Oil Marketing Companies (OMCs)

Sector Study

November 2021

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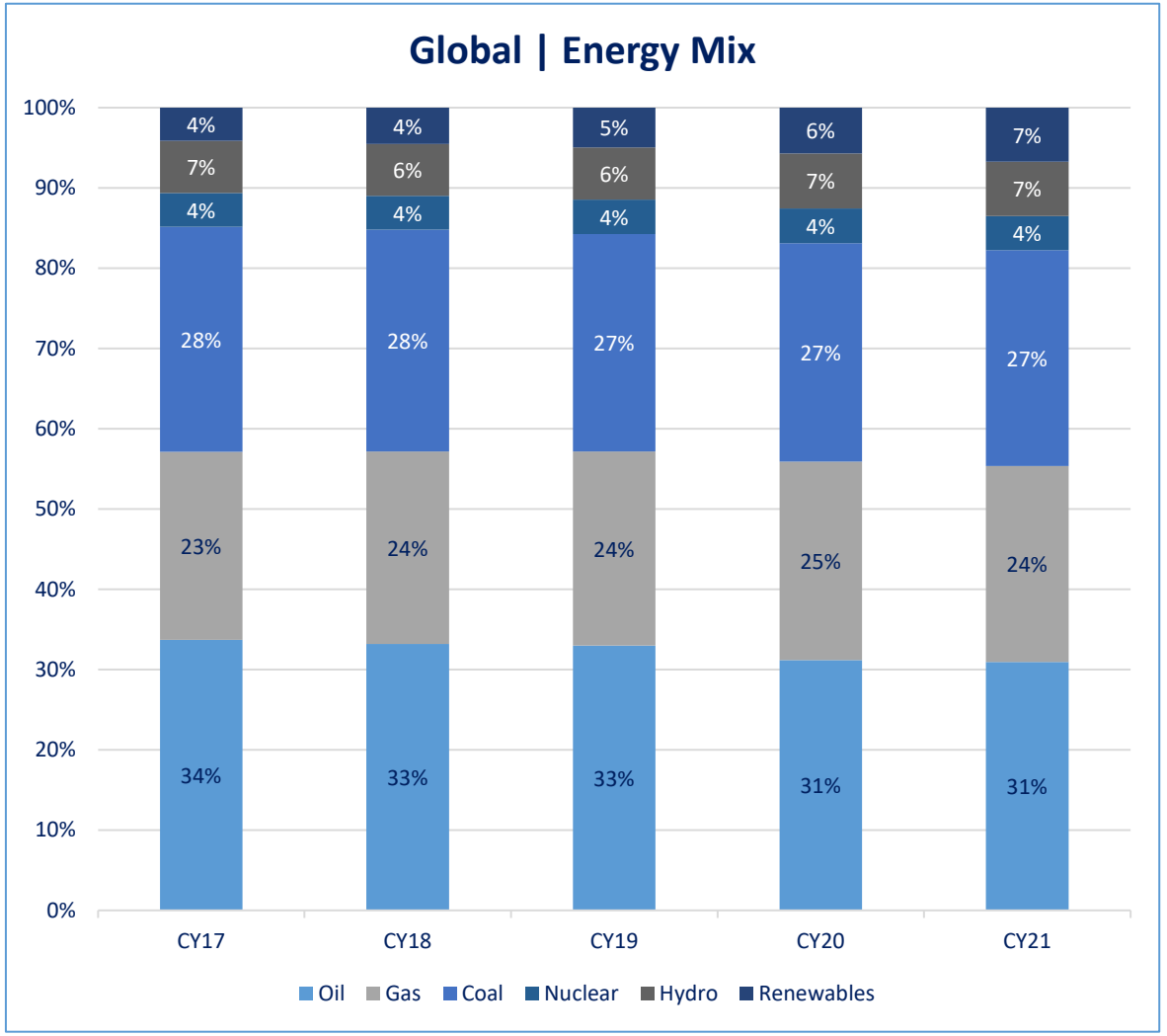
Refineries

Global | Energy Mix

- The global energy mix is historically dominated by fossil fuels, with oil taking the lead among all fuels followed by coal and gas. Despite the growing demand for renewables and environment friendly energy, renewables still holds a very nominal portion in the global energy mix.
- In CY21, the world consumed energy of ~97bln barrels of oil equivalent (CY20: ~91bln) from a variety of sources. Although there is a positive trend in the development of renewables; fossil fuels (Oil, Gas and Coal) comprised the lion's share in the global energy mix at ~82.3% of total (CY20: ~82.2%) with oil being the most dominant source of energy at ~31%.
- A gradual decrease in demand for fossil fuels is expected in the longer term following advances in renewable technology, improved efficiency of internal combustion engines, a more widespread use of EVs and international efforts for environmental sustainability.
- On the sidelines, the conflict in Eastern Europe that started in the beginning of CY22 has exposed major geopolitical risks in the fossil fuel supply chain. This may act also as the impetus for accelerated renewable technology adoption; as major developed economies sure up their energy security.

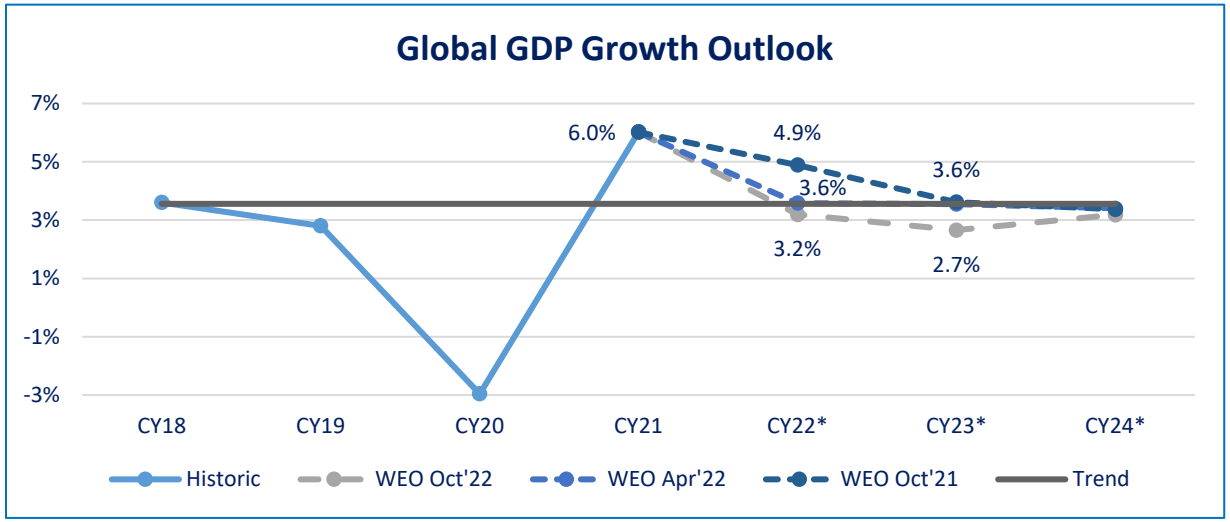


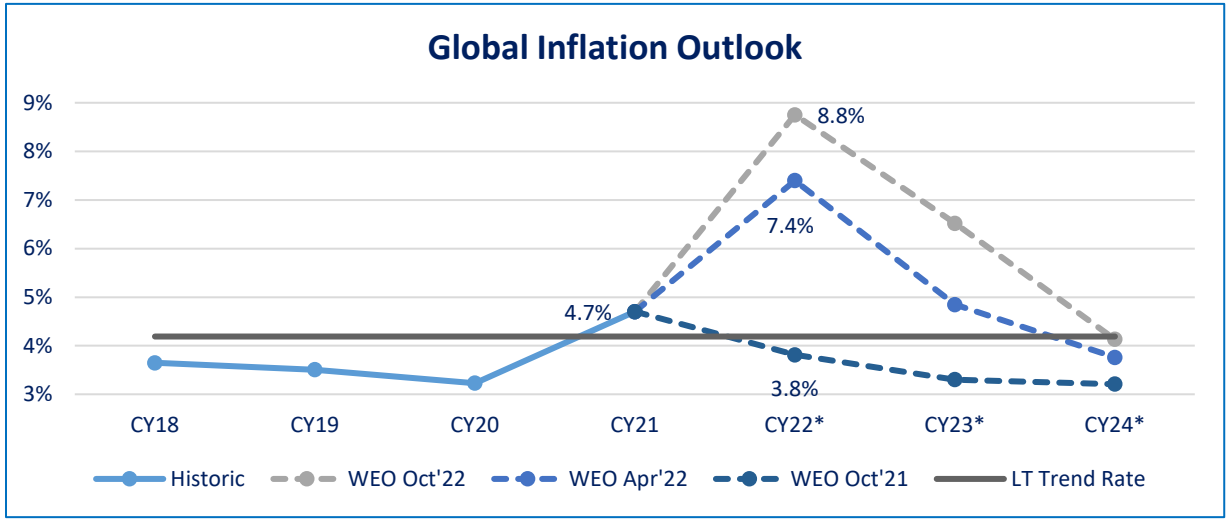
Source: BP Stats, Yale School of the Environment, McKinsey & Company

Refineries

Global | Economic Outlook

- In CY21, the global GDP rebounded at ~6.0% with expectations of normalization in CY22 and convergence with long-term GDP trend rate by CY23.
- However, since the start of the conflict in Eastern Europe in early CY22; fear of energy and food commodity supply shocks on top weakened supply chains that led to commodity price spirals and was followed by decades high inflation levels.
- Resultantly, many central banks have taken hawkish monetary stances to curb inflation that has been brought on by both stimulative polices during COVID-19 lockdowns and commodity price inflation.
- IMF in its latest World Economic Outlook Oct'22 estimates global inflation for CY22 to clock in at ~8.8% (CY21: ~4.7%) and remain persistent through CY23 with convergence expectation to LT trend rate in CY24.
- This has culminated in decreasing demand and a global economic slowdown, with increasing threats of a looming recession as developed economies gear for a "soft or softish landing".
- IMF in its latest October'22 WEO forecasts a below trend GDP growth rate for CY22 at ~3.2% (CY21: 6.0%) with subdued economic activity going into CY23 with its estimated GDP growth rate at ~2.7%.





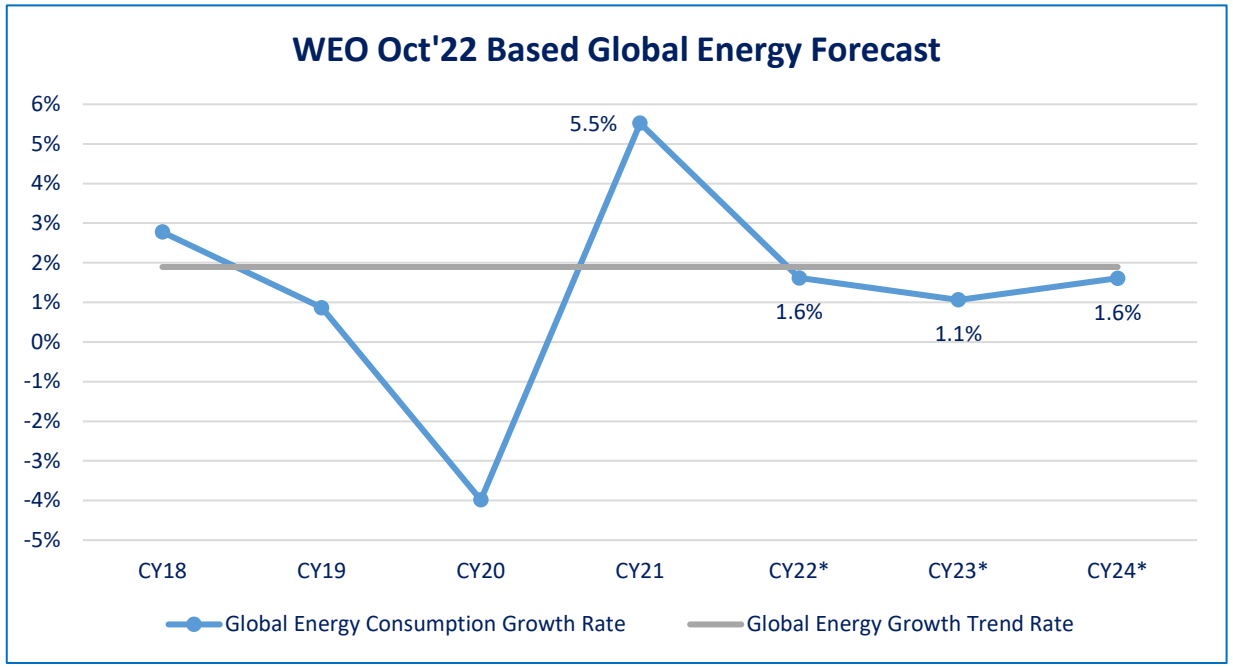
*Forecast values

Source: IMF

Refineries

Global | Energy Consumption

- Global energy consumption growth is highly correlated with the global GDP growth as the two have a long term correlation coefficient of 0.91.
- Similar to the global GDP, energy consumption in CY21 also rebounded at ~5.5%.
- During the CY20 recission global energy consumption fell by ~4.0% while global carbon emissions dipped by 5.9%; indicating high integration of fossil fuels in the modern economy.
- As the current economic structure costs USD~1,300 in opportunity cost of reducing 1MT of Carbon emissions via reducing energy consumption.
- Energy commodities prices change have historically had a higher volatility (i.e., Standard Deviation) of ~38.4% compared to non-energy commodities at ~15.1%.
- The start of Russia-Ukraine was at the start of CY22 set the pace for energy markets for the rest of the year; as Russia is one of the largest energy exporter in the world; holding a global export share of 12.8% petroleum, 19.8% in nature gas and 17.9% in coal in CY21.



- Ensuing supply concerns threw energy commodity prices in an upward spiral as they reached all-time/multi-year highs; however given the subdued economic growth outlook; growth in global energy consumption is also expected remain below the trend rate.

**Forecast values*

Source: BP Stats, IMF, World Bank

Oil Marketing Companies

Oil Market Segments

Upstream

- Exploration
- Field Development
- Production Operations

Midstream

- Transportation
- Processing & Refining
- Storage & Distribution

Downstream

- Wholesale & Marketing

- Oil sector is divided into **Upstream**, **Midstream** and **Downstream** segments.
- Upstream Sector encompasses Exploration and Production of oil.
- Midstream includes transporting oil from production sites to refineries via pipelines, trains, tankers, and trucks and production of refined products.
- Downstream comprises marketing & distribution of refined petroleum products.
- In the medium term global investments of USD~250bln are expected to be made in the midstream and downstream sectors.

Source: EIA, OPEC

Oil Marketing Companies

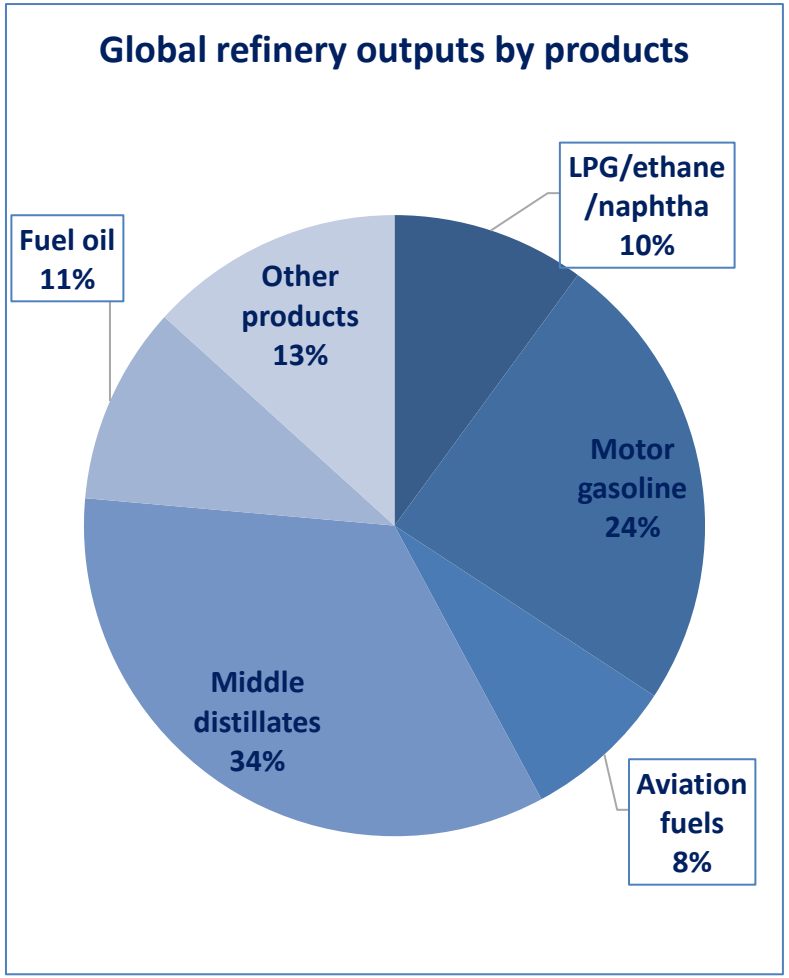
Oil Value Chain

Crude oil is a mixture of hydrocarbons that exists in liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities.

Crude oil is transported to refineries to convert it into its derivatives.

Refining breaks crude oil down into its various components, which are then selectively reconfigured into new products. All refineries have three basic steps: Separation, Conversion, Treatment

Petroleum products include gasoline, distillates such as diesel fuel and heating oil, jet fuel, petrochemical feed stocks, waxes, lubricating oils, and asphalt.



Source: EIA

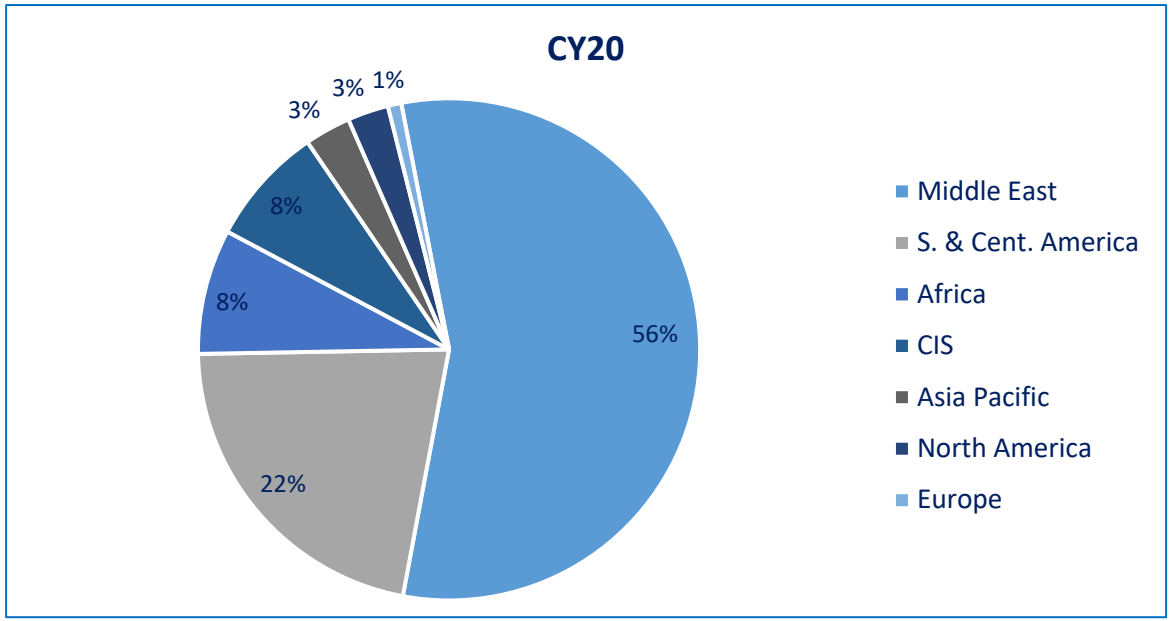
Refineries

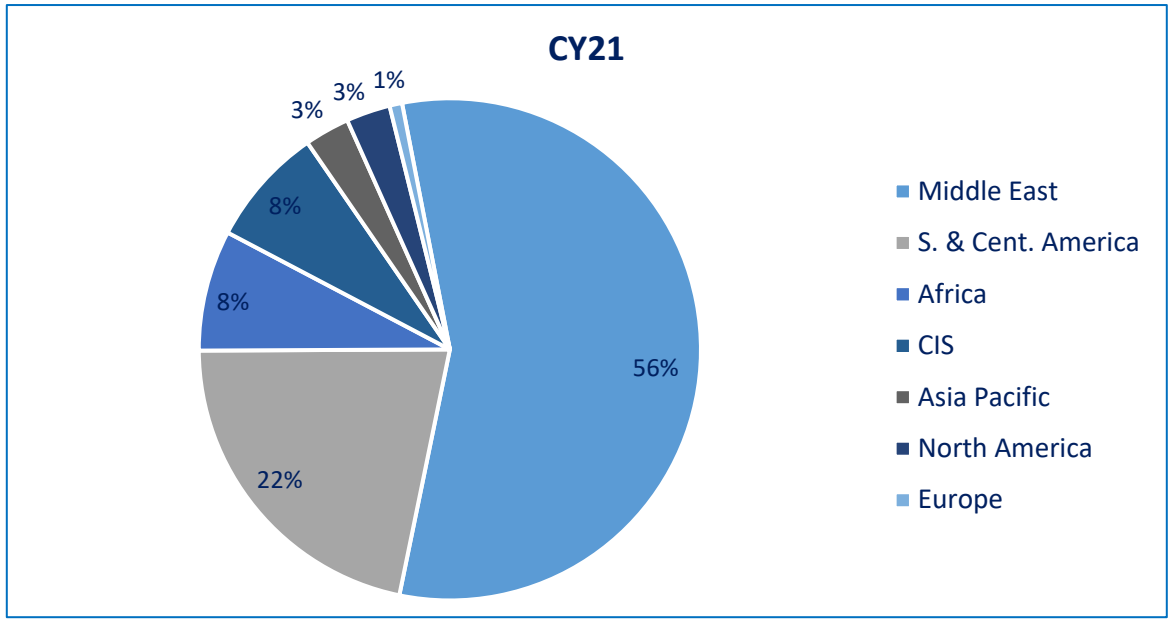
Global | Crude Oil Reserves Position

- World crude reserves stood around ~ 1,545 2bln barrels as at Dec-end 2021.
- Reserves have been growing at a meagre CAGR of ~0.7% over the period of last five years (CY17-CY21).
- OPEC countries account for ~70% of the world's proven crude oil reserves.

Global Crude Oil Reserves (bln barrels)					
Period	CY17	CY18	CY19	CY20	CY21
Total World	1,491	1,495	1,554	1,545	1,545

Note: Oil Sands not considered





1 Barrel = 0.1364 MT

Source: BP Stats, EIA

Refineries

Global | Crude Oil Production & Consumption Levels

- During CY21, global crude oil extraction as a percentage of total global reserves was ~2.1%.
- Total world crude oil extraction grew by ~1.2% in CY21, however remained ~5.7% below pre-COVID levels.
- In CY22, global crude oil extraction is expected to grow at ~4.4% reaching pre-Covid levels; however after OPEC's agreement to cut production targets by 2mln bbl/day and ~16% decline in Russian oil production; Crude extraction in CY23 is expected to grow by ~0.7%.
- In CY21 global Crude oil consumption grew by ~5.9% but remained ~4.1% below pre-COVID levels.
- Inc CY22 global crude oil consumption is expected to grow by ~2.3%; the expected economic slowdown in CY23 may keep demand subdued; with crude consumption growth forecasted at ~1.2%.

Global | Crude Oil Extraction-mln MT					
Period	CY17	CY18	CY19	CY20	CY21
Total World Production	**4,386**	**4,487**	**4,478**	**4,171**	**4,221**
Total Middle East	1,470	1,485	1,408	1,295	1,316
Total North America	920	1,029	1,108	1,059	1,075
Total CIS	702	715	720	661	674
Total Asia Pacific	369	361	361	353	348
Total Africa	386	393	397	331	345
Total S. & Cent. America	374	341	323	305	304
Total Europe	165	163	159	168	160

Global | Crude Oil Consumption-mln MT					
Period	CY17	CY18	CY19	CY20	CY21
Total World Production	**4,362**	**4,421**	**4,429**	**4,019**	**4,246**
Total Asia Pacific	1,594	1,631	1,659	1,571	1,640
Total North America	1,012	1,033	1,025	890	958
Total Europe	705	704	700	608	638
Total Middle East	396	402	392	362	375
Total S. & Cent. America	282	273	270	238	261
Total CIS	188	193	197	184	194
Total Africa	185	187	187	166	180

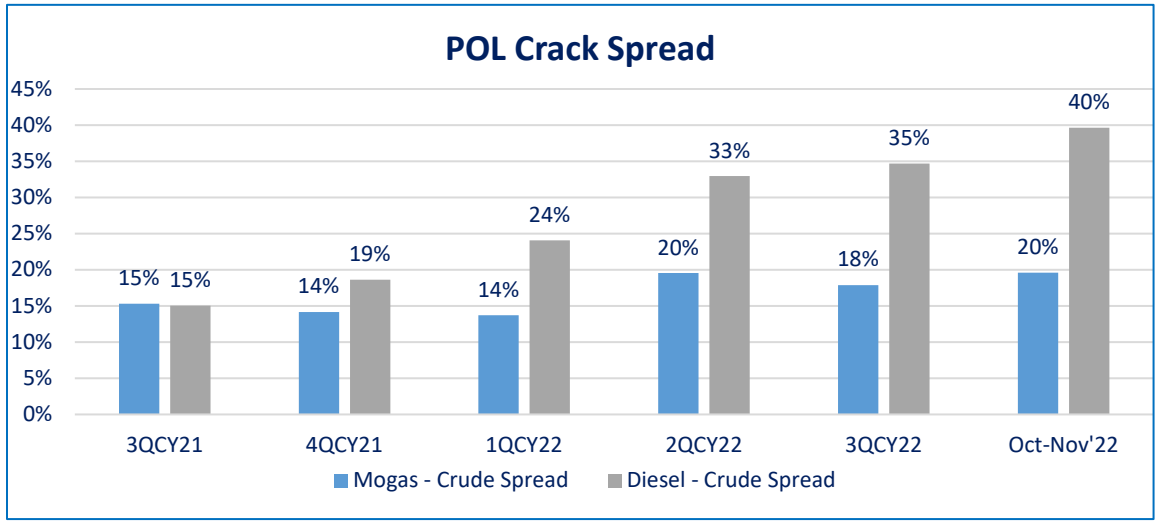
*Estimated

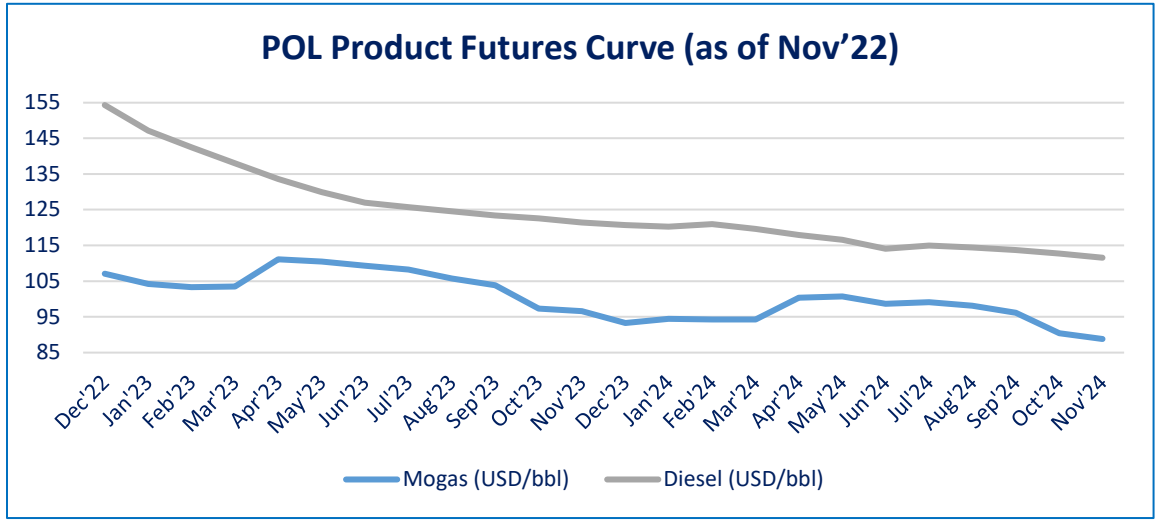
Source: BP Stats, EIA

Refineries

Crack Spreads

- Refined petroleum products trade at a premium above crude oil prices, the spread between the prices is called Crack Spread and is indicative of mid and downstream profitability margins
- Prices of crude and refined products are independently subject to their own supply and demand, regulatory, environmental and economic factors.
- Historically, crack spreads of Mogas and Diesel has averaged ~15% and ~20% respectively.
- However global refining capacity in CY21 reduced by ~0.4% with further expected capacity cuts up to ~1bln bbl/day; refinery throughput also remained ~4.3% below pre-COVID levels and combination of sanctions on Russia have pushed the Crack Spreads of Mogas and Diesel to ~20% and ~40% respectively.
- Substitution of natural gas with Diesel (for heating and power generation) in combination with its high economic/industrial dependence upon it has kept diesel market in backwardation and the market can reasonably be expected to remain tight and volatile going forward.



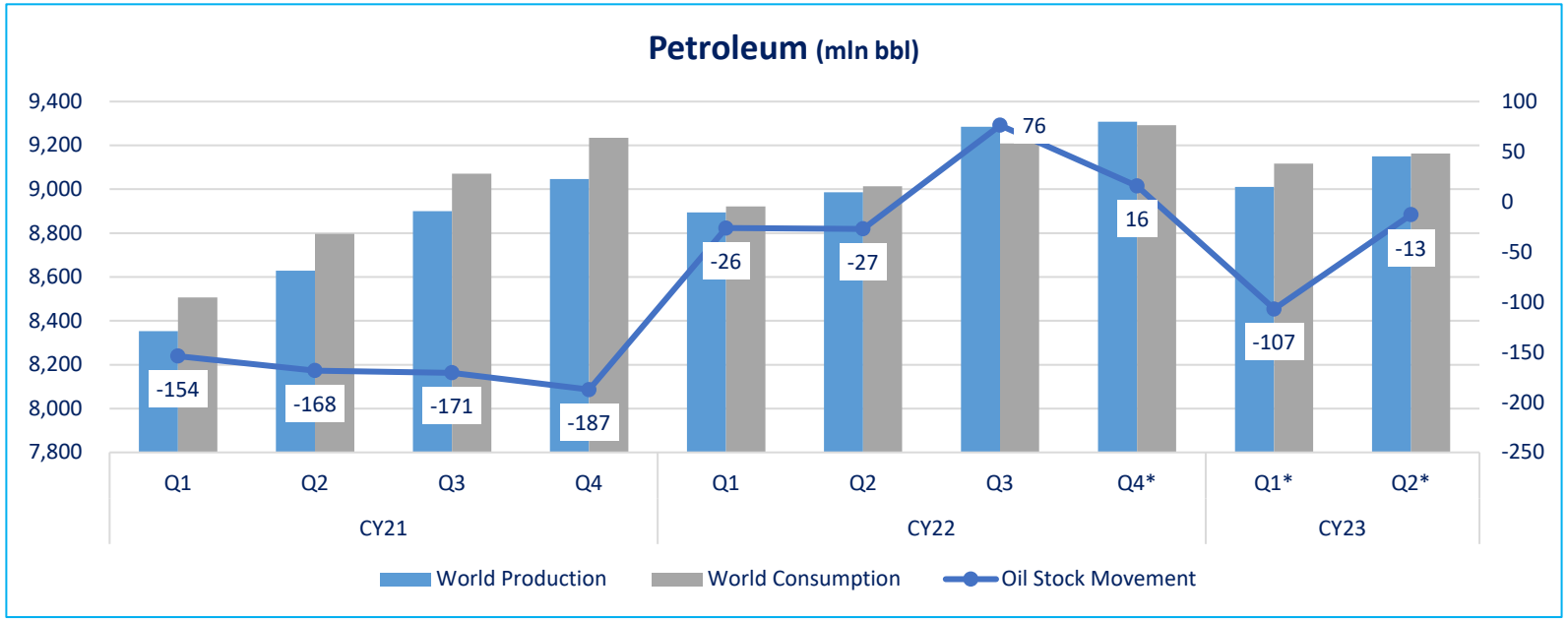


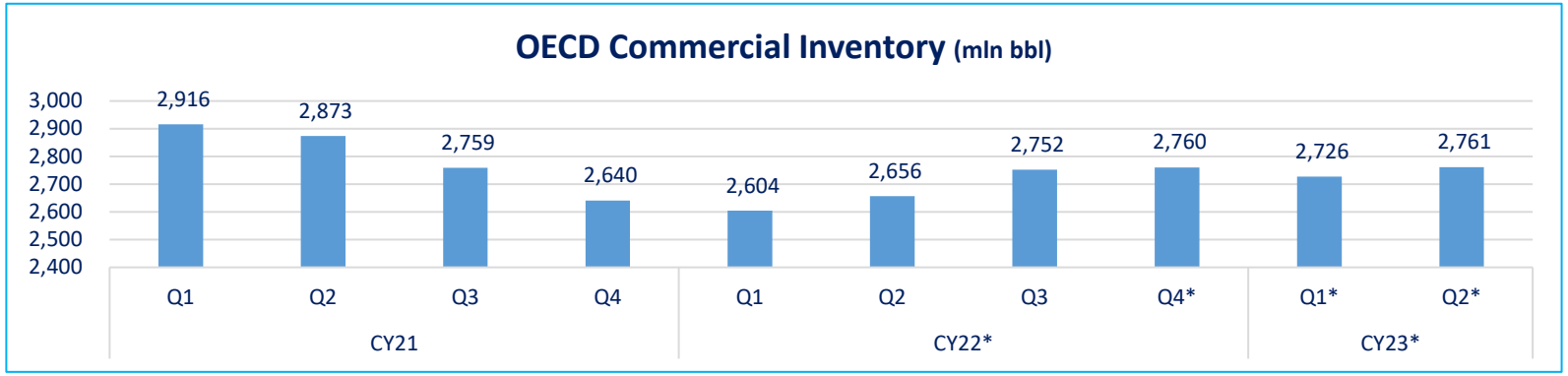
Source: Investing.com, BP Stats, Fitch, ifs.marketcenter.com

Refineries

Oil Stock Analysis

- Strong demand rebound in CY21 lead to petroleum consumption outpacing its production levels; leading to inventory drawdowns of ~680 bbl; OCED's commercial inventories dipped by ~12.8%, while US's Strategic Petroleum Reserves dipped by ~3.7%.
- As petroleum production ramped up in CY22; draw on global petroleum inventories are expected to increase by ~39mln bbl; with OCED's commercial inventories to increase by ~5.5% till Nov'22.
- As productions cuts from OPEC and Russia expected to come into effect; inventory draws are expected from Dec'22 onwards till 2QCY23 end.





*Forecasted**

Source: EIA, OPEC

Oil Marketing Companies

Global | Crude & Products Trade

- In CY20 Saudi Arabia had the highest share of world crude exports (~17%), followed by Russia (~12%) and Canada (~9%). In products market, USA emerged as the largest exporter (~22%), followed by Russia(~10%).
- A major portion of world crude and products import was dominated by Europe (~23%) and China(~26%). India is emerging as a net crude importer and product exporter on the globe with a share of ~10% in crude imports and ~1% in products export.
- Whereas in terms of export of total petroleum liquids, USA cemented itself as the global leader in CY20, outpacing Saudi Arabia by ~90mln tons and capturing ~12% of the global market share.

Imports Share - Crude & Products

Country/ Region	CY20	CY21
Europe	19%	20%
China	20%	19%
Other Asia Pacific	15%	14%
US	12%	13%
India	8%	8%
Japan	5%	5%
Singapore	5%	4%
S. & Cent. America	3%	4%
Mexico	2%	2%
Canada	2%	2%
ROW	9%	9%
Total World	100%	100%

Exports Share - Crude & Products

Country/ Region	CY20	CY21
Russia	11%	12%
US	12%	12%
Saudi Arabia	12%	12%
UAE	7%	7%
Canada	7%	7%
West Africa	7%	6%
Iraq	6%	6%
Other Asia Pacific	5%	5%
Other Middle East	5%	5%
S. & Cent. America	5%	5%
ROW	23%	24%
Total	100%	100%

Source: BP Stats

Oil Marketing Companies

Global | POL Consumption Mix

- Global POL mix has been stable up till CY19. However, due to COVID-19 lockdowns and travel restrictions, variations were observed in CY20.
- Among POL products, HSD is the highest consumed product with a share of ~30%, followed by MOGAS with a share of ~25%. HSD is mainly used as a fuel in engines operating above 750rpm in commercial vehicles, stationery diesel engines, locomotives, pumps, etc.
- As global POL consumption fell amid COVID-19 pandemic, the fall was not proportionate among fuel types. Jet fuel took the biggest hit, as its share in global POL mix is estimated to have dropped from ~7% to ~4% in CY20. MOGAS global share also dropped by ~1% in CY20. The decline in both MOGAS and Jet fuel global share was picked up by HSD and other petroleum liquids as their share increased by ~1% and ~2% respectively

Global | POL Consumption Mix					
Period	**CY17**	**CY18**	**CY19**	**CY20**	**CY21**
White Oils	**62%**	**63%**	**63%**	**60%**	
HSD	28%	29%	29%	30%	
MOGAS	26%	26%	26%	25%	
Jet fuel	7%	7%	7%	4%	
Kerosene	1%	1%	1%	1%	
Black Oils	**29%**	**28%**	**28%**	**30%**	
Other petroleum liquids	22%	21%	21%	23%	
Residual fuel oil	7%	7%	7%	7%	
Gases	**9%**	**9%**	**9%**	**9%**	
Liquefied Petroleum Gases	9%	9%	9%	9%	
Total	**100%**	**100%**	**100%**	**100%**	

Source: EIA

Oil Marketing Companies

Global | Top 10 Oil Companies

- World's top 10 companies involved in oil marketing operations are vertically integrated either in all three segments or middle and down streams of oil value chain. Top 10 companies have cumulative assets worth USD ~1.784 trillion and revenues of USD ~1.78 trillion representing ~1.9% of the expected global GDP of CY21.

Global | Top 10 OMCs				
Sr.	**OMC**	**Country/ Region**	**Revenues**	**Assets**
1	China Petroleum & Chemical Corp	China, Asia Pacific	324,780	267,521
2	PetroChina Co Ltd	China, Asia Pacific	298,385	383,911
3	Saudi Arabian Oil Co	Saudi Arabia, EMEA	229,891	510,470
4	BP	UK, EMEA	183,500	267,654
5	Royal Dutch Shell	Netherland, EMEA	183,195	379,268
6	Exxon Mobil	Texas, Americas	181,502	332,750
7	Total	France, EMEA	140,685	266,132
8	Chevron	California, Americas	94,471	239,790
9	PJSC Lukoil	Russia, EMEA	78,388	83,283
10	Public JSC Rosneft Oil Co	Russia, EMEA	70,063	209,969
Total			**1,784,860**	**2,940,748**

Revenues for OMCs are latest available. All numbers are in $ million.

Source: S&P Global Platts, BP stats, IMF

Oil Marketing Companies

Local| Industry Snapshot

- Pakistan relies significantly on imports to meet the demand of its energy products. During FY21, the country consumed ~19.8mln MT of petroleum products (FY20:~17.1mln MT) up ~15.8% YOY. Owing to declining local oil reserves amid low new discoveries, the dependence on imported POL products is increasing with each passing year.
- Currently, there are ~35 registered OMCs. There are five (5) Listed OMCs operating in the country namely (i) Pakistan State Oil (PSO) (ii) Shell Pakistan (SHELL) (iii) Hascol Petroleum (HASCOL) (iv) Hi-Tech Lubricants (HTL) and (v) Attock Petroleum (APL).
- The Sector is highly regulated with the prices of two major products, i.e., MOGAS and Diesel being determined by the Oil & Gas Regulatory Authority (OGRA) on a fortnightly basis.
- OMCs generated an aggregate revenue of PKR~2,528bln in FY21 (FY20: PKR~2,225bln) with an annual GDP contribution of ~5.3% (FY20: 5.4%)**.** The sector's revenue during FY21 registered a YOY growth of ~13.6% on account of increased consumption and rising petroleum products' prices.

Overview	FY20	FY21	FY22
Gross Revenue (PKR bln)	2,225	2,528	
Contribution to GDP	5.4%	5.3%	
Sector Players	33	35	34
Listed OMCs	5	5	7
Energy Products Consumption (mln MT)	17.9	19.4	22.8
Crude Oil Production (mln MT)	3.7	3.7	3.2
Crude Oil Import (mln MT)	6.8	8.4	9.3
Petroleum Product Import (mln MT)	8.4	9.5	18.1
Total Storage Capacity (mln MT)	1.6	1.6	
Structure	Regulated		
Regulator	OGRA		
Associations	OCAC		

Source: Economic Survey, PBS, OCAC,B0R

Oil Marketing Companies

Demand | Product-wise POL Consumption

- Pakistan's POL products demand is significantly driven by transportation sector and level of Industrial activities in the country.
- MOGAS and HSD consumption grew by ~7% and ~14% in FY22 respectively, signaling an uptick in auto sales and growth in agricultural sector.
- Total consumption of petroleum products during FY22 was recorded at ~22.8mln MT (FY21: ~19.8mln MT) with YoY growth of ~15%.
- The three major products, HSD, MOGAS and RFO account for ~98% of the total POL products consumption in the country. Historically, RFO was the highest consumed product with a share of ~37% in FY17. Its consumption has drastically declined at a CAGR of ~24% from CY17-CY21 mainly due to government's decision to reduce its use as a fuel for power sector plants.

Refined POL Product | Consumption (mln MT)					
Period	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**
White Oils	**17.4**	**15.9**	**14.8**	**16.7**	**18.5**
MOGAS	7.4	7.6	7.5	8.4	9.0
HSD	9	7.4	6.6	7.8	8.9
JP-1	0.1	0.1	0.1	0.1	0.5
Kerosene	0.9	0.8	0.6	0.4	0.1
Black Oils	**7.4**	**3.5**	**2.4**	**3.2**	**4.3**
RFO	7.4	3.5	2.4	3.2	4.3
Total	**24.8**	**19.4**	**17.2**	**19.9**	**22.8**

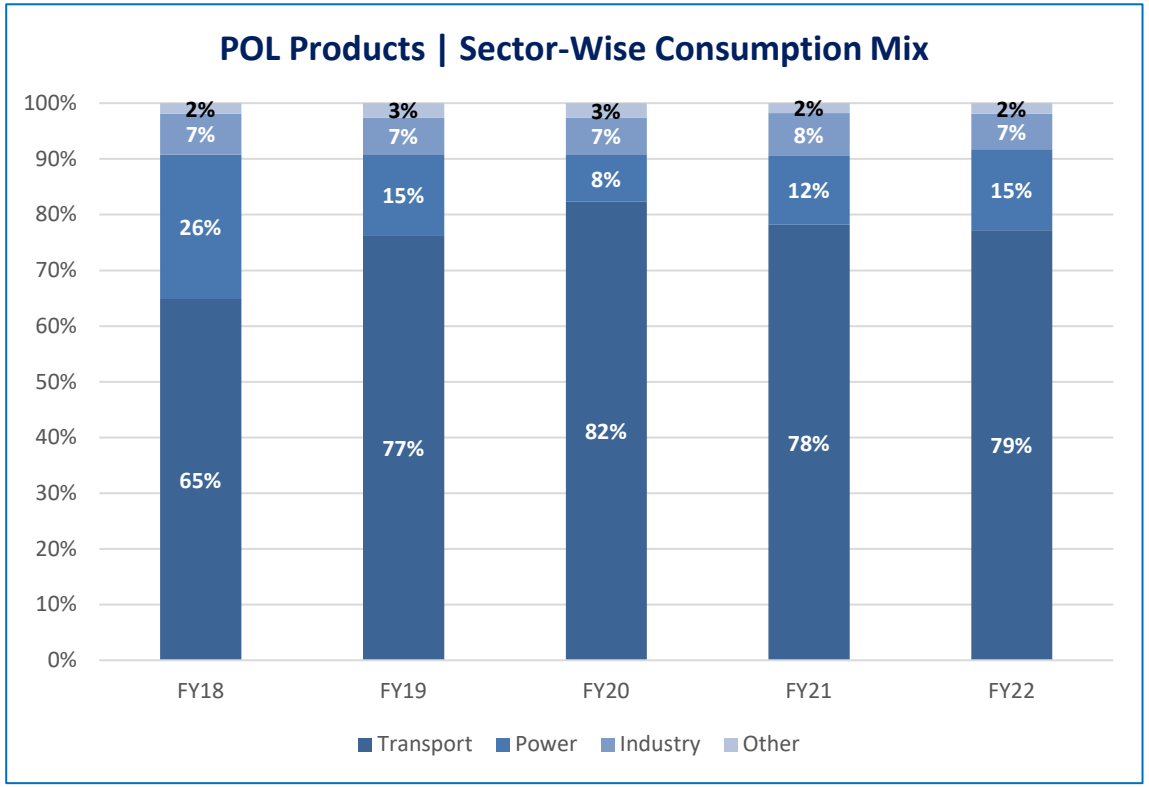
Refined POL Product | Consumption Mix					
Period	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**
White Oils	**70%**	**82%**	**86%**	**84%**	**81%**
MOGAS	30%	39%	44%	42%	39%
HSD	36%	38%	38%	39%	39%
JP-1	0%	1%	1%	1%	2%
Kerosene	4%	4%	3%	2%	0.4%
Black Oils	**30%**	**18%**	**14%**	**16%**	**19%**
RFO	30%	18%	14%	16%	19%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: PBS, OCAC

Oil Marketing Companies

Demand | Sector-wise POL Consumption

- Transport sector is the highest consumer of petroleum products, as it constitutes ~78% of total POL products consumed in FY21 (~78% in FY20).
- POL consumption by industries is largely driven by LSM growth. The industrial consumption share increased to ~8% during FY21 (FY20:~7%). Since FY15, power sector's oil consumption has reduced at a CAGR of ~18% due to shift from RFO to cheaper and environment friendly sources.



POL Products | Consumption (mln MT)							
Year	Transport	Power	Industry	Other Govt.	Households	Agriculture	Total
FY18	16.0	6.4	1.8	0.39	0.07	0.01	24.7
FY19	14.7	2.8	1.3	0.41	0.06	0.02	19.2
FY20	14.7	1.5	1.2	0.4	0.05	0.01	17.9
FY21	15.2	2.4	1.5	0.3	0.03	0.01	19.4
FY22	18.1	3.4	1.5	0.4	0.03	0.01	23.4

*Figures are for 10MFY22 (Jul-Apr)

Source: Pakistan Economic Survey

Oil Marketing Companies

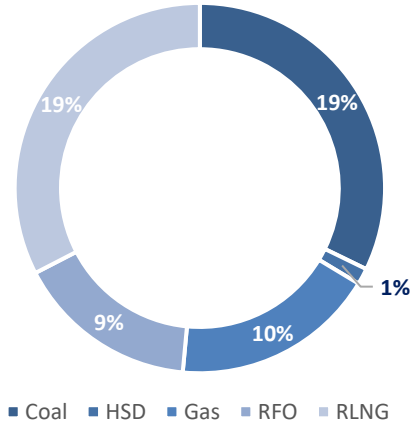
Demand | Power Generation Mix

- Thermal and hydro-energy are two major sources of electricity generation in Pakistan. During FY21, thermal electricity generation had a share of ~58% (FY20:~60%) in total power generation mix followed by hydroelectric, which contributed ~31% to total electricity generation in FY21 (FY20:~29%).
- RFO based power plants generated ~10,590 GWH electricity during FY21 (FY20: ~7,909 GWH) with a YoY increase of ~34%. The share of RFO based power plants in total thermal energy generation increased to ~12% during FY21 (FY20: ~10%). This is due to the continuous depletion of local gas reserves and favorable rates of RFO during FY21.
- The uptick in RFO offtake also bodes well for the refineries. RFO sales continue its upward trend in FY22 as well and was recorded at ~878,000 tons during 2MFY22 (2MFY21: ~563,000 tons) with a YoY increase of ~56%.
- Going forward, the government is committed to increase the share of renewable energy sources in total power generation mix through Integrated Generation Capacity Expansion Plan (2021-2030).

Power Generation | Commercial Mix

Source	FY18	FY19	FY20	FY21	10MFY22
Thermal	68%	67%	60%	58%	61%
Hydroelectric	21%	21%	29%	31%	28%
Nuclear	7%	8%	7%	7%	12%
Renewable	3%	4%	3%	3%	3%

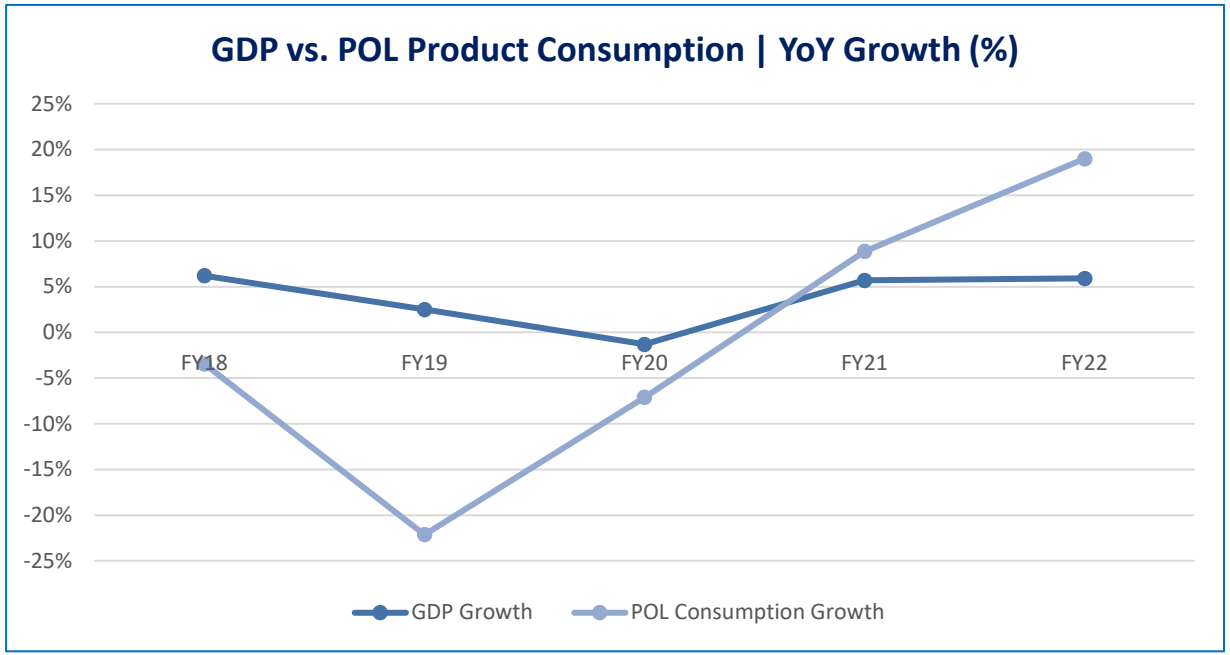
Power Generation | Thermal Energy Mix (FY22)

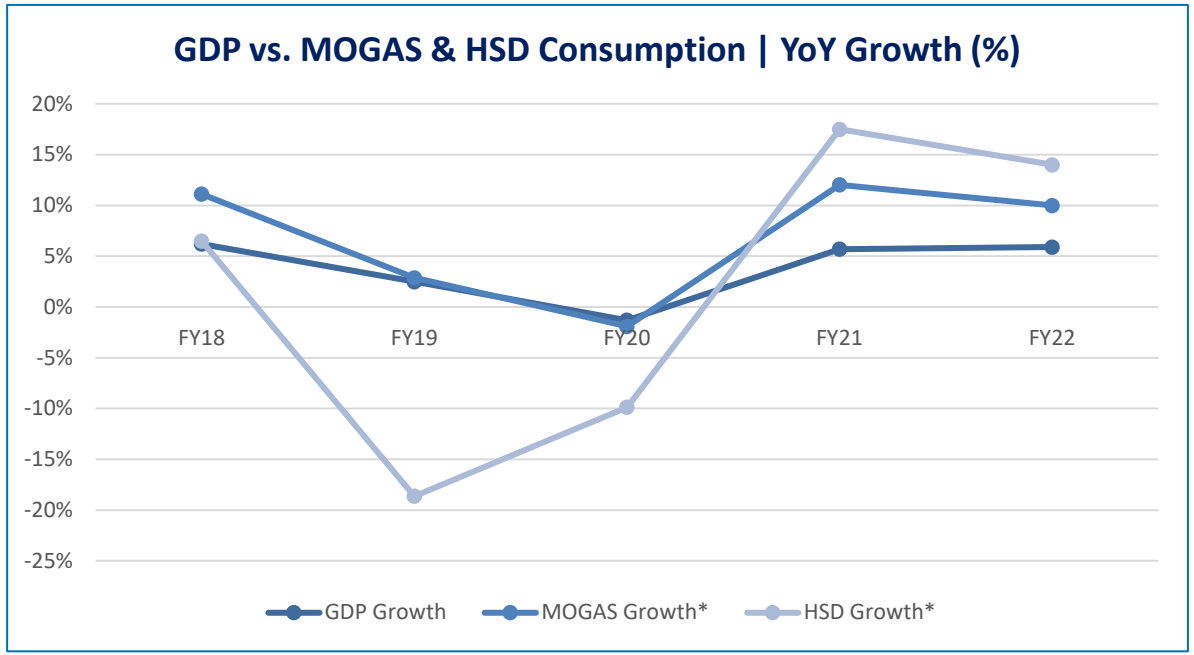


Oil Marketing Companies

POL Consumption and Economic Activity

- Local POL products consumption is highly correlated to GDP growth. As discussed earlier, the decrease in overall POL products in recent years was on the backdrop of a dip in RFO consumption.
- MOGAS consumption growth had a coefficient of ~0.96 with GDP growth, indicating cyclical dependency of demand, while HSD consumption growth has a lower coefficient of correlation with GDP growth at ~0.79 indicating a lower cyclical dependency of demand.



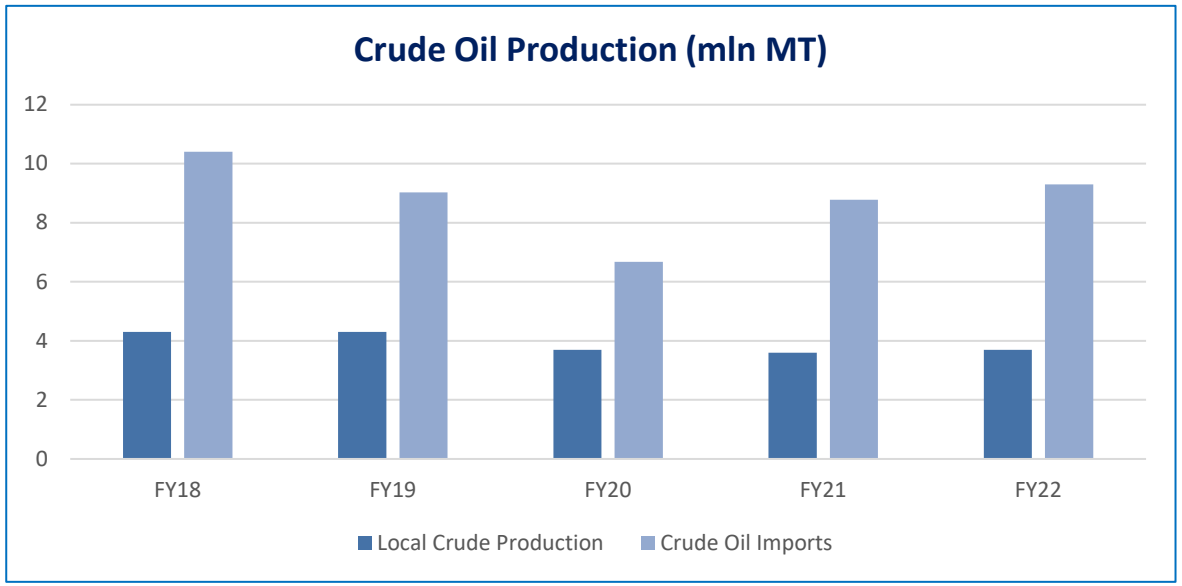


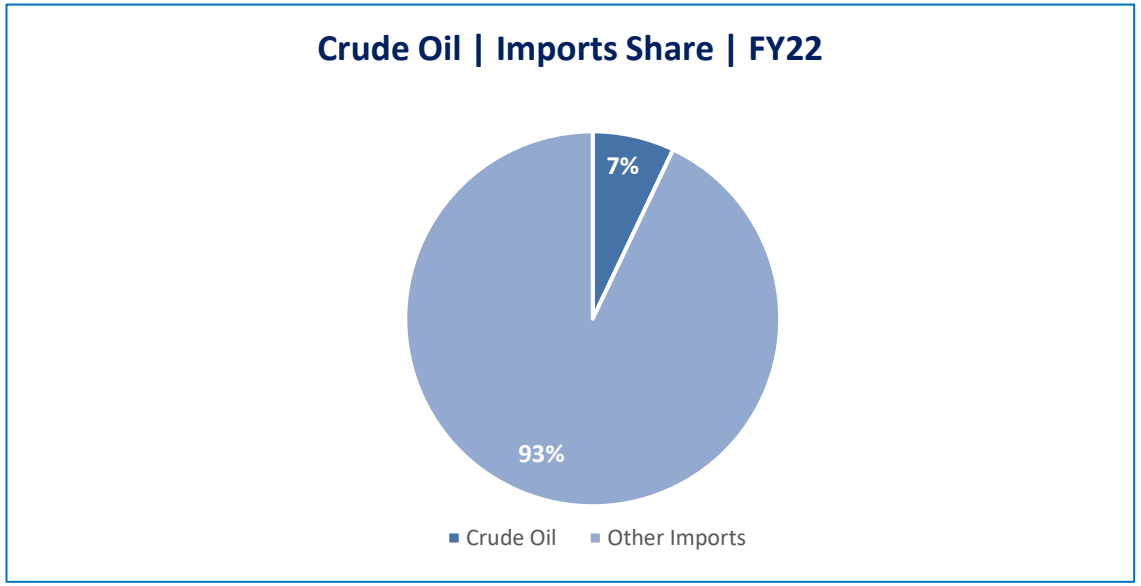
Source: PBS, OCAC, IMF, BP

Oil Marketing Companies

Supply| Crude Oil

- Pakistani local crude oil is light and sweet, i.e. it has an average API gravity of ~39.06 and, on average, ~0.24% Sulphur content by weight.
- In FY21, Pakistan extracted ~3.7mln MT crude oil (FY20: 3.7mln MT).
- Pakistan significantly relies on imports to meet its demand of petroleum products. On average around ~8.6mln MT of crude oil is imported every year.
- In FY21 ~8.8mln MT (FY20: ~6.7mln MT) crude oil was imported marking a growth of ~29.4% YoY.
- Total crude oil imports in FY21 amounted to PKR ~495bln (FY20: PKR ~427bln) representing 5.5% (FY:20 6.1%) of total import bill.



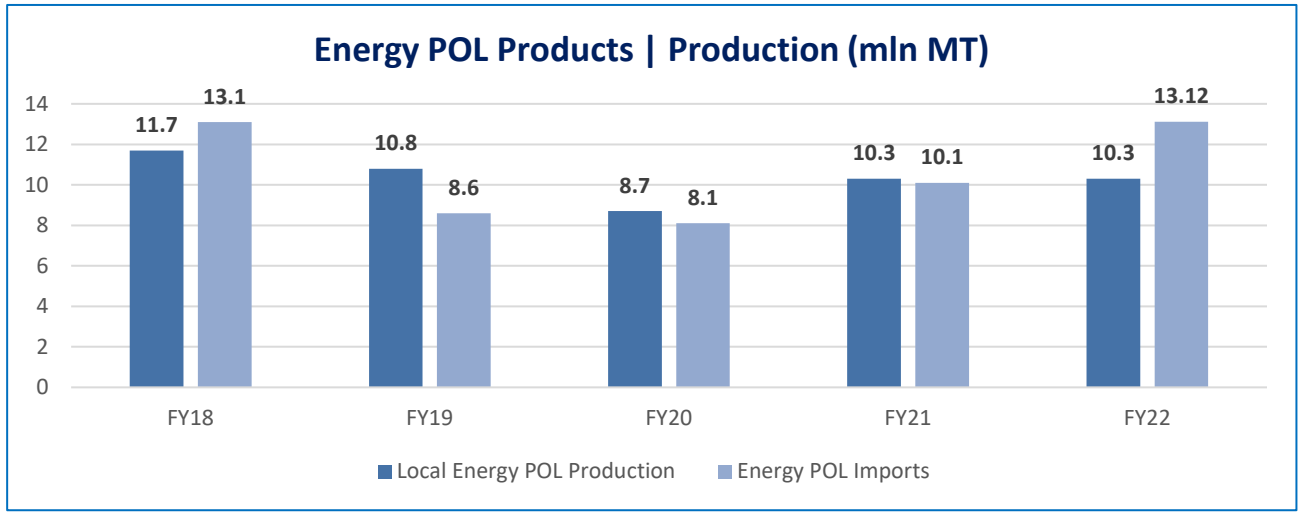


Source: Economic Survey, PBS, Journal of Petroleum Technology and Alternative Fuels, Cabinet Division, OCAC

Oil Marketing Companies

Supply | POL Products

- In FY21 Pakistan locally produced ~11.6mln MT (FY20: ~9.4mln MT) POL products, of which ~10.3mln MT (FY20: ~8.3mln MT) were energy POL products and ~1.3mln MT (FY20: 1.2mln MT) were non-energy POL products.
- As local refineries lack cracking and cocking capabilities, therefore in FY21 RFO comprised ~25% (FY20: ~27%) of total locally produced energy POL products, while MOGAS share was ~25% (FY20: ~24%) and HSD share was ~47% (FY20: ~46%).
- POL product imports for FY21 were ~9.5mln MT (FY20: ~8.4 mln MT), marking a growth 28.7% YoY.
- In FY21 POL product import bill amounted to PKR ~822bln (FY20: PKR ~745bln) representing ~9.1% (FY20: 10.6%) share in total imports.



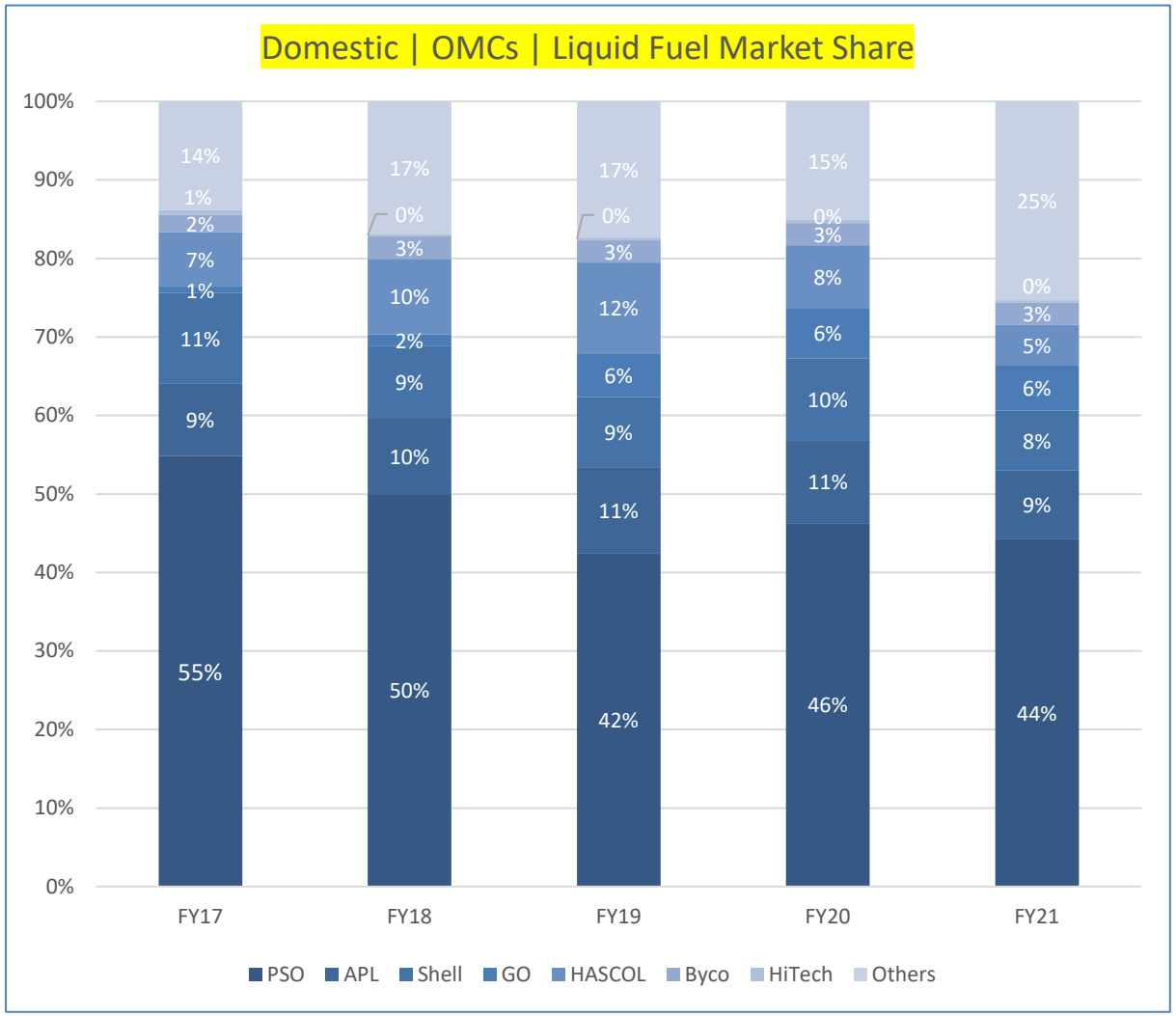
Locally Produced POL Products (mln MT)					
Composition	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**
White Oils	**7.7**	**7.3**	**6.0**	**7.5**	**7.9**
MOGAS	2.2	2.3	2.0	2.5	2.5
HSD	5.3	4.7	3.8	4.7	4.7
JP-1	0.2	0.2	0.2	0.2	0.6
Kerosene	0.1	0.1	0.1	0.1	0.1
Black Oils	**5.2**	**4.4**	**3.4**	**3.8**	**3.7**
RFO	3.3	2.9	2.2	2.5	2.4
Non-Energy Products	1.9	1.6	1.2	1.3	1.3
Total	**12.9**	**11.8**	**9.4**	**11.3**	**11.6**

*Estimated

Source: Economic Survey, PBS, Cabinet Division, OCAC

Oil Marketing Companies

Domestic OMCs | Market share



Top 10 Players | POL Product (FY22)			
Company	MS	Company	HSD
PSO	44%	PSO	52%
Total Parco	12%	Total Parco	11%
Shell	11%	APL	9%
GO	9%	Shell	8%
APL	8%	GO	8%
BE	3%	BYCO	3%
BYCO	2%	BE	2%
HASCOL	2%	HASCOL	2%
PUMA	2%	PUMA	2%
ZMOPL	1%	ZMOPL	0%
Others	4%	Others	5%
Total	100%	Total	100%

Source: PACRA Database, Financial Statements, OCAC

Oil Marketing Companies

Country-wide Retail Outlets

- As per latest publicly available data published in Cabinet Division's report, OMCs in Pakistan have a cumulative MOGAS storage capacity of ~613,488 MT.
- Cumulative HSD storage capacity of OMCs stands at ~1,011,423 MT that puts the cumulative MOGAS and HSD storage capacity at ~1,624,911 MT.
- As per FY21 consumption figures, storage capacity can cover ~27 days of average MOGAS consumption and ~47 days of average HSD consumption, exceeding OGRA's minimum requirement of 20 days.

Top 10 Players				
OMC	No. of stations	Share in Storage (MS)	Share in Storage (HSD)	Share in total Storage capacity
PSO	3,484	40%	31%	34%
GO	892	7%	8%	8%
Total Parco	763	5%	3%	4%
Shell	757	10%	6%	8%
Attock	746	7%	9%	8%
Hascol	623	6%	19%	14%
Puma	542	0%	1%	1%
Byco	427	3%	1%	2%
Askar	394	0%	1%	1%
BE Energy	381	8%	10%	9%
Others	598	15%	11%	12%
Total	**9,607**	**100%**	**100%**	**100%**

Based on latest available public data

Source: Cabinet Division, OGRA

Oil Marketing Companies

Price per Liter Breakdown | MS & HSD

Ex-Refinery Price: The refinery output price for finished inventories of HSD and MOGAS

Petroleum Levy (PL) & Sales Tax (ST) PL is a **variable** development tax imposed by the GoP subject to variations on the GoP's disposal. Sales Tax is collected by the OMCs at a monthly fixed percentage charged to the Ex-Depot price and dealer commission.

In-Land Freight Equalization Margin (IFEM): The element of pricing structure which allows pricing of petroleum products to remain at par across the country. A freight pool managed by OGRA is developed to keep the prices equalized countrywide.

Distribution Margin (OMCs): Fixed Commission per liter earned by the OMCs upon sales of HSD and MOGAS to Industrial and retail clients.

Dealer Commission: Fixed Commission per liter earned by the dealer or owner of the petrol pump.

Source: OGRA

Oil Marketing Companies

Pricing Mechanism| How it Works

- The pricing structure of POL products (MOGAS & HSD) is a computation of six different price components (discussed in previous slide) embedded in a price formula.

- While OMC Margins and Dealer Commission are fixed, the Petroleum Levy, Sales Tax and IFEM are variable components, the former two depending on the GoP's discretion, and the latter computed through a freight pool mechanism.

- The start-up point for pricing mechanism is the **'Ex-Refinery Price'.** This price is determined by OGRA and was earlier determined based on PSO's weighted average costs of POL products in the preceding monthly and ~30 days International prices published in the Platt's Oilgram.

- Since 1st Sep'20, the pricing mechanism has been shifted from monthly basis to fortnightly basis and the price benchmark based on PSO's oil imports has been shifted to Platt's Index. This development is expected to shield the Industry from Inventory losses.

- As per OGRA Rules, OMCs are required to build storage/depots at different areas of the country in order to maintain a stock of at least 20 days so as not to end up with dry petrol stations. Ex-Refinery Price, PL, IFEM and OMC margin add up to Ex-Depot Price, while Dealer Commission is added on the next step. Sales Tax is applied to an aggregate of Ex-Depot Price and Dealer Commission.

Source: OCAC, OGRA

Oil Marketing Companies

Local | Fuel Retail Prices

- For FY22, OMC margins increased to PKR~3.3/ liter, compared to PKR~2.9/ liter. For MOGAS, share of OMC margins as % of average retail prices declined from ~2.7% in FY21 to ~2.3% in FY22. Similarly, in case of HSD, the share of OMC margins fell by ~0.3% YoY in FY22.

- Moreover, the ex-refinery price for MOGAS increased by more than 100% for both MOGAS and HSD in FY22, most likely due to the ~67% climb in international prices over the course of last two years (Approx. $22 to $66 per barrel in FY20 compared to $78 to $110 per barrel in FY22).

- Whereas, the government is charging only PKR~11.68/liter of tax which is ~8% of per liter price.

- This sets an alarm for the GoP to meet its budgeted petroleum levy collection target of FY22, since it requires to charge at least PKR~32/ liter levy, which seems highly unlikely considering the current international POL prices.

MOGAS – Average Retail Price/ Liter (Composition)

Price Components	FY19	FY20	FY21	FY22	FY23		
					1QFY23	Oct'22	Nov'22*
Cost of Supply	71.9	61.5	60.5	131.3	184.7	172.0	164.5
IFEM Margin	3.3	3.4	3.6	4.0	4.1	2.3	(0.35)
OMC Margin	**2.6**	**2.8**	**2.9**	**3.3**	**3.7**	**3.7**	**3.7**
Dealer Commission	3.5	3.6	3.7	4.4	6.7	7	7
Petroleum Levy	15	19.8	20.3	5.4	30.3	39.8	50
Sales Tax	16.4	15.5	15.5	4.6	0.0	0.0	0.0
Max Ex-Depot Sales Price	112.7	106.6	106.6	145.1	229.5	224.8	224.8

HSD – Average Retail Price/ Liter (Composition)

Price Components	FY19	FY20	FY21	FY22
Cost of Supply	85.7	66.3	65.0	135.0
IFEM Margin	1.1	1.2	1.0	1.3
OMC Margin	**2.6**	**2.8**	**2.9**	**3.4**
Dealer Commission	2.9	3.1	3.2	3.8
Petroleum Levy	16.0	21.1	21.1	5.2
Sales Tax	18.4	16.0	15.8	6.9
Max Ex-Depot Sales Price	126.8	110.4	108.9	146.0

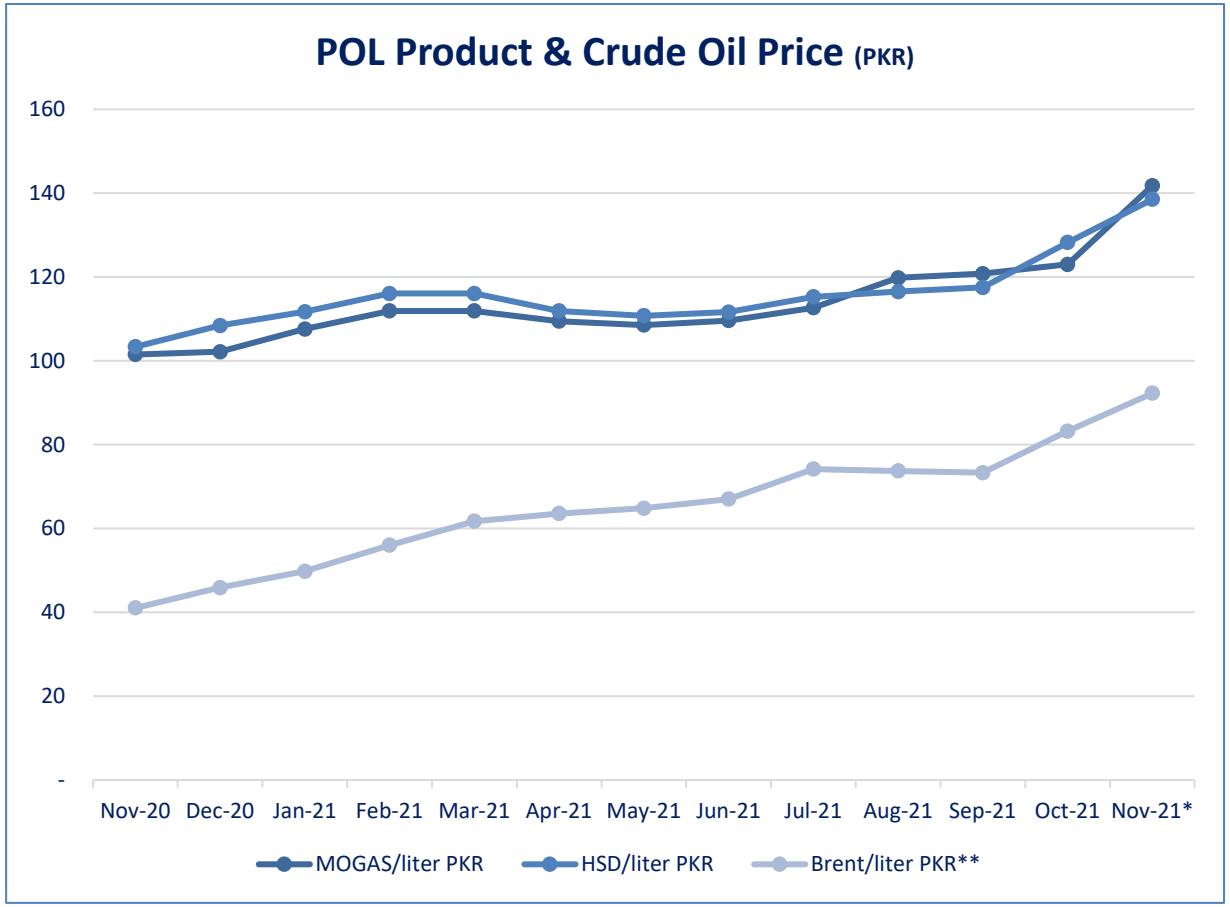
Prices for HSD are the latest available.
**As of Nov'01, 2022*

Source: OGRA, PSO

Oil Marketing Companies

Fuel Price Sensitivity

- On November 5th 2021, MOGAS to Brent price spread stood at PKR ~49.53/liter while HSD to brent spread stood at PKR ~46.28/liter; these spreads include cost of refining, IFEM margin, OMC margin, dealer commission, petroleum levy and GST.
- OMC margin and dealer commission are the most stable components of the spread, as the last revision was in 4QFY21.
- Cost of refining (cost of supply/liter – Brent/liter) stood at PKR ~30.27/liter for MOGAS and PKR ~24.17/liter for HSD on 5th November 2021, witnessing a significant increase as 6 month average (May 21 to Oct 21) cost of refining was PKR ~17.76/liter for MOGAS and PKR ~16.19/liter for HSD.
- Petroleum levy and GST values are contingent upon government discretion. Significant reductions have been witnessed, as a part of the GoP's efforts to provide relief to end consumers due to high international oil prices.
- In terms of sensitivity, considering exchange rate, IFEM margin, OMC margin, dealer commission, petroleum levy and sales tax remain at current levels (5th November 2021 notification); a USD 1/barrel change in crude oil prices can cause per liter MOGAS and HSD prices to change by PKR ~1.08/liter.



* Nov 5th

** 2 week lagged price as per GoP policy

Source: OGRA, PSO, investing.com

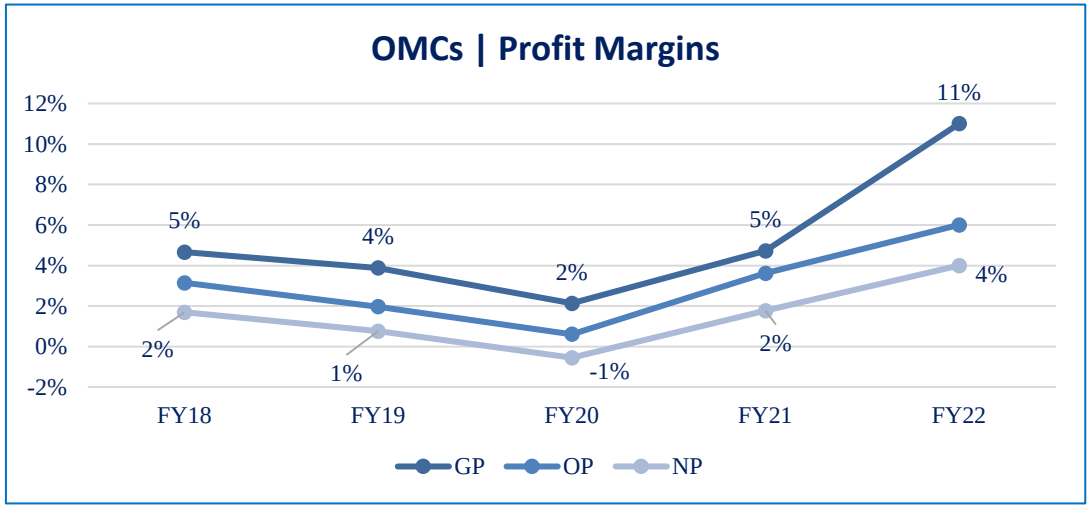
Oil Marketing Companies

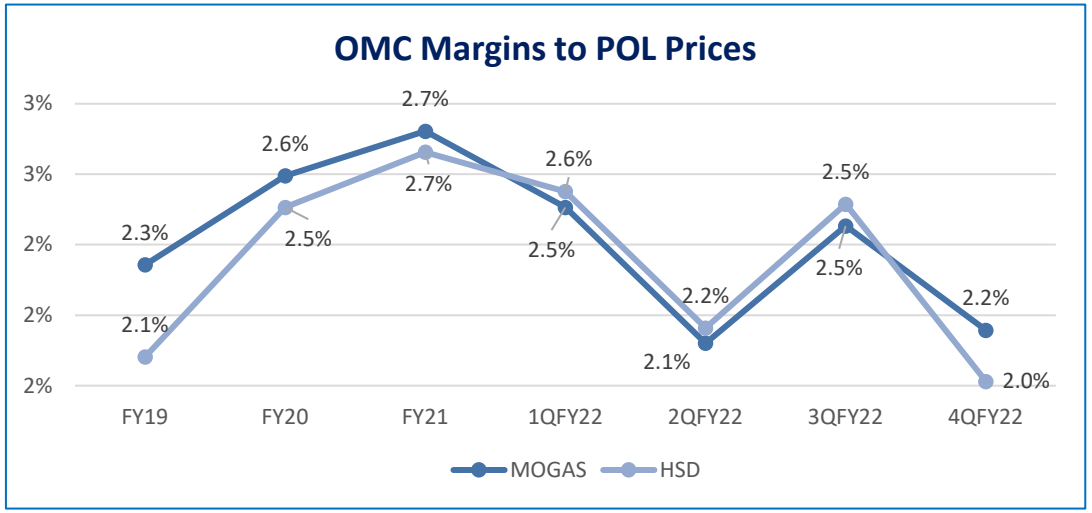
Business Risk

- OMC margins per liter of fuel prices are determined by OGRA. While that may be the case, gross profit margins for OMCs rose by ~6% during FY22. OMC sales stood at ~22.8 million tons in FY22. This ~15% YoY increase could attributed to higher-than-expected FO sales (~32% YoY increase, compared to CAGR equivalent to ~-19%), due to high demand in power plants amidst non-availability of RLNG, along with low hydel generation.

- In terms of gross margin retention, OMCs can only retain their fixed government determined margins, due to recent increase in overall prices the share of OMCs in per liter price has decreased to ~2.2% in MOGAS and ~2.0% in HSD.

- While OMC margins stood stable at PKR 3.68/ liter during 4QFY22, prices for MOGAS and HSD increased sharply in the month of June, from PKR~149.86 to average PKR~208/ liter and from PKR~144/ liter to PKR~214/ liter. The most notable contributor to these increases was cost of supply, which increased on the back of higher international prices and deteriorating rupee.





Numbers based on annual data from listed companies and PACRA database.

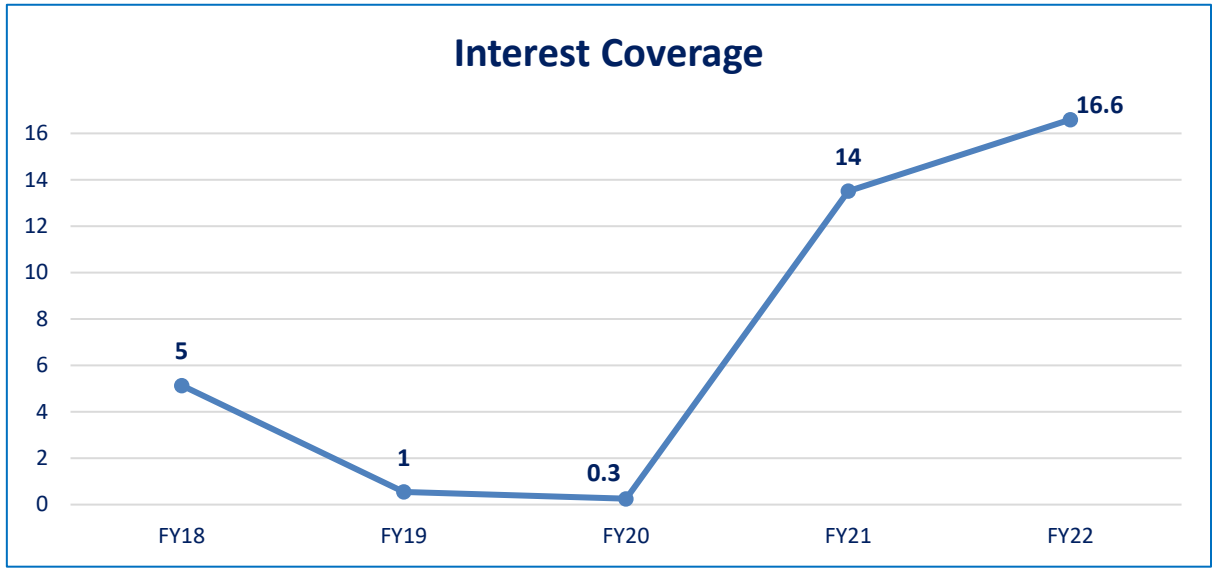
Source: Financial Statements, PSO, OGRA

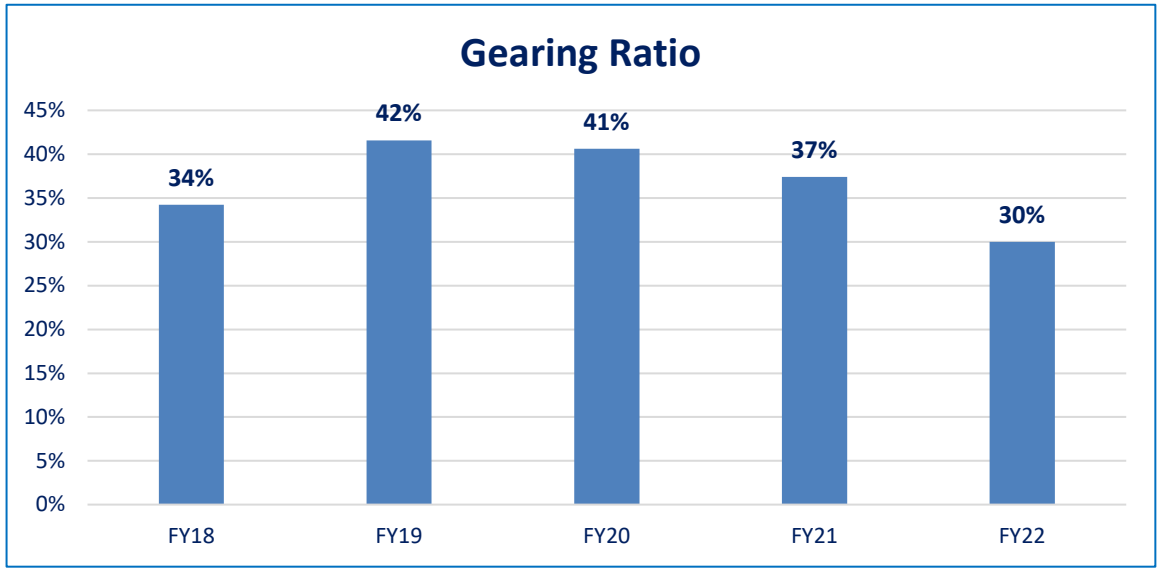
Oil Marketing Companies

Financial Risk

- With historically low interest rates for the most part of FY21 and improved profitability, interest coverage of the sector enhanced significantly in FY22 to ~4.6 x (FY20:~0.8x).

- The sector is moderately leveraged with gearing ration of ~37.8% in FY21 (FY20:~42%). The borrowing needs of the sector arise from working capital financing for which the sector relies heavily on short term borrowings as it constitutes an average of ~80%-90% of the total borrowings. Significant reliance on short term borrowing increases the financial risk of the sector as well.





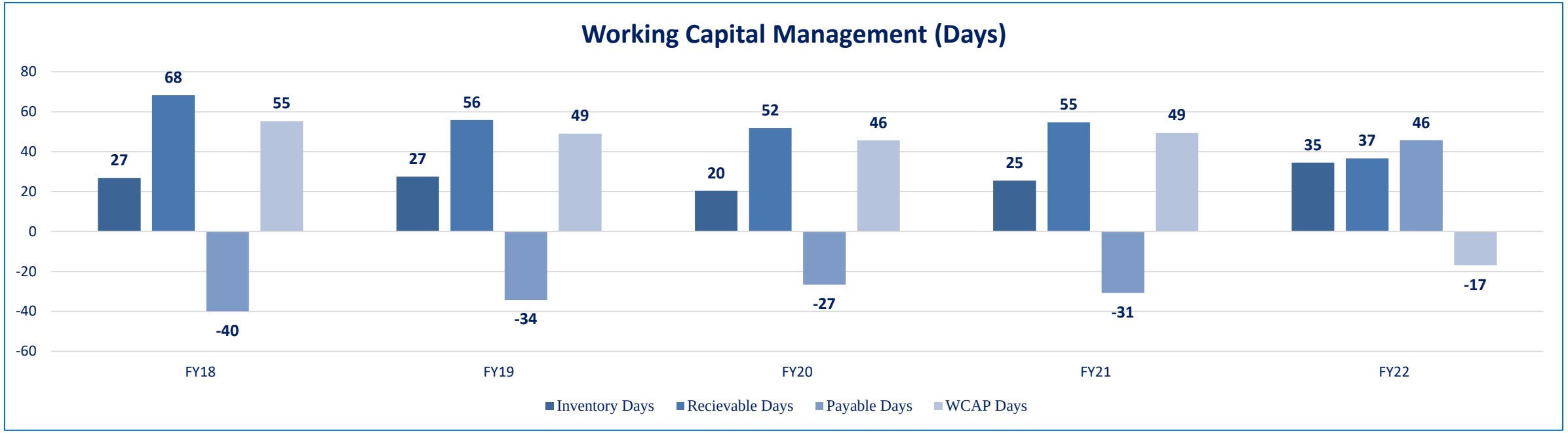
Numbers based on annual data from listed companies

Source: PACRA Database

Oil Marketing Companies

Financial Risk

- In FY21, the sector's average inventory days stood at ~23 days (FY20: ~20 days) with a YoY increase of ~3 days.
- Average receivable days of the sector during FY21 were recorded at ~49 days (FY20: ~46 days). Moreover, payable days in FY21 stood at ~42 days (FY20: ~40 days). Working capital days in FY21 stood at ~30 days (FY20: ~26 days).



Numbers based on annual data from listed companies

Source: PACRA Database, Financial statements

Oil Marketing Companies

Key Developments

- The Government of Pakistan (GoP) relaxed the policy framework for establishing new Oil Marketing Companies (OMCs) in the country. Owing to the relaxation in the policy framework, (especially related to uplift of retail expansion restriction and storage capacity) the number of active OMCs reached 35 in FY21 (33 in FY20).

- Since 1st Sep'20, the GoP has decided to shift the pricing mechanism from monthly basis to fortnightly basis and also shift the price benchmark based on PSO's oil imports to Platt's Index. This development is expected to shield the Industry from Inventory losses

Following Policies have been under consideration since FY17:

- Deregulation of margins on kerosene oil/JP-1/JP-8 and light diesel oil.

- Deregulation of ex-refinery prices and margins of HSD/MS for local refineries and OMCs in a phased manner.

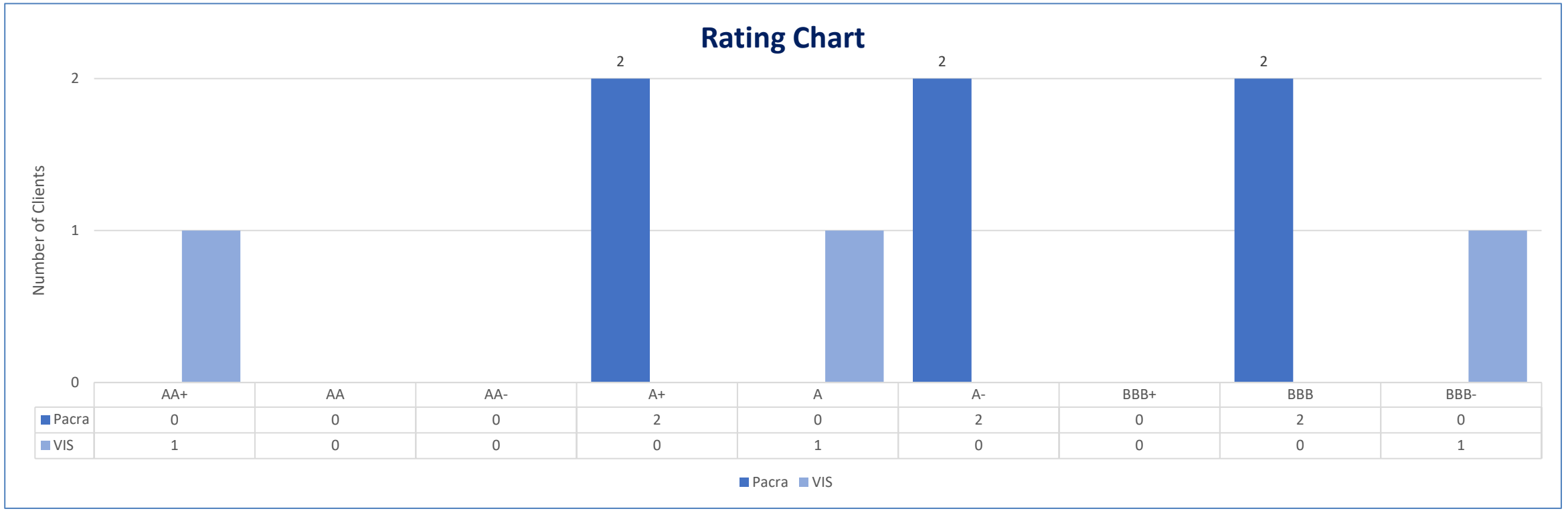
- Phasing out of IFEM system with the completion of pipeline from Karachi to Peshawar, which would allow multiproduct movement.

- Deregulation of OMC and dealer margin would be a positive event for the sector and could help contain the inventory losses for the companies. However, little progress is seen in this area.

Oil Marketing Companies

Ratings

PACRA rates six companies in the sector. The rating bandwidth is from BBB to A+.



Source: PACRA

Oil Marketing Companies

SWOT Analysis

- Major contributor to GDP
- Guaranteed margins
- Established supply chain
- Strategic importance of the sector
- Wider range of products
- Availability of low-paid unskilled and skilled labor-force

- Significant reliance on imports
- Strict government regulations
- Circular debt build-up

- Basic commodity – low bargaining power of customers
- Increasing demand of HSD due to increased industrial activity
- Exploration of new markets and development of retail branches
- Black oil export opportunity

- Shift of power sector to alternate sources of energy
- Oil price/ supply fluctuations
- Exchange rate fluctuations
- Outdated technology
- Low strategic storage capacities
- Russia-Ukraine war

Oil Marketing Companies

Outlook: Stable

- Economic activity picked up pace during FY21 after easing of COVID-19 restrictions during the period. The country's GDP registered an impressive growth of ~3.94% during FY21 (FY20:(0.5%)), which resulted in increased demand of petroleum products as well.

- Local consumption of petroleum products registered an impressive growth of ~15.9% during FY21 (FY20:(~11.8%)). Although the demand of petroleum products from industries is expected to remain strong but record high prices of petroleum products will impact the demand from transport sector negatively.

- Overall demand of petroleum products is expected to increase during FY22. Moreover, due to significant increase in international RLNG prices, RFO based thermal generation would become relatively cheaper which is expected to stimulate FO demand during the period.

- Profitability of the sector improved during FY21 on the back of increased offtake. Moreover, profitability will improve further with upcoming revision in OMCs margin. On the contrary, the negative impact of rising interest rates will be apparent on sector's profitability sooner or later owing to significant proportion of short term borrowing in total liability mix.

- The sector strategy of significant reliance on short term borrowing to finance working capital need, inherently has a high financial risk. However, comfort can be drawn from strong interest coverage ratio and moderate leverage of the sector.

- Any downward revision in oil prices, going forward, can result in inventory losses for the sector. However, the revisions are expected to be gradual and mild, particularly in comparison to the recent past.

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