

# Chemicals – Hydrogen Peroxide

June 2019

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# Introduction

- Hydrogen peroxide is a chemical compound with the formula  $H_2O_2$ .
- **Characteristics:**
  - colorless liquid,
  - slightly more viscous than water
- **Production:** Catalysis of the reaction of Hydrogen (obtained from processing natural gas, the **key raw material**) with atmospheric Oxygen
- **Applications:**
  - Paper and pulp industry for pulp bleaching and deinking of recycled paper.
  - To make sodium perborate and sodium percarbonate which are used as bleaching agents for washing clothes.
  - For purification of water, making aseptic packaging.
  - To clean and disinfect packages in contact with food products
  - Healthcare uses for disinfection of dental and surgical instruments
- **Bulk material:** Road Tankers, Rail tankers
- **Packaged material:** Intermediate bulk container, Jerry cans, Drums
- **Commonly used grades**
  - Technical grade – 60% concentration level
  - Technical Grade – 50% concentration level
  - Aseptic Grade – 35% concentration level
  - Food Grade – 35% concentration level

(Concentration level: the strength of a solution, particularly the amount of dissolved substance in a given volume of solvent)

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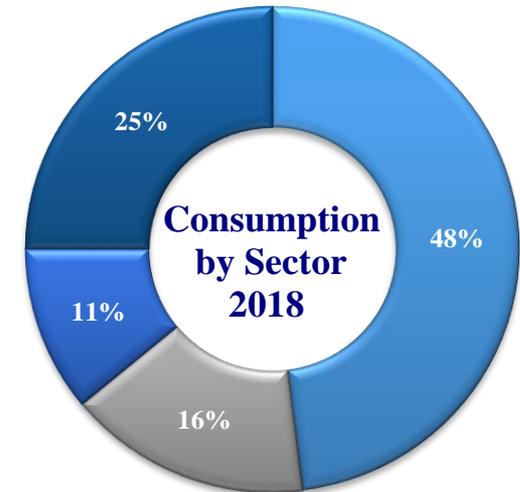
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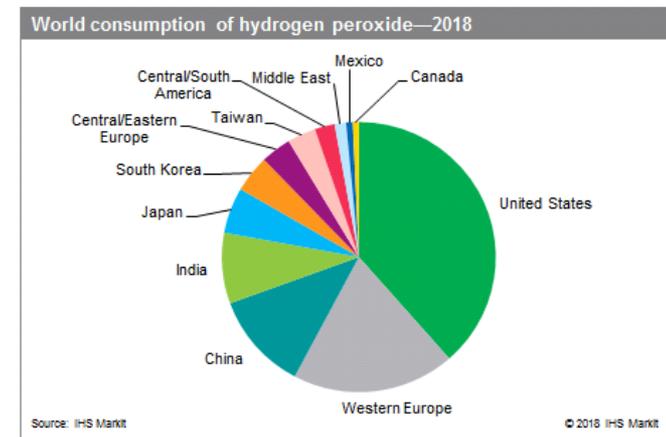
# Global Industry Dynamics

- Global production of HPO for 2018 is estimated at ~4.6 MT.
- Production of various concentration levels remained stable over the years.
- Paper & Pulp industry accounts for the major portion of the global HPO market share. and With growing demand for recycled paper in the packaging industry and the global stationery demand, this sector is anticipated to maintain the dominance over the next few years.
- Three major European players account for major portion of the market representing over ~50% of the global production capacity.

Capacity Headquarters	Solvay Chemicals		Evonik Industries		Arkema Group	
	2017	2018	2017	2018	2017	2018
	~330,000 MT Belgium		~950,000 MT Germany		~400,000 MT France	
Revenues (€ mln)	10,984	11,299	14,383	15,024	8,326	8,816
Net Income (€ mln)	1,116	897	730	954	592	725



■ Paper & Pulp ■ Textile ■ Wastewater Treatment ■ Others



*\*Though Hydrogen peroxide is their key product, they have other products as well.*

- During CY18, global HPO prices witnessed a significant increase, owing to a rise in international gas prices and shutdowns of plants of some major players. This led to strong revenues and margins for HPO players worldwide.
- Asia Pacific, led by China is expected to have the fastest growth at close to 6% CAGR in terms of revenue. Global shift of paper & pulp industry towards China, India and a few South-East Asian countries owing to cost effective labor force and lenient government norms will drive this growth.

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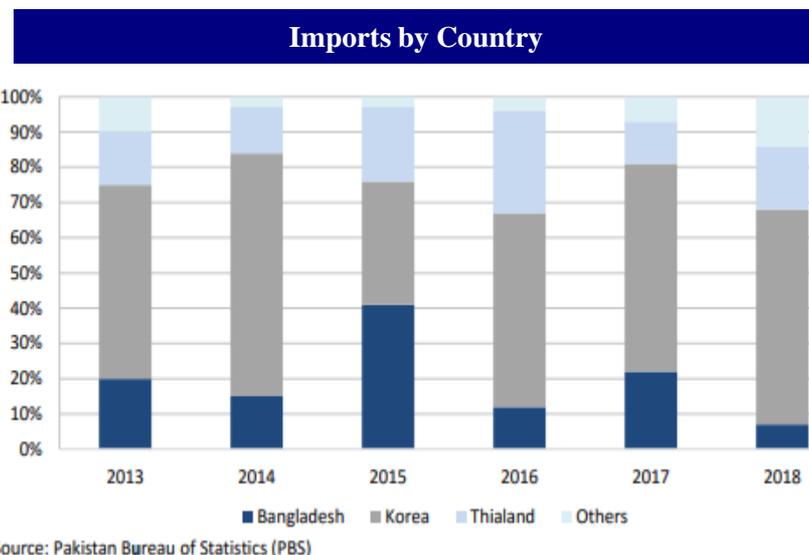
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# Domestic Industry Dynamics

- Total domestic demand stands between ~65,000 – 70,000 Metric tons while supply amounted to ~53,640 MT in FY18.
- Since demand currently outstrips supply, the gap is filled through imports, which account for 15-20% of the HPO market.
- ~99% of local production is consumed locally, with only a minor amount being exported to Afghanistan and Sri Lanka.
- Imports are mainly from South Korea, Thailand and Bangladesh.
- The major domestic consumer is the Textile Industry, followed by Mining and Food & Beverages.
- The domestic industry is making efforts to increase its penetration in the food grade concentration which is a higher margin segment.
- The domestic industry currently comprises two players:
  - i) Descon Oxychem Limited – Installed annual capacity 28,000 MT
  - ii) Sitara Peroxide Limited – Installed annual capacity 30,000 MT
- Presently, both players are in the process of increasing their capacities. Following the expansions, Descon Oxychem’s capacity will increase to ~35,000 MT while Sitara Peroxide’s capacity will amount to ~44,800 MT.
- Engro Polymer & Chemicals is also planning to enter the market in FY20 with a capacity of ~20,000 MT.
- Once the new capacities come online, the Country’s production of HPO is expected to exceed local demand by FY21.

Domestic Industry (MT)					
	FY16	FY17	FY18	FY19-E	FY20-E
Demand	59,498	64,886	69,500	71,210	75,936
Supply	53,259	54,489	53,640	55,356	57,500
Imports	6,239	10,397	15,860	15,854	18,436



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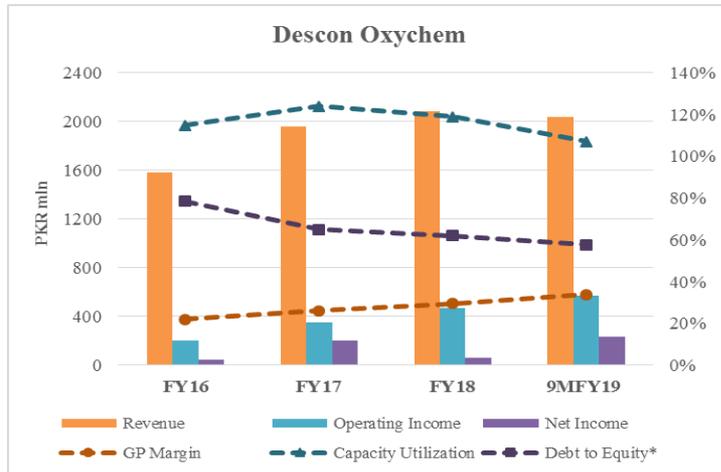
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# Domestic Players | Performance

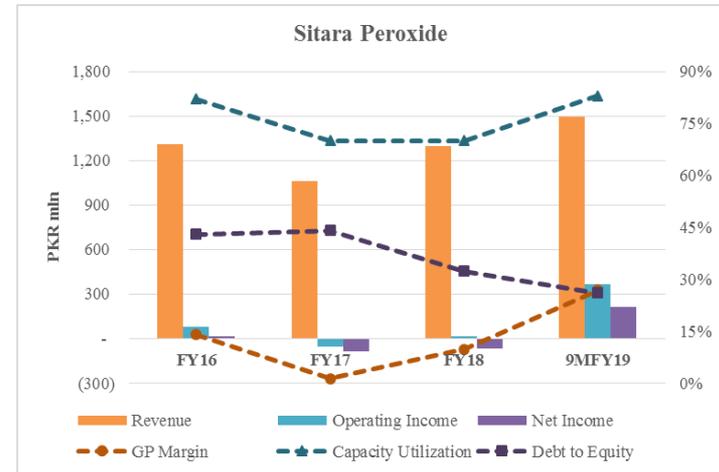


	FY16	FY17	FY18	9MFY19
Revenue	1582	1,961	2,088	2,039
Operating Income	201	354	465	574
Net Income	45	205	58	232
GP Margin	22%	26%	30%	34%
Capacity Utilization	115%	124%	119%	107%
Debt to Equity*	79%	65%	62%	58%

\*Inclusive of preference stock

Capacity Utilization for 9MFY19 is annualized

- Descon Oxychem has outperformed Sitara Peroxide in recent years in terms of revenues and profitability.
- Debottlenecking and operational efficiencies of Descon Oxychem keep its capacity utilization level significantly above its peer who faced technical issues with its plant in FY17.
- Both players shSitara Peroxide has been catching up recently, resolving its technical difficulties, resulting in improved operations.
- owed strong performance in 9MFY19, capitalizing on high international prices.



	FY16	FY17	FY18	9MFY19
Revenue	1,310	1,059	1,296	1,497
Operating Income	82	(57)	12	366
Net Income	16	(87)	(65)	210
GP Margin	14%	1%	10%	27%
Capacity Utilization	82%	70%	70%	83%
Debt to Equity	43%	44%	32%	26%

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# Regulatory Structure

- There are various regulations in place to provide protection to the domestic HPO industry.
- Presently, ~18% protection is offered to the local producers. This constitutes ~13% custom duty as well as regulatory duty which was imposed in May18.
- Various anti dumping duties have been imposed on the import of HPO from different countries.
- The duty structure is in place to protect the local manufacturing industry as most of the international players, being more complex chemical units with greater efficiency, are more competitive.
- Duties on Far East Asian countries, imposed since 2010 (reviewed and re-imposed in 2015), range from ~3.5% to ~84.5%. These include major exporters including Thailand, Indonesia and Korea.
- During 2016, two producers from Bangladesh started dumping excess hydrogen peroxide in the country thus negatively impacting the margins of the local industry. Thus, anti-dumping duty was imposed, including two major players, for five years from Oct15.

Type of Duty	Duty rate (%)
Custom Duty	11
Additional Custom Duty	2
Regulatory Duty	5

Exporters from Bangladesh	Anti-dumping duty rate (%)
Tasnim Chemical Complex Limited	12.14
Samuda Chemical Complex Limited	10.67
All Others	12.14

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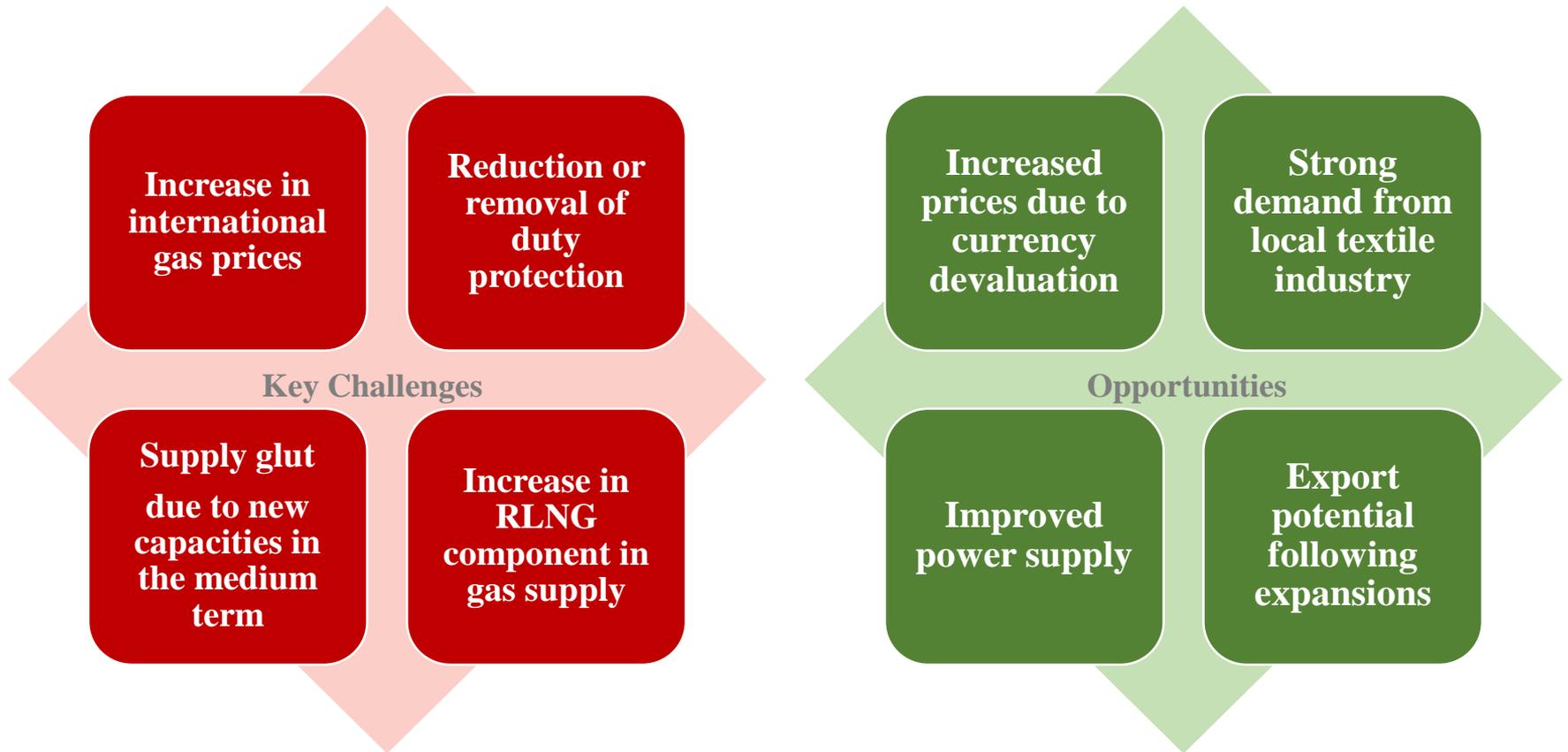
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# Key Challenges & Opportunities



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