



Polyester

An Overview

TABLE OF CONTENTS



Contents	Page No.	Contents	Page No.
Introduction	1	Duties & Taxes	13
Production Process	2	Recycles PSF	14
Global Industry Overview	3	Financial Risk	15
Local Industry Overview	4	Rating Curve	17
Demand	6	SWOT Analysis	18
Supply	8	Outlook	19
Capacities	9	Bibliography	20
Business Risk	10		
Turnover & Margins	12		

- **What is Polyester?** Polyester is a generalized term for any fabric or textile, which is made using polyester yarns or fibers. It is a shortened name for a synthetic, man-made polymer, most commonly made from polyethylene terephthalate (PET). It is made by mixing ethylene glycol and terephthalic acid.
- Polyester is made through either naturally occurring chemicals (cutin of plant cuticles) or synthetic chemicals (polybutyrate). Natural polyesters and a few synthetic ones are biodegradable but most synthetic polyesters are not.
- **Uses:** Polyesters are extensively used in apparel and home furnishing like garments, bedsheets, blankets, pillows, computer mouse mats and upholstered furniture. Moreover, Industrial polyester fibers and yarn are used in a wide variety of sectors for multi-purposes such as car tyre reinforcements, conveyer belts and safety belts. Polyesters are also used to make bottles, tarpaulin, films, wire insulation and insulating tapes. They can be used separately as well as spun together with natural fibers to produce cloths with blended properties.

**Garments
(coats,
jackets,
pants)**

Sportswear

Footwear

**Bedding,
sheets,
sleeping
bags**

**Bottles,
insulating
tapes,
safety
belts.**



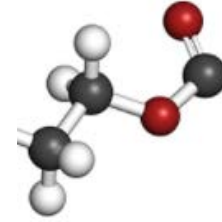
POLYESTER | INTRODUCTION

Production Process



1. Creating a Monomer

The process begins with reacting ethylene glycol with dimethyl terephthalate at high heat, resulting in a monomer.



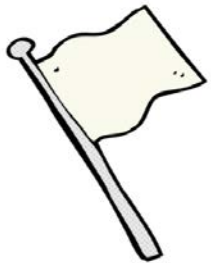
2. Creating a Polymer

The monomer is then reacted again with dimethyl terephthalate to create a polymer.



3. Extruding

The molten polyester polymer is then extruded into long strips which are cooled and dried and then are broken apart into small pieces.



5. Finishing

The resulting fibers/filaments are either cut or reacted with other chemicals to achieve the desired type of end result.



4. Spinning

The resulting small pieces/chips are then melted again to create a honey-like substance, which is extruded through a spinneret to create fibers.

Overview

- The global polyester market was recorded at USD~104bln in CY20 (USD~110bln in CY19, a drop of ~5% YoY) owing to the Covid-19 pandemic. The polyester market is further divided into segments based on the product types, grade types and use of the polyester.
- There are two major product types in the polyester industry; one derived from solid fibers and the others made from hollow fibers. Solid fibers are gaining popularity over hollow fibers and are expected to retain the major market share in the days to come due to their moist resistant and durable properties.
- With reference to grade/varieties, polyester fibers are available in two varieties – PET and PCDT. PET is the most common production. It is stronger than PCDT, while PCDT has more elasticity and resilience. Gradually, PET has become the world's first choice in the packaging sector and more than half of the world's synthetic fiber and bottles demand is fulfilled by PET plastics.
- Based on Application/Use, the textile Sector dominates the market share of polyester demand and is expected to continue the same trend. The textile Industry has been consuming increasing amounts of polyesters throughout the textile chain including weaving, dyeing, composite, etc.
- Geographically, the Asia-pacific is considered the leading market for polyester demand due to increasing use in textile, home furnishing and in industrial fabrics. China possesses the highest market share in the Asia-pacific region.

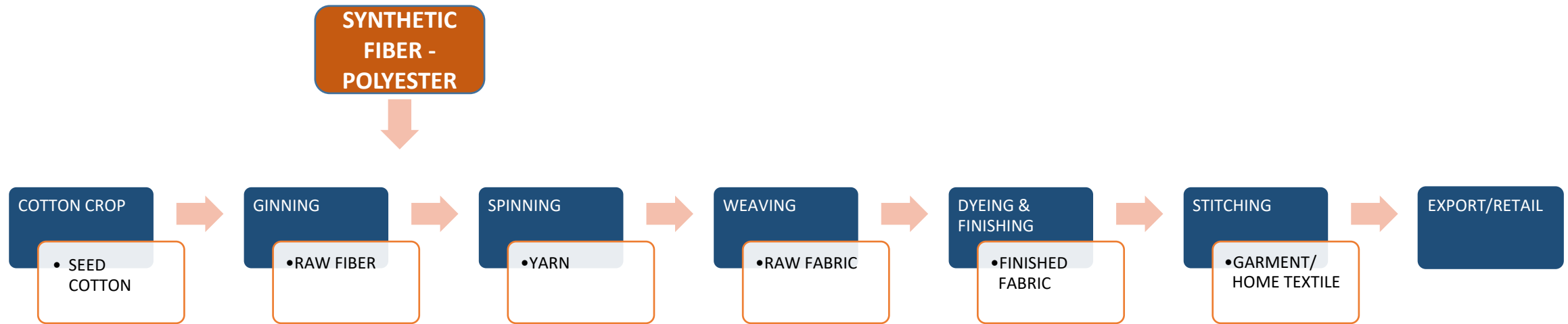
Overview

- Pakistan's polyester Industry was recorded at PKR~76bln in FY20 (PKR~99bln in FY19), a significant decline of ~23% YoY, owing to slowdown in demand from textile and PET bottling Industry amid the outspread of Covid-19 pandemic.
- In volumetric terms, the demand for polyester fibers fell by ~22% during FY20, almost aligned to the fall in value terms, depicting that price variations have not cast any major impact on the market size during the Covid-19 pandemic spread.
- The structure of the Sector is Organized and Listed. The Sector is dominated by three (3) players capturing almost the entire share of the Local Sales in the Sector.
- In terms of product market segments, Textile Sector occupies the largest share of the polyester demand as polyester has now become the most dominant man-made fabric.
- Lately, with a gradual reduction in cotton production coupled with its increasing price trend, a room for energizing the demand for polyester segment is created.

Snapshot	FY19	FY20
Revenue (PKR bln)	98,850	75,923
Contribution to GDP	0.3%	0.2%
Annual Demand (tons)	535,810	417,932
Local Sales	86%	86%
Import	14%	14%
Structure	Organized & Listed	
Sector Players	3	3
Installed Capacity p.a (tons)	536,575	534,950
Utilized Capacity	86%	66%
Association	All Pakistan Textile Mills Association	

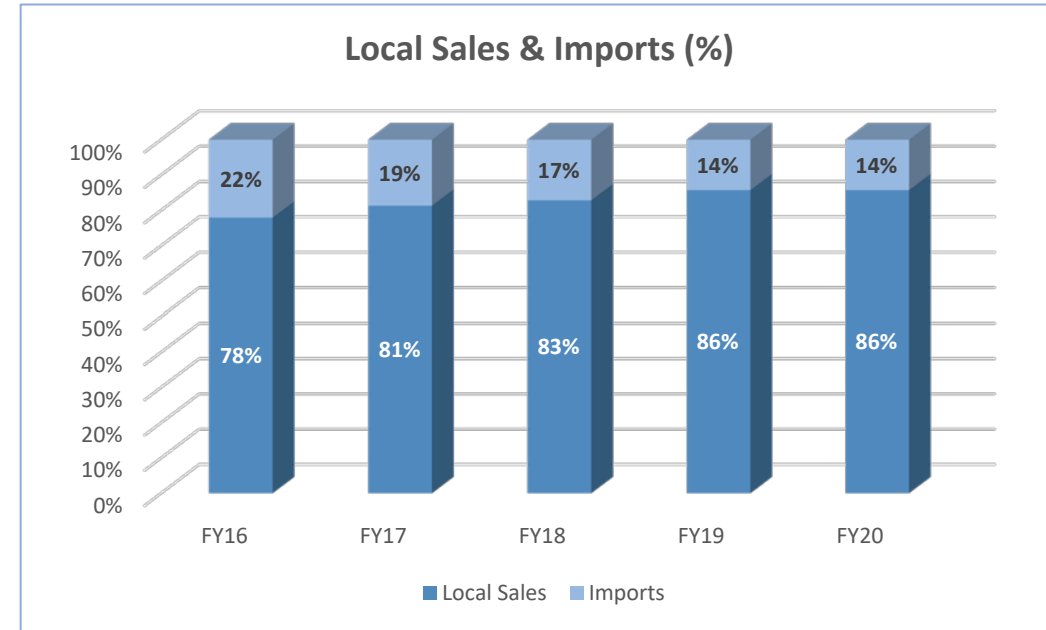
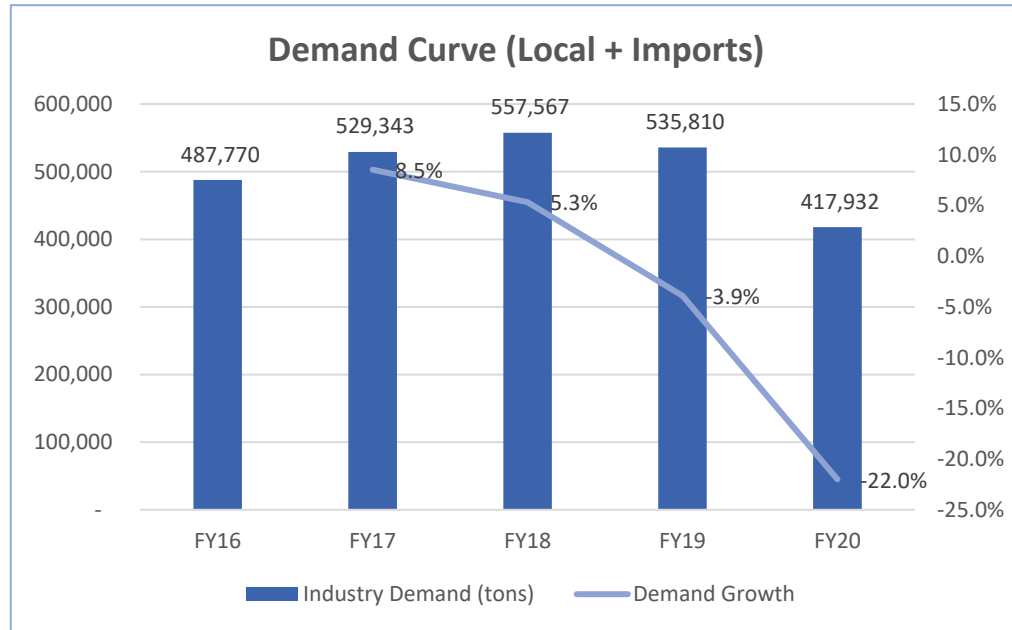
POLYESTER | LOCAL INDUSTRY

- Pakistan produces natural as well as man-made fibers. Natural fibers include cotton, wool and silk among which cotton is the most common textile fiber. In synthetic/man-made fibers, polyester is the main fiber. Other man-made fibers include Viscose Rayon and Acrylic Staple Fibers which are produced on a limited scale.
- Over **~70%** of the Polyester Staple Fiber (PSF) is supplied to the textile value chain, i.e., the spinning sector, as illustrated below. The remaining PSF is majorly supplied to the PET packaging Industry used in making plastic bottles. The mix of natural and synthetic fibers varies depending on the type of yarn produced. For instance, fabric type S/J is produced through a mix of ~52% polyester and ~48% cotton, while fleece is composed of ~66% cotton and ~34% polyester. On the other hand, the loopback fabric is a mixture of ~30% cotton, ~31% polyester and ~30% Linen.



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Demand



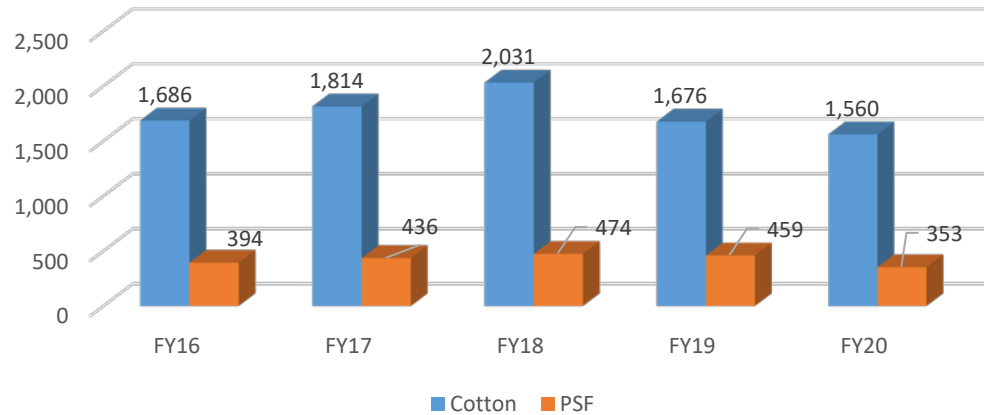
- Pakistan’s polyester demand took a steep dip in FY20 owing to a halt in business activities and reduced demand from the textile Sector. Total demand registered a free fall of ~22% YoY, clocking in at ~418k tons in FY20 (~536k tons in FY19), the lowest volumes recorded in last five years.
- The Country’s demand is majorly met through local sales while some portion is catered through imports. Over the recent years, imports have gradually contracted from ~22% in FY16 to ~14% in FY20, though not completely substituted by the local market.
- Polyester, being the main synthetic fiber, has a broad potential to grow. Decline in cotton production, polyester’s durability, insulating properties and recyclability are a few of the many factors that create potential growth opportunities for the Sector.



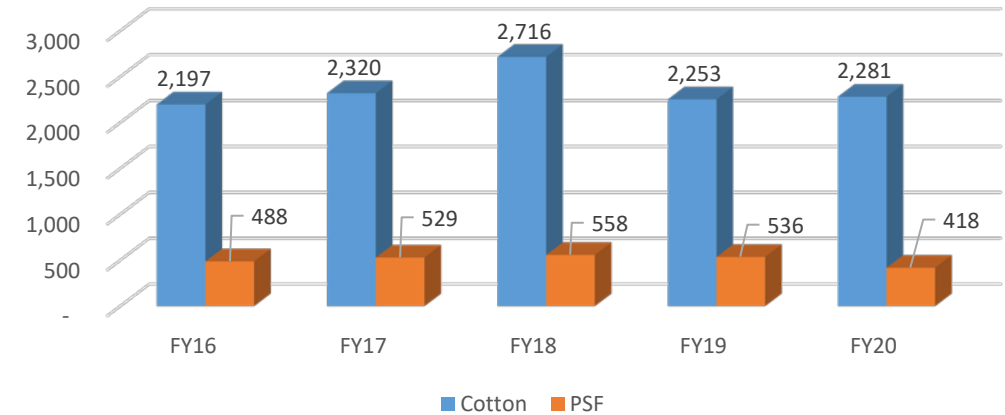
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Demand | A Comparison with Cotton

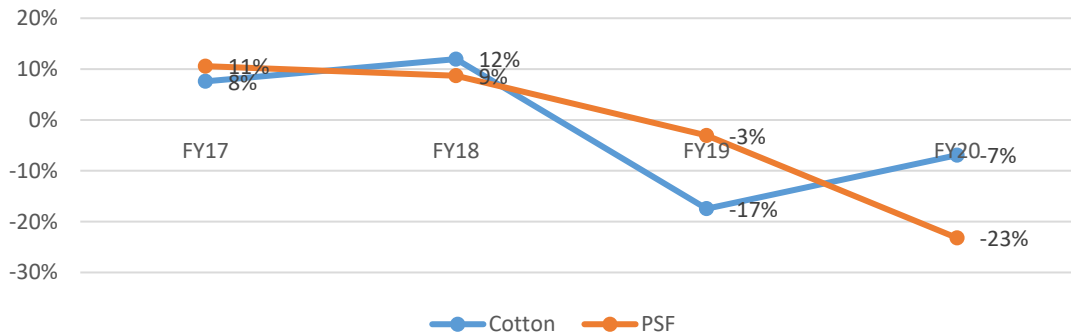
Cotton Vs PSF | Production (000 tons)



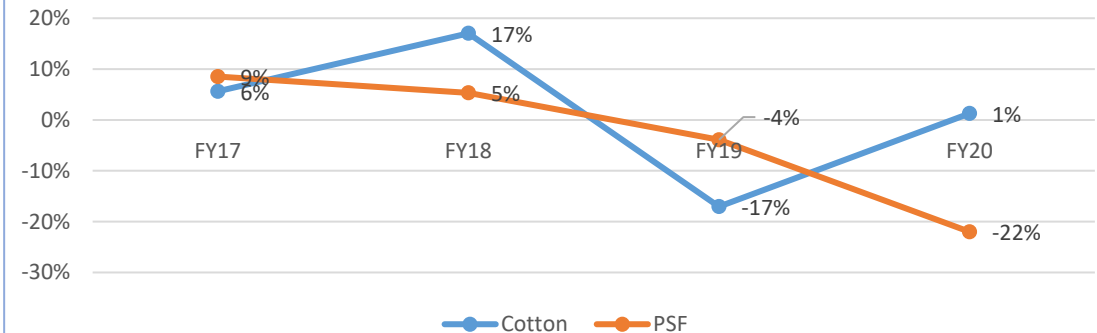
Cotton Vs PSF | Demand (000 tons)



Production Curve | Cotton Vs PSF



Demand Curve | Cotton Vs PSF





Major Raw Materials for PSF

Purified Terephthalic Acid (PTA): PTA is an organic compound majorly used in the development of polyester resins, polyester fiber & yarn, and PET material bottles.

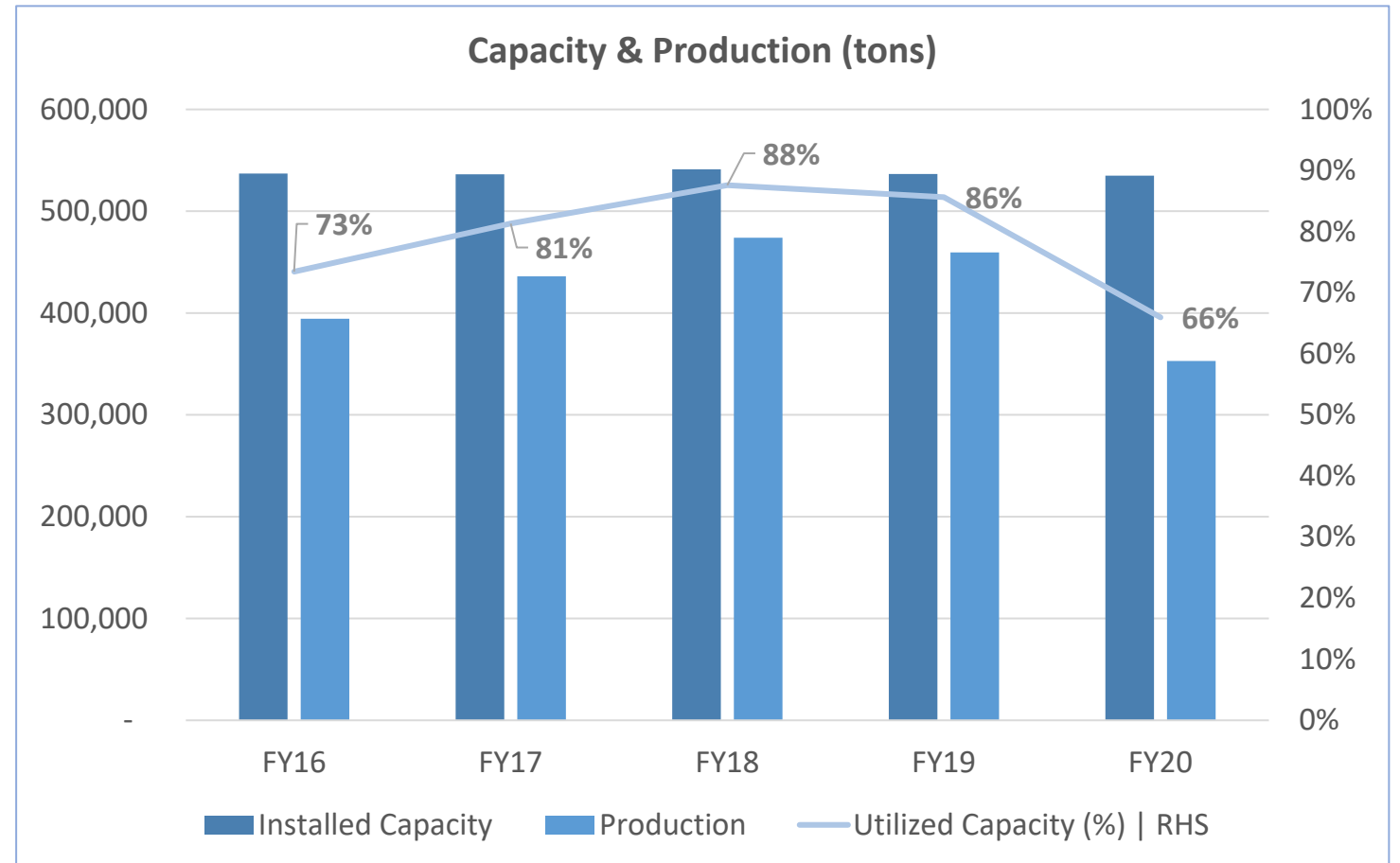
Monoethylene Glycol (MEG): Belonging to the petrochemical family, MEG is an odorless, colorless, syrupy liquid used as a raw material for polyester and PET polymer. It is used in home textiles, food/drink containers, clothing, medical textile and others. It is majorly imported in Pakistan.

rPSF: Recycles PET/Polyester waste or recycled consumed PET bottle flakes is regenerated into Polyester Stable Fiber. This market is relatively new in Pakistan, however, is growing at a fast pace. Globally, the rPSF technique has already captured a significant market segment.

- Raw Material cost is the key component of the Sector's cost structure, therefore, is essential in determining the output price and margins of the Sector.
- PTA is majorly procured locally through its sole supplier, Lotte Chemicals Pakistan Limited, while some portion of it is imported too. Oil is a major resource for the production of PTA, therefore, PSF price is also subject to variations in oil prices.
- MEG is entirely imported. The highest share of imports comes from China followed by Middle East.
- rPSF is a recycled product. It is sold at a discount of almost ~25% of the PSF price. rPSF is a relatively new technique which has been adopted by International brands and gradually penetrating in Pakistan market.

Capacities

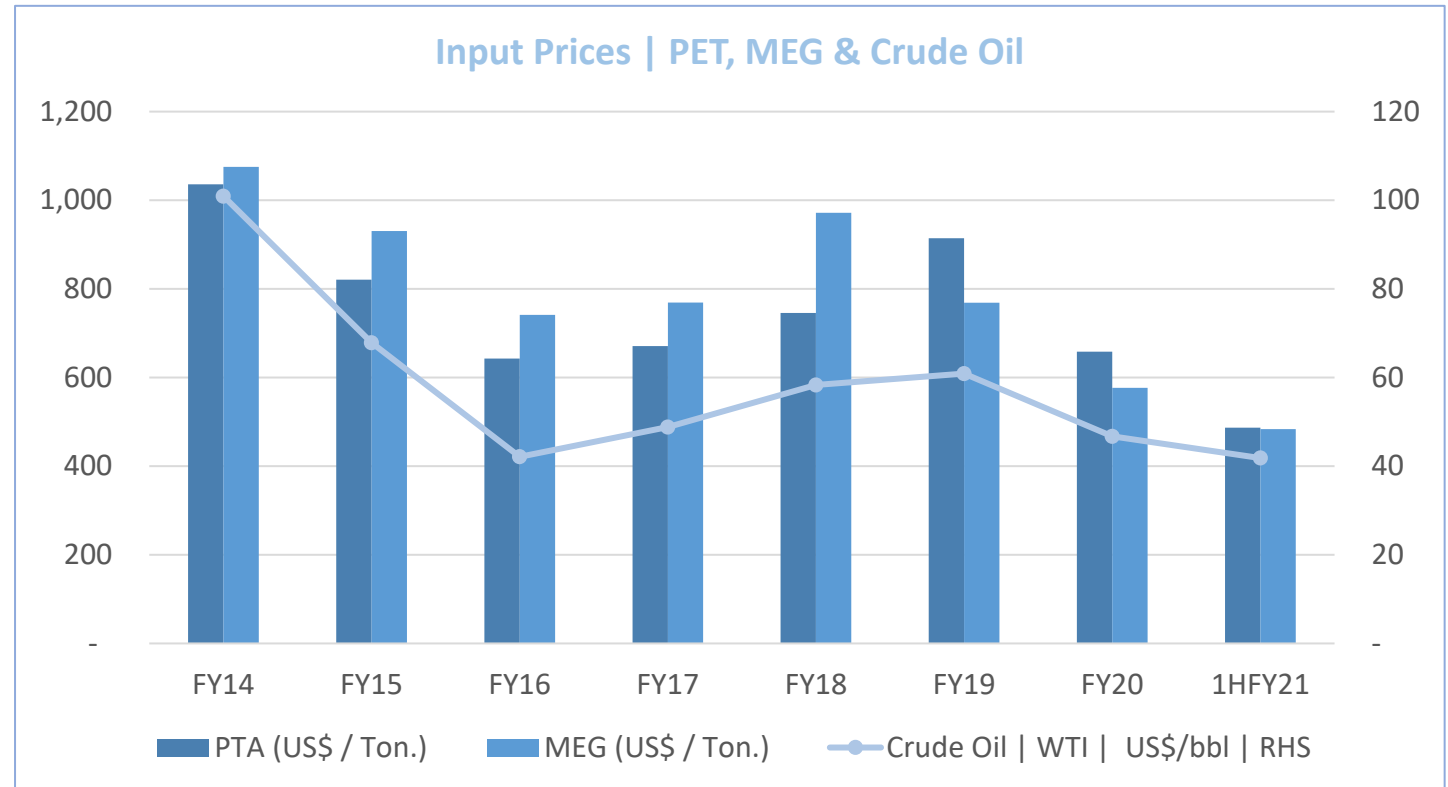
- The Sector's total Installed Capacity was recorded at ~535k tons in FY20 (~537k tons in FY19). Actual production dropped to ~66% in FY20 (~86% in FY19) owing to reduced demand on account of Covid-19 induced economic slowdown.
- The Sector's utilization levels have historically remained below ~90%, despite the total installed capacity being largely able to cater the overall demand.



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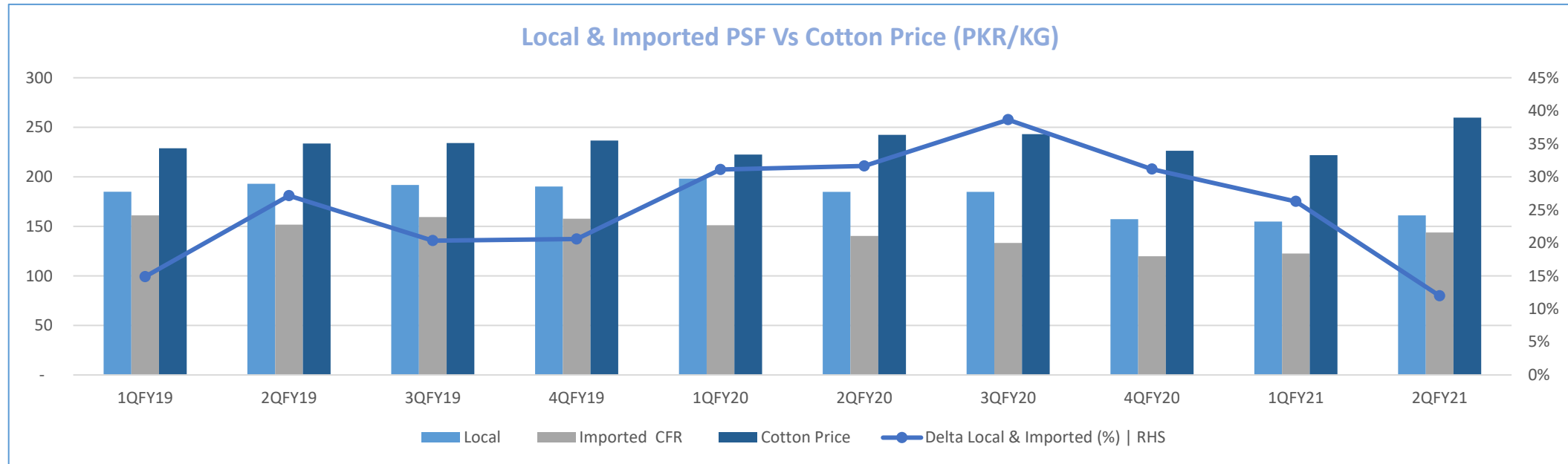
Business Risk – Input Prices

- Raw material costs are the major components of the total manufacturing costs of PSF.
- The price of PTA is subject to variations in oil prices, while MEG, which is entirely imported, is exposed to exchange rate volatility.
- It can be witnessed that the price trend of PTA and MEG reflects the same pattern as of oil price.
- Amid Covid-19 pandemic, the price of PTA stooped by around ~23% in May'20 (MoM basis) from USD~600/ton in Apr'20 to USD~463/ton in May'20. Since then, the price has shown a sluggish recovery of just ~5% and is still way behind the pre-pandemic levels.
- Meanwhile, the price of MEG fell by ~29% from USD~630/ton in Feb'20 to USD~445/ton in June'20 and has recovered by almost ~15% since then.



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Business Risk – Output Prices

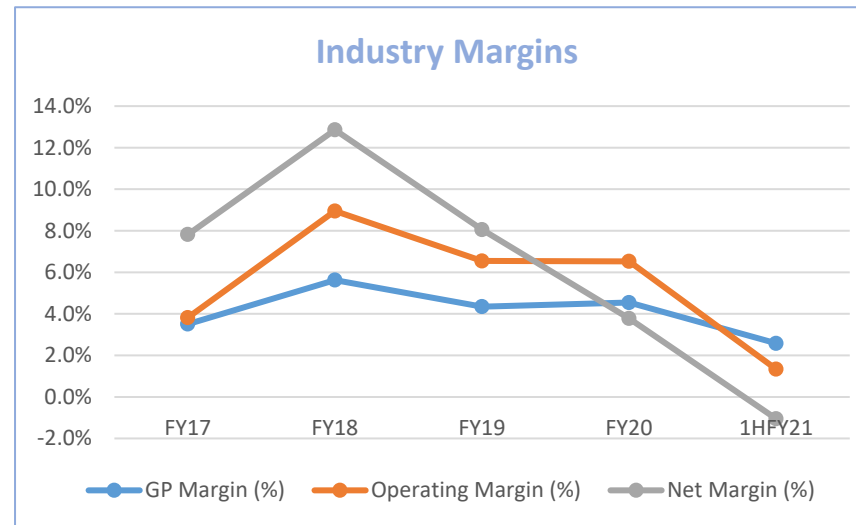
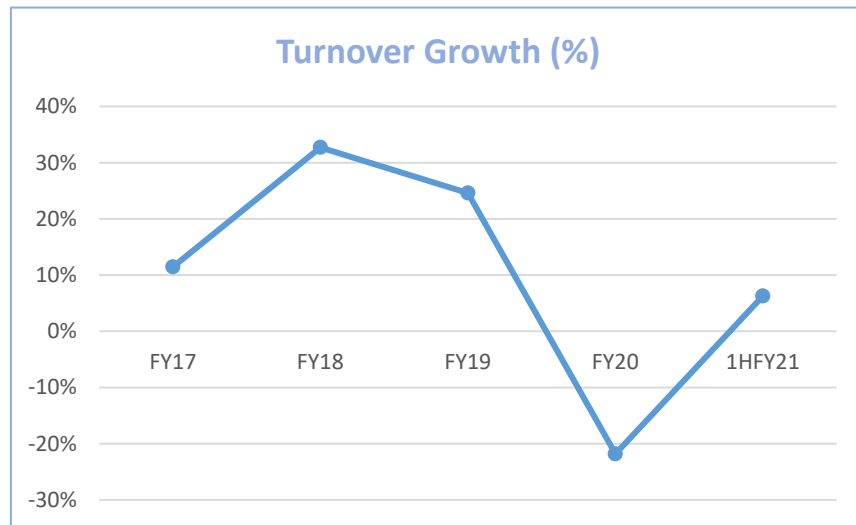


- One of the key challenges to the local Industry is the Import substitution of PSF at relatively lower rates, hampering the growth and performance of the Sector.
- As witnessed from the above chart, the Imported CFR price of PSF is relatively lower than the local prices. Despite imposition of anti-dumping duties on dumped imports from China, the delta between local and import prices has widened to approx. ~39% in 3QFY20, which injures the competitiveness of the local market. (Duty Structure covered in detail in the next sheet).

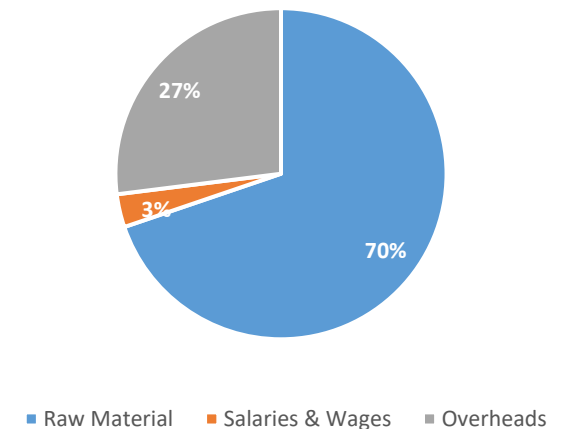
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Turnover & Margins

- Pakistan’s average polyester Industry size is recorded around PKR~72bln in FY20 (excluding rPSF). The Industry suffered majorly on account of the Covid-19 pandemic and contracted by around ~22% in FY20 from SPLY. The overall dynamics are now improving. Projecting results of 1HFY21, the Industry’s size is expected to increase to PKR~75bln in FY21 (a projected growth of ~6% YoY). The Industry’s turnover is majorly reflected by local sales with a very low share of exports as well. Historically, the Industry’s turnover has reflected an impressive growth from FY17-FY19, registering a CAGR of ~23%.
- The Industry’s direct costs are majorly dominated by raw material costs (PTA and MEG). This reflects that margins are significantly dependent on the International prices and exchange rate fluctuations since MEG is entirely imported while PTA is both imported and locally procured. The Industry operates on thin margins, due to availability of cheaper imported PSF (majorly from China) which hampers the performance and growth of the Industry significantly.



Average Direct Cost Break-up



Business Risk – Duties & Taxes

PCT Code	Description	Custom Duty	
		FY20	FY19
Raw Materials			
2917.3610	PTA	16%	16%
2905.3100	MEG	0%	3%
Finished Goods		FY20	FY19
5503.2010	PSF	11%	11%

No Additional Custom Duties or Regulatory Duties are charged on the products.

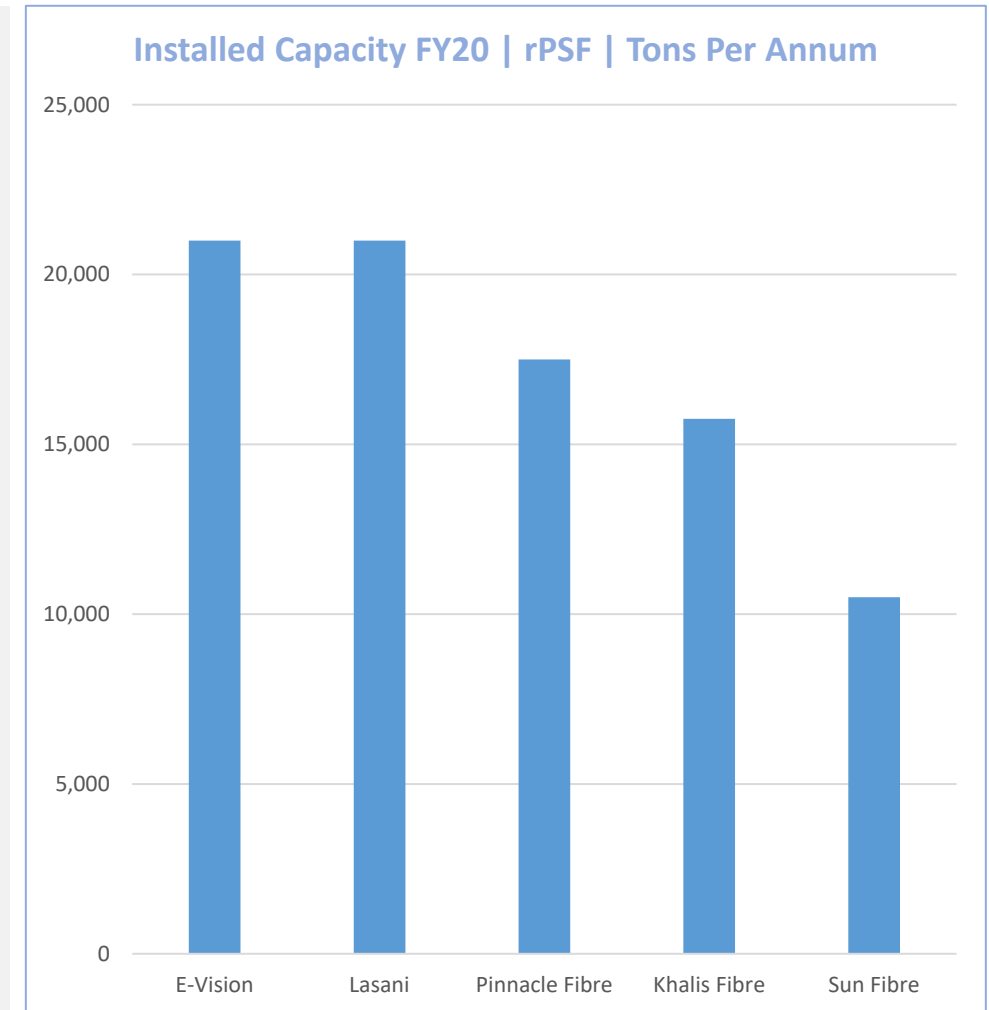
PCT Code	Description	Anti-dumping Duty Rates	Export Country	Date	Period
5503.2010	PSF	2.82% - 11.51%	China	3-Oct-15	5 years

- Pakistan’s polyester industry is facing a stiff competition from Imports market, particularly from China.
- The National Tariff Commission (NTC) had therefore imposed anti-dumping duties on PSF (PCT Code: 5503.2010) dumped imports from China ranging between 2.82% to 11.51% effective from Oct, 03 – 2015 for a period of five years.
- The anti-dumping duties were expired on 30th June, 2020, after which a request for sunset review was filed by the major sector players in Aug’2020 to allow continuation of the said duties in order to protect the Industry from any further injury caused by dumped imports.
- Consequently, the anti-dumping duties remain in force until the NTC outcome of the review is released.
- In Dec’2020, the major sector players also requested the NTC to initiate an investigation on dumped imports from Indonesia, Korea and Thailand as well. The NTC, in response, has initiated investigation under Section 23 of the Anti-Dumping Duties Act, 2015 in Feb’2021.



Recycled PSF (rPSF) – An Overview

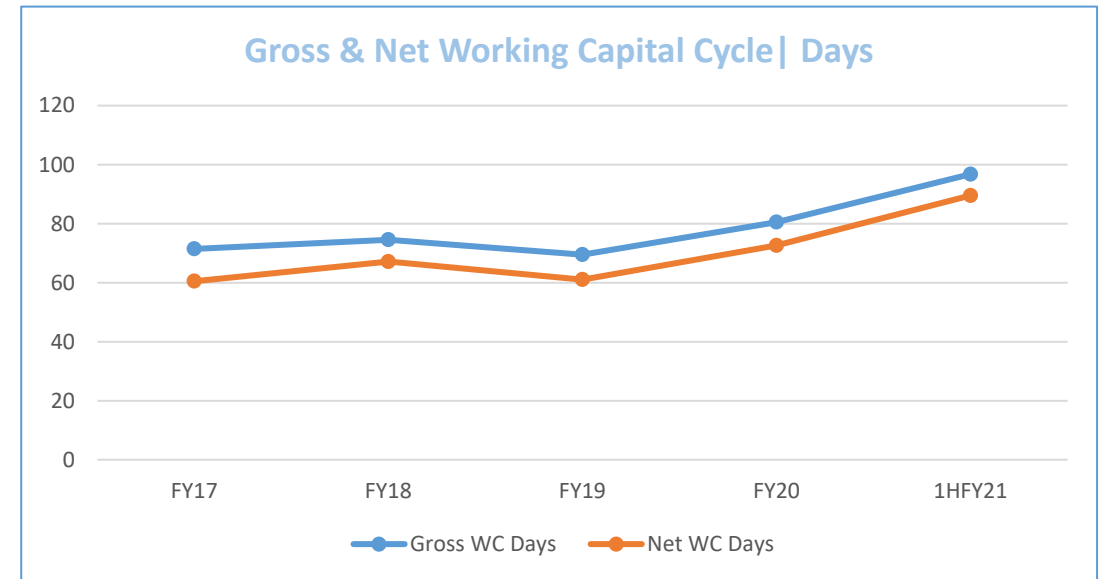
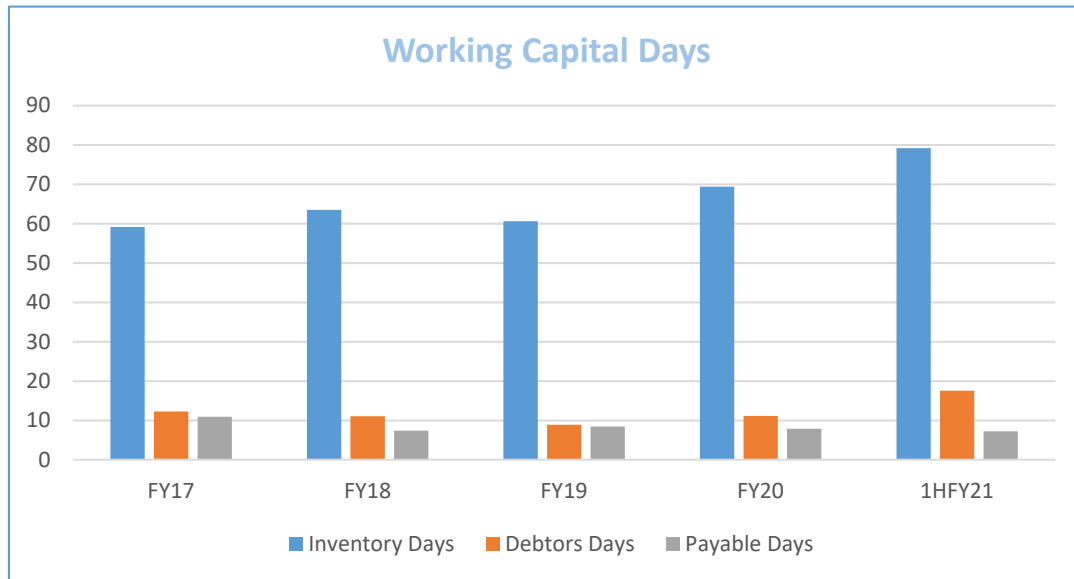
- Recycled Polyester staple Fiber is a prominent segment in recycling PET and it has been projected that the Recycled Polyester staple Fiber is going to be the fiber of the future in the entire textile industry.
- International chains like IKEA are now pushing its suppliers to use recycled PSF for its products.
- rPSF is used for both woven and non-woven Industry.
- In Pakistan, the market is relatively new and small. However, it has an immense potential to grow due to the recyclability of PET waste and used bottles, which reduces the risk of cost volatility associated with first hand PSF formation.
- Pakistan's total capacity for rPSF production stands around ~86k tons per annum. The capacity is expected to enhance, going forward, with ICI Pakistan's emergence into the segment, as approved in the latest Board Meeting of the Company to set up 100% PET recycled chip for the manufacturing of rPSF.
- Blended Textile Yarn can bode well for rising textile Export Orders.



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Financial Risk – Working Capital

- The Industry’s working capital cycle is predominated by its Inventory days.
- The average inventory days of the Industry reflect an increasing trend from 61 in FY19 to 79 in 1HFY21, depicting the demand slide of ~22% amid Covid-19 pandemic, despite reduced raw material prices.
- The Industry’s average net cash cycle has now gone up to 90 days, equivalent 3 months, as compared to an approx. 2 month cash cycle in FY19.

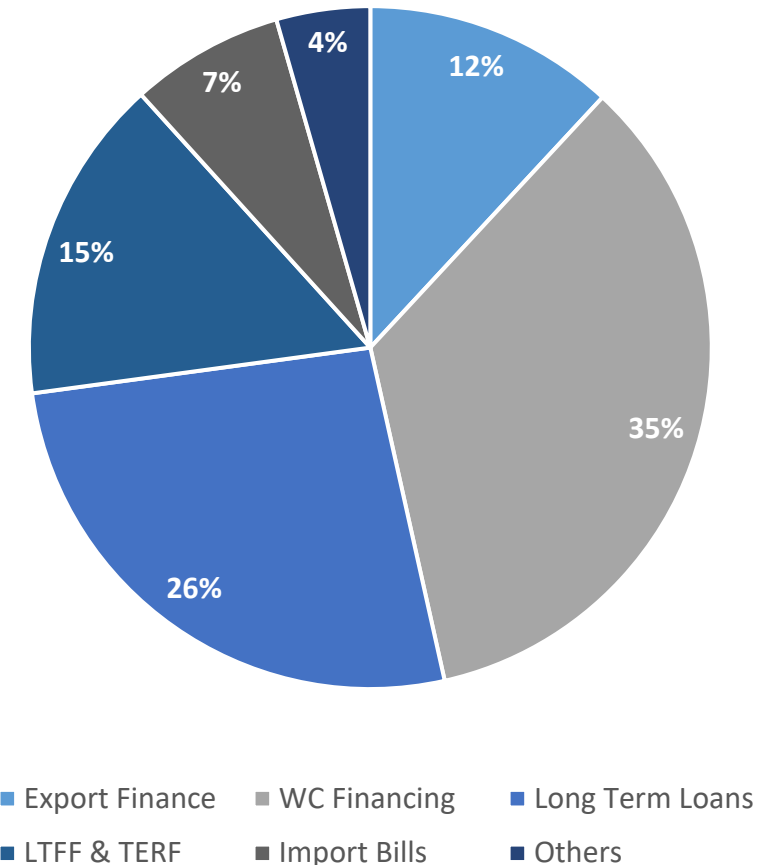


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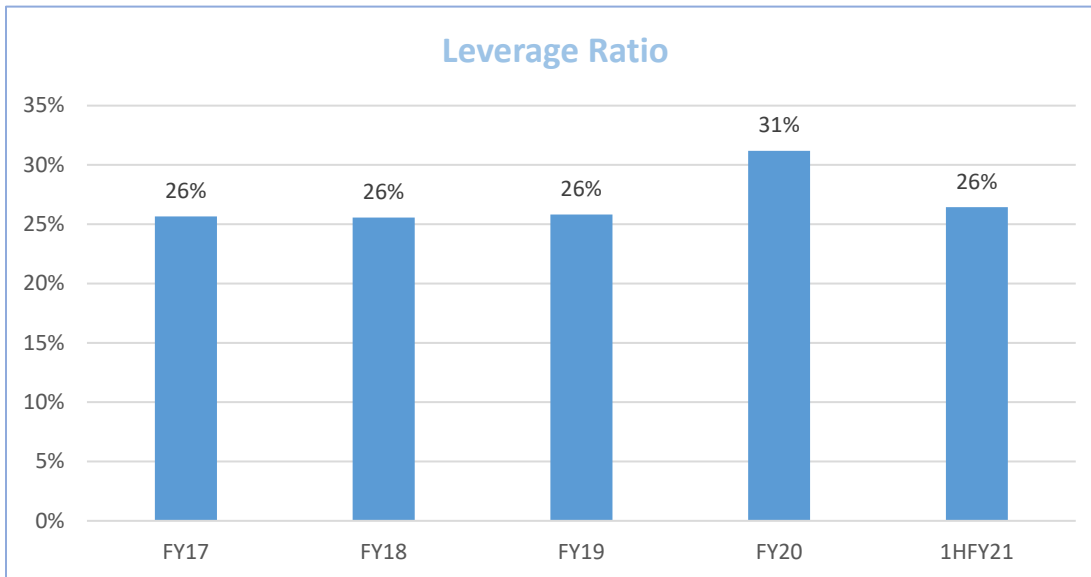
Financial Risk - Borrowings

- The Industry’s total borrowing was recorded at PKR~27bln as at End-Dec’20 (PKR~25bln as at End-June’20) up ~8%.
- The borrowings are a mix of short-term and long-term financing with Long Term financing making up ~53% of the total debt book.
- Almost ~27% of the Industry’s financing comprises LTFF/TERF and Export Finance Schemes, which are offered at subsidized rates.
- The Industry’s capital structure is sound. Overall debt financing stands at an average of ~26% in the capital which reflects robust internal capital formation.

Sector Borrowing | Break-up (%)



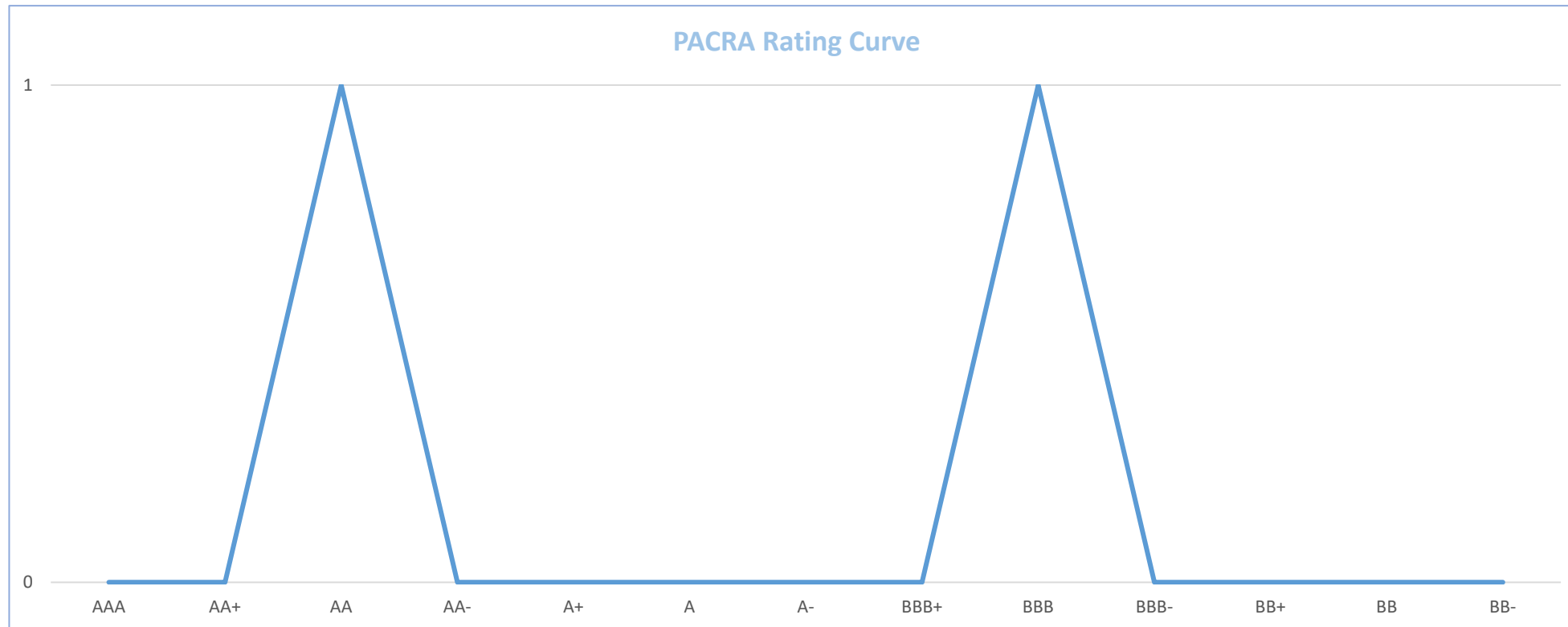
Leverage Ratio



Note: Leverage % is based on 2 Sector Players making up over ~90% of the Market Share in terms of sales.

Rating Curve

- PACRA rates 2 entities in the polyester sector, namely Ibrahim Fibres Limited and E-Vision Manufacturing Limited (rPSF).
- All three players involved in the manufacturing of PSF are Listed on the PSX (Ibrahim Fibres, ICI Pakistan and Rupali Polyester).



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SWOT Analysis

- Organized & Listed Sector
- Sound Equity and Sponsor Backing
- Diversified Product portfolio
- Strong sector association



- Consumer preference of natural fiber over synthetic/man-made fiber.
- Raw material pricing subject to exchange rate & International price volatility.
- Thin gross and net margins due to little room to increase price against imported PSF.

- Dumped Imports from China, Thailand and Indonesia.
- Exchange rate volatility
- Fluctuations in raw material prices

- Growing recycled PSF market opening new avenues for the Industry through cost minimization and competitive market prices.
- Reduced cotton production encouraging room for expansion in synthetic fiber market.
- Increase efficiency and improve quality through technological upgrade

Outlook: Stable

- Despite challenges faced due to the COVID-19 pandemic the garment industry has been making a recovery in recent months as restrictions both in Pakistan and abroad have eased allowing the industry to resume operations and resulting in gradual increase in demand.
- With recovery in oil prices, the price of PTA and MEG is expected to go up in the coming days, which is going to increase the raw material cost for the sector.
- NTC's initiation to investigate against dumped imports from Indonesia & Thailand, in addition to China, is expected to provide some further protection to the domestic Industry, if anti-dumping duty is imposed on imports originating from these countries too.
- The reduction in benchmark rate by 625bps is expected to reduce the finance cost of the Sector by PKR~1.2bln. Meanwhile, exchange rate is also expected to remain stable in the short horizon.
- The decline in local cotton production can create room for growth in Synthetic fiber demand. Also, increased production capacity on the rPSF front is expected to expand market for blended textiles, which will bode well for rising textile sector exports.

- Pakistan Stock Exchange (PSX)
- State Bank of Pakistan (SBP)
- Federal Board of Revenue (FBR)
- PACRA Database
- Business Recorder

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