Chemicals - Hydrogen Peroxide

June 2017

International Dynamics

Domestic Dynamics

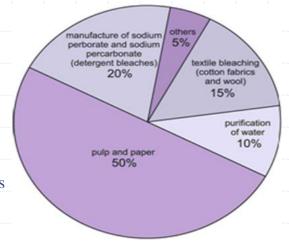
Domestic Players **Duty Structure** **Key** challenges

Introduction

- Hydrogen peroxide is a chemical compound with the formula H2O2.
- Characteristics:
 - colorless liquid
 - slightly more viscous than water

Applications (Global trend)

- 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 applications uses it for disinfection of dental and surgical instruments



Packaging

Introduction

Bulk material: Road Tankers, Rail tankers

Packaged material: Intermediate bulk container, Jerrycans, Drums

Commonly used Grades

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

Technical grade - 60% concentration level
Technical Grade - 50% concentration level
Aseptic Grade - 35% concentration level
Food Grade - 35% concentration level

Global Industry Dynamics

| Production | |
|------------|---------|
| World | ~3.8 MT |
| Europe | ~1.3 MT |
| USA | ~1.2 MT |
| Others | ~1.3 MT |

| * | | | | | | |
|--------------|------------------|--------|-------------------|--------|--------------|-------|
| | Solvay Chemicals | | Evonik Industries | | Arkema Group | |
| | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 |
| Revenues | 10,083 | 11,403 | 13,507 | 12,732 | 7,683 | 7,535 |
| Profit | 454 | 674 | 991 | 844 | 288 | 429 |
| | Solvay Chemicals | | Evonik Industries | | Arkema Group | |
| Capacity | 330,000 | | 950,000 | | 400,000 | |
| Headquarters | Belgium | | Germany | | France | |

- The global production levels for various concentration levels remained stable over the years.
- The three large players account for major portion of the market representing over ~50% of the global production capacity.
- During FY16, global demand and supply dynamics remained same resulting in a largely stable margins for the industry players.
- Paper & pulp industry accounted for over 40% of the global hydrogen peroxide market share and is anticipated to maintain the dominance in the next few years. With growing demand for recycled paper in the packaging industry and the global stationery demand, this sector will register a growth at over 5% CAGR in terms of revenue.
- 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.

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

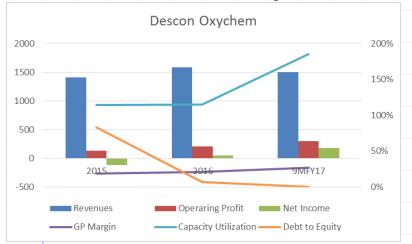
Domestic Dynamics

- Total domestic demand stands close to 55,000 60,000 Metric tons.
- Pakistan imports ~ 10-15% of its total demand while the rest is being catered by two players
- Domestic industry currently comprises two players (a) Descon Oxychem Limited DOL, (b) Sitara Peroxide Limited SPOL, with an installed capacity of 30,000 MT each.
- SPOL captures major portion of the northern market supported by its strategic location being in close proximity to the main textile hub of northern region (Faisalabad). DOL has a major market share in the southern region.
- Imports are mainly from Korea, and Thailand. ~80% are consumed in the south
- The major consumer in the domestic market is the Textile Industry, representing more than three-fourth of the domestic demand, followed by paper and pulp.
- The domestic industry is making efforts to increase its penetration in the food grade concentration which is a high margin segment

Domestic

Dynamics

Domestic Players | Performance



| | | | Sita | ara Peroxide | e | | | |
|------|--------------|----------|------|--------------------|-----------------|-------|-----|---|
| 1400 | | | | | | | 90% | |
| 1200 | | _ | | | | | 80% | |
| 1000 | | | | | | | 70% | |
| 800 | | | | | | | 60% | |
| 600 | | | | | | | 50% | - |
| 400 | | | | | | | 40% | |
| | | | | | | | 30% | |
| 200 | | | | | | | 20% | |
| 0 | | | | | | | 10% | |
| -200 | | 2015 | | 2016 | 9MFY: | 17 | 0% | |
| | Re | evenues | | Operaring Profit | Net Incom | ne | | - |
| | — -GI | P Margin | | Capacity Utilizati | on —— Debt to E | quity | | |
| | | | | | | | | |

| 2015 | 2016 | 9MFY17 |
|------|------------------------------------|---|
| 1409 | 1581 | 1497 |
| 132 | 210 | 302 |
| -118 | 44 | 174 |
| 19% | 21% | 27% |
| 114% | 115% | 185% |
| 83% | 7% | 0% |
| | 1409 132 -118 19% 114% | 1409 1581 132 210 -118 44 19% 21% 114% 115% |

| | 2015 | 2016 | 9MFY17 |
|----------------------|------|------|--------|
| Revenues | 1325 | 1310 | 757 |
| Operaring Profit | 13 | 82 | -69 |
| Net Income | -51 | 16 | -92 |
| GP Margin | 8% | 14% | 1% |
| Capacity Utilization | 81% | 82% | 77% |
| Debt to Equity | 51% | 43% | 74% |

- Top line of both the players remains healthy on account of sound domestic demand.
- Debt Free balance sheet of Descon Oxychem enhancing its performance compared to its peer in the industry.
- Debottlenecking and operational efficiencies of Descon oxychem has improved its utilization level as compared to peer companies in the industry.

Duty Structure

- The government has imposed an anti dumping duty on the import of hydrogen peroxide.

 The duty structure varies according to the regions
- The duty structure is in place to protect the local manufacturing industry as most of the international players being more complex chemical units and with greater efficiency are more competitive
- During the recent year, two producers from Bangladesh started dumping excess hydrogen peroxide in the country thus negatively impacting the margins of the local industry. Duty structure already existed for the most of the Far East Asian Countries but recently was implemented for Bangladesh as well
- Domestic hydrogen peroxide prices are mainly driven in relation with the international pricing regimes
- This duty structure started from 16th, October 2015 and is effective for 5 years

Domestic

Dynamics

| Exporter/ Foreign Producers | Anti-dumping duty rate (%) |
|---------------------------------|----------------------------|
| | |
| Tasnim Chemical Complex Limited | 12.14 |
| Samuda Chemical Complex Limited | 10.67 |
| All Others | 12.14 |



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