



Polyester

Sector Study

TABLE OF CONTENTS



Contents	Page No.
Introduction	1
Production Process	2
Global Overview	3
Local Industry Overview	4
Local Industry Snapshot	5
Local Industry Demand & Supply	6
Local Industry A Comparison with Cotton	7
Local Industry Raw Material	8
Local Industry Capacity	9
Recycles PSF	10

Contents	Page No.
Business Risk Input Prices	11
Business Risk Output Prices	12
Business Risk Turnover & Margins	13
Business Risk Duties & Taxes	14
Financial Risk Working Capital	15
Financial Risk Borrowing	16
SWOT Analysis	17
Rating Curve	18
Outlook	19
Bibliography	20



POLYESTER

Introduction

- **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, which, as a specific material, is most commonly referred to as a type called 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, from shirts and pants to 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.

**Fashion
(coats,
jackets,
pants)**

Sportswear

Footwear

**Bedding,
sheets,
sleeping
bags**

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



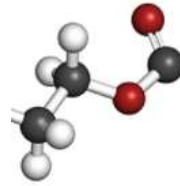
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Production Process



1. Creating a Monomer

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



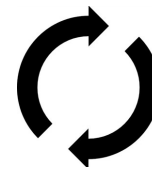
2. Creating a Polymer

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



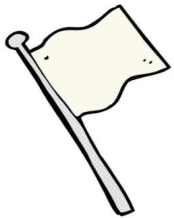
3. Extruding

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



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.



5. Finishing

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



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Global Overview

- The global polyester market was recorded at USD~106bln in CY21 (USD~104bln in CY19) and is expected to increase at a CAGR of 5.1% to USD~175bln by end of CY32. Polyester filament used in a variety of industries, including textiles, automotive, and healthcare is believed to drive the polyester market growth. The polyester market is further divided into segments based on the product types, grade types and application 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 in all chains of the Industry including weaving, dyeing, composite, etc.
- Geographically, the Asia-pacific is considered the leading market for polyester demand. China possesses the highest market share in the Asia-pacific region.
- The growth of the polyester fiber market is also propelled by surging demand for face masks due to COVID-19 outbreak, the expanding textile industry, booming consumer interest in the apparel sector, and rapid urbanization in emerging countries.

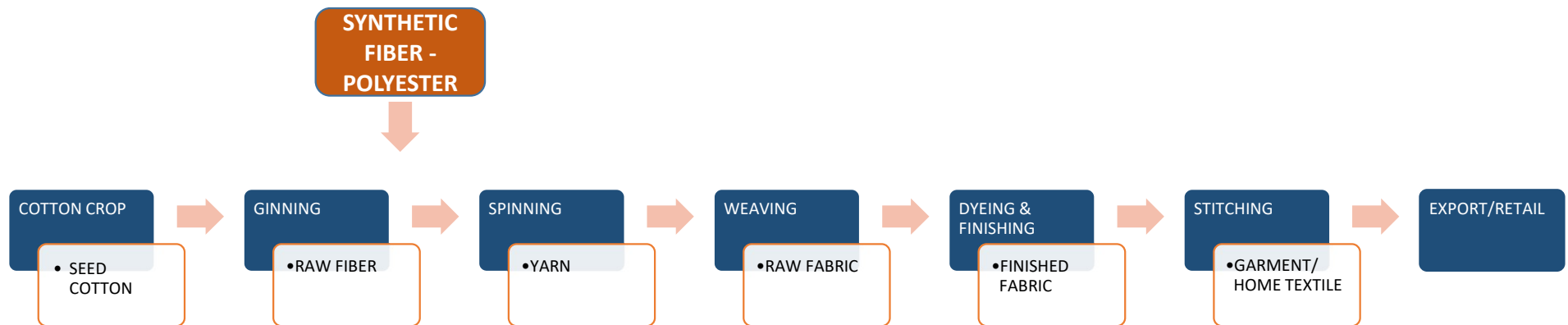




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Local Industry | Overview

- 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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Local Industry | Snapshot

- Pakistan’s polyester Industry was recorded at PKR~109bln in FY21 (PKR~78bln in FY20), a significant increase of ~40% YoY, owing to the recovery after a slowdown in demand from textile and PET bottling Industry amid the outspread of COVID-19 pandemic in FY20.
- In volumetric terms, the production of polyester fibers increased by ~37% during FY21, almost aligned to the rise in value terms, depicting that price variations have also cast an impact on the market size during FY21.
- 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	FY20	FY21
Revenue (PKR mln)	77,828	108,788
Contribution to GDP	0.2%	0.2%
Annual Production (tons)	352,815	483,401
Annual Import (tons)	9,585	19,082
Structure	Organized & Listed	
Sector Players (Listed)	3	3
Installed Capacity p.a. (tons)	534,950	534,950
Utilized Capacity	66%	90%
Association	All Pakistan Textile Mills Association	

Note: Industry Averages are based on 3 Sector Players making up near ~100% of the Market Share in terms of sales.

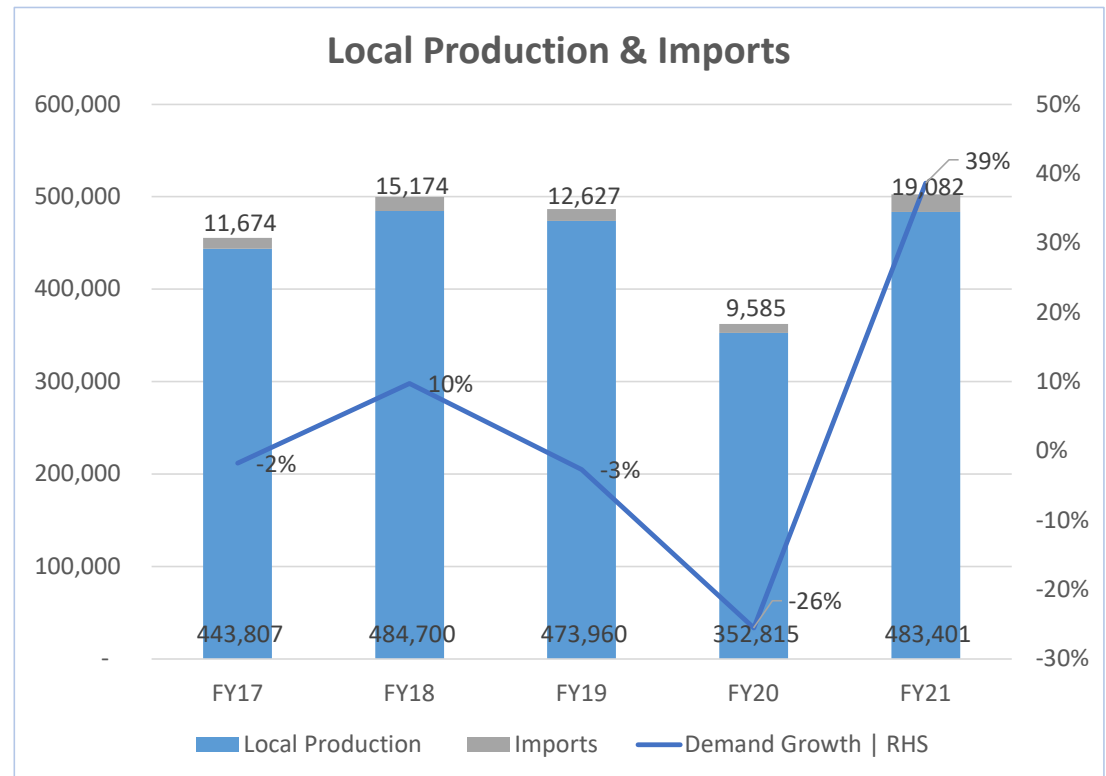
Source: PACRA Database



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Local Industry | Demand & Supply

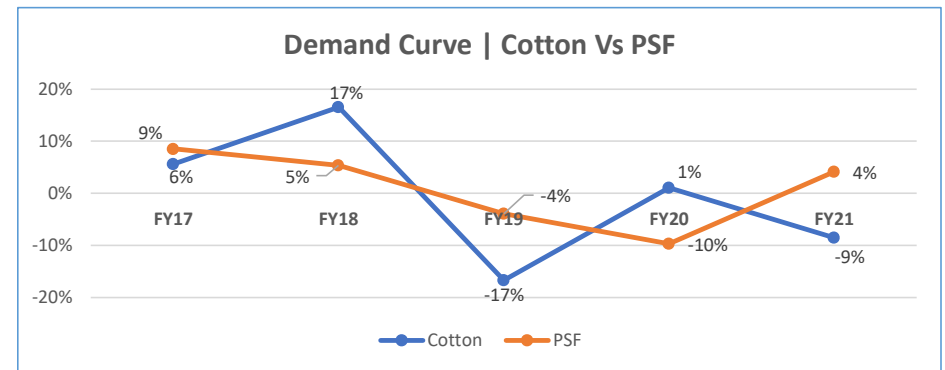
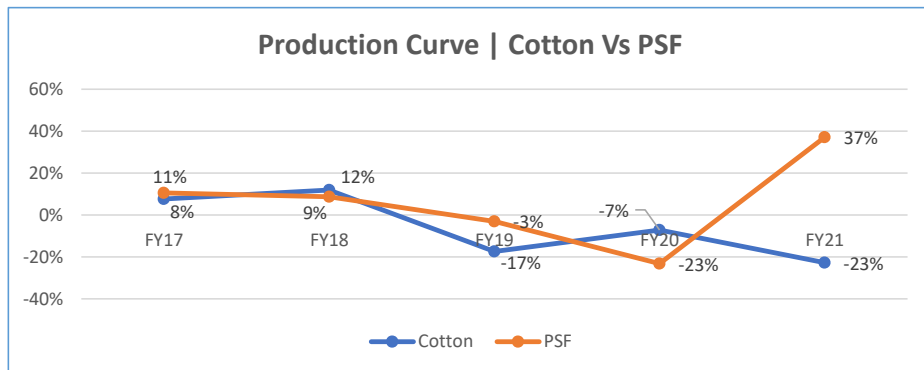
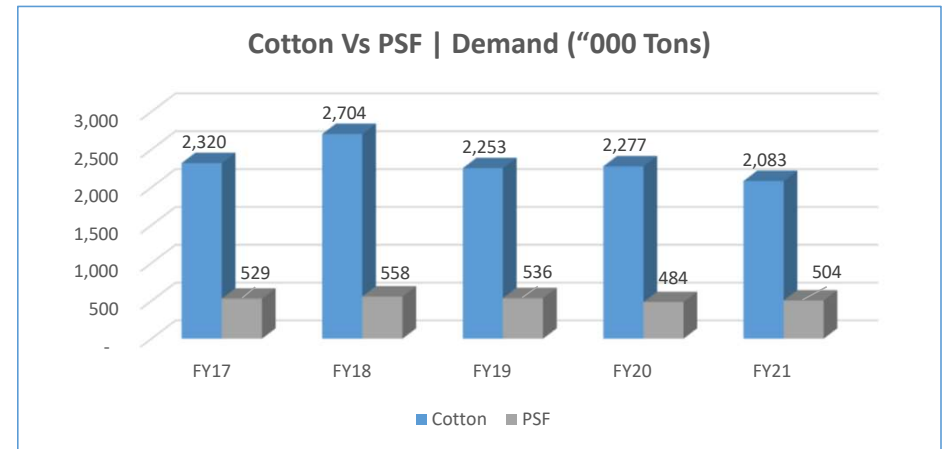
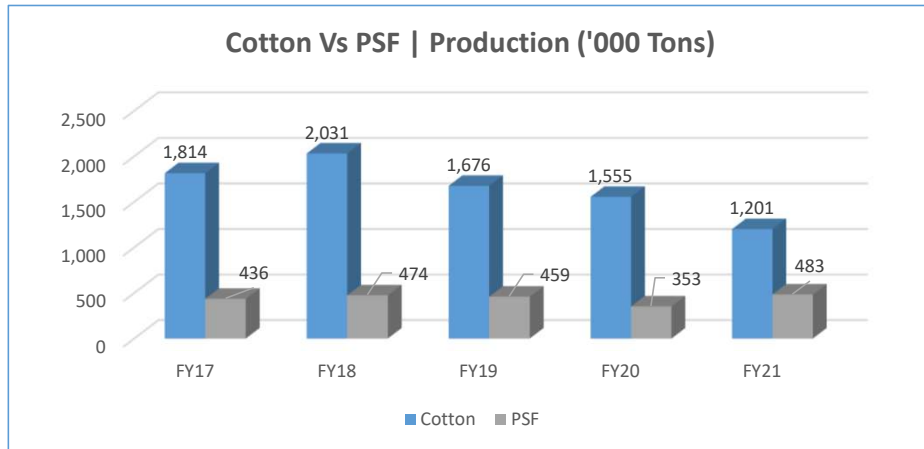
- Pakistan’s polyester demand took a steep dip in FY20, registering a free fall of ~26% YoY, owing to a halt in business activities and reduced demand from the textile Sector. However since the demand has recovered, clocking in at ~502k tons in FY21 as compared to ~362k tons in FY20 which was the lowest volumes recorded over 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 remained relatively stable with ~4% in FY21,
- 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



For the purpose of comparison, cotton production & demand is converted from bales to tons, using a conversion factor of 1 bale = 170 kgs



POLYESTER | LOCAL INDUSTRY

Supply | Raw Materials

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.

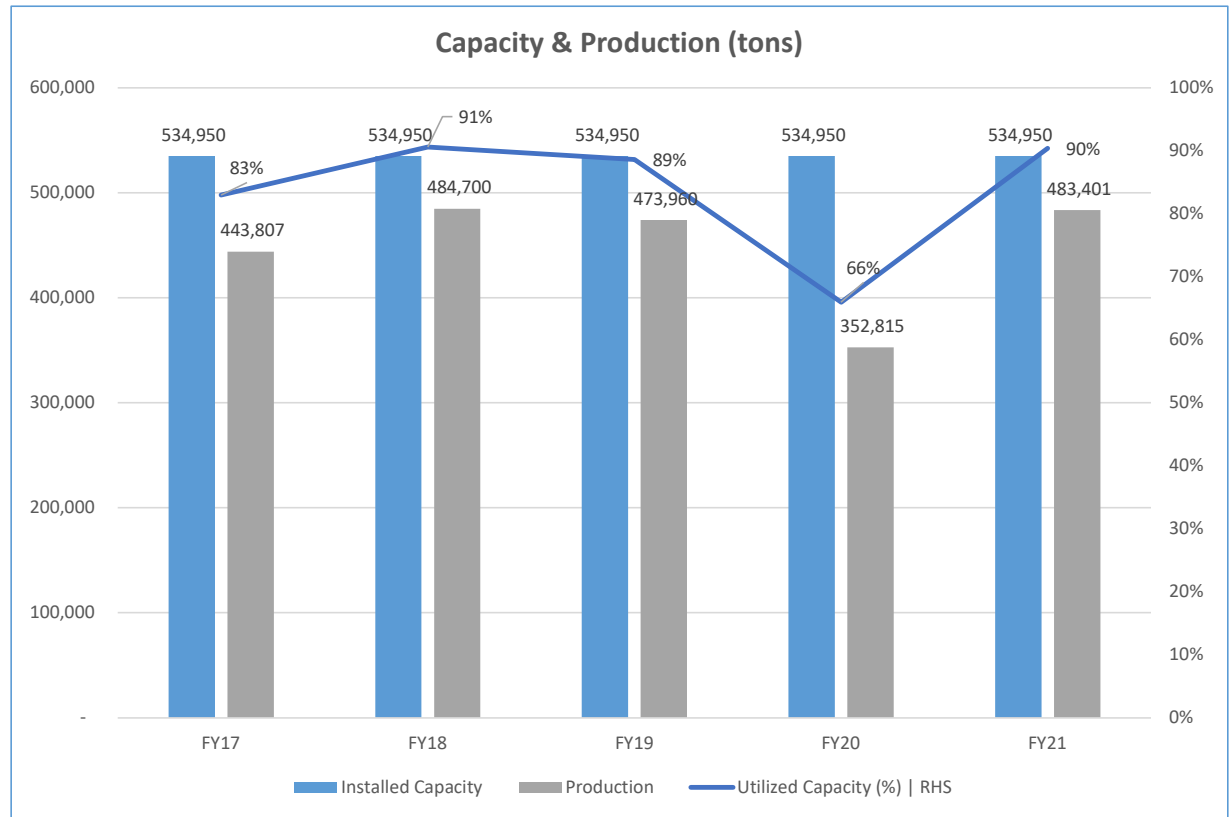
- Raw Material cost is the key component of the Sector's cost structure, therefore, is essential in determining the output price and margins of the Sector.
- PTA is majorly procured locally through its sole supplier, Lotte Chemicals Pakistan Limited, while some portion of it is imported too. Oil is a 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.



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Local Industry | Capacities

- ICI Pakistan Limited was a pioneer in the manufacture of Polyester Staple Fiber. Currently there are three significant players producing and fulfilling almost the entire local demand.
- PSF brings huge advantages to the domestic textile industry in making a viable substitute for cotton, allowing for a maximum utilization of textile resources.
- The Polyester Sector's total Installed Capacity registered no change and was recorded at ~535k tons in FY21. Actual production picked up by ~37% in FY21 after a dip of ~23% in FY20 owing to reduced demand on account of Covid-19 induced economic slowdown.
- The Sector's utilization levels have historically remained below ~90%, despite that the total installed capacity has been largely able to cater the overall demand.



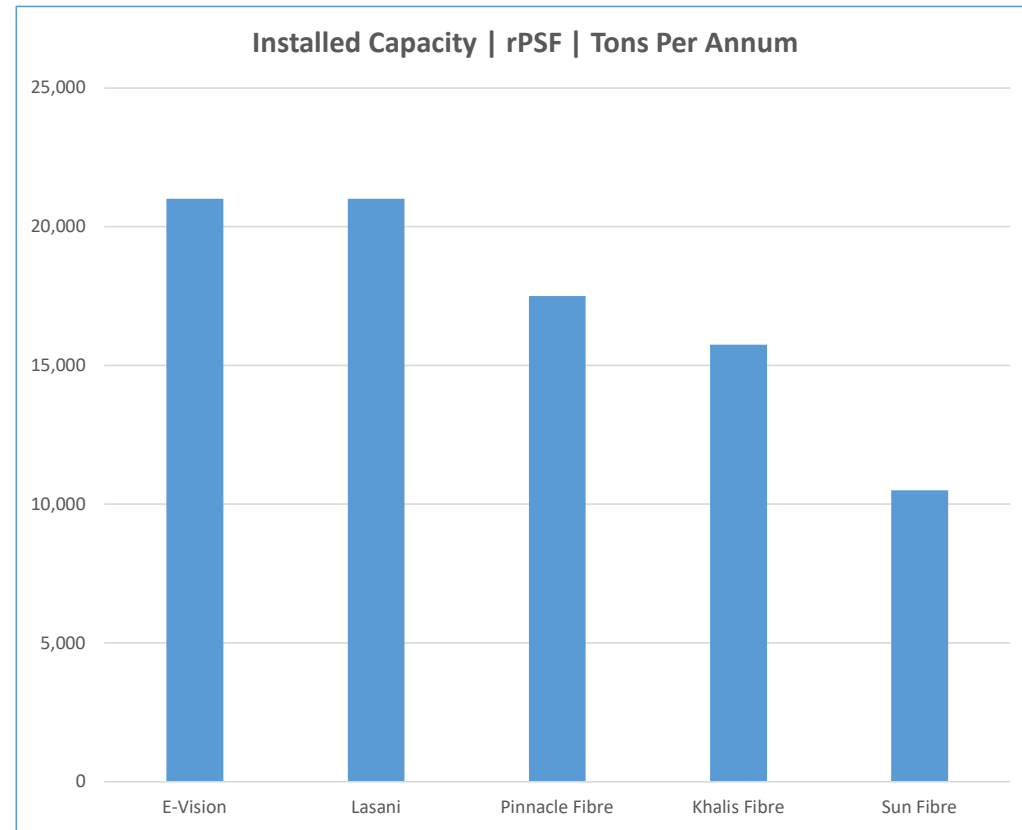
Note: Industry Averages are based on 3 Sector Players making up near ~100% of the Market Share in terms of sales.



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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. rPSF is used for both woven and non-woven Industry. The annual turnover of rPSF segment in the country is PKR~3,563mln* while the total demand stood at ~72,000MT per annum in FY21.
- Being derivative of crude oil, rPSF prices fluctuate accordingly. rPSF remain at ~75% of the price of virgin polyester fiber.
- 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 stood around ~86k tons per annum in FY20. The capacity is expected to enhance, going forward, with ICI Pakistan’s emergence into the segment, as the Company approved to set up a manufacturing unit of Recycled Polyester Staple Fibre for use in producing yarn for blended textiles which can bode well for for rising textile Export of the country. Furthermore, the demand for rPSF chips is high in China and due to ban on PET bottles as they have started to import rPSF chips from other countries.



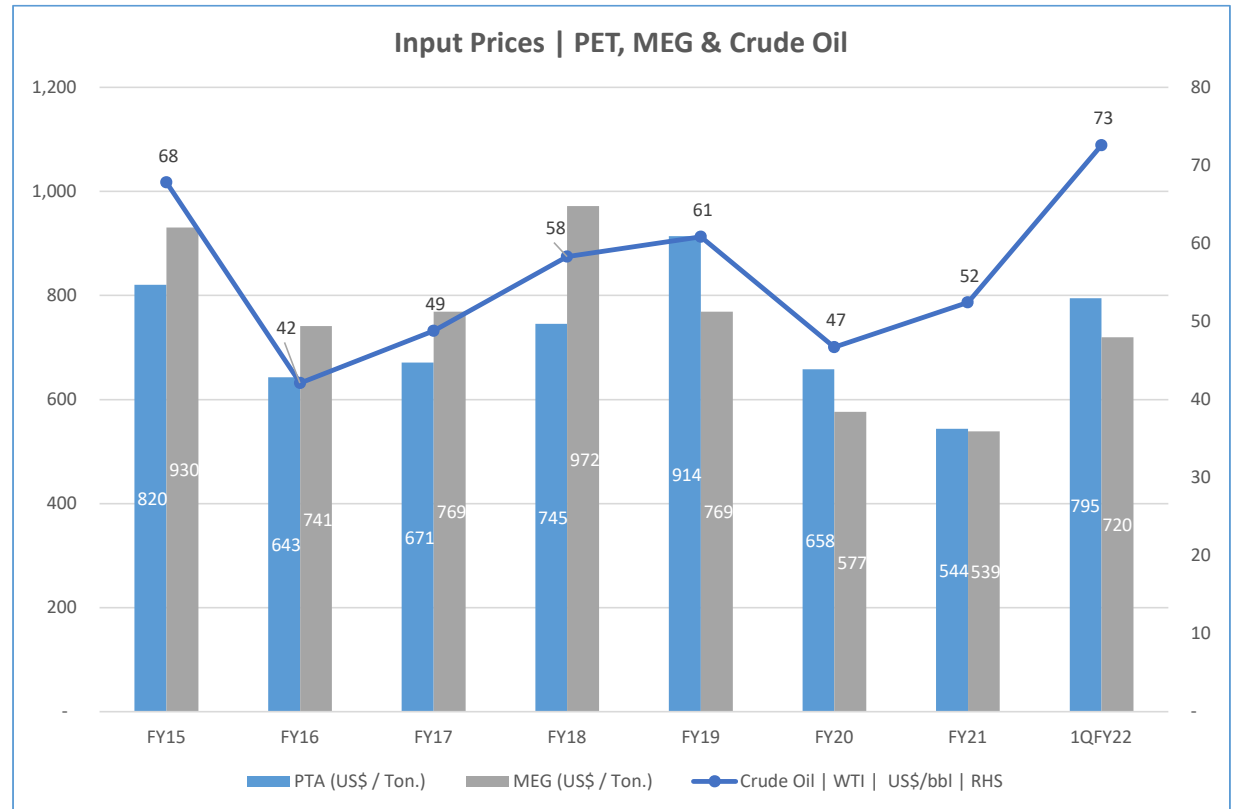
*rPSF Segment turnover is extrapolated on 1 Sector Player making up ~25% of the Market Share in terms of sales. Source: Statista, Trading Economics, globalpetrolprices.com



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Business Risk – Input Prices

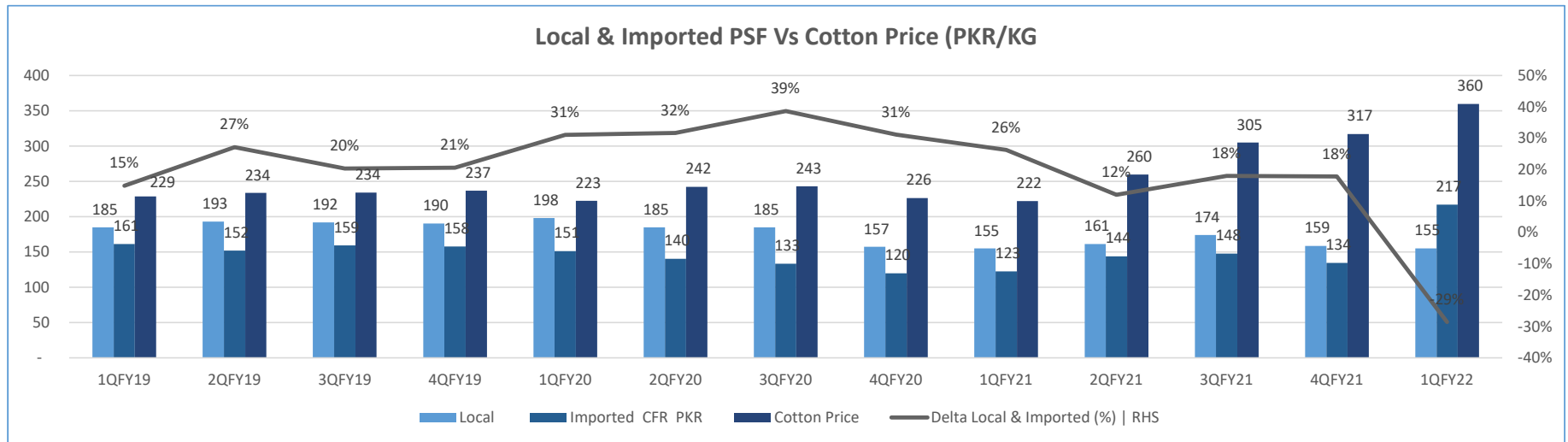
- Raw material costs are the major components of the total manufacturing costs of PSF.
- The price of PTA is subject to variations in oil prices, while MEG, which is entirely imported, is exposed to exchange rate volatility as well.
- It can be witnessed that the price trend of PTA and MEG reflects the same pattern as of oil price.
- Amid Covid-19 pandemic, the price of PTA stooped by around ~11% in FY21. Since then, PTA prices showcased an upward trajectory and in the 2Q22 rose to USD~1,012/ton as compared to USD~489/ton SPLY. Logistical issues plagued Asian PTA market which posed a major challenge for traders and in turn kept an upward pressure on PTA prices.
- Meanwhile, the price of MEG rose by ~32% from USD~631/ton in FY21 to USD~832/ton in 1HFY22.





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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 higher than the local prices due to depreciation of PKR. Furthermore, due to imposition of anti-dumping duties on dumped imports from China, the delta between local and import prices has widened to ~33% in 2QFY22, which is safeguarding the competitiveness of the local market. (Duty Structure covered in detail in the next sheet).

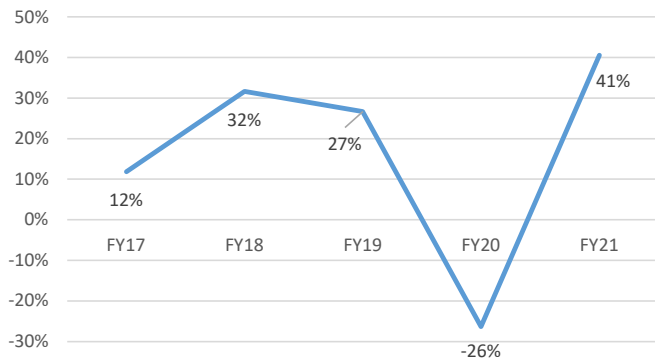


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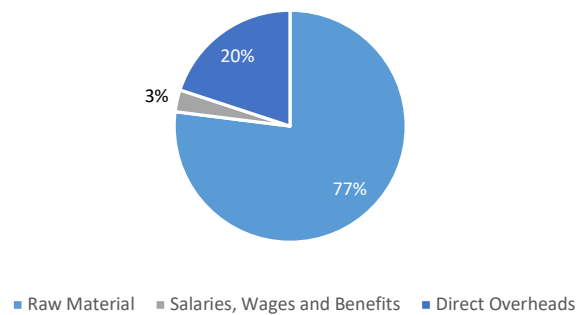
Business Risk – Turnover & Margins

- Pakistan’s average polyester Industry size is recorded around PKR~109bln in FY21 (excluding rPSF). The Industry which suffered on account of the COVID-19 pandemic during FY20, recovered and expanded by around ~40% in FY21 compared to SPLY. The Industry’s turnover is majorly reflected by local sales with a very low share of exports. Historically, the Industry’s turnover has reflected an impressive growth from FY17-FY21, registering a CAGR of ~16%.
- 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. Turnover has increased in FY21 by 41% YoY, but the cost of goods sold have increased by mere 23% over the last year. This improved margins can be attributable to higher import offers, backed by an increase in feedstock prices, sea freights, rupee devaluation along with strong demand by the textile industry. However, the cost of raw material are on a rise which will negatively impact margins in future.

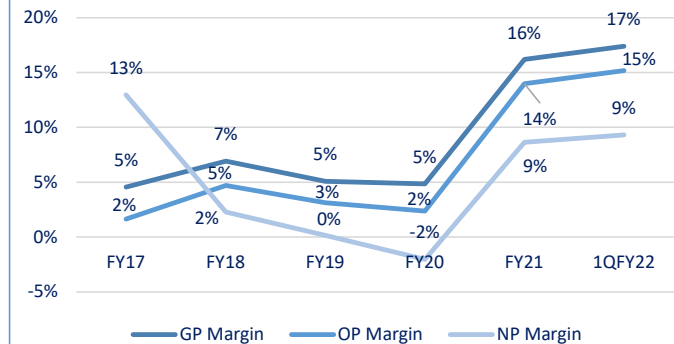
Turnover Growth



Direct Cost Break-up FY21



Profit Margins



Note: Industry Averages are based on 3 Sector Players making up over ~100% of the Market Share in terms of sales.

Source: PSX, PACRA Database



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Business Risk – Duties & Taxes

PCT Code	Description	Custom Duty		
		Raw Materials	FY21	FY20
2917.3610	PTA	5%	16%	16%
2905.3100	MEG	0%	0%	3%
	Finished Goods	FY21	FY20	FY19
5503.2010	PSF	7%	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	12.5%	China	4-Feb-22	5 years
5503.2010	PSF	2.4% - 3.6%	Indonesia	4-Feb-22	5 years
5503.2010	PSF	2.5% - 10.7%	Thailand	4-Feb-22	5 years

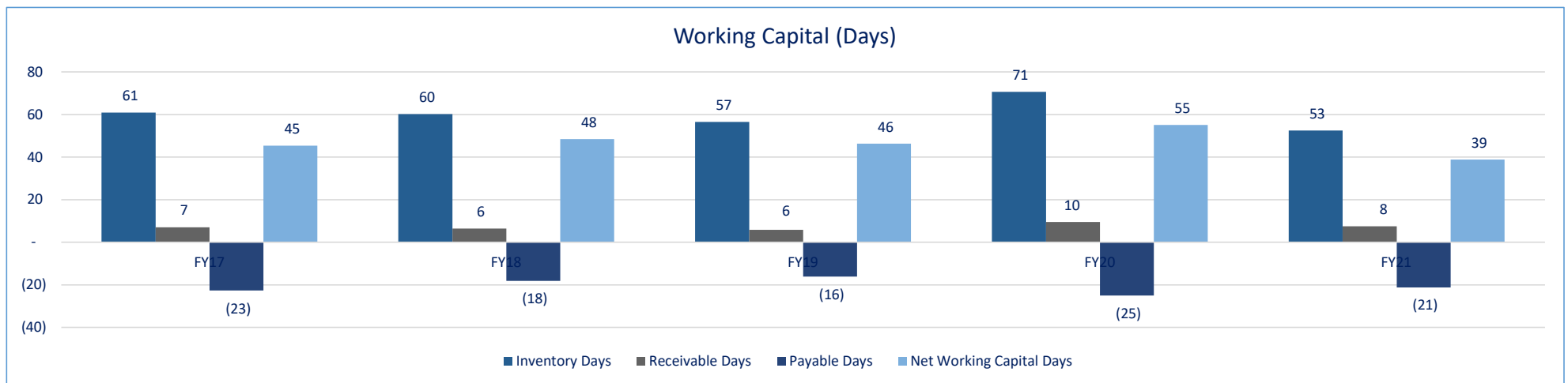
- Pakistan’s polyester industry is facing a stiff competition from Imports market, particularly from China.
- The National Tariff Commission (NTC) had therefore imposed anti-dumping duties on PSF (PCT Code: 5503.2010) dumped imports from China ranging between 2.5% to 12.5% effective from Oct, 05 – 2022 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. Consequently, the Commission was satisfied that the investigated product had been exported at dumped prices from the Exporting Countries, which caused material injury to the domestic industry Therefore, definitive antidumping duty rates for Chinese Taipei was imposed, equal to injury margins.
- In Dec’2020, the NTC was again requested to initiate investigation on dumped imports from Indonesia and Thailand. The NTC in response, has imposed anti-dumping duties exporters/foreign producers from Indonesia and Thailand equal to their respective dumping margins.



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Financial Risk – Working Capital

- The Industry’s average working capital cycle is predominated by its Inventory days.
- The average inventory days of the Industry reflected a decreasing trend from 71 days in FY20 to 53 days in FY21, backed by the demand recovery by ~26% amid COVID-19 pandemic recovery.
- The Industry’s average net cash cycle has now gone down to 39 days, equivalent ~1 month, as compared to an approx. 2 month cash cycle in FY20.



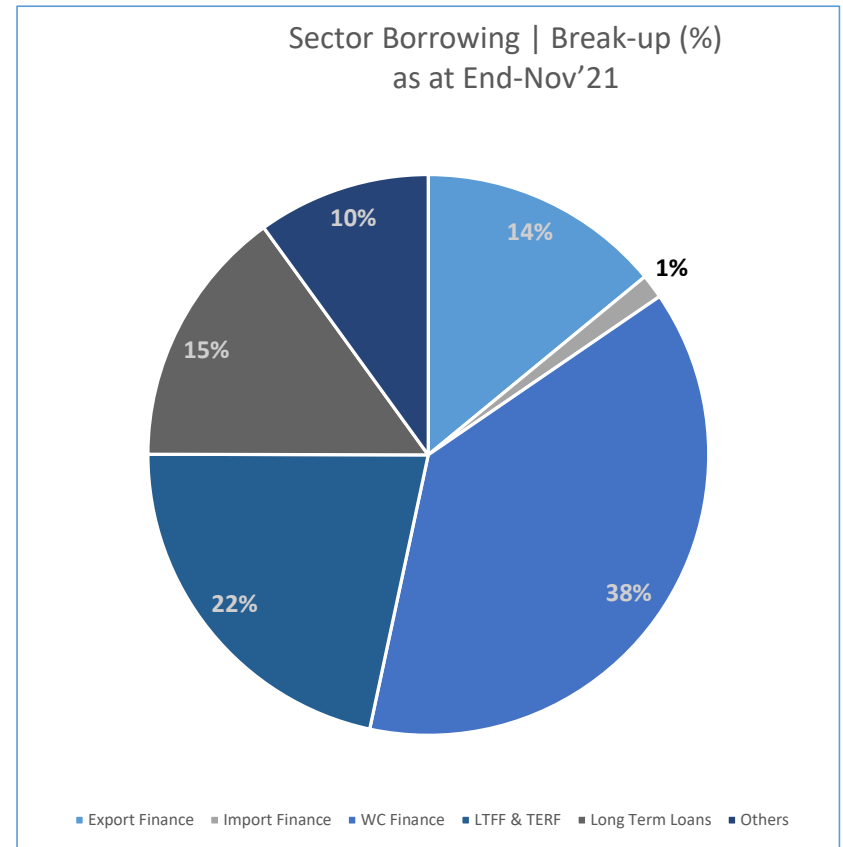
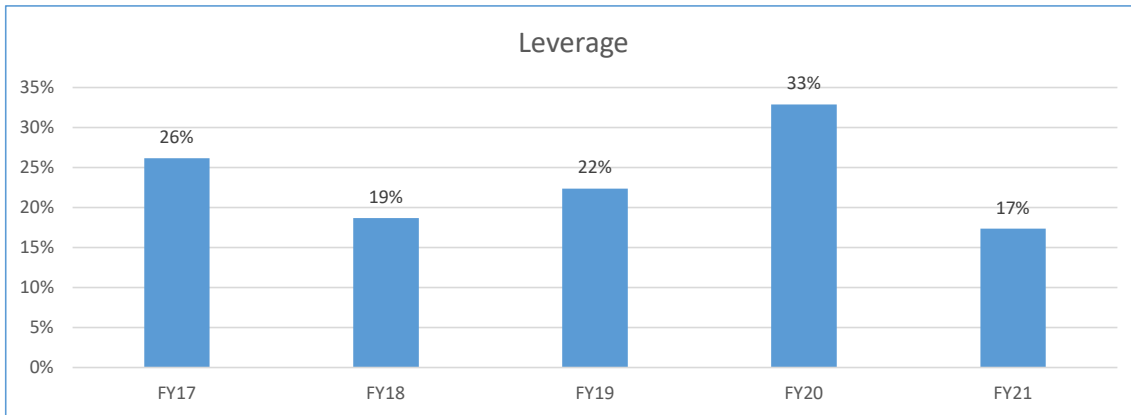
Note: Industry Averages are based on 3 Sector Players making up over ~100% of the Market Share in terms of sales.



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Financial Risk – Borrowings

- As per SBP data, the Industry’s total borrowing was recorded at PKR~26.6bln as at End-Nov’21 (PKR~26.8bln as at End-Nov’20).
- Borrowings are a mix of short-term and long-term financing with Working Capital financing making up ~38% of the total debt book.
- Almost ~36% 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. During FY21 there was a significant decline in ST borrowing due to improvement in WC management. Overall debt financing stood at an average of ~23% in the capital over the last five years which reflects robust internal capital formation.



Note: Leverage % is based on 3 Sector Players making up over ~100% of the Market Share in terms of sales.

Source: PACRA Database, SBP



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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.

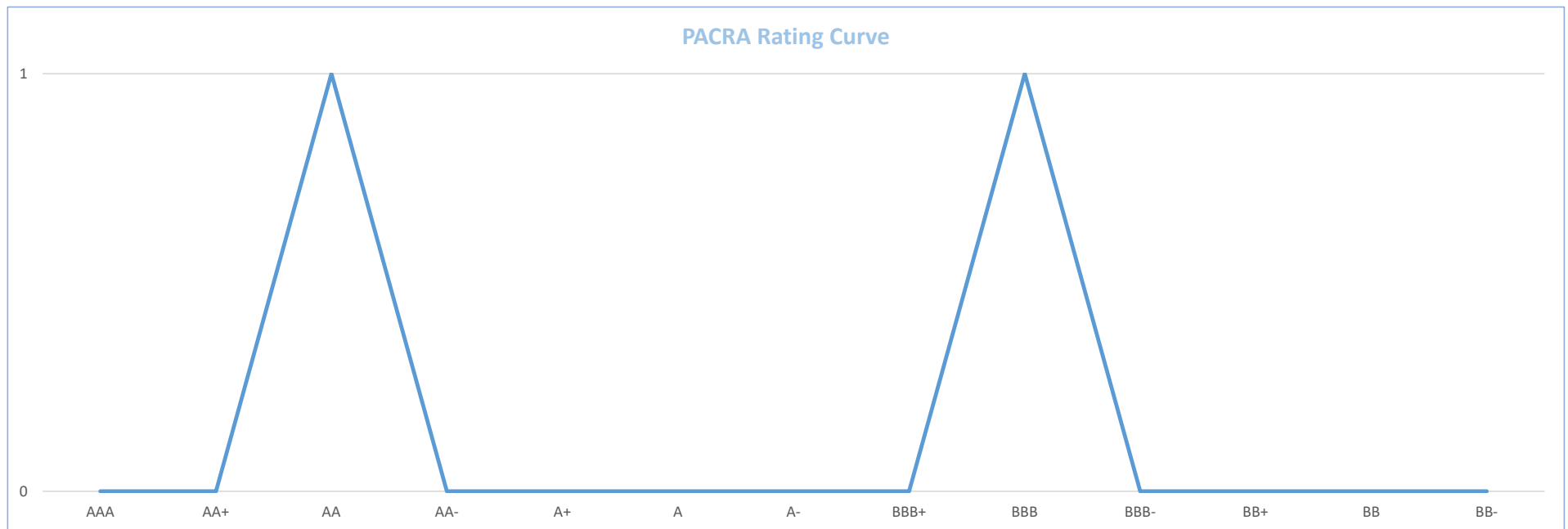
- Growing recycled PSF market opening new avenues for the Industry through cost minimization and competitive market prices.
- Reduced cotton production encouraging room for expansion in synthetic fiber market.
- Increase efficiency and improve quality through technological upgrade.
- Growing textile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



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Rating Curve

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





POLYESTER | Outlook & Future Prospects

Outlook: Stable

- Despite challenges faced due to the COVID-19 pandemic the textile sector has been making a recovery as restrictions both in Pakistan and abroad have eased allowing the industry to resume normal operations as demand for textile from the west are on a rise. Textile exports in Pakistan is witnessing a ~26% increase to USD~9.4bln in the 1HFY22. The growth in exports has continued in Jan'22 with exports of USD~1.6bln up by ~17% YoY.
- The textile sector is expecting a increase in polyester yarn rates due to rising oil prices in the international market which is going to increase the raw material cost. Furthermore, freight charges have gone up by four times during the span of last 12 months.
- 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.
- Cotton production during current season has improved considerably due to favorable weather conditions and arrivals stand at ~7.4mln bales. However, the country remains reliant on imports to meet the remaining demand and the rising trend of international cotton prices will put pressure on the sector's margins.
- Greater reliance on imported raw material also increases currency risk exposure due to exchange rate volatility. PKR has depreciated by ~12.2% during the ongoing FY22 till January 2022.
- The decision taken by the State Bank of Pakistan (SBP) to lower the policy rate by 625bps to 7% in the last quarter of FY20 lowered the finance costs of textile sector in FY21. However, State Bank of Pakistan (SBP) has since revised the policy rate upwards by 275 basis points to counter growing inflation thereby taking the policy rate to 9.75%. This increase will affect the sector profitability due to rise in finance cost.
- The average inflation rate during FY21 stood at ~8.9% as compared to an average inflation rate of ~10.7% during FY20. Till January 2022, the inflation level in the country has risen to ~13%. This will have a negative impact on turnover and profitability as consumer's spending ability will erode and the company's operational overheads will increase.



POLYESTER | BIBLIOGRAPHY

- Pakistan Bureau of Statistics (PBS)
- Pakistan Stock Exchange (PSX)
- State Bank of Pakistan (SBP)
- Federal Board of Revenue (FBR)
- Towel Manufacturers Association of Pakistan (TMA)
- PACRA Database
- International Labor Organization (ILO)
- Pakistan Cotton Ginners Association (PCGA)
- Pakistan Central Cotton Committee (PCCC)
- Investing.com
- Statisa
- Trading Economics
- Business Recorder
- Trade Map
- MenaFN (<https://menafn.com/1098203560/India-Bath-Towel-Market-2019-Global-Trends-Market-Share-Industry-Size-Growth-Opportunities-and-Forecast-to-2024?src=Rss>)
- PR Newswire (<https://www.prnewswire.com/news-releases/global-kitchen-towel-industry-2019-to-2027---market-trajectory--analytics-301087094.html>)
- CBI (<https://www.cbi.eu/market-information/home-decoration-home-textiles/hammam-towels/market-potential>)

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