

Fertilizers Sector in Pakistan

- Cultivating Economy

October 2016

Significance¹ of Fertilizers

Fertilizers is the most significant and expensive agricultural input

Increased Agri production and higher crop yield is essential for food security

Crops accounted for 7% of GDP (37% of Agri) in FY16

Agri is important for Food Security and reducing poverty | political interests

Crop yield (30% - 50%) is dependent upon balanced use of fertilizers; One kg of fertilizers nutrients produces

- 8 kgs of cereals (Wheat, Maize and rice)
- 2.5 kgs of cotton
- 11 kgs of sugarcane

Nutrient deficiency in soil of Pakistan is met through fertilizers

- Nitrogen Deficiency: 100% of soil
- Phosphorus Deficiency: 80% - 90% of soil
- Potassium Deficiency: 30% of soil

Significance

Competitive Analysis

Capacities

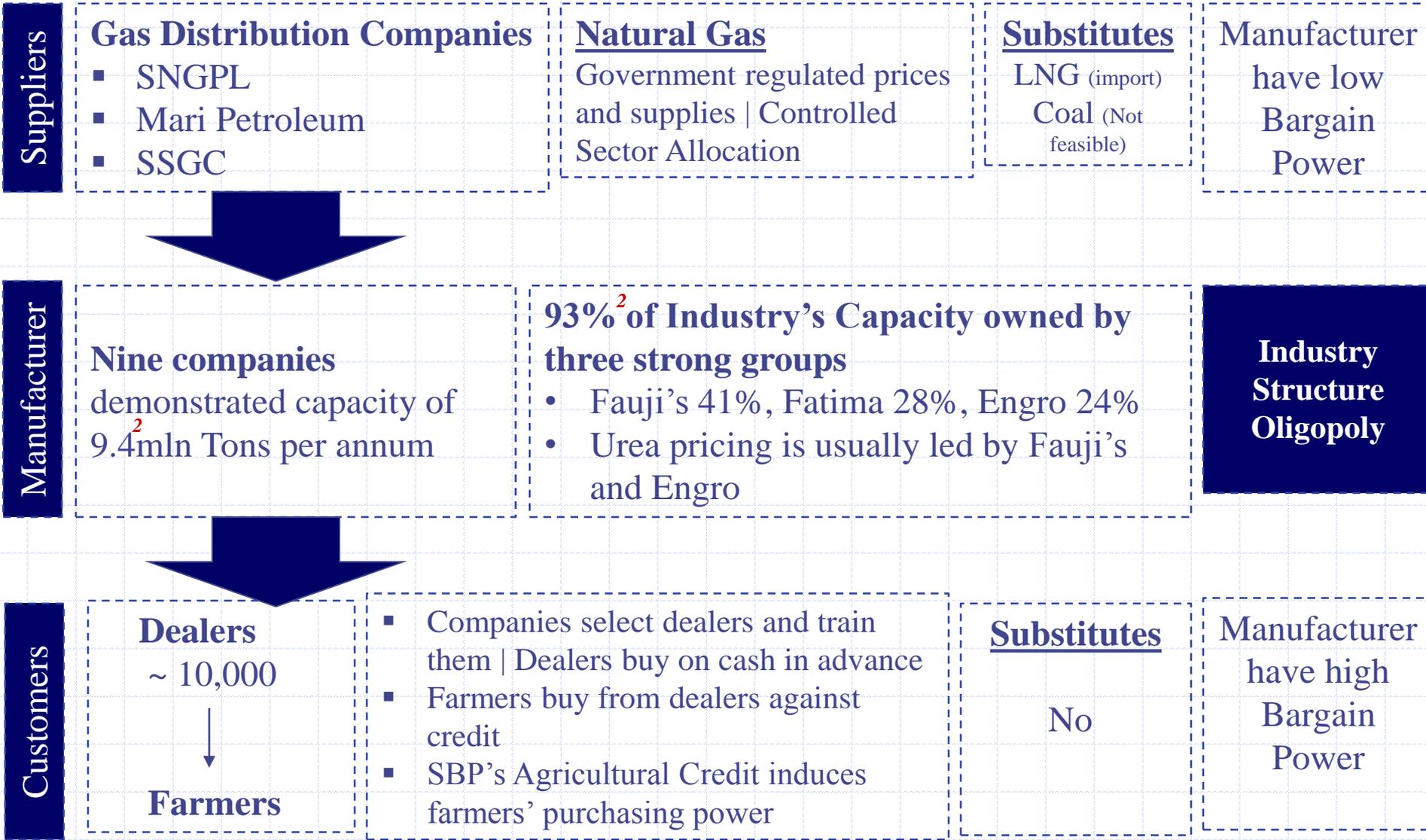
Primary Cost | Gas

Urea Dynamics

Urea Price

Risk Profile

Fertilizers Sector | Competitive Analysis



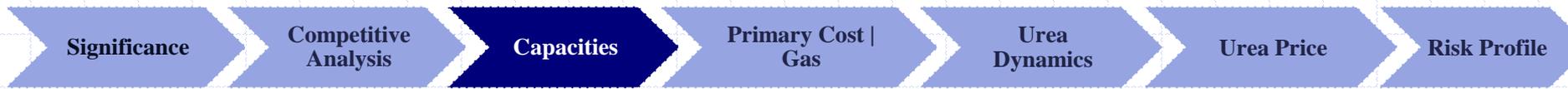
Manufacturing Capacities ²

- Pakistan's Urea manufacturing capacity exceeds country's demand
- There is only one DAP manufacturer, whose capacity insufficient to meet the demand and, hence, DAP is imported

| Fertilizer Industry Demonstrated Capacities (thousand MT p.a.) | | | | | | | | | Plant Location | Brand Name | Allocated Gas | Captive Power Plant |
|--|------------------|-------------------------|-------------------|------------|----------------------------------|------------|--------------|--------------|-----------------------------|-------------|---------------|---------------------|
| Group's Name | Company's Name | Nitrogenous Fertilizers | | | Phosphatic Complex Fertilizers | | | Grand Total | | | | |
| | | Urea | Urea Market share | CAN | DAP | NP | Others (SSP) | | | | | |
| Fauji's | Fauji (FFC) | 2,500 | 36% | - | - | - | - | 2,500 | 1 & 2 - RYK 3-Ghotki | Sona | 245 | |
| | FFBL | 700 | 10% | - | 670 | - | - | 1,370 | Port Qasim Karachi | Sona | 100 | |
| | Sub-Total | 3,200 | 46% | - | 670 | - | - | 3,870 | | | | |
| Engro | Engro Fertilizer | 2,275 | 33% | | - | - | - | 2,275 | Base Plant & Enven - Dharki | Engro | 212 | |
| Fatima | Fatima | 500 | 7% | 420 | - | 360 | - | 1,280 | Rahim Yar Khan | SarSabz | 97 | 56MW |
| | Fatima Fert* | 446 | 6% | - | - | - | - | 446 | Sheikhupura | Bubber Sher | 44 | |
| | Pakarab | 92 | 1% | 450 | - | 350 | - | 892 | Multan | SarSabz | 80 | |
| | Sub-Total | 1,038 | 15% | 870 | - | 710 | - | 2,618 | | | | |
| | Agritech | 433 | 6% | - | - | - | 81 | 514 | Urea-Mianwali SSP-Hazara | Tara | 44 | |
| | Others | - | - | - | - | - | 162 | 162 | n.a | None | | |
| Grand Total | | 6,946 | 100% | 870 | 670 | 710 | 243 | 9,440 | | | 822 | |

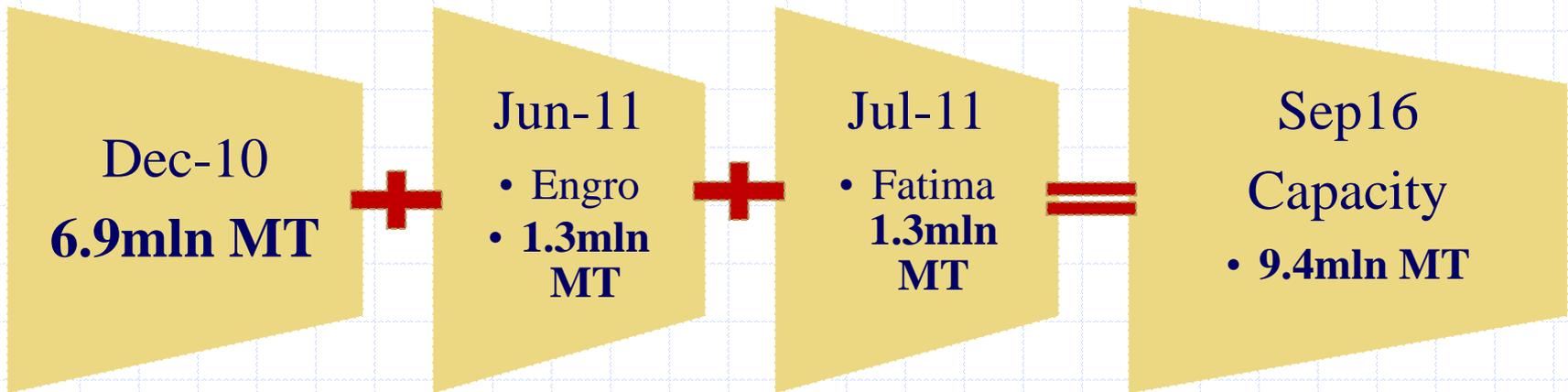
* previously DH Fertilizers

Note: Demonstrated capacity has been taken as the higher of (i) highest production achieved given normal gas supply, and (ii) Nameplate capacity



New Capacities²

Capacity Expansion in latest 5 years – Majorly Nitrogenous FertilizerS



- The country, though added capacities in CY11, has continued to import urea until CY15 due to shortage of gas – a vital raw material
- In medium term, new capacities are not expected to be added in the country
- The industry players have been exploring opportunities to set up plants in other countries e.g. US

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Capacity Utilization² – increased

- Beginning Jun-16, industry’s capacity utilization has been consistent at 90%
- Increased supply of gas
 - Mari Network: new finds
 - Other Networks: Imported LNG is being provided through normal network

| Gas Network | Urea Capacity (000'Tons) | Capacity utilization ^{5a} | | | | |
|--------------------------|-----------------------------|------------------------------------|------------|------------|------------|------------|
| | | CY13 | CY14 | CY15 | 9MCY15 | 9MCY16 |
| Mari Petroleum | 5,275 | 82% | 87% | 92% | 92% | 92% |
| Sui Northern Gas (SNGPL) | 971 | 29% | 10% | 16% | 11% | 68% |
| Sui Southern Gas (SSGC) | 700 | 32% | 30% | 43% | 38% | 67% |
| Total | 6,946 | 70% | 71% | 76% | 75% | 86% |

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Primary Cost | Gas Pricing ^{2&4}

- Feedstock price, a basic raw material, is subsidised for the fertilizer sector – 80% discount to fuelstock
- Fertiliser policy 2001, further subsidized and fixed feedstock on new plants at USD 0.7/ mmbtu (Fatima: 1.5mln Tonnes, Engro Enven: 1.3mln Tonnes)
- Levy of GIDC, in 2011, escalated the cost of manufacturing; however, passed on to farmers

Two Components of Cost

- 1) **Base prices** has relatively remained stable throughout the years, except raise in Aug-15; however, GoP reverted the base price of feedstock after negotiation with the industry players
- 2) **Gas Infrastructural Surcharge (GIDC)** accounts for ~50% of the cost per tonne of urea

GIDC Disputed

- All industry players, including fertiliser manufacturers, in 2014, challenged the imposition of GIDC
- GoP, responded by promulgating GIDC Act, 2015; which has again been declared void ab initio by the High Court of Sindh in 3Q16
- There is likelihood that the GoP would challenge the decision or may adopt some other mechanism to fill the revenue gap; hence, transfer of beneficial impact remains uncertain

| Timeline | Feed Stock (PKR/mmbtu) | | | Fuel Stock (PKR/mmbtu) | | | Gas Cost | |
|----------|------------------------|------|----------|------------------------|------|----------|-----------------|----------------|
| | Base Price | GIDC | Increase | Base Price | GIDC | Increase | PKR/ Tonne Urea | Total Increase |
| Dec-10 | 116 | 0 | n.a | 460 | 0 | n.a | 6,232 | n.a |
| Dec-11 | 116 | 197 | 170% | 460 | 13 | 3% | 10,670 | 71% |
| Jul-12 | 116 | 197 | 0% | 460 | 50 | 8% | 10,966 | 3% |
| Sep-12 | 123 | 197 | 2% | 488 | 50 | 5% | 11,344 | 3% |
| Dec-12 | 123 | 197 | 0% | 488 | 50 | 0% | 11,344 | 0% |
| Dec-13 | 123 | 197 | 0% | 488 | 50 | 0% | 11,344 | 0% |
| Jul-14 | 123 | 300 | 32% | 488 | 100 | 9% | 14,010 | 24% |
| Sep-14 | 123 | 300 | 0% | 488 | 150 | 9% | 14,410 | 3% |
| Dec-14 | 123 | 300 | 0% | 488 | 150 | 0% | 14,410 | 0% |
| Aug-15 | 200 | 300 | 18% | 600 | 150 | 18% | 17,000 | 18% |
| Dec-15 | 200 | 300 | 0% | 600 | 150 | 0% | 17,000 | 0% |
| Apr-16 | 123 | 300 | -15% | 600 | 150 | 0% | 15,306 | -10% |
| Sep-16 | 123 | 300 | 0% | 600 | 150 | 0% | 15,306 | 0% |

Significance

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UREA Performance

Country's largest selling Nitrogenous Fertilizer

Government support – subsidy of PKR 340/bag

Reduction in GST from 17% to 5% (PKR 184/bag)

Cash Subsidy (PKR 156/bag)

Effective Jul-16

Significance

Competitive
Analysis

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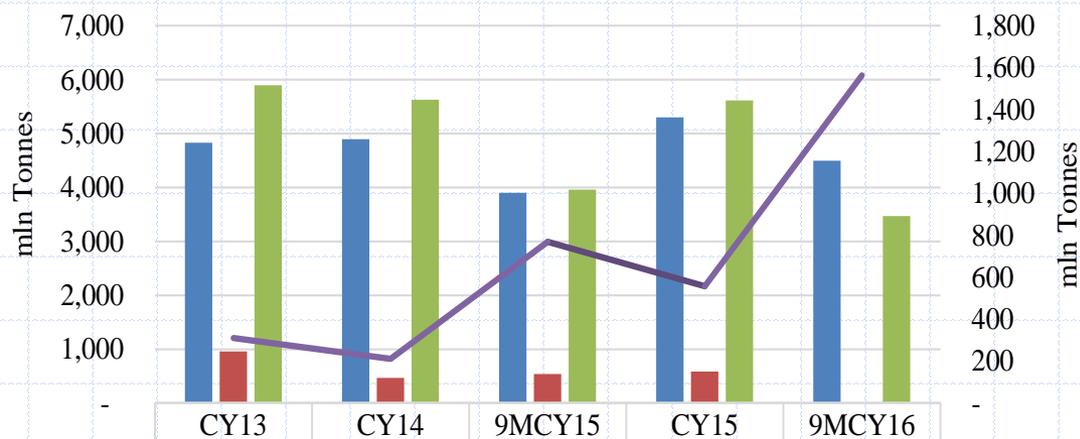
Urea Dynamics

- During 9M16, industry produced additional 593k tonnes of urea YoY, due to full capacity utilization, thereby eradicating need to import (9M15: 536k tonnes)
- Manufacturers could not obtain full benefit constrained by low offtakes
- Limited buying by dealers until end-Jun16, in anticipation of price reduction on account of expected subsidy announcement by GoP, combined with low farmers economics (crops declined by 6%) resulted in cumulative decline by 12% in 9M16
- Production exceeded demand by 1,024k tonnes, which translated into inventory piled up at end-Sep16

Going forward

- Challenge is to offload inventories
- Exports allowance by GoP supported by export subsidy critical for the industry
- Increased working capital requirement – high inventory, receivables and subsidy receivable from GoP

Urea demand supply



| | | | | | |
|-------------------------|-------|-------|-------|-------|-------|
| Production | 4,829 | 4,899 | 3,904 | 5,302 | 4,497 |
| Imports | 957 | 464 | 536 | 586 | - |
| Sales | 5,895 | 5,631 | 3,958 | 5,617 | 3,473 |
| Closing Inventory (RHS) | 311 | 211 | 770 | 558 | 1,564 |

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Urea Dynamics

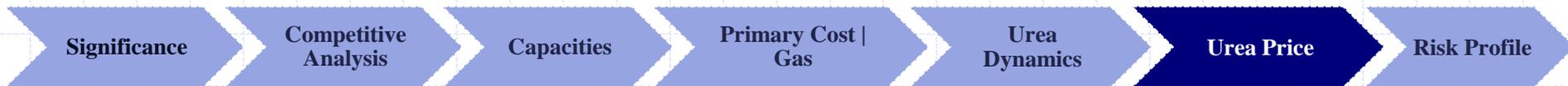
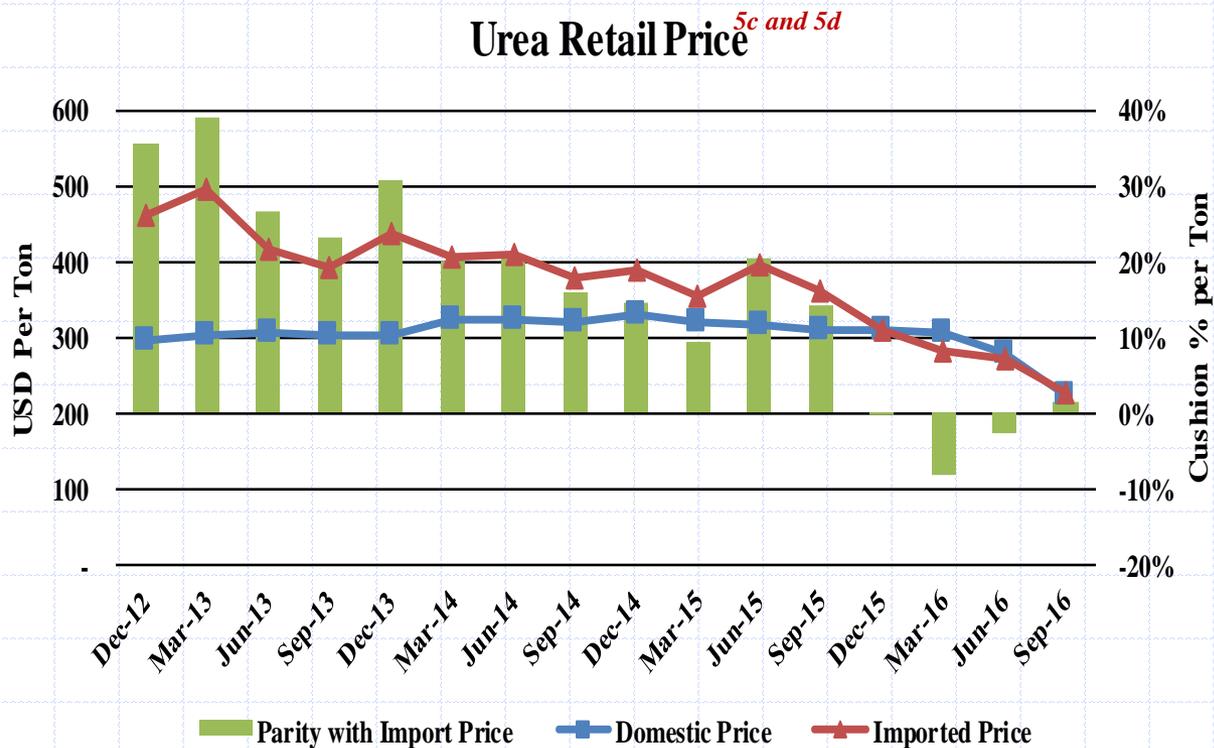
Urea Price

Risk Profile

Urea Price

- Historically, the players had demonstrated the ability to pass on the costs hike to consumers through price hike; Urea local price remained generally stable throughout CY14 and CY15
- The fuel gas price hike in Aug-15 was absorbed by the players, as the parity with international price was reduced
- Pressure on local price would continue in near term due to (i) high competition amidst supply surplus, (ii) available margins to absorb price cut (iii) low international price making exports unfeasible

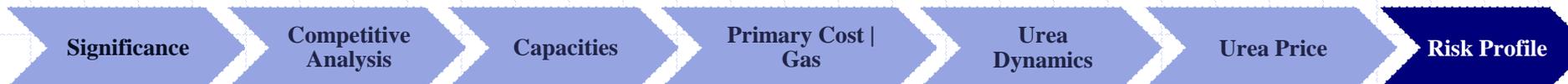
- With the fall in international urea price another risk that may arise is that of imports; the likelihood is remote because of
 - Margin (cost of imports equates local sale price)
 - Distribution network
 - Brand quality/ Loyalty



Fertilizer Industry | Outlook Negative

- + Operational risk minimized with all plants operating at full capacity
- + Sustainable gas supply ensured at ~75% of the country's capacity, which covers demand
- + Established Demand of fertilizers backed by vital need of agricultural output; farmers economics expected to improve with recent "Kissan Package" relief by GoP
- + No substitute of the products

- Margins under pressure | price cut amidst abundant supply
- Challenge to offload inventories; low international price makes exports unfeasible
- Financial Risk: increased working capital requirements and constraints on cashflows; inventories, trade receivables, and subsidy receivable from GoP
- Permanent resolution of gas to small players is vital for their survival
- Any drop in international urea price will further constrain urea price raise to pass on cost hikes, particularly gas cost



Bibliography

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2. PACRA's in-house research and database
3. National Fertilizer Development Centre (NFDC) Monthly Report
 - a. Annexure 11_ Fertilizer Production by Product and Manufacturer
 - b. Annexure 5_ Plant wise Production Sales and Stock position
 - c. Section 9_ Fertilizer Prices, Table 7_ Average Fertilizer Retail Prices
 - d. Section 9_ Fertilizer Prices, Table 8_ International Prices
4. Oil and Gas Regulatory Authority, Notified Gas Prices Consumer Gas Prices

Thank You

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