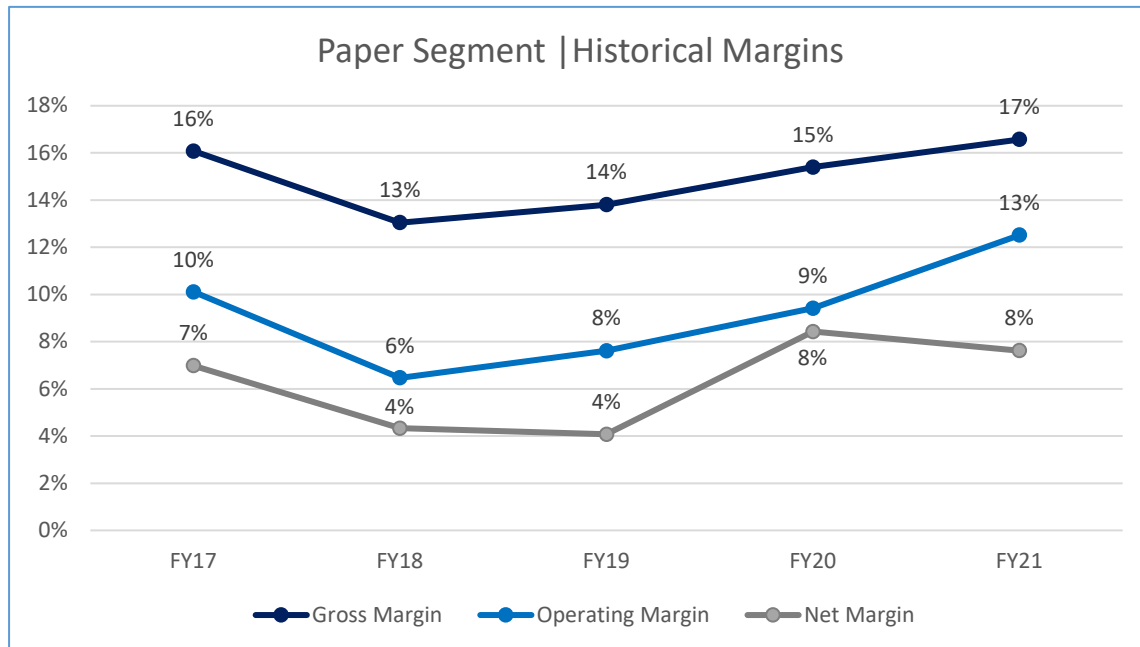
- The paper packaging segment has remained relatively stable in recent years. Despite the economic slowdown caused by the COVID-19 pandemic, demand for the segment remained almost consistent as it falls in the supply chain of various essential products and industries. Moreover, ban on plastic bags in the country has also helped the demand. Paper packaging market is forecasted to grow at a CAGR of 3.5% from FY20 to FY26.
- The adjacent graph shows production level of paper for the last five years which has experienced a CAGR of ~2% in the period. Moreover, consistent levels of production can be observed since FY18. This reflects on the stability of paper packaging segment as it makes up a significant portion of overall paper and board production.



# Paper & Packaging | Local Industry

## Margins & Cost Structure | Paper

- The segment’s direct costs consist largely of imported raw materials (~75%). Therefore, volatility in exchange rates and international price trends has an impact on costs.
- The average margins of the paper packaging industry have shown a positive trend since FY18, with average gross margins rising from 13% in FY18 to 17% in FY21. The growth in the latest year was due to the increasing demand of paper bags for cement packaging as the construction activities in the country resumed. The ban on plastic bags has also resulted in a demand shift towards paper bags. Moreover, reduction in interest rates has helped lift up the net margins.

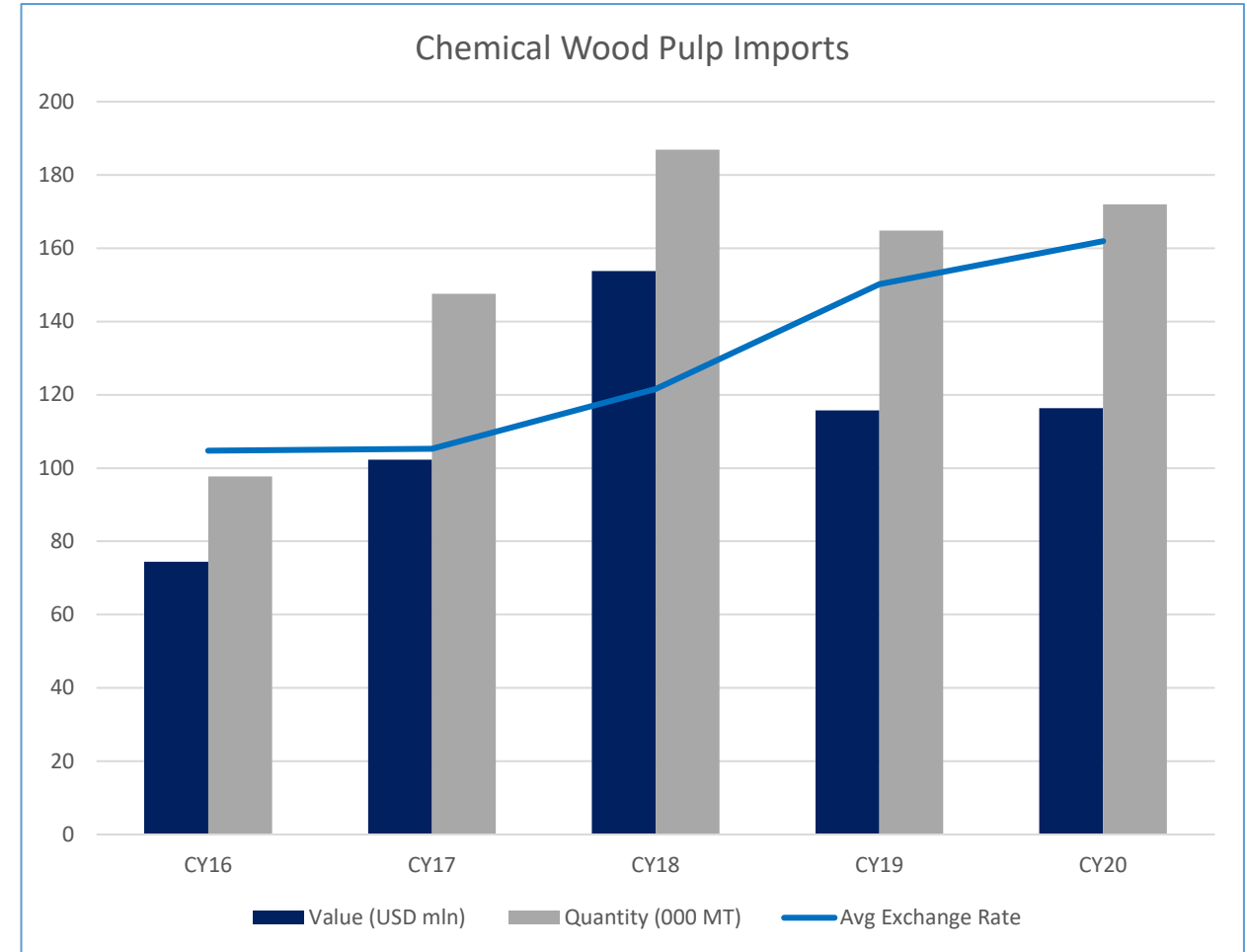


\*Cost break up and margins are representative of 5 listed companies.

# Paper & Packaging | Local Industry

## Raw Materials | Paper

- Chemical wood pulp is one of the main raw materials in production of paper packaging. The imports of wood pulp increased by a mere ~1% YoY in CY20. However, they showed a growth of 56% during a 5 year period from CY16 to CY20.
- USA, Chile and Brazil are the countries which have the largest share in wood pulp imports.
- In CY20, the average import price for wood pulp amounted to USD~524 per ton. Overall, the most notable rise in import prices during the last five years was seen from USA.

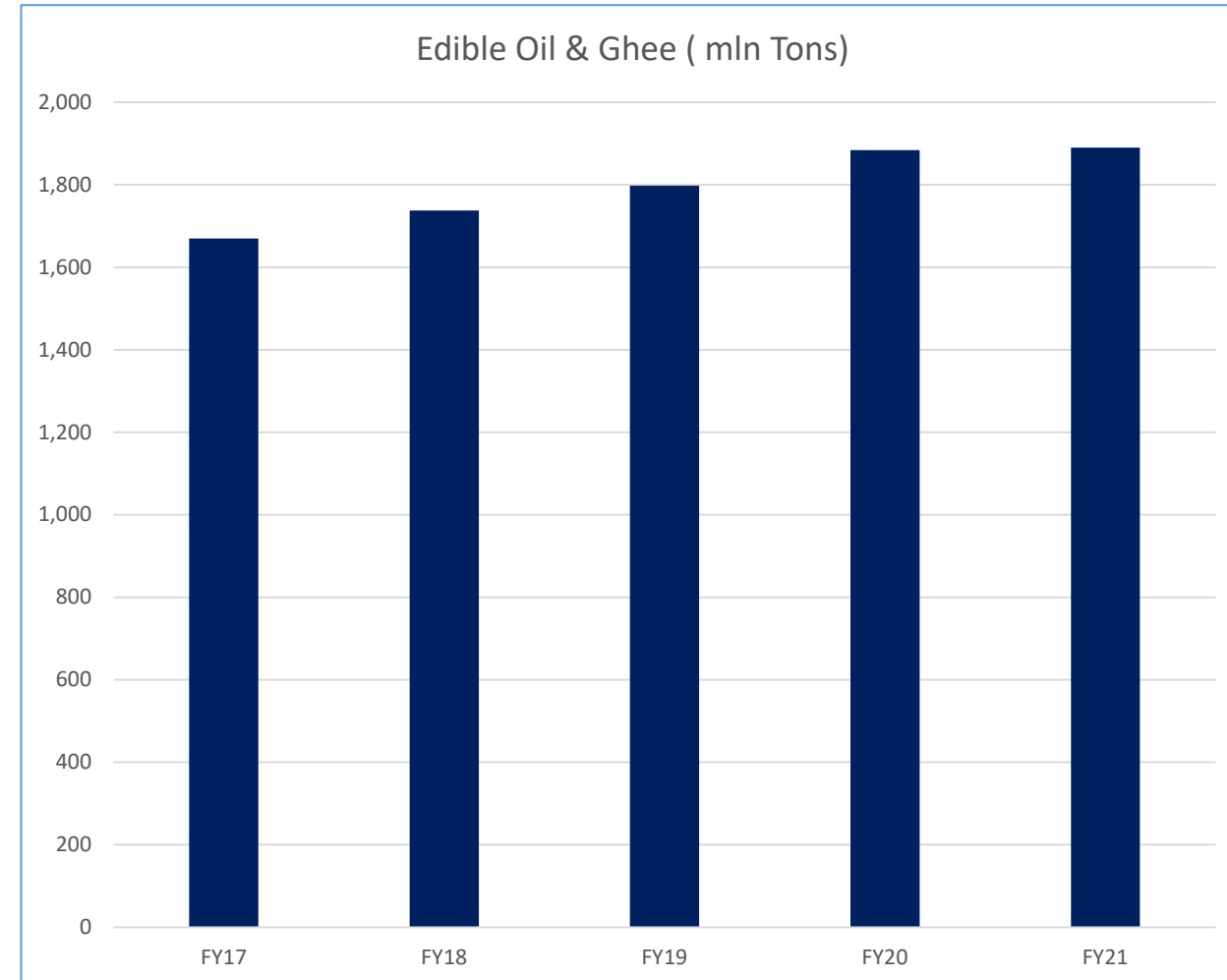




# Paper & Packaging | Local Industry

## Business Risk | Tinplate

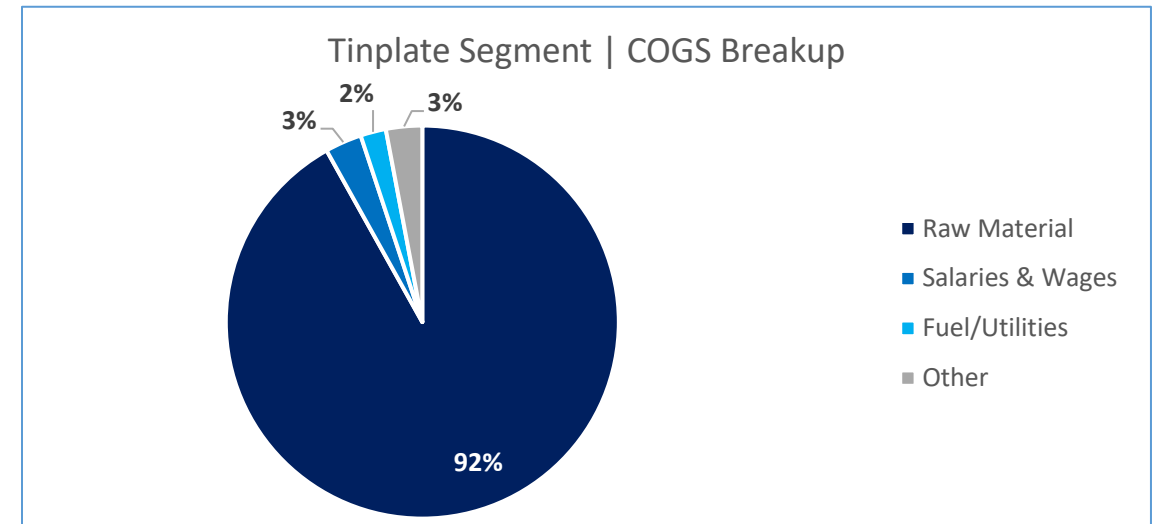
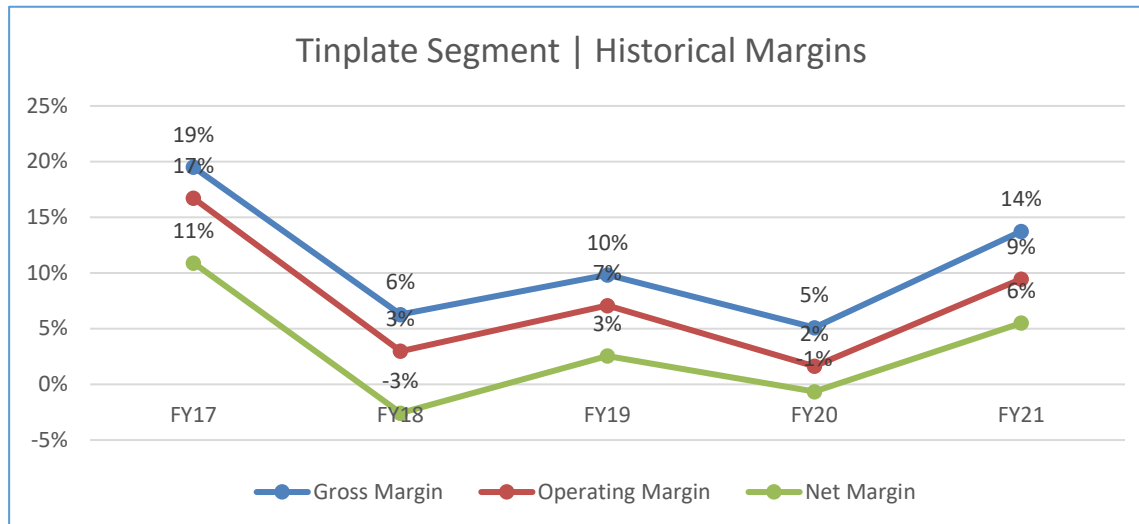
- One of the major sources of demand for the tinplate packaging segment is edible oil and ghee industries. The adjacent graph shows production levels of edible oil and ghee in the last five fiscal years. The production of edible oil and ghee has increased steadily over the period with a CAGR of ~3%.
- There is only one local tinplate manufacturer in Pakistan that faces stiff competition from import market. The government has imposed anti-dumping duty on the import of tinplates from China, South Africa, EU & USA which has provided some protection to local manufacturer.
- However, application of anti-dumping duty on the raw material, CRC, has further damaged competitiveness by increasing costs. Moreover, alternate sources of raw material are not reliable in terms of quality.



# Paper & Packaging | Local Industry

## Margins & Cost Structure | Tinplate

- Most of the tinplate segment's direct costs consist largely of imported raw materials. Therefore, volatility in exchange rates and international price trends of CRC has a significant impact on costs.
- The average margins of the segment have observed a volatile trend in the last five years, with average gross margins falling from ~19% in FY17 to ~14% in FY21. In addition, net margins fell from ~11% to ~6% during the five year period. This is attributable in large part to fluctuations in raw material prices as well as the imposition of anti-dumping duty on CRC imports in March'20.
- However, the gradual increase in demand for tinplate due to rising demand for edible oil and ghee because of the resumption of hoteling and outdoor activities provided relief in FY21 wherein average gross margins increased by a significant ~170% YoY. Lower interest rates also supported the bottom-line margins during FY21 that increased to ~6% from -1% in FY20.

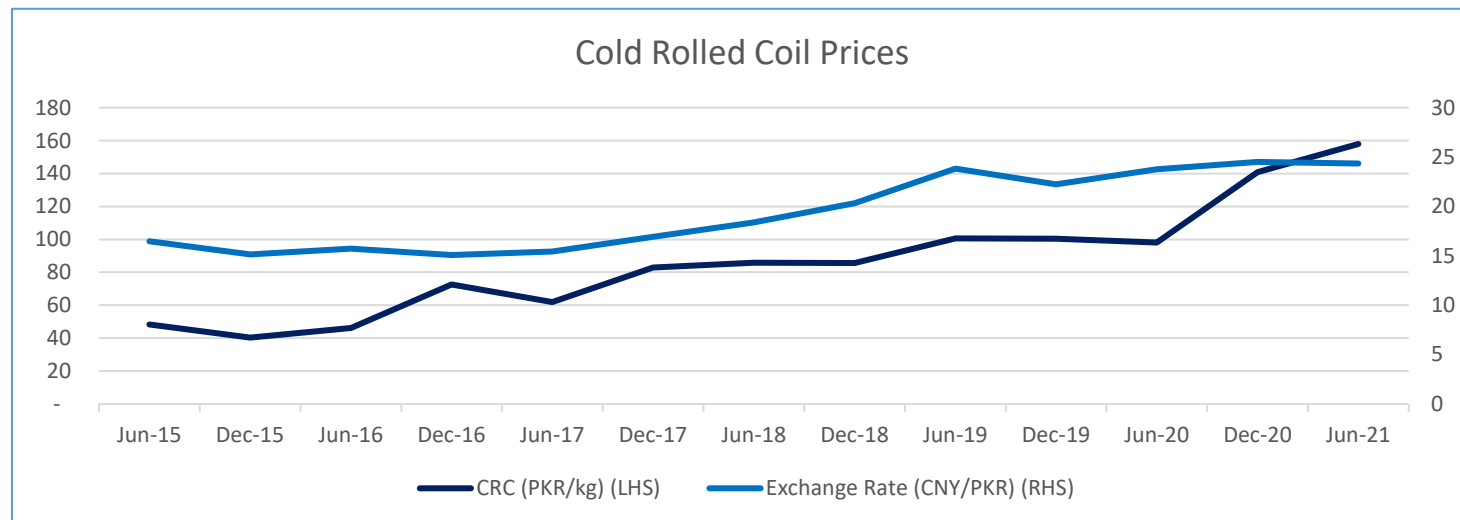
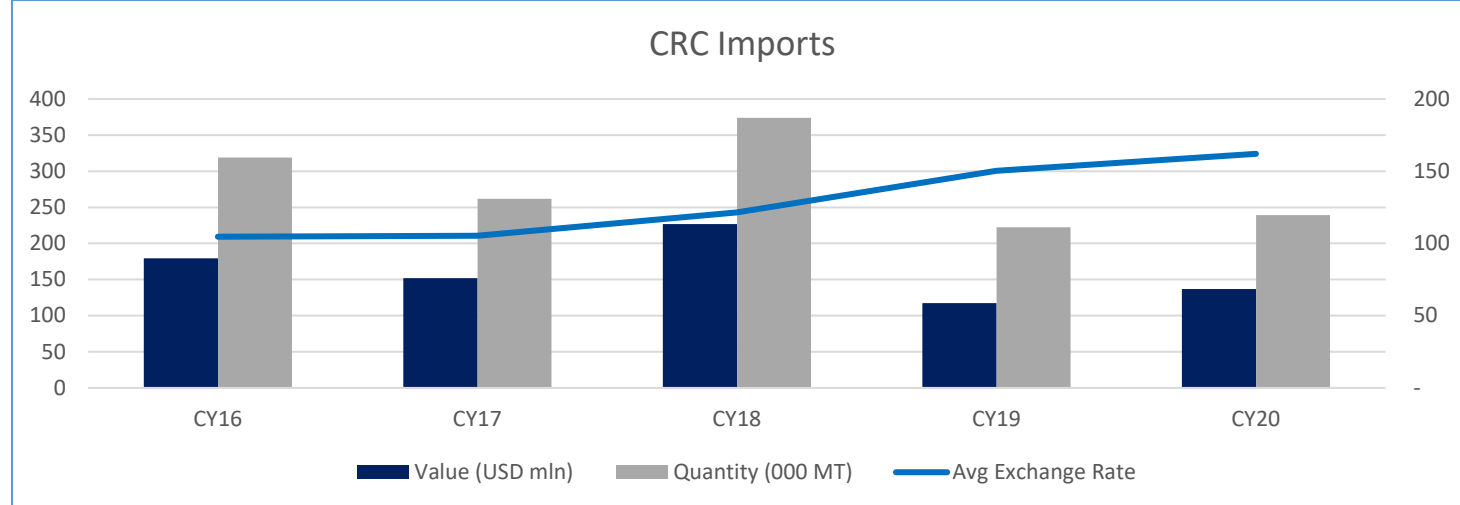


\*Cost break up and margins are representative of 1 listed Company.

# Paper & Packaging | Local Industry

## Raw Materials | Tinplate

- Cold-Rolled Coil (CRC) is a major raw material for tinplate packaging and is imported from countries such as South Korea, Russia and Canada. The prices of CRC have increased by ~155% in the previous five years. However, the majority of this increase is attributable to increase in exchange rate by ~58% in the same time period.
- The imports of CRC have been volatile in previous periods. During CY20, the imports grew by ~40% to USD~137mIn (PKR~22,186mIn) from USD~117mIn (PKR~17,611mIn) in CY19.
- The National Tariff Commission has imposed anti-dumping duty on CRC imports from Canada and Russia of 13.49%. Anti-dumping duty was already applicable on imports from China.





# Paper & Packaging | Local Industry

## Duty & Sales Tax Structure

- Despite the existence of a large number of players, the packaging industry does not have an industry association to represent and lobby in favor of its interests. However, some segments have their own associations such as the Flexible Packaging Association of Converters of Pakistan and Pakistan Plastic Manufacturers Association.
- The government is providing protection to local manufacturers through the imposition of significant customs and regulatory duties on the import of finished packaging goods. With respect to income tax, the industry is under Normal Tax Regime (NTR). Further, minimum tax @1.5% of turnover is applicable if tax liability under NTR is lower than minimum tax. However, the additional tax paid under minimum tax is adjustable against future tax liabilities for next 5 years. In addition, sales tax of 17% is also applicable.

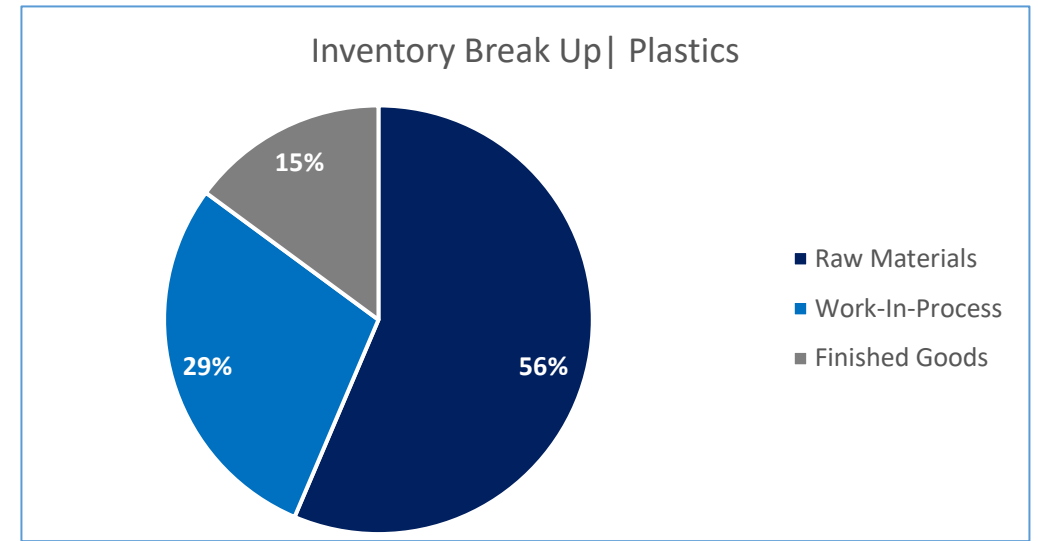
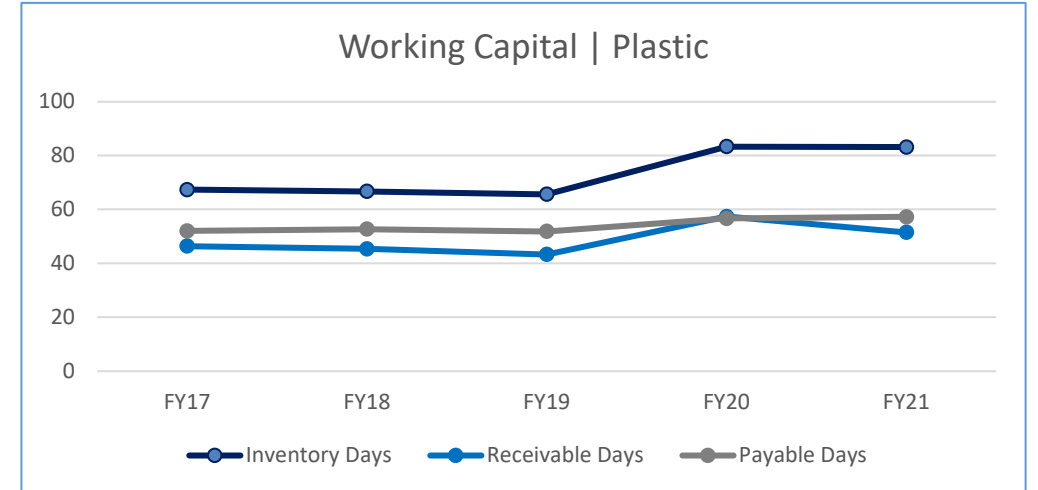
PCT Code	Description	Additional Custom Duty		Custom Duty		Regulatory Duty		Total	
		FY21	FY20	FY21	FY20	FY21	FY20	FY21	FY20
<b>Raw Materials</b>									
72.09	Flat- rolled products of iron or non- alloy steel, of a width of 600 mm or more, cold- rolled (cold- reduced), not clad, plated or coated.	2-7%	2-7%	11-20%	11-20%	5%	5%	18-32%	18-32%
39.01	Polymers of ethylene, in primary forms	2%	2%	11%	11%	0%	0%	13%	13%
47.01-47.05	Wood Pulp (Mechanical, Chemical & Other)	2%	2%	0%	0%	0%	0%	2%	2%
<b>Finished Goods</b>									
48.19	Cartons, boxes, cases, bags and other packing containers, of paper, paperboard	7%	7%	20%	20%	0%	0%	27%	27%
39.23	Articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics.	7%	7%	20%	20%	15%	15%	42%	42%
3923.901	Preforms made from polyethylene terephthalate	4%	4%	16%	16%	15%	15%	35%	35%
8007.001	TinPlates, Sheets or Strips	2%	2%	3%	11%	0%	0%	5%	13%



# Paper & Packaging | Local Industry

## Financial Risk | Working Capital | Plastic

- The plastic packaging segment’s overall working capital cycle has remained relatively stable in previous three years. However, there has been an overall decrease in its net working capital days which clocked in at 77 days at the end of FY21 as compared to 84 days at the end of FY20.
- This is due to the resumption of business activities in most industries after the lockdown was lifted that led to a rise in demand for the plastic packaging segments specially those which cater to non-essential products.
- Working capital is partially financed through short term borrowings which constitutes 49% of the industry’s borrowing mix.
- The segment’s average inventory break up shows that ~56% of total inventory is attributable to raw materials, while ~29% consists of work-in-process inventory and ~15% is finished goods inventory.



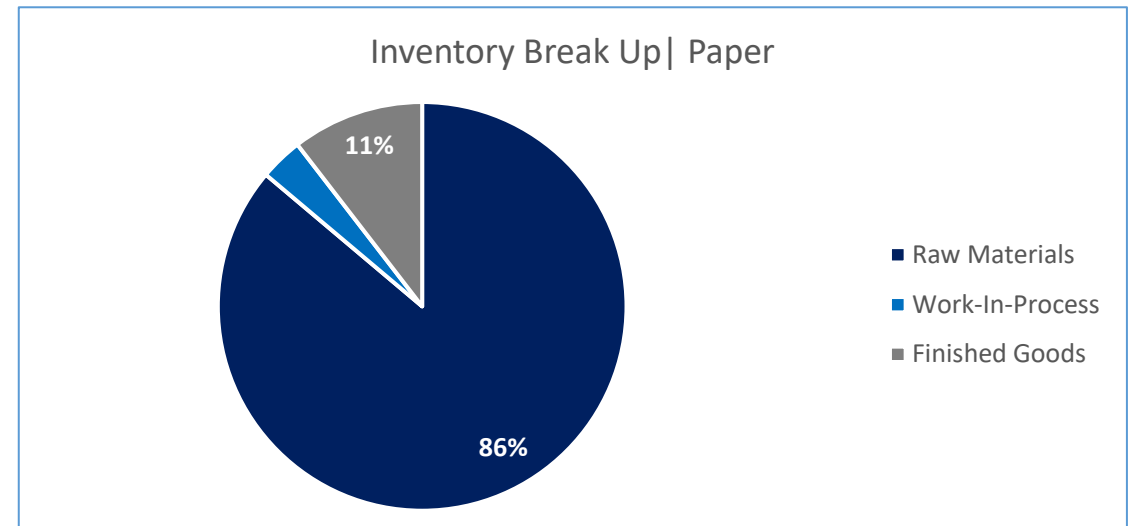
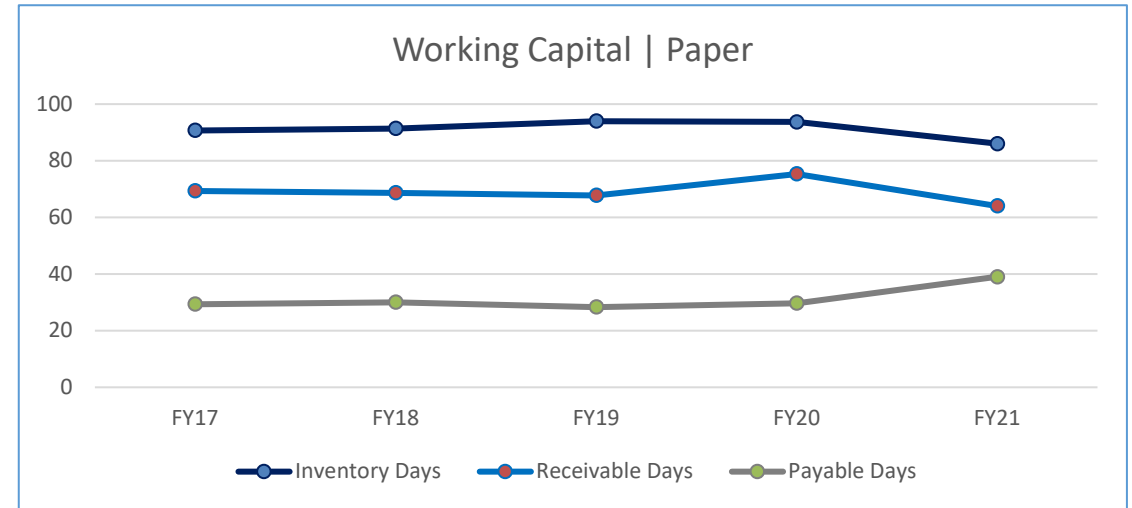
\*Working capital cycle and inventory breakup are representative of 6 listed companies



# Paper & Packaging | Local Industry

## Financial Risk | Working Capital | Paper

- The paper packaging segment has also observed a decrease in its working capital cycle with net working capital days clocking in at 111 days at the end of FY21 as compared to 139 days at the end of FY20.
- The general slowdown in economic activity during COVID-19 lockdown period had a limited impact as the segments cater to many essential items whose demand was not impacted.
- Working capital is partially financed through short term borrowings which constitutes 49% of the industry's borrowing mix.
- The industry's average inventory break up shows that ~86% of total inventory is attributable to raw materials, while ~11% consists of finished goods and only ~3% is work-in-process inventory.



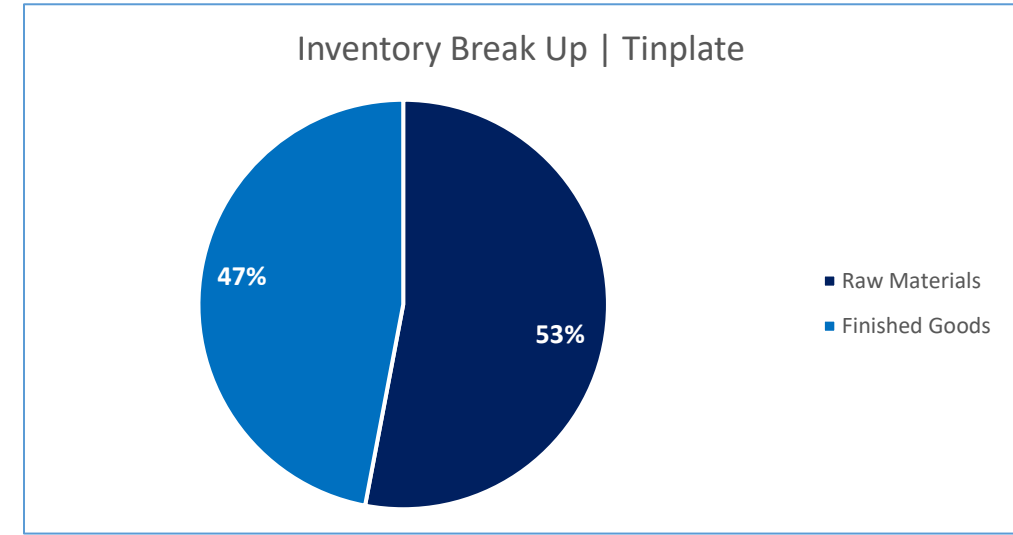
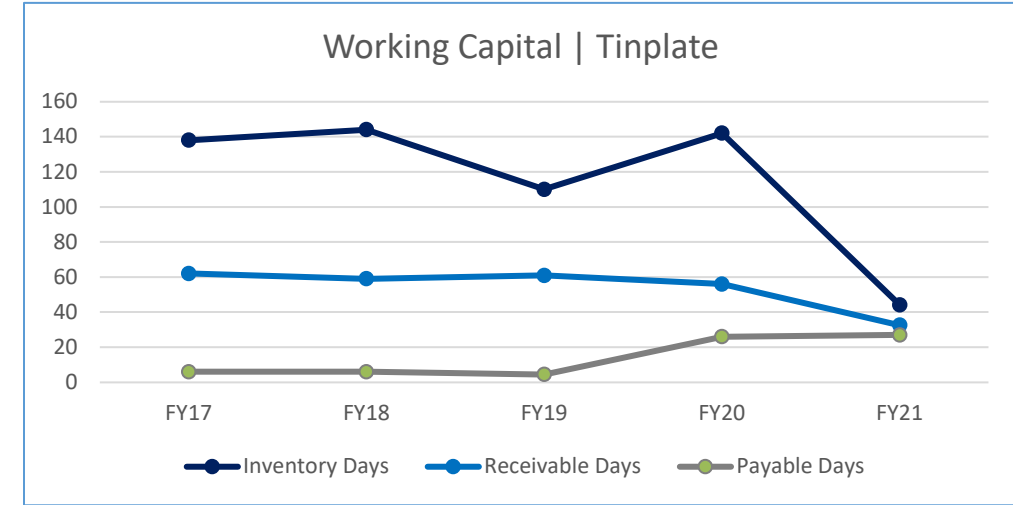
*\*Working capital cycle and inventory breakup are representative of 5 listed companies*



# Paper & Packaging | Local Industry

## Financial Risk | Working Capital | Tinplate

- The tinplate packaging segment has observed a slight increase in its working capital cycle with net working capital days clocking in at 176 days at the end of FY21 as compared to 172 days at the end of FY20.
- The working capital cycle is comparatively larger than other segments as inventory is ordered and stored in bulk.
- There is a brief process through which raw material is converted into finished goods. As a result, there is no work-in-process inventory maintained. A majority of the inventory, ~47%, is stored as finished goods while the share of raw material is ~53%.
- Working capital is partially financed through short term borrowings which constitutes 49% of the industry’s borrowing mix.

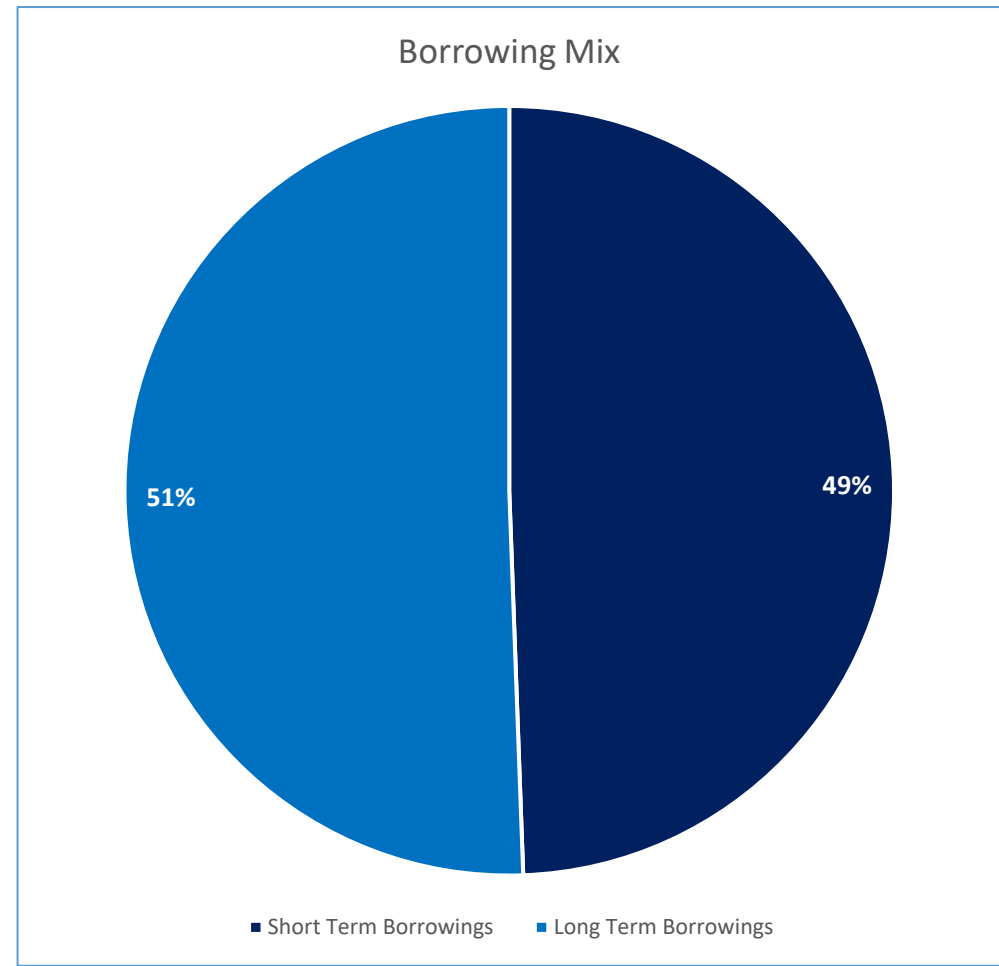


\*Working capital cycle and inventory breakup is representative of 1 listed company representing ~30% market share.

# Paper & Packaging | Local Industry

## Financial Risk | Borrowings

- Overall, the packaging industry has moderate leveraging, with total borrowings standing at ~34% of total capital (debt + equity).
- **Plastic:** The total borrowing of plastic industry stood at PKR~37,064mln as at End-Sep'21 as compared to PKR~32,244mln as at End-Sep'20. This was a YoY increase of ~15%.
- **Paper:** Similarly, the total borrowing of paper industry stood at PKR~61,298mln as at End-Sep'21 as compared to PKR~47,317mln as at End-Sep'20, showing a YoY increase of ~30% .
- The industry's average borrowing mix consists largely of long term borrowing which accounts for ~51% of total borrowing, while the remaining ~49% is short term borrowing.



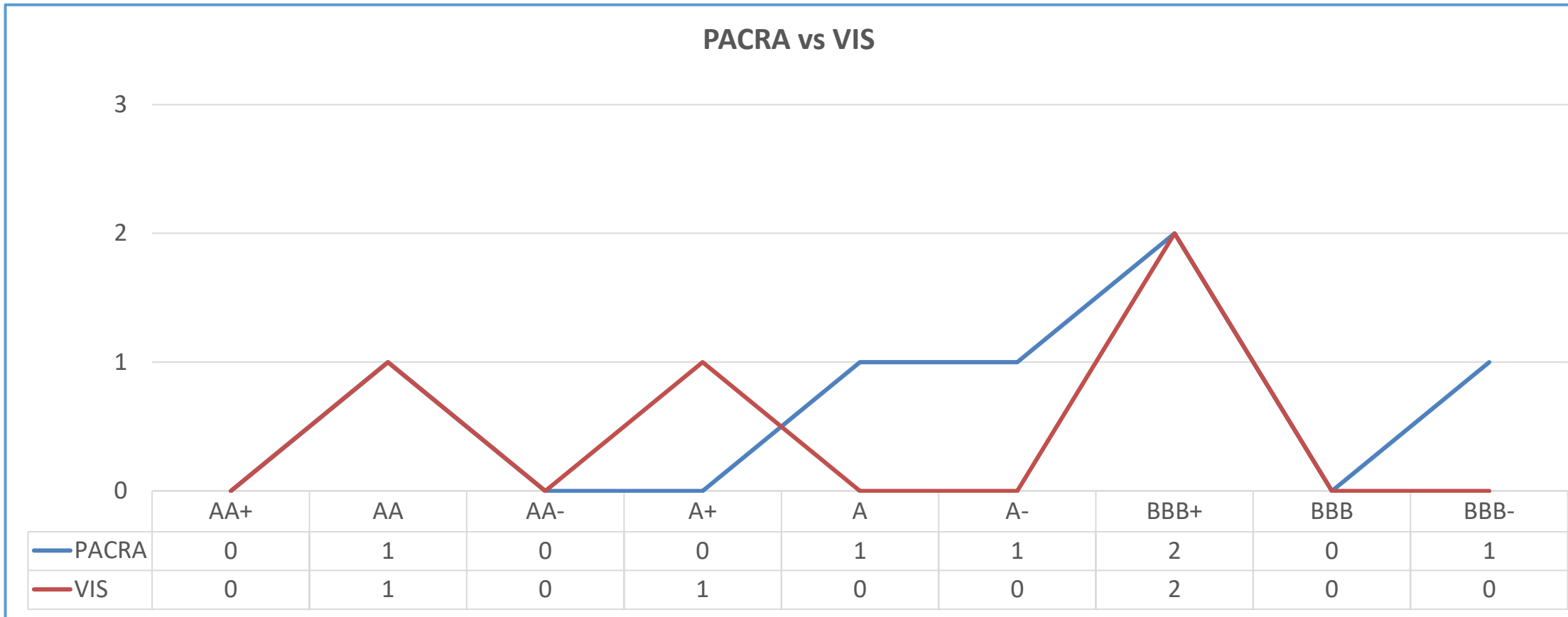
\*Average leveraging and borrowing mix figures are representative of 11 listed companies.

\*\*The total borrowing figures are obtained from SBP's banking statistics for credit classified by borrower.

## Rating Curve

- PACRA rates 6 entities ranging from the BBB- category to the AA category.

PACRA vs VIS





## SWOT Analysis

- Highly diversified product mix.
- Government support for local manufacturers in the form of import duties.
- Availability of low cost labor.
- Increasing trend of urbanization, consumerism and e-commerce

- Increase in exchange rate and volatility of imported raw material prices.
- Increasing awareness regarding harmful environmental impacts of plastic packaging.



- Absence of an industry association for the overall packaging industry.
- Decline in per capita income and high level of inflation, thus reduced purchasing power of end consumers.

- Conversion from glass to PET bottles in the beverage industry.
- Opportunity for innovation in order to move towards more environmentally friendly packaging solutions.

## Plastic

### Outlook: Stable

- Demand has suffered, specifically from beverage industry and other non-essential products. However, recovery is on track as the business activities have begun to resume.
- The plastic packaging segment may face some challenges, going forward, as consumers are increasingly more aware of the harmful environmental impact of plastics and are moving towards more sustainable alternatives.
- In addition, the government has already implemented a ban on single use plastic bags. As a result, the industry may require more innovation and adoption of environmentally friendly practices and products.

## Paper

### Outlook: Stable

- Demand from essential industries and products has remained consistent.
- Margins are expected to remain intact. The recent increase in interest rates is expected to impact the bottom-line margins to some extent.
- Wood pulp prices have shown an increasing trend in the past few months but are expected to be stabilized in the near future.
- Overall, the sector is expected to grow due to the increasing trend of online shopping and packaged goods.

## Tinplate

### Outlook: Negative

- In FY21, the production of Cooking Oil and ghee was 0.31% above production levels in FY20, indicating stable demand.
- However, recently imposed anti-dumping duty on CRC will make it harder for the local manufacturer to compete with imports.
- Additionally, despite the fact that anti-dumping duty is also imposed on tinplate, the duty on imports from China is too low to effectively discourage imports. Moreover, it is not sufficient to provide local manufacturer any cost advantage.



- Pakistan Bureau of Statistics (PBS)
- Pakistan Stock Exchange (PSX)
- State Bank of Pakistan (SBP)
- Federal Board of Revenue (FBR)
- National Tariff Commission
- Investing.com
- Sunsirs.com/uk
- Trade Map
- <https://www.globenewswire.com/news-release/2020/05/12/2031745/0/en/1-Billion-Global-Packaging-Industry-to-2021-Growing-Demand-for-FMCG-and-Pharmaceutical-Packaging-Presents-Opportunities.html>
- [https://www.packagingstrategies.com/articles/96035-packaging-market-outlook?oly\\_enc\\_id=1361D3081434D1F](https://www.packagingstrategies.com/articles/96035-packaging-market-outlook?oly_enc_id=1361D3081434D1F)
- <https://packagingschool.com/wp-content/uploads/2021/03/Global-Packaging-Industry.pdf>
- PACRA database

<b>Research Team</b>	<b>Saniya Tauseef</b> <i>Asst. Manager</i> <a href="mailto:saniya.tauseef@pacra.com">saniya.tauseef@pacra.com</a>	<b>Momina Rehman</b> <i>Associate Analyst</i> <a href="mailto:momina.rehman@pacra.com">momina.rehman@pacra.com</a>
<b>Contact Number: +92 42 35869504</b>		

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