SECTOR STUDY . NOVEMBER 2023

Together. Creating Value.

Oil Marketing Companies

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- Exploration
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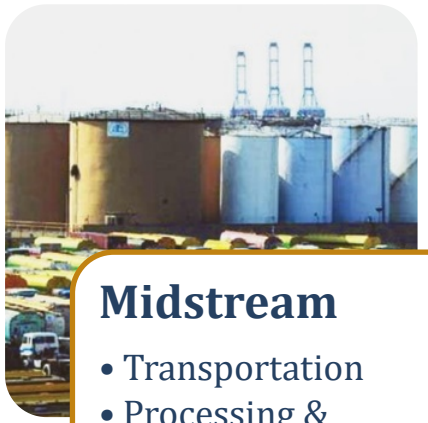

Midstream

- Transportation
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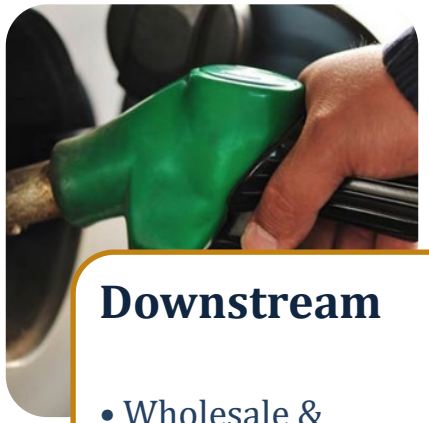
- Storage & Distribution



Downstream

- Wholesale & Marketing

Source: OPEC

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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

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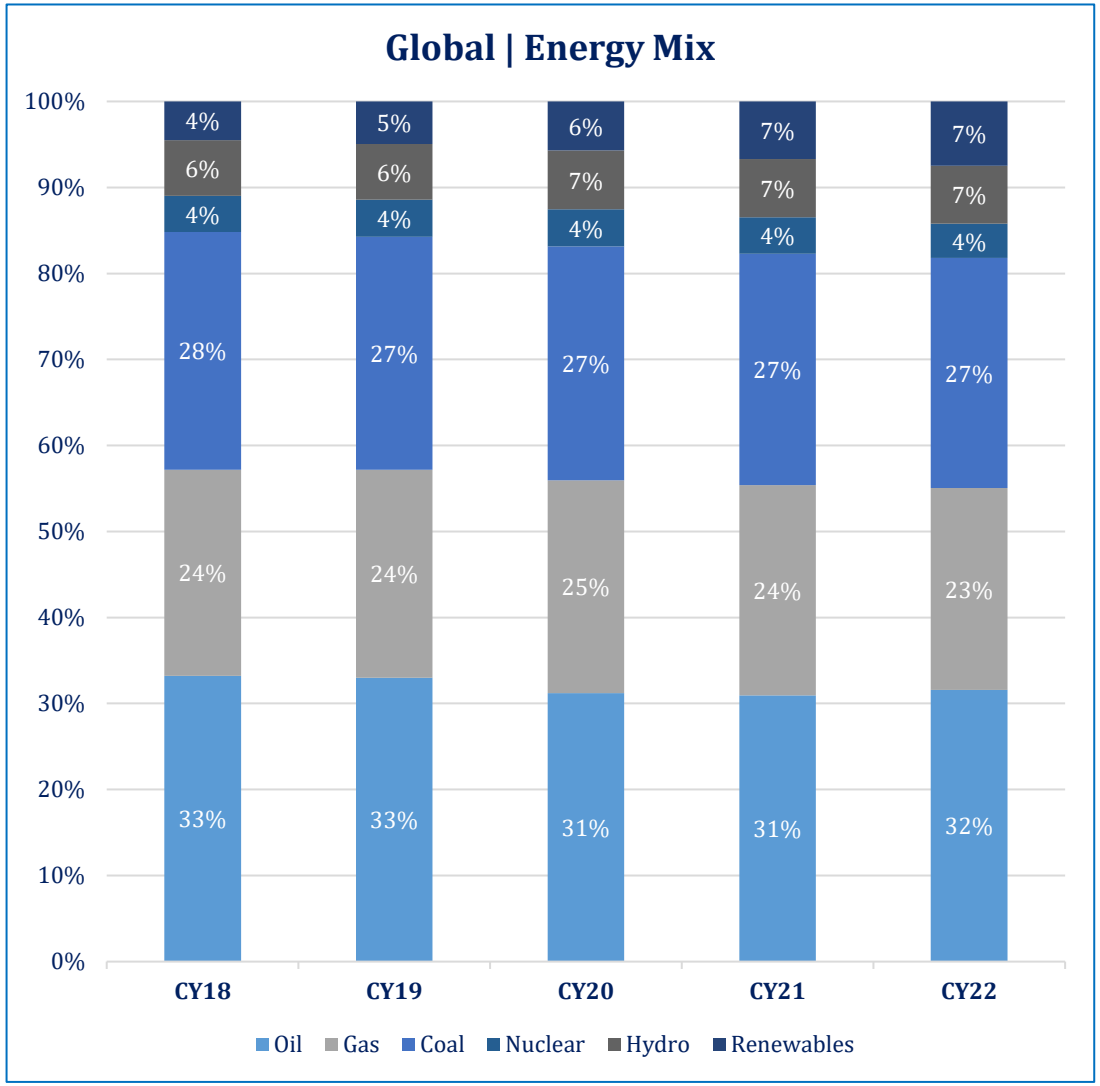
Global | Energy Mix

- The global energy mix has, over the years (CY18-22), been dominated by fossil fuels, with oil being the major contributor, followed by coal and gas. For the said period, oil has, on average, comprised ~32% of the total energy mix. Therefore, fossil fuels (Oil, Gas and Coal) comprised the lion's share in the global energy mix at ~82.0% of total in CY22 (CY20: ~82.3%).
- According to BP Statistics, during CY22, total energy consumed amounted to ~604EJ increasing YoY by ~1.2%. Global energy mix reveals that the world consumed energy amounting to ~99bln barrels of oil equivalent in CY22 (CY20: ~97bln).
- Oil demand, however, is expected to peak around CY30, where its consumption is forecast to decline to ~70-80mln barrels/day by CY35. However, natural gas and oil are forecast to remain core part of the global energy mix. Factors leading to this decline in oil include improved engine efficiency, continued electrification of road transport, and international efforts for environmental sustainability.
- With respect to natural gas, LNG imports are expected to contribute to growing use of natural gas in developing economies, accounting for ~65-75% of the increase in Asia by CY30, and reflecting increasing usage in power and industrial sectors in this region. For developed countries, demand is expected to be lower on the back of increased shift towards renewables. Beyond CY30, overall natural gas demand is forecast to slow down, with decline being only partially set off by use of natural gas in producing blue hydrogen.
- Renewable energy sources are forecast to provide ~40-50% to global power generation by CY30 and ~85% by CY50. This shift will likely be driven by their cost competitiveness, with solar and wind being the major contributors. The growth in installed wind and solar capacity by CY30 is forecast to be dominated by China and developed world, each accounting for ~30-40% of the overall increase in capacity. However, the renewable build-out faces challenges such as supply chain issues and slow permitting.



***Note**: EJ stands for Exajoules.*

Source: BP Stats, McKinsey & Company

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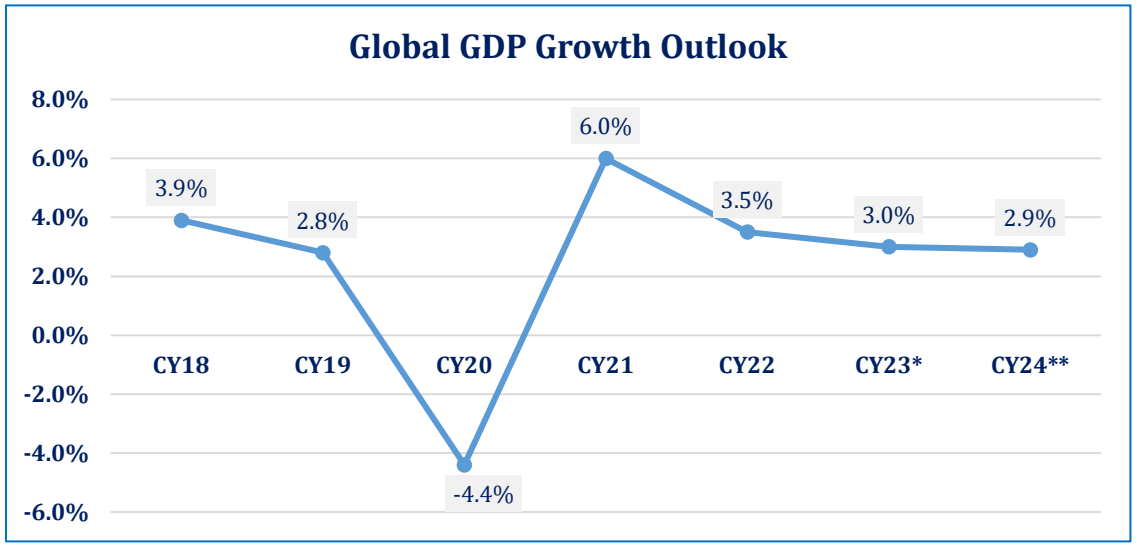
Global | Economic Outlook

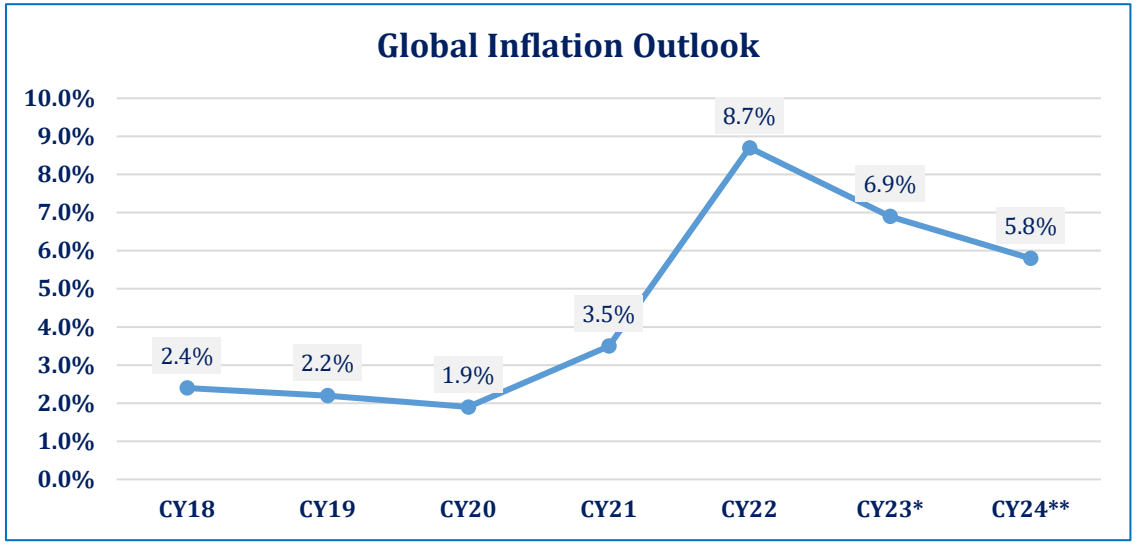
- Global GDP growth slowed down to ~3.5% during CY22, on the back of various headwinds, including the reeling effects of the pandemic, Russia-Ukraine war, worsening climate shocks, inflationary pressures, and increasing poverty levels across the globe. According to World Bank estimates, ~75-94mln more people were living in extreme poverty compared with pre-pandemic estimates.

- The IMF, in its Oct'23 World Economic Outlook (WEO), expects the growth rate of global GDP to fall by ~14.3% to reach ~3.0% in CY23. In the same issue, the global lender forecasts the global GDP to shrink further by ~3.3% to clock at ~2.9% by CY24. The leading factors behind subdued GDP growth rates include diminishing pandemic-era savings, slowing rebound in services, including travel, and persisting manufacturing slowdown.

- China's growth is expected to remain muted with property sector crisis leading the factors hampering growth, along with uncertainty in the country's labor market (youth unemployment levels reached ~20% in Jun'23). These factors are forecast to weigh down on consumption. Moreover, industrial production, business investments and exports are also exhibiting a downward trajectory, translating into weakening overall demand.

- IMF in its latest World Economic Outlook (WEO) Oct'23 estimates global inflation for CY23 to clock in at ~6.9% (CY22: ~8.7%). For CY24, it is projected to further decline to ~5.8%. These projections are likely a result of the monetary tightening efforts, with drivers to inflation outlook comprising a combination of demand pressures and supply shifts in various industries.





*Forecast. **Projected.

Source: IMF

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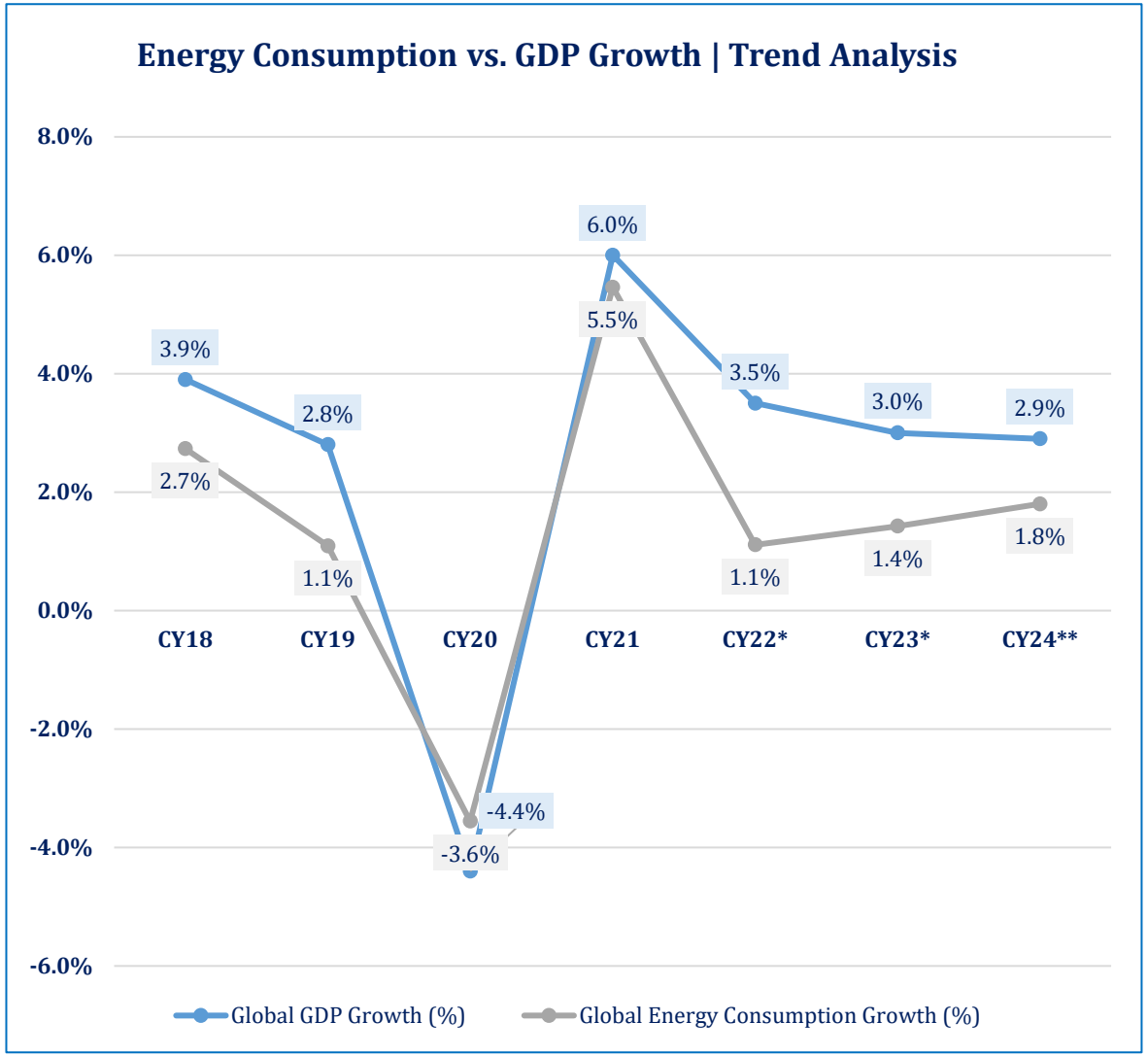
Global | Energy Consumption

- Global energy consumption growth has exhibited strong correlation with global GDP growth, with a correlation coefficient of 0.91.
- Country-wise, China has an outsized role in shaping global energy dynamics, however, this influence is evolving led by a slowing economy and growing use of cleaner energy. Over the past decade, the country alone accounted for ~66.7% increase in global crude consumption, ~33.3% increase in natural gas usage, and has also been a prominent player in the coal market. Going forward, with respect to energy-intensive segments like steel and cement, China's demand is expected to weaken in CY24, with residential floorspace per capita the same as that in Japan. Moreover, China also accounted for ~50% of global EV sales in CY22.
- Across economies, drivers of energy demand, including rates of urbanization, constructed space per capita, ownership of EVs and air conditioners, remain lower in developing countries. Global population, however, is expected to increase by ~1.7bln by CY50, thereby driving the global energy outlook accordingly.
- Another important aspect to global energy outlook remains rooted in ~93 countries and EU's targets to achieve net-zero emissions and as of Sep'23, net-zero emissions pledges account for ~85% of global energy-related emissions (or ~90% of global GDP). Moreover, electric 2/3 wheelers and trucks have exhibited an uptick in developing economies like India, while the USA, through its Inflation Reduction Act of 2022, has provided significant funding to reducing costs for low-emissions technologies, such as CCUS and hydrogen.



*Forecast. **Projected. **Note**: CCUS – Carbon Capture, Utilization and Storage.*

Source: McKinsey, IMF, Enerdata

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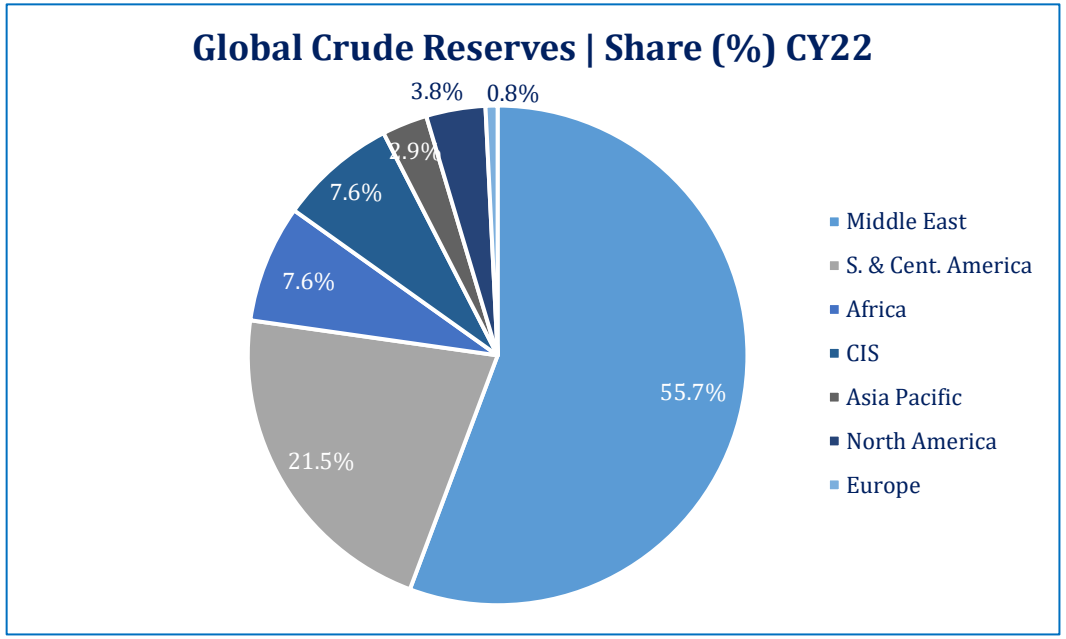
Global | Crude Reserves Position

- During CY22, global crude reserves stood at ~1,564bln barrels, registering a growth of ~1.2% YoY.
- Country-wise breakdown depicts that USA registered ~34.3% increase in crude reserves YoY during CY22, amounting to ~55,251mln barrels, forming only ~3.5% of the global reserves. Similarly, Argentina, Colombia and Brazil recorded ~17.7%, ~12.1% and ~11.4% YoY increase in crude reserves, respectively. However, together, these formed ~1.1% of the global crude reserves.
- Region-wise distribution of these reserves shows that the largest reserves registered were in the Middle East, where these amounted to ~871,612mln barrels, making up ~55.7% of the global crude reserves (SPLY: ~56.2%). A further breakdown with respect to Middle Eastern countries reveals that Saudi Arabia formed ~17.1% of the global reserves, while Iran comprised ~13.3%.
- S. & Cent. American countries together accounted for ~21.5% of the total crude reserves, amounting to ~331,265mln barrels during CY22. Meanwhile, Venezuela alone formed ~19.4% of the global crude reserves.
- The CIS and Asia Pacific regions cumulatively accounted for ~15.2% of the global crude reserves. Of the former, Russia's crude reserves formed ~5.1% of the world total. Meanwhile, Africa accounted for ~7.6% of the world's total reserves, amounting to ~119,050mln barrels.

Global Crude Oil Reserves (bln barrels)						
Year	**CY17**	**CY18**	**CY19**	**CY20**	**CY21**	**CY22**
World Total	1,491	1,495	1,554	1,545	1,545	1,564

***Note**: Oil Sands not considered*



***Note**: 1 Barrel = 0.1364 MT*

Source: OPEC, EIA

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Global | Crude Oil Supply and Demand

- During CY22, global crude oil extraction as a share of total available reserves stood at ~2.0% (SPLY: ~2.1%). During the same year, crude oil extracted increased ~4.4% YoY, with the Middle East making up ~32.7% of the total crude oil extracted. This growth in crude oil supply reflected progressive economic growth and OPEC+ adjustment in crude supply by ~0.4mbpd. Total crude oil extracted in CY22 amounted to ~4.4mln MT (or ~94mbpd), up ~4.2% YoY.
- With respect to output from Middle East, the biggest share was registered by Saudi Arabia (~40%), where production went up ~0.4% YoY, clocking in at ~573mln MT (or ~12mbpd). Among North American countries, the USA accounted for ~17% of the global crude extracted, with crude production clocking in at ~1,131mln MT (or ~18mbpd), growing by ~6.5% YoY. Overall, North America made up ~26% of the global crude extracted in CY22. The 'Other CIS' region contributed ~16% to the global crude supply, with Russia's share recording at ~12% in CY22.
- Global crude consumption increased ~4% YoY in CY22, clocking in at ~4,395mln MT or ~97mbpd (SPLY: ~92mbpd). Asia Pacific was the largest consumer, with crude consumption increasing ~0.4% YoY, and making up ~37% of the global crude consumption, recording at ~1,615mln MT (or ~35mbpd). Among Asia Pacific, China remained the top consumer, making up ~15% of the global crude consumption which stood at ~659mln MT or ~14mbpd. On the other hand, the USA formed ~19% of the global crude consumption, recording at ~823mln MT (or ~19mbpd).

Global | Crude Oil Extraction (mln MT)						
Period	**CY17**	**CY18**	**CY19**	**CY20**	**CY21**	**CY22**
Crude Extraction	**4,386**	**4,487**	**4,478**	**4,171**	**4,221**	**4,407**
Middle East	1,470	1,485	1,408	1,295	1,316	1,442
North America	920	1,029	1,108	1,059	1,075	1,131
CIS	702	715	720	661	674	683
Asia Pacific	369	361	361	353	348	346
Africa	386	393	397	331	345	332
S. & Cent. America	374	341	323	305	304	327
Total Europe	165	163	159	168	160	148

Global | Crude Oil Consumption (mln MT)						
Period	**CY17**	**CY18**	**CY19**	**CY20**	**CY21**	**CY22**
Crude Consumption	**4,362**	**4,421**	**4,429**	**4,019**	**4,246**	**4,395**
Asia Pacific	1,594	1,631	1,659	1,571	1,640	1,615
North America	1,012	1,033	1,025	890	958	1,016
Europe	705	704	700	608	638	663
Middle East	396	402	392	362	375	414
S. & Cent. America	282	273	270	238	261	286
CIS	188	193	197	184	194	208
Africa	185	187	187	166	180	192

***Note**: mbpd stands for mln barrels per day.*

Source: BP Stats, Enerdata, EIA

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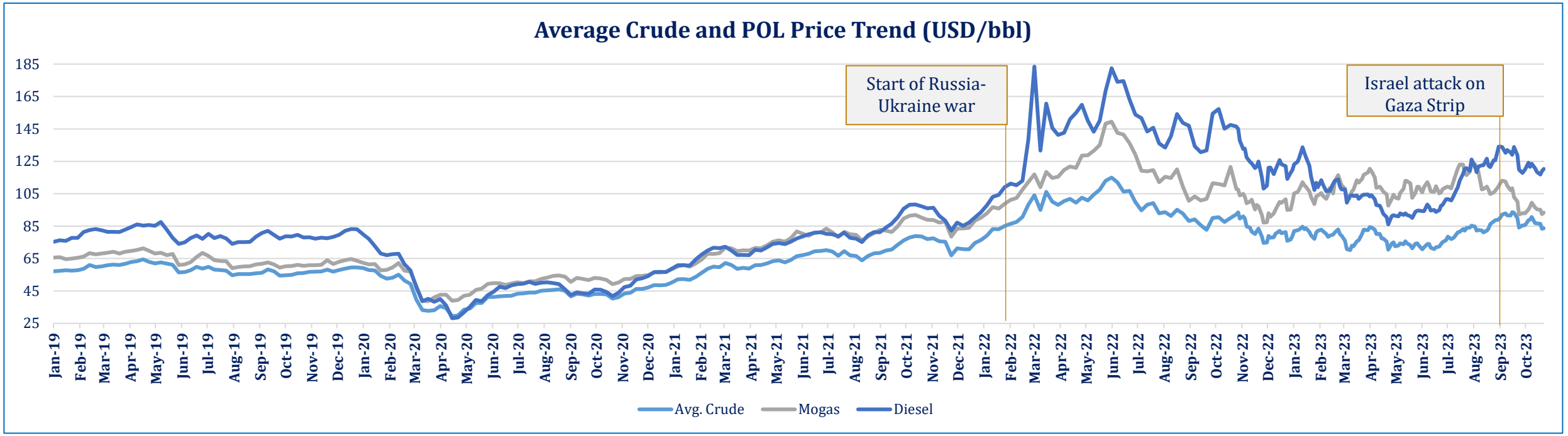
Global | POL Product Prices



- Global POL product prices (MOGAS and HSD) tend to move in tandem with global crude oil prices. During Jan'19-Jan'22, average global brent prices remained at USD~56.7/bbl, recording at USD~74.7/bbl (Jan'21: USD~57.2/bbl), increasing ~30.6% during this period. However following the Russia-Ukraine conflict which began in Feb'22, average brent prices reached USD~115.0/bbl on account of global supply chain disruptions. Moreover, Russia was the second-largest exporter of crude oil in CY21.

- While global brent prices were starting to cool down, the decline continued well into CY23, recording at USD~71.3/bbl, they are beginning to exhibit an uptick again following tensions in the Middle East dated Sep'23, and recorded at USD~83.7/bbl in Nov'23.

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

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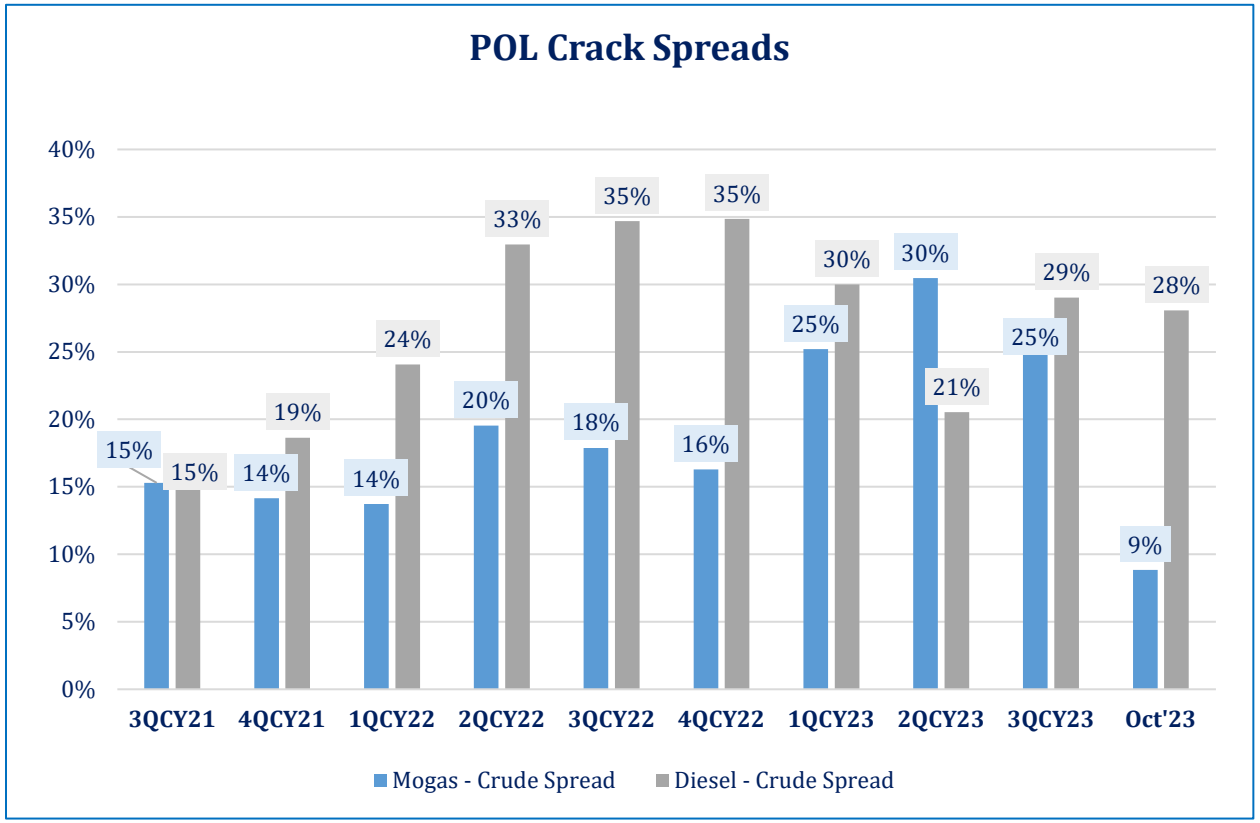
Global | POL Crack Spreads

- Refined petroleum products trade at a premium above crude oil prices. This spread between prices is referred to as 'Crack Spread' and is indicative of midstream profitability margins. Meanwhile, prices of crude and refined products are subject to their respective supply and demand dynamics, as well as regulatory, environmental and economic factors.

- Historically (CY21-Nov'23), crack spreads of MOGAS and Diesel (or HSD) have averaged ~19% and ~27% respectively.

- In CY22, global refining capacity increased by ~0.5% YoY, whereas Refinery throughput also remained ~1.4% below pre-COVID levels and combination of sanctions on Russia have pushed the crack spreads of MOGAS and Diesel to ~30% and ~21%, respectively, during 2QCY23.



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

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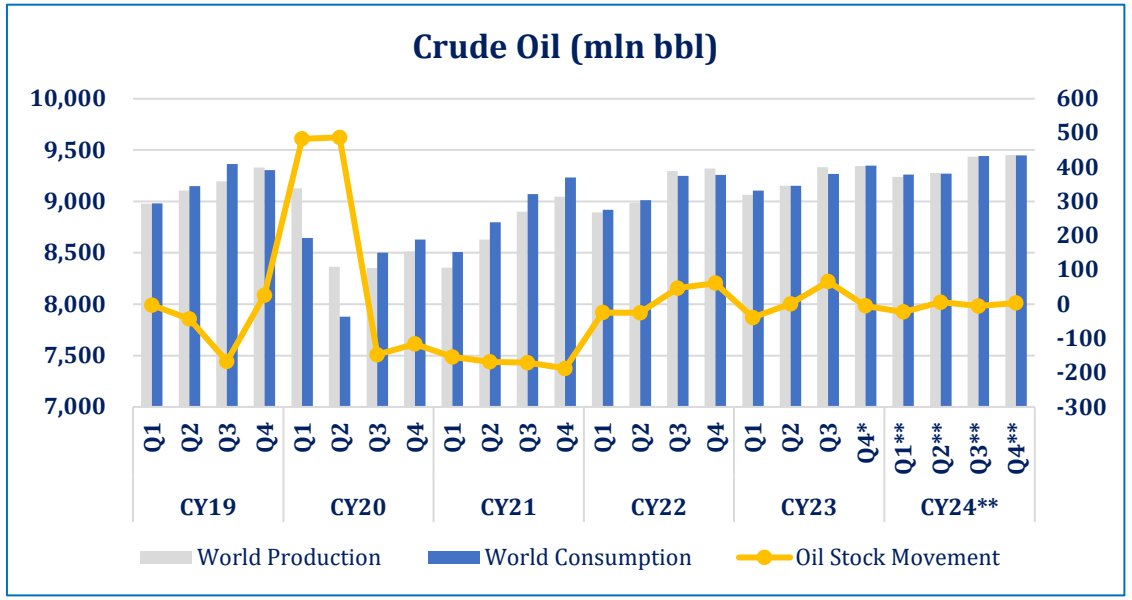
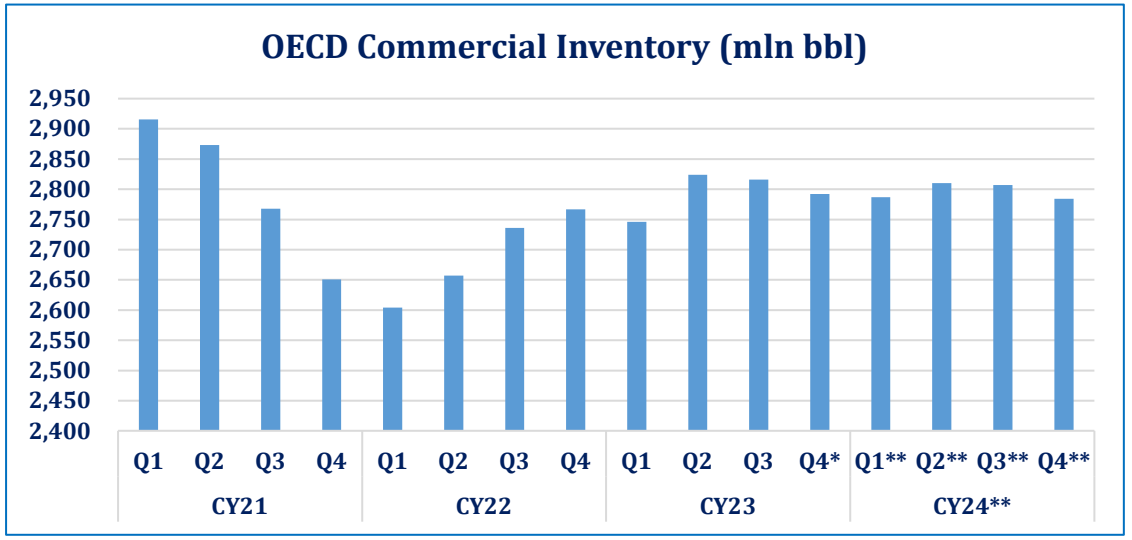
Global | Crude Stock Analysis

- Global oil inventories, as depicted by the chart below on the left, are a function of oil production and consumption levels for a given time period. According to EIA estimates, during CY22, average global crude production recorded at ~99.9mbpd, while average crude consumption recorded at ~99.2mbpd, leading to a build up of ~0.8mbpd, on average. The largest global inventory draw was recorded at ~1.2mbpd in the month of Jun'22, when crude production clocked in at ~99mbpd, against average crude consumption levels of ~100.3mbpd. During CY19-22, the highest level of inventory draw was recorded in Dec'22 at ~2.6mbpd, whereas highest inventory build-up was seen in Apr'20 at ~15.6mbpd, coinciding with the global slowdown due to COVID-19.
- During 1HCY23, average global crude production recorded at 101.2mbpd, while average global crude consumption clocked in at ~100.3mbpd, leading to a build-up of ~0.8mbpd. Moving forward into 3QCY23, an average global inventory draw has been recorded at ~0.3mbpd, with average production at ~101.2mbpd. Following supply cuts by OPEC+ of ~1mbpd in Ju'23, Aug'23 recorded inventory draw reaching ~0.6mbpd. EIA's forecast data suggests that 2HCY23 is likely to record inventory draw of ~0.2mbpd, on account of voluntary cuts by Saudi Arabia and reduced production targets among OPEC+ countries.
- With respect to period-end inventory levels recorded across USA and OECD countries, the latter, which include USA, Canada, Mexico and others, and accounted for ~32% of the global crude production in CY22 (OPEC+ formed ~48%), made up ~69% of the total global crude inventories. For CY22, average global inventory levels recorded at ~3.9bbpd, while for CY23, EIA forecasts global crude inventories to average at ~4.1bbpd (OECD commercial crude inventories are expected to clock in at ~2.8bbpd).





Estimated. **Forecast.* ***Note**: mbpd stands for mln barrels per day.*

Source: EIA, OPEC

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Global | Inter-area Trade Movements

- **Crude Exports**: In CY22, major crude exporters included Saudi Arabia, Russia and Canada, with these forming ~38.9% of the total crude exported. International crude traded stood at ~2.1bln MT (or ~42.8mbpd). For Saudi Arabia, largest export destinations were Asia Pacific (~25.2%), China (~24.1%) and Japan (~14.5%). Of Russia's total crude exports, ~44.2% went to Europe, while ~32.5% was imported by China. Meanwhile, USA exported ~45.1% of its total crude exports to Europe.
- **Crude Imports**: Top three global importers of crude formed ~75.5% of the total crude imported globally in CY22. China remained the largest crude importer, however, lower crude imports during the year likely reflect economic slowdown in the country. Moreover, crude imports from USA and S. & Cent. America went down ~42.1% YoY. Meanwhile Europe's crude imports increased ~11.3% YoY, with Russia forming ~23% of its total crude imports.
- **POL Products Exports**: In CY22, major exporters of POL products included USA, Russia and Asia Pacific, with combined export share clocking in at ~40.4%. Russia, being the second-largest exporter of POL products, registered ~10.5% decline in its exports, with market share falling from ~11.5% in CY21 to ~10.1% in CY22. Of the total exported, ~60.3% went to Europe, while those to USA declined ~73.9% YoY. For Asia Pacific, Singapore and China remained the top export destinations, forming ~52.0% of the region's total POL exports. With respect to India's POL products exports, ~24.1% went to Europe, while ~20.5% was exported to Africa.
- **POL Products Imports**: The top three importers comprised ~41.7% of the total POL products imported, with Asia Pacific recording net trade balance of ~72.0mln MT in CY22. During the year, Europe imported POL products largely from USA, Russia and India, while S. & Cent. America imported ~69.8% from USA. Total POL products traded during CY22 amounted to ~1.2mln MT

Country	Crude Exports (CY22)	Share in Global Exports (%)	YoY Δ
Saudi Arabia	365	*17.1%*	+13%
Russia	265	*12.4%*	+0.4%
Canada	200	*9.4%*	+1.5%
Iraq	191	*9.0%*	+8.5%
USA	173	*8.1%*	+24.4%
UAE	173	*8.1%*	+18.4%
ROW	763	*35.8%*	-6.3%
World	**2,129**	***100%***	**+3.4%**

Country	Crude Imports (CY22)	Share in Global Exports (%)	YoY Δ
China	508	*23.9%*	-3.4%
Europe	501	*23.5%*	+7.1%
USA	313	*14.7%*	+2.6%
Asia Pacific	286	*13.4%*	+11.3%
India	231	*10.9%*	+7.9%
Japan	133	*6.2%*	+9.0%
ROW	157	*7.4%*	-63.1%
World	**2,129**	***100%***	**+3.4%**

Country	Products Exports (CY22)	Share in Global Exports (%)	YoY Δ
USA	253	*20.3%*	+3.5%
Russia	126	*10.1%*	-10.5%
Asia Pacific	125	*10.0%*	-4.6%
Europe	110	*8.8%*	-0.9%
UAE	90	*7.2%*	+3.2%
India	83	*6.7%*	+20.1%
ROW	460	*32.1%*	+4.1%
World	**1,247**	***100%***	**+1.8%**

Country	Products Imports (CY22)	Share in Global Exports (%)	YoY Δ
Europe	207	*16.6%*	+4.6%
Asia Pacific	197	*15.8%*	-2.8%
S. & Cent. America	116	*9.3%*	+9.5%
USA	98	*7.9%*	-13.0%
China	93	*7.5%*	-9.8%
Singapore	73	*5.8%*	-21.0%
ROW	464	*37.1%*	+12.6%
World	**1,247**	***100%***	**+1.7%**

***Note**: Exports and Imports data are in mln MT.*

Source: BP Stats, EIA

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Global | POL Consumption Mix

- Among POL products, MOGAS remained the highest-consumed product in CY22, with a share of ~30%, followed by HSD with a share of ~29%. With respect to White Oils, global POL consumption mix has stayed relatively the same in CY22, as compared against CY21. Demand for Jet Fuel in CY22 exhibited an increase, reflecting a boost in international flights.

- Black Oils, comprising Residual Fuel Oil and other petroleum liquids, formed ~20% of the global consumption mix, however, this had been previously recorded at ~25% during CY21.

- High Speed Diesel (HSD or simply Diesel) is mainly used as a fuel in engines operating above ~750rpm in commercial vehicles, stationery diesel engines (e.g. pumps, generators, factory machinery) and locomotives etc.

Global | POL Consumption Mix					
Period	**CY18**	**CY19**	**CY20**	**CY21**	**CY22**
White Oils	**69%**	**69%**	**66%**	**66%**	**68%**
MOGAS	31%	31%	30%	30%	30%
Diesel	29%	29%	30%	29%	29%
Jet Fuel	8%	9%	5%	6%	8%
Kerosene	1%	1%	1%	1%	1%
Black Oils	**24%**	**23%**	**26%**	**25%**	**20%**
Other Petroleum Liquids	20%	20%	22%	22%	16%
Residual Fuel Oil	4%	4%	4%	4%	4%
Gases	**8%**	**8%**	**8%**	**8%**	**12%**
Liquefied Petroleum Gases	8%	8%	8%	8%	12%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: EIA

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Global | Top Ten Companies

Global | Top 10 OMCs | CY22				
Sr.	**OMC**	**Country/ Region**	**Revenue (USD bln)**	**Net income (USD bln)**
1	Chinese Petroleum and Chemicals Corporation	China, Asia Pacific	405.4	10.54
2	PetroChina Co Ltd.	China, Asia Pacific	386.9	13.61
3	Saudi Aramco.	Saudi Arabia, EMEA	359.2	110.0
4	ExxonMobil	Texas, USA	285.6	23.0
5	Royal Dutch Shell	Netherland, EMEA	272.7	20.6
6	Total Energies	France, EMEA	184.6	18.1
7	BP	UK, EMEA	157.7	7.6
8	Chevron	California, USA	155.6	15.6
9	Marathon Petroleum	Ohio,USA	120.9	9.7
10	Valero Energy Corporation	USA	114.0	0.9
Total			**1,985.3**	**199.4**

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

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Local | Industry Snapshot

- During FY23, the Sector's revenue clocked in at PKR~5,303 bln, inching up ~24.4% YoY, with growth slowing likely due to lower POL consumption across demand-driving segments.
- As per latest data available with OGRA dated Sep'23, the total number of OMCs with marketing permission stands at ~10, while those with provincial licenses and marketing permission amount to ~29, taking the total OMCs with marketing permission to ~39.
- Pakistan's supply of POL products, a function of domestic production and imports, declined ~26.5% YoY during FY23, clocking in at ~17.2mln MT. This came on the back of lower imports, which declined by ~37.4% YoY, while local refineries' output also went down ~12.6% YoY. Lower imports resulted from SBP's curb on imports during May'22-Jun'23.
- With respect to meeting local supply of POL products, the country remains dependent on imports, owing to lower local reserves and low new discoveries., with imports forming ~64.5% of the total supply in FY23 (SPLY: ~78.8%). Therefore, petroleum products made up ~22.7% of country's total imports bill (in USD terms). For FY23, petroleum products worth USD~7,628mln (SPLY: USD~12,069) and crude worth USD~4,947mln (SPLY: USD~5,599mln) were imported.
- Moreover, demand for petroleum products remained muted (covered later), on the back of higher prices and overall inflationary pressures in the economy during the year. POL consumption (measured by sales), declined ~25.5% YoY to clock in at ~17.2mln MT during FY23 (covered in detail later).
- 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.

Overview	FY21	FY22	FY23	1QFY24
Gross Revenue (PKR bln)	2,297	4,262	5,303	1,231
Gross Revenue Growth (YoY%)	*9.0%*	*85.6%*	*24.4%*	*5.1%*
Sector Players	35	35	39	
POL Consumption (mln MT)	**20.1**	**23.1**	**17.1**	**3.9**
POL Local Production (mln MT)	10.3	10.3	9.0	2.5
POL Imports (mln MT)	10.1	13.1	8.2	1.7
POL Storage (mln MT)*	0.3	0.1	0.1	0.3
Crude Consumption (mln MT)	11.6	11.6	11.3	5.1
Crude Local Offtake (mln MT)*	2.8	2.3	3.4	3.6
Crude Imports (mln MT)	8.8	9.3	7.9	1.5
Petroleum Group (% Share in Imports)		22.0	22.7	
Structure	Oligopoly			
Regulator	OGRA			
Associations	OCAC			

Estimate.* ***Note**: Petroleum Group includes POL Products and Crude; Revenue figures are based on ~11 PACRA-rated/ listed Sector players.*

Source: Economic Survey, PBS, OGRA., OCAC

Oil Marketing Companies

Demand | Product-wise POL Consumption

- Pakistan's POL products demand is largely driven by the transport sector and level of industrial activity in the country (covered under Segment-wise consumption). Automotive sales across all segments registered a decline owing to supply chain disruptions due to SBP-imposed import restrictions which led to an increase in vehicle prices and therefore a decline in sales. On the other hand, LSM also registered a dip of ~10.3% during FY23.
- Total consumption of petroleum products during FY23 was recorded at ~17.1mln MT (SPLY: ~23.1mln MT), declining by ~25.5% YoY. With respect to types of POL products, white oils comprised ~87% of the total POL products consumed, while black oils formed ~13% during FY23 (SPLY: ~81% and ~19%, respectively). The three major products, i.e., HSD, MOGAS and RFO cumulatively accounted for ~94.0% of the total POL products consumption in the country during FY23 (SPLY: ~97.0%).
- However, MOGAS and HSD consumption declined by ~74.6% and ~78.1% YoY, respectively, in FY23, signaling slowdown in demand and a concomitant dip in Automotive sales. Sales of Passenger Cars experienced a staggering YoY drop of ~59% during FY23, while those for Trucks and Buses also declined by ~41% YoY due to increasing prices of these vehicles.
- RFO consumption, during FY19-23, declined at a CAGR of ~24%, mainly due to government's decision to reduce its use as a fuel for the power sector plants. During FY23, its consumption declined ~46.5% YoY to clock in at ~2.3mln MT.

POL Consumption (mln MT)

Period	FY19	FY20	FY21	FY22	FY23	1QFY24
White Oils	**16.2**	**14.9**	**16.9**	**18.8**	**14.8**	**3.5**
MOGAS	7.6	7.5	8.4	9.0	7.5	1.9
HSD	7.4	6.6	7.8	8.9	6.4	1.4
JP-1/ JP-8	0.8	0.6	0.4	0.5	0.6	0.1
Others*	0.4	0.2	0.3	0.4	0.3	0.1
Black Oils	**3.5**	**2.4**	**3.2**	**4.3**	**2.3**	**0.4**
RFO	3.5	2.4	3.2	4.3	2.3	0.4
Total	**19.7**	**17.3**	**20.1**	**23.1**	**17.1**	**3.9**

POL Consumption Mix (%)

Period	FY19	FY20	FY21	FY22	FY23	1QFY24
White Oils	**82%**	**86%**	**84%**	**81%**	**87%**	**90%**
MOGAS	39%	43%	42%	39%	44%	49%
HSD	38%	38%	39%	39%	37%	36%
JP-1/ JP-8	4%	3%	2%	2%	4%	3%
Black Oils	**18%**	**14%**	**16%**	**19%**	**13%**	**10%**
RFO	18%	14%	16%	19%	13%	10%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

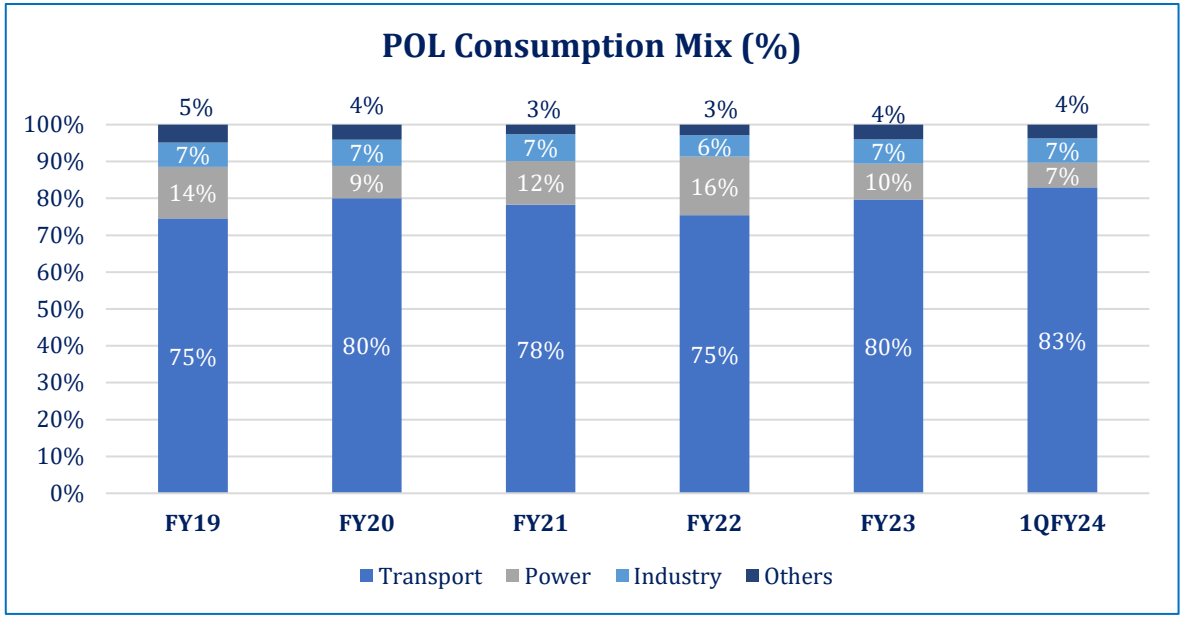
**'Others' include Kerosene, LDO and HOBC, and share in Consumption Mix amounts to ~0% for the stated time periods.*

Source: PBS, OCAC

Oil Marketing Companies

Demand | Segment-wise POL Consumption

- The country's Transport segment remained the largest consumer of petroleum products in FY23, as it comprised ~79.7% of total POL products consumed during the year (~74.8% in FY22). The Segment's stand-alone consumption stood at ~13.6mln MT, registering a YoY decline of ~21.8% during FY23. This dip in consumption could likely be due to reduced automotive sales and lower demand from the public, owing to double-digit inflation and high petrol prices.
- POL consumption by industries is largely driven by LSM growth. The industrial consumption of POL products comprised ~6.6% of country's total POL consumption (SPLY: ~5.7%) and stood at ~1.1mln MT, declining YoY by ~15.5% during FY23. The decline can be associated with the LSM exhibiting ~10.3% YoY dip during the same year, depicting slowdown in industrial activity, which had majorly resulted from SBP's imposed restrictions on imports. On the other hand, Power segment's POL consumption (comprising HSD and FO) declined ~54.1% YoY to ~1.7mln MT (SPLY: ~3.7mln MT) due to shift from FO to cheaper and environment-friendly alternatives (the Segment consumed ~53.4% lower FO during the year).



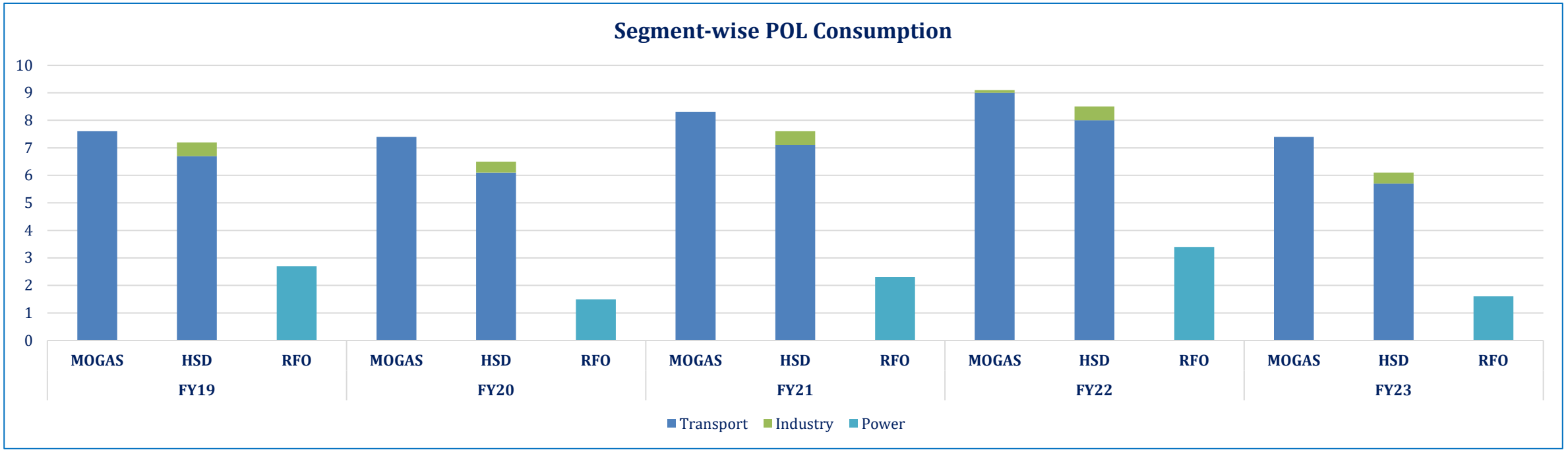
POL Consumption (mln MT)					
Period	**Transport**	**Power**	**Industry**	**Others**	**Total**
FY19	14.7	2.8	1.3	1.0	**19.7**
FY20	13.9	1.5	1.2	0.7	**17.3**
FY21	15.8	2.4	1.5	0.5	**20.1**
FY22	17.4	3.7	1.3	0.7	**23.1**
FY23	13.6	1.7	1.1	0.7	**17.1**
1QFY24	3.3	0.3	0.3	0.1	**3.9**

Source: OCAC

Oil Marketing Companies

Demand | Segment-wise POL Consumption Breakdown

- Major demand drivers for POL products include the Transport, Industry and Power segments of the country. During FY23, the Transport segment consumed ~43.6% of MOGAS and ~33.6% HSD of the total POL products consumed. Total POL products consumed by the Sector clocked in at ~13.6mln MT during FY23.
- Similarly, during the year, the Industry segment consumed ~0.1% of MOGAS and ~2.4% HSD of the total POL products consumed. Total POL products consumed by the Sector clocked in at ~1.1mln MT during FY23.
- With respect to the Power segment, the amount of RFO consumed has reduced by ~9.4% in FY23 since FY19, when it had stood at ~1.7mln MT (FY23: ~3.7mln MT).

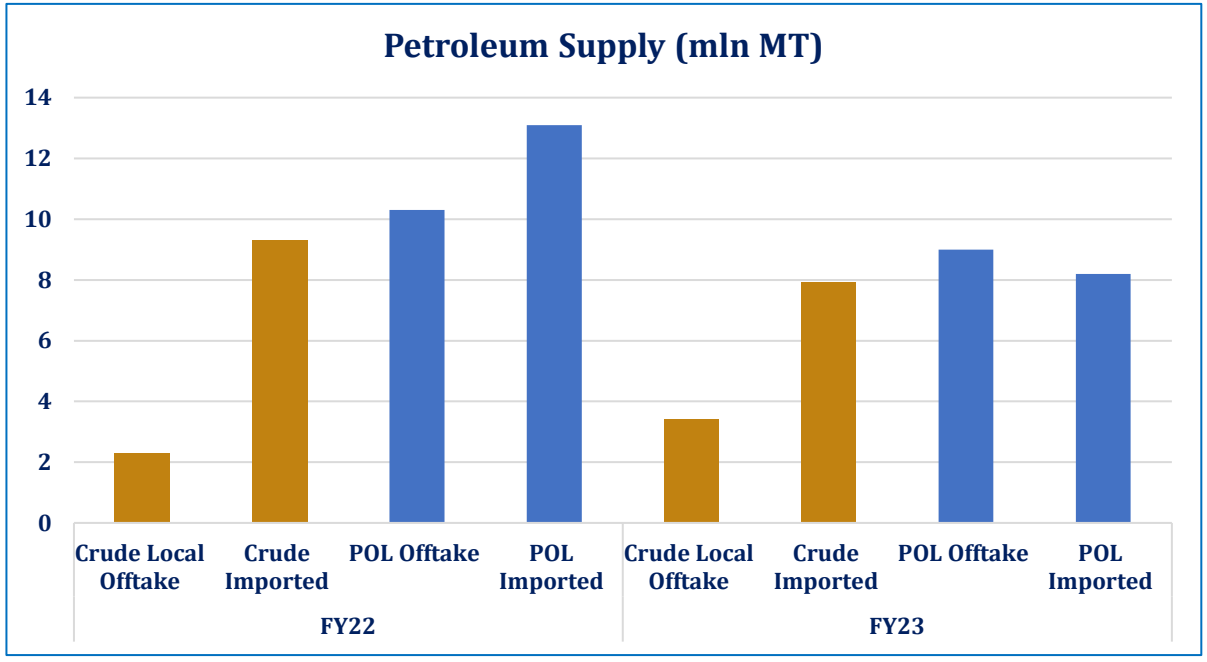


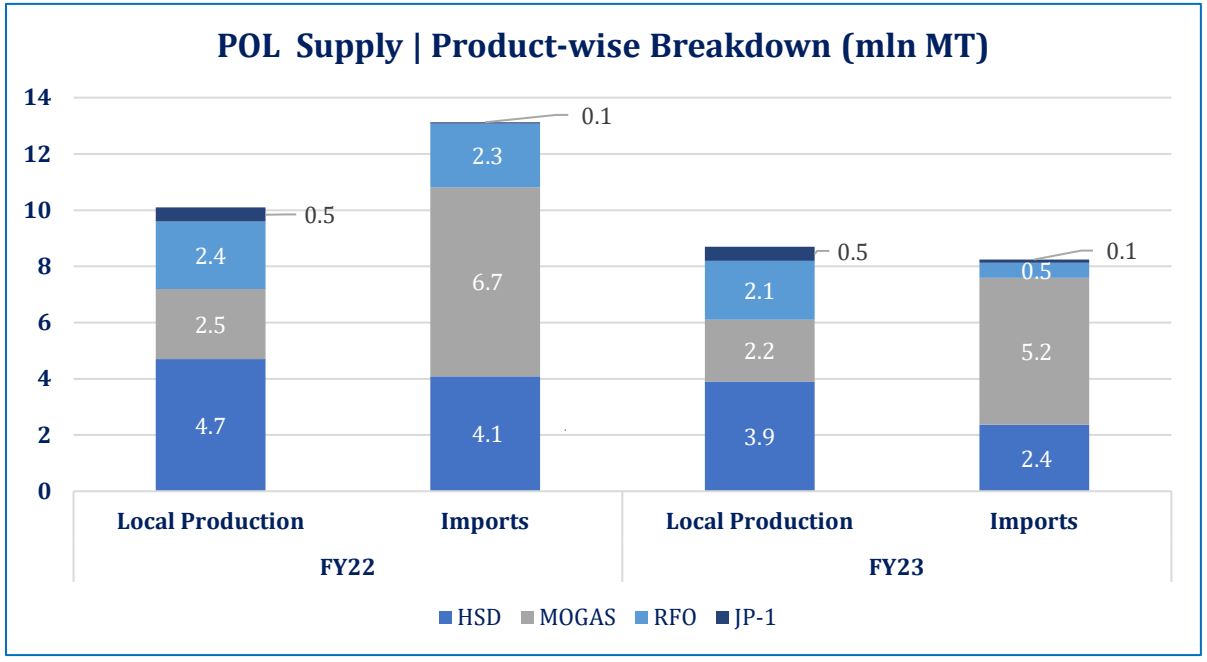
Source: OCAC

Oil Marketing Companies

Local | Supply

- In FY23, local crude offtake was recorded at ~3.4mln MT, a YoY decline of ~47.8% (FY22: ~2.3mln MT). During the same year, ~7.9mln MT (FY22: ~9.3mln MT) of crude oil was imported, marking a decline of ~15.1% YoY. Of the total crude supply, crude imports formed ~70.0% during FY23 (SPLY: ~79.9%).
- In FY23, local POL production stood at ~9.0mln MT (FY22: ~10.3mln MT). Of the total POL supply, crude imports formed ~48% during FY23 (SPLY: ~56%), reflecting Pakistan's reliance on imports to meet local demand. Of total POL products produced, furnace oil comprised ~23.3% (FY22: ~24.0%) of total locally produced energy POL products, while share of MOGAS was recorded at ~24.4% (FY22: ~25.0%) and HSD share was ~43.3% (FY22: ~47%).
- Similarly, total POL products imports stood at ~8.2mln MT (SPLY: ~13.1mln MT), declining by ~37.4% YoY. Of these, share of MOGAS imports comprised ~64% of the total POL products imported, whereas that of HSD imports made up ~29% (SPLY: ~51% and ~31%, respectively). Meanwhile, RFO imports declined ~78% YoY and formed ~6% of the total POL products imports (SPLY: ~17%).





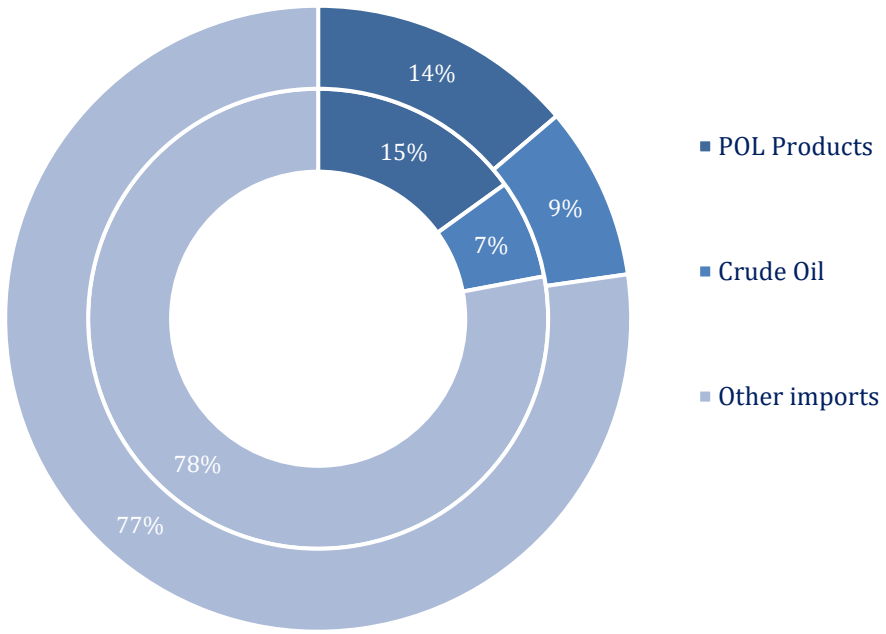
Source: OCAC

Oil Marketing Companies

Local | Imports

- Pakistan significantly relies on imports to meet its demand of crude oil. On average (FY19-22), ~8.0mln MT of crude oil was imported into the country. Crude imports made up ~70.0% of total crude supply in the country during FY23.
- Total crude oil imports in FY23 amounted to USD~4.9bln (FY22: USD~5.6bln) representing ~7.0% of country's total import bill. The volume imported declined by ~17.0% to ~9.3mln MT (FY22: ~7.9mln MT) whereas, the value of crude imports declined by ~12.5% YoY.
- POL products imports for FY23 fell to ~8.2mln MT (FY22: ~13.1mln MT), a decline of ~37.4% YoY. During the year, POL products' import bill amounted to USD~7.6bln (FY22: USD~12.1bln) representing ~13.8% (FY22: 15.1%) share in country's total imports. The value of POL products import fell by ~37.1%.
- The fall in value of imports in FY23 was mainly due to the import restrictions imposed by the SBP from May'22-Jun'23. Additionally, even though PKR depreciated by ~39.0% in FY23, the import bill still was lower due to the lower imports due to the aforementioned reason. Moreover, international brent prices during FY23 averaged USD~86.5/bbl (SPLY: USD~90.5bbl), depicting a decline of ~4.4% YoY.
- In the first quarter of FY24, petroleum products' imports declined in quantity by ~26.0% QoQ (1QFY24: ~2.4mln MT; 1QFY23: ~3.2ml MT), due to currency devaluation that makes imports highly expensive.

POL & Crude Import | FY22 (Inner) & FY23 (Outer)

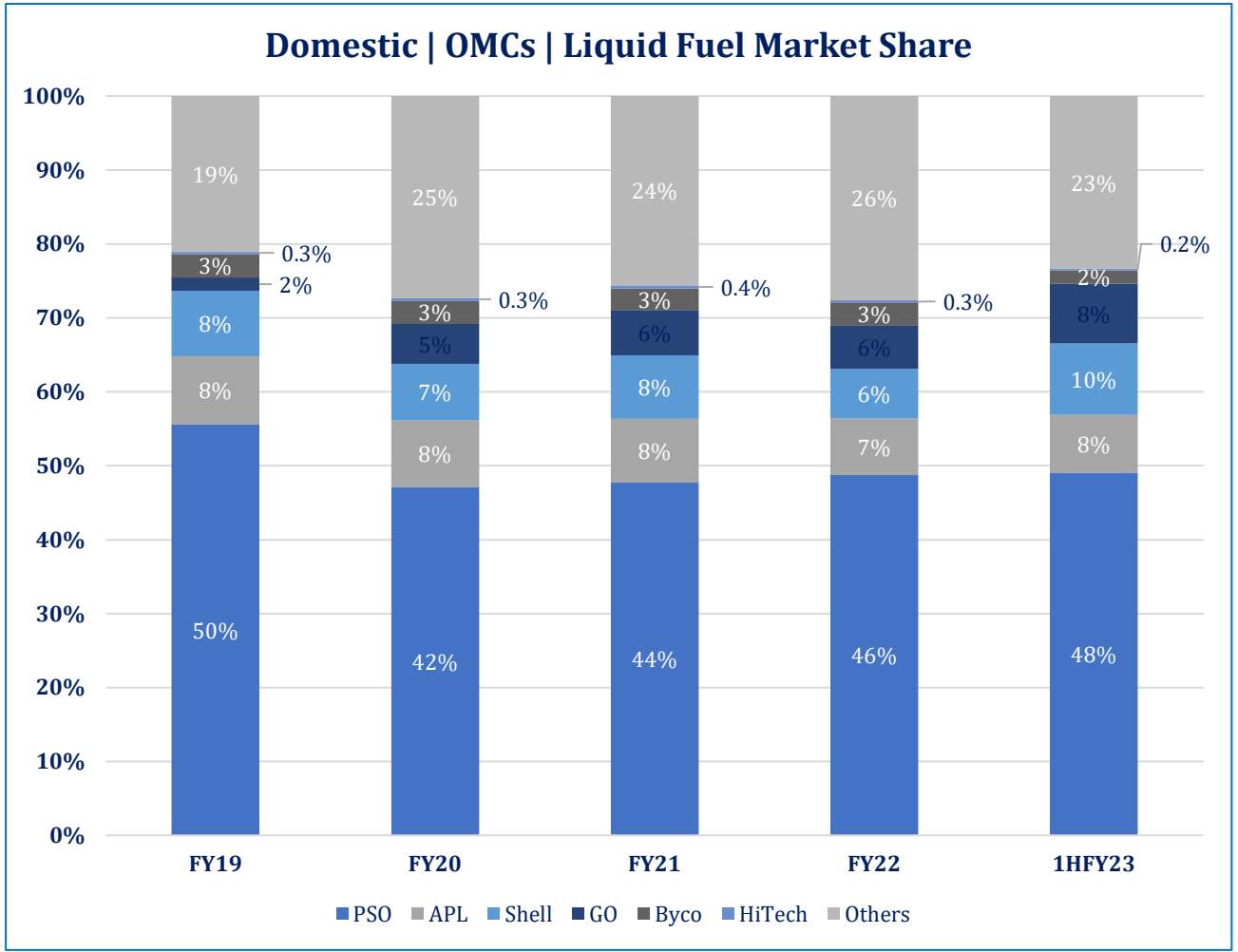


Note: *Other Imports represent country's imports excluding petroleum products and crude.*

Source: PBS

Oil Marketing Companies

Local | Player-wise Market Shares



Top 10 Players | POL Products (CY22)			
Company	**MS**	**Company**	**HSD**
PSO	44%	**PSO**	55%
Total Parco	12%	**Total Parco**	11%
Shell	11%	**APL**	9%
APL	8%	**Shell**	8%
GO	9%	**GO**	7%
BE	3%	**BE**	2%
CNERGYICO	2%	**CNERGYICO**	2%
PUMA	2%	**PUMA**	2%
Taj	1%	**TAJ**	1%
Flow	1%	**FLOW**	1%
Others	7%	**Others**	4%
Total	**100%**	**Total**	**100%**

Source: PACRA Database

Oil Marketing Companies

Local | Country-wise Retail Outlets

- As per latest publicly available data as at Dec'21, OMCs in Pakistan have a cumulative MOGAS storage capacity of ~798,525 MT.
- Cumulative HSD storage capacity of OMCs stands at ~978,750 MT, which puts the cumulative MOGAS and HSD storage capacity at ~1,777,275 MT.

Top 10 Players | CY21				
OMC	**No. of Stations**	**Share in Storage (MS)**	**Share in Storage (HSD)**	**Share in Total Storage Capacity**
PSO	3,484	31%	31%	31%
GO	892	12%	8%	10%
Total Parco	763	7%	4%	5%
Shell	757	8%	8%	8%
Attock	746	11%	10%	10%
Hascol	623	6%	7%	7%
Puma	542	4%	2%	3%
Byco	427	3%	5%	4%
Askar	394	1%	2%	2%
BE Energy	381	6%	10%	8%
Others	598	11%	13%	12%
Total	**9,607**	**100%**	**100%**	**100%**

Based on latest available public data

Source: OCAC

Oil Marketing Companies

Local | Pricing Mechanism

- 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 starting 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 September 01, 2020, 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 | Price per Litre Breakdown

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

Source: OGRA

Oil Marketing Companies

Local | Fuel Retail Prices

- For FY23, OMC margins averaged at PKR~4.9/liter, compared to PKR~3.3/liter SPLY in the case of MOGAS, whereas for HSD, these clocked in at ~4.8% (SPLY: ~3.4%). For MOGAS, share of OMC margins as % of average retail prices declined from ~2.3% in FY22 to ~2.0% in FY23. Similarly, in the case of HSD, the share of OMC margins recorded at ~1.9% during FY23 (SPLY: ~2.2%).

- Moreover, the ex-refinery price for MOGAS increased ~41.3% and ~84.4% YoY, despite international brent crude prices falling ~4.4% YoY. The increase, therefore, can tentatively be linked to PKR depreciation of ~39.0% YoY during FY23.

- Another significant component of fuel prices during FY23 was the petroleum levy which was increased to an average of ~43.5% for MOGAS during FY23 and ~28.6% for HSD. The petroleum levy as of Oct;23 stands at PKR~60/litre for MOGAS and PKR~52.5/litre for HSD and remains contingent upon IMF's conditions of the 9-month Stand-By Agreement signed in Jun'23. Furthermore, there is currently no sales tax applicable on Sector players for sale of MOGAS and HSD.

MOGAS – Average Retail Price/ Liter (Composition)

Price Components	FY19	FY20	FY21	FY22	FY23	FY24	
						1QFY24	Oct'23
Cost of Supply	71.9	61.5	60.5	131.3	185.5	211.7	222.7
IFEM Margin	3.3	3.4	3.6	4.0	3.1	4.3	5.5
OMC Margin	**2.6**	**2.8**	**2.9**	**3.3**	**4.9**	**6.1**	**7.2**
Dealer Commission	3.5	3.6	3.7	4.4	6.9	7.1	8.0
Petroleum Levy	15	19.8	20.3	5.4	43.5	56.7	60.0
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**	**243.9**	**285.9**	**303.4**

HSD – Average Retail Price/ Liter (Composition)

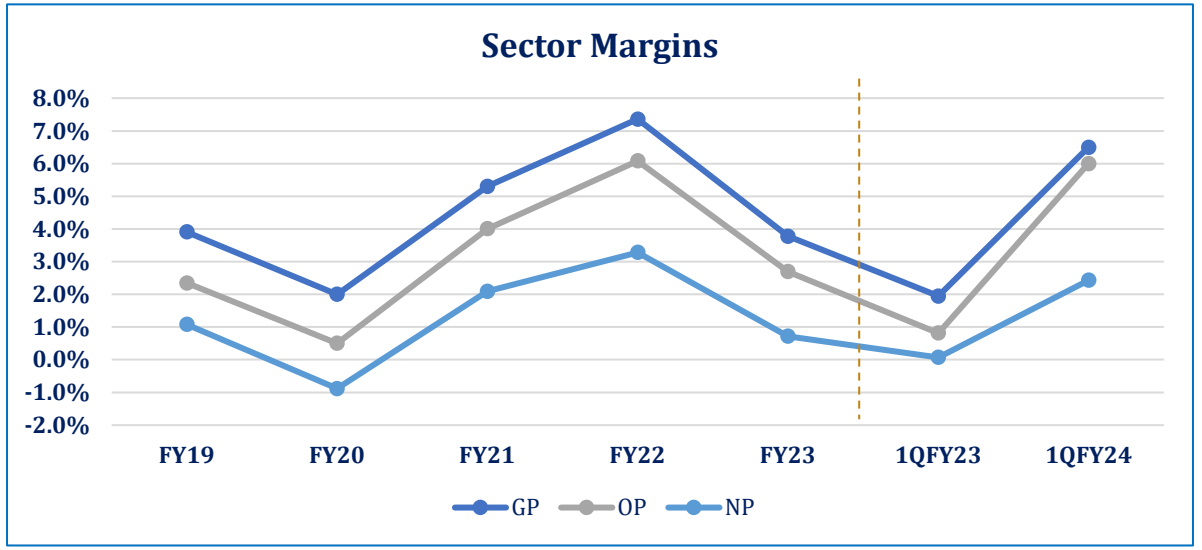
Price Components	FY19	FY20	FY21	FY22	FY23	FY24	
						1QFY24	Oct'23
Cost of Supply	85.7	66.3	65.0	135.0	218.0	228.4	242.1
IFEM Margin	1.1	1.2	1	-1.3	-3.5	-1.9	0.9
OMC Margin	**2.6**	**2.8**	**2.9**	**3.4**	**4.8**	**6.1**	**7.2**
Dealer Commission	2.9	3.1	3.2	3.8	6.6	7.1	8.0
Petroleum Levy	16	21.1	21.1	5.2	28.6	50.0	52.5
Sales Tax	18.4	16	15.8	6.9	0.0	0.0	0.0
Max Ex-Depot Sales Price	**126.8**	**110.4**	**108.9**	**153.0**	**254.5**	**289.7**	**310.7**

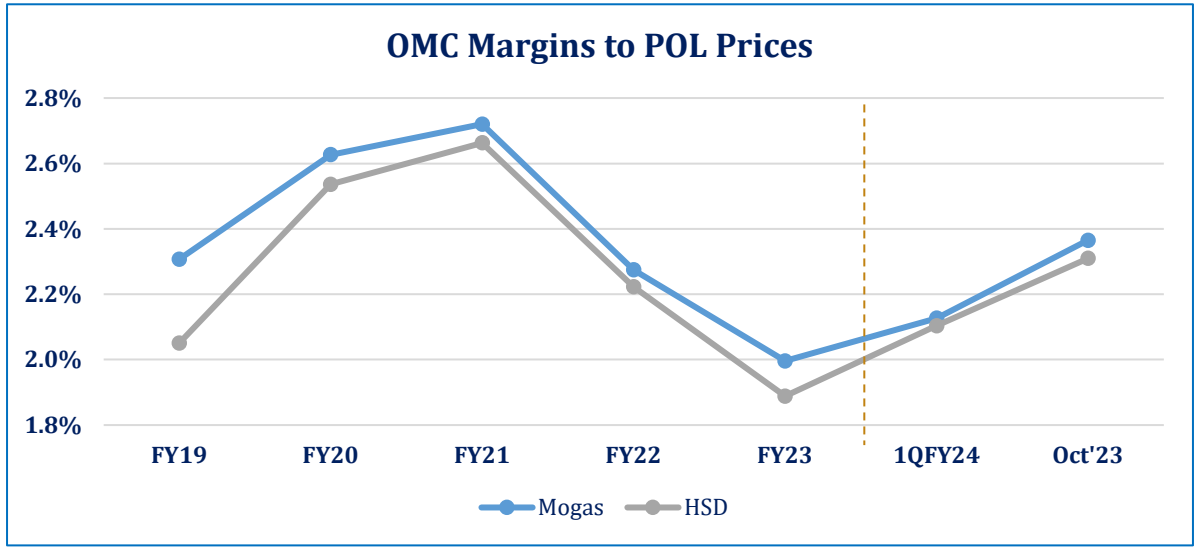
Source: OGRA, PSO

Oil Marketing Companies

Local | Business Risk

- OMC margins per liter of fuel prices are determined by OGRA, representing the amount which the OMCs earn from each litre of fuel sold. While that may be the case, average gross profit margins for the Sector declined to ~3.8% during FY23 (SPLY: ~7.4%). This dip could likely be attributed to lower sales across all demand-driving segments of the economy (covered earlier) and can be explained by the fact that transport segment, comprising ~80% of the total POL product sales, registered ~21.8% decline in POL consumption. This can further be linked to the slowdown in automotive sales, along with higher prices, which together resulted in lower average gross margins.
- In terms of gross margin retention, OMCs can only retain their fixed government-determined margins, and due to recent increase in overall prices the share of OMCs in per liter price declined to ~2.0% in the case of MOGAS sales and ~1.9% with respect HSD sales (SPLY: ~2.3% and ~2.2%, respectively).
- While average OMC margins increased to ~4.9% and ~4.8% for MOGAS and HSD sales, prices for these rose ~68.3% and ~60.5%, respectively, in FY23. The most notable contributor to these increases was cost of supply, which increased on the back of higher international prices and deteriorating rupee (PKR depreciated ~39.0% YoY during FY23).
- Another important factor impacting OMCs' profitability are the inventory losses which arise due to discrepancy between international prices and domestic prices determined by the government.
- Following suit, Sector's average operating margins also dipped to ~2.7% in FY23 (SPLY: ~6.1%, reflecting higher operation costs on the back of overall inflationary pressures. Furthermore, due to rising interest rates, Sector's average net margins also declined to ~0.7% during the year (FY22: ~3.3%), reflecting higher finance costs.





***Note**: Data is based on~11 PACRA-rated/listed Sector players. 1QFY24 margins are reflective of only ~4 players.*

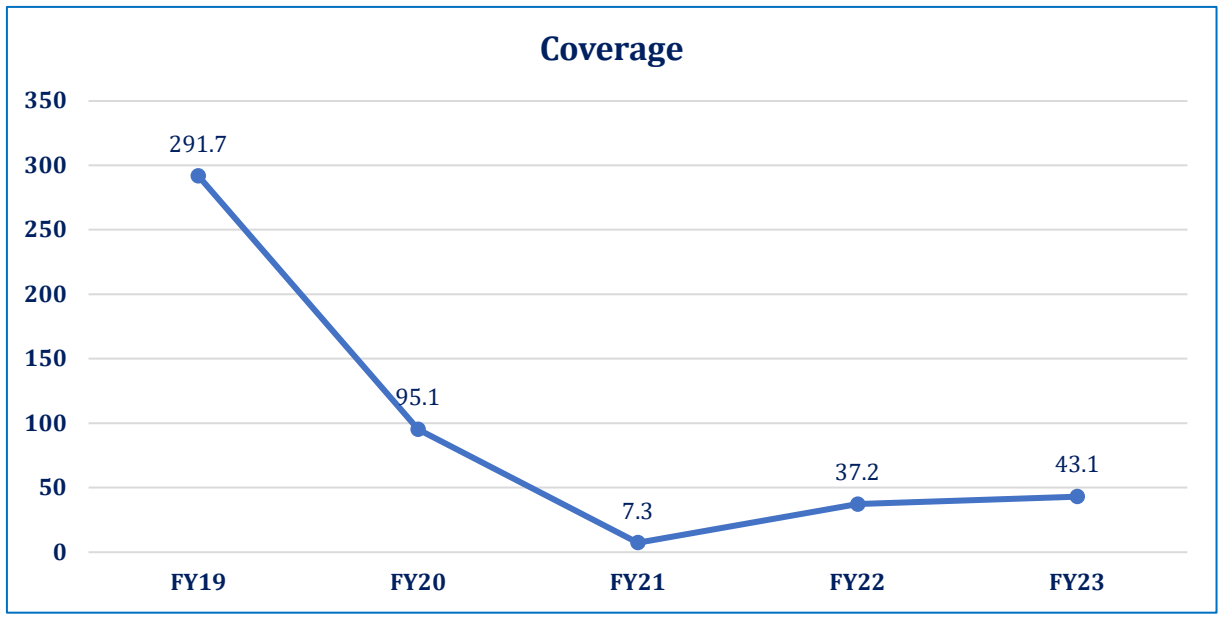
Source: Financial Statements, OGRA

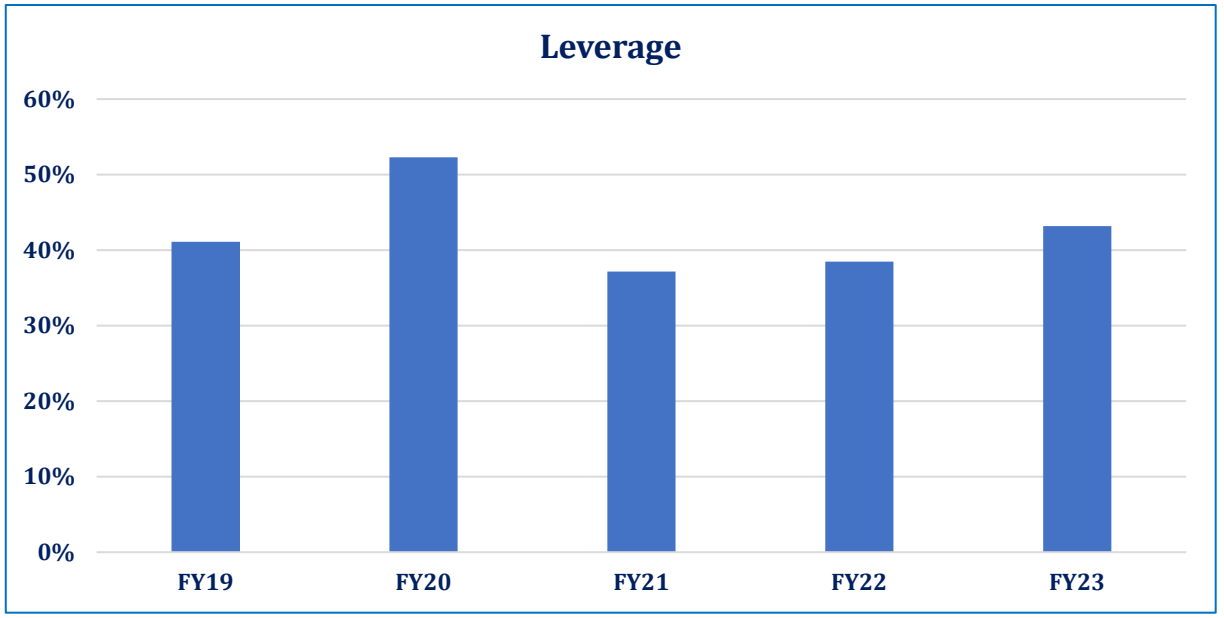
Oil Marketing Companies

Local | Financial Risk

- Interest coverage of the Sector clocked in at ~43x compared to ~37x in FY22. This may have occurred due to exponential increase in PBIT of more than ~68.2% YoY, since OMCs recorded, on average, a surge in sales revenue of ~24.4% YoY driven likely by higher prices component of the equation, in the presence of lower POL consumption/ sales across all segments during the year. On the other hand, finance cost for the Sector, on average, shot up ~359% YoY, signaling steep interest rate hikes. As per SBP's hawkish monetary policy stance, the MPR increased from ~17% in Jul'22 to ~22% in Jun'23. Overall, though, average interest coverage increased ~16.2% YoY, reflecting thereby, better expense management by Sector players.

- The Sector remained moderately-leveraged with average gearing ratio of ~43% in FY23 (SPLY: ~38%). The borrowing needs of the Sector arise from working capital financing for which the Sector relies heavily on short-term borrowings as these constituted ~36% of the total borrowings. Significant reliance on short-term borrowings increases the financial risk of the Sector as well, which reflects in high finance costs incurred during the year.





***Note**: Data is based on~11 PACRA-rated/listed Sector players.*

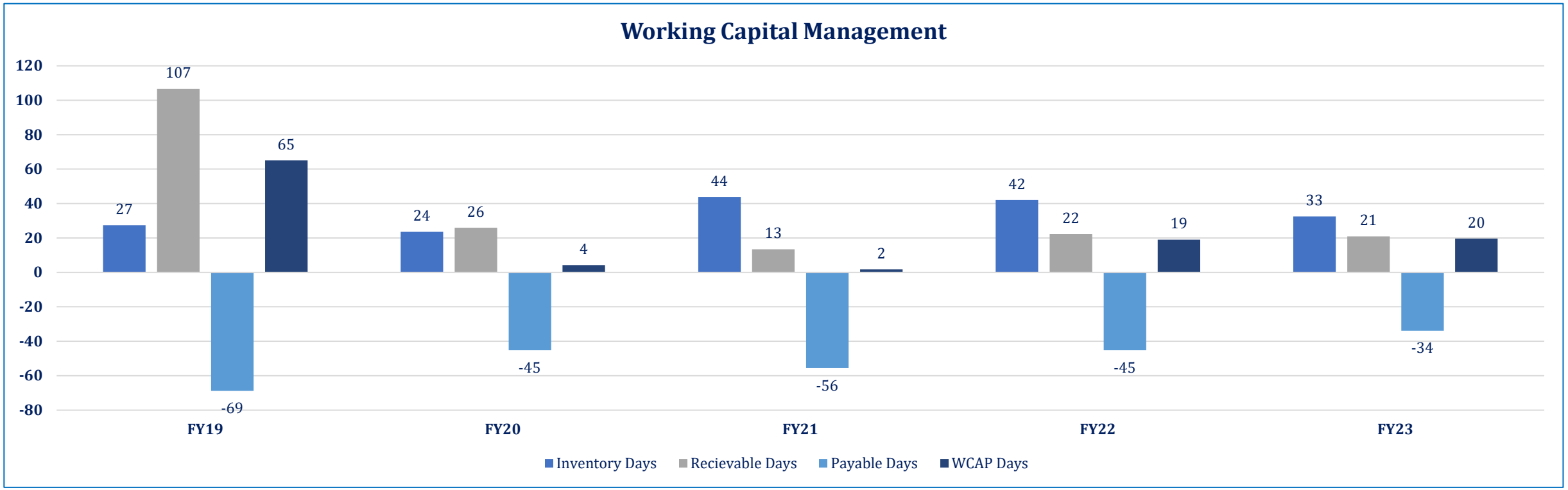
Source: PACRA Database

Oil Marketing Companies

Local | Working Capital Management

- In FY23, the Sector's average inventory days stood at ~33 days (FY22: ~42 days) with a YoY decline of ~9 days, which may have resulted from decline in international oil prices. Average receivable days of the Sector during FY23 were recorded at ~21 days (FY22: ~22 days).

- Moreover, average payable days in FY23 stood at ~34 days (FY22: ~-45 days). most likely due to decline in trade payables on account of decline in international oil prices. This also coincides with better interest coverage during FY23. Average working capital days, therefore, rose only slightly to ~20 days in FY22 (FY22: ~19 days), mainly on the back of decline in average receivable days being offset by improvement in payable days.



***Note**: Data is based on ~11 PACRA-rated/listed Sector players.*

Source: PACRA Database

Dealers

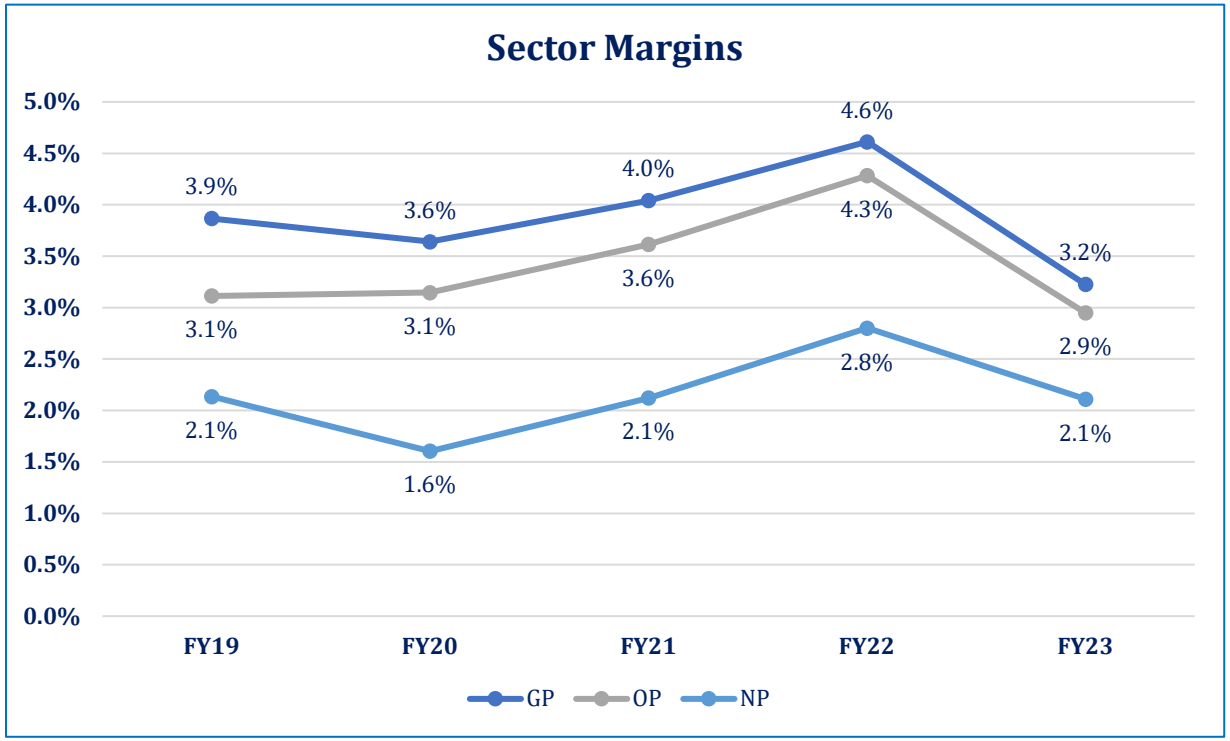
Local | Business Risk

- In FY23, average gross profit margins, operating profit margins as well as net profit margins all displayed a downward trend for this sub-segment.

- Average gross profit margins for the dealers declined to ~3.2% during FY23 (SPLY: ~4.6%). This dip could likely be attributed to higher cost of sales which reduced the gross profit despite an increase in the average revenue. The sub-Segment's revenue is largely dominated by trading of petroleum products, with transportation services contributing additional income for support.

- Segment's average operating margins also dipped to ~2.9% in FY23 (SPLY: ~4.3%), reflecting higher operation costs on the back of overall inflationary pressures and mismanagement of resources. Furthermore, in FY23, due to rising interest rates, Segment's average net margins also declined to ~2.1% during the year (FY22: ~2.8%), reflecting higher finance costs.

- In order to improve their margins, Segment players intend to grow their carriage income (transportation services) which will likely increase the revenue base ultimately impacting positively on the profitability of the Segment.



***Note**: Data is based on PACRA-rated Segment players.*

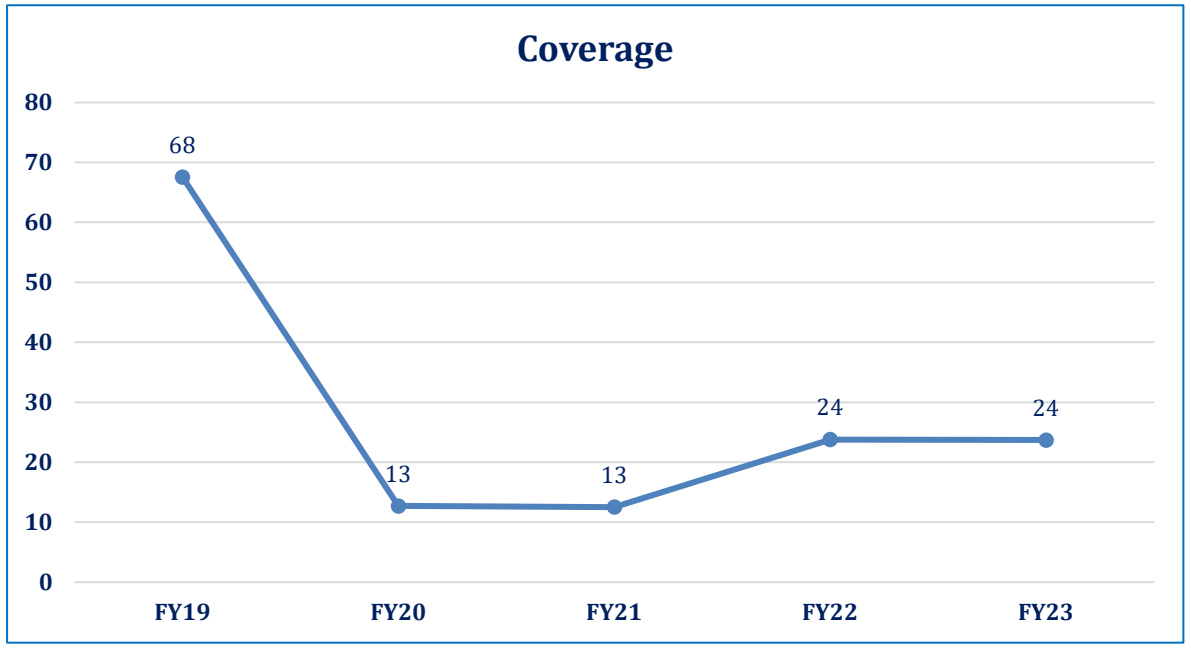
Source: PACRA Database

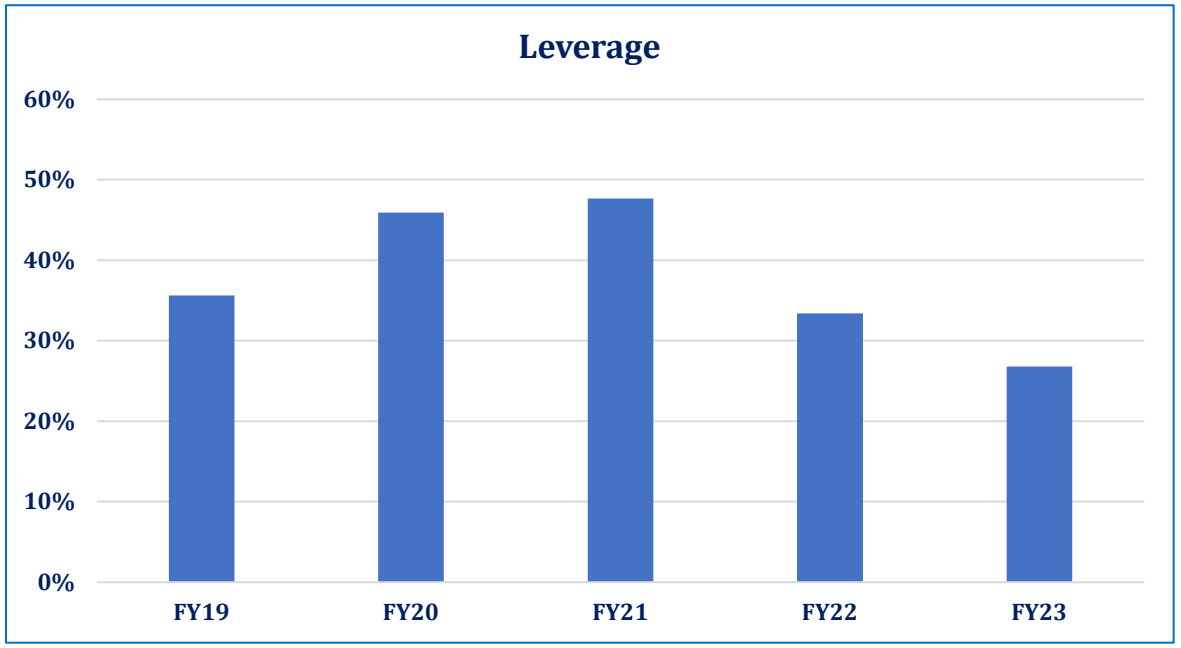
Dealers

Local | Financial Risk

- Interest coverage of the Segment clocked in at ~24x in FY23 (FY22: ~24x), reflecting that the Segment players' ability to fulfill their financial obligations has remained constant on a YoY basis, with improvement observed in FY22 compared against FY21.

- Segment's leverage ratio reduced from ~33% in FY22 to ~27%, indicating a decrease in debt and greater dependence on equity. This reduced gearing level offers room for additional borrowing capacity. Short-term borrowings constitute the larger portion of the total borrowings, whereby greater reliance on short-term borrowings increases the financial risk of the Segment as well.





***Note**: Data is based on PACRA-rated Segment players.*

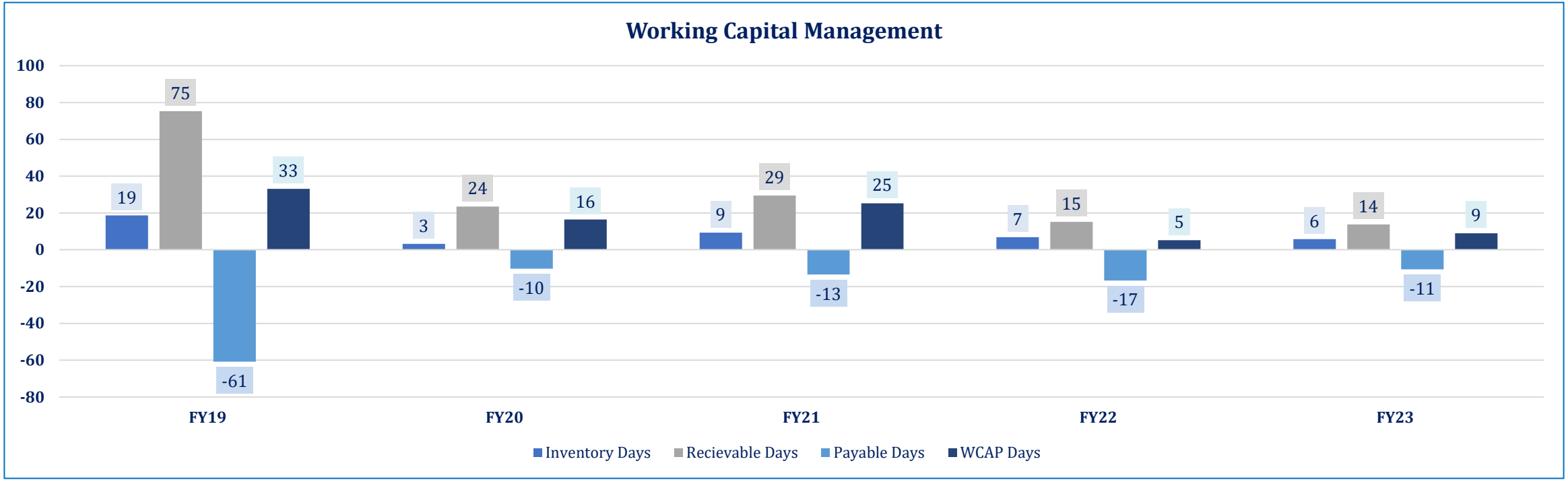
Source: PACRA Database

Dealers

Local | Working Capital Management

- In FY23, the Segment's average inventory days stood at ~6 days (FY22: ~7 days) with a YoY decrease of ~1 day, whereas average receivable days of the Segment during FY23 were recorded at ~14 days (FY22: ~15 days).

- Moreover, average payable days in FY23 stood at ~11 days (FY21: ~17 days). On average, payables decreased by ~7.0% YoY. Therefore, average working capital cycle deteriorated to ~9 days in FY23 (FY22: ~5 days). This came largely on the back of a decrease in average inventory days as well as average receivable days.



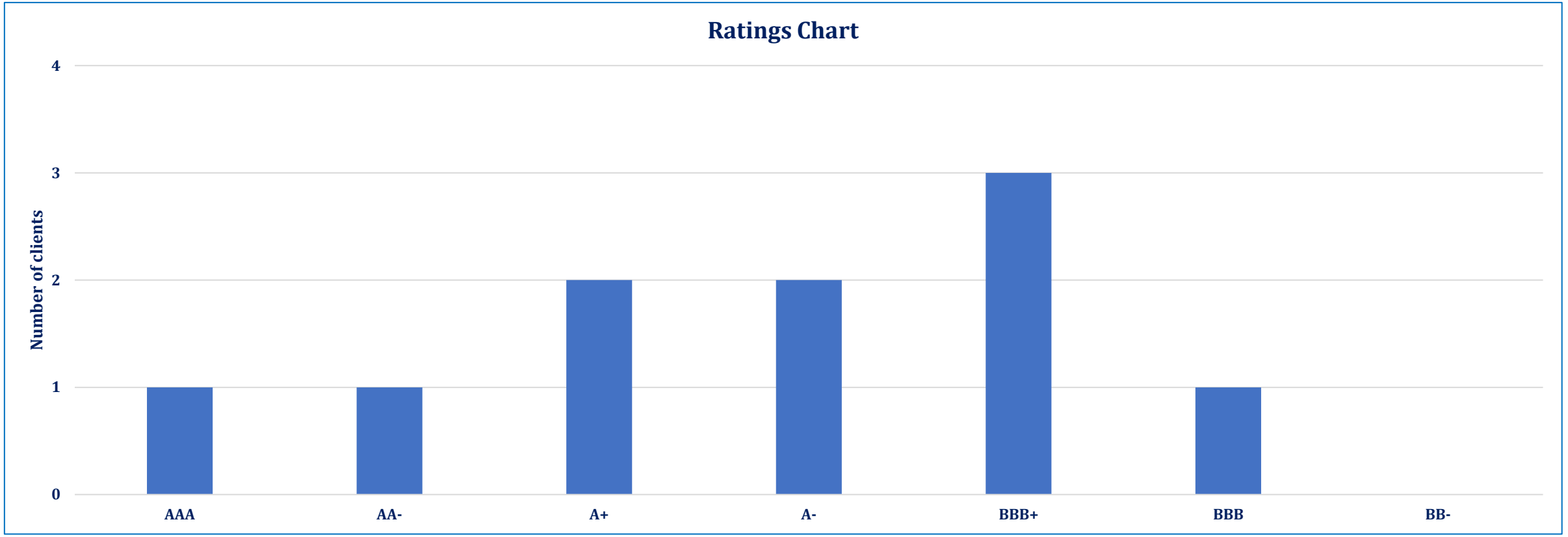
***Note**: Data is based on PACRA-rated Segment players.*

Source: PACRA Database

Oil Marketing Companies

Rating Curve

PACRA rates players in the Sector, in the bandwidth of BBB to AA-.



Source: PACRA Database

Oil Marketing Companies

SWOT

- 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

- Pakistan's economy posted a real GDP growth of ~0.29% (FY22: ~6.1%) in FY23, while the LSM sector declined by ~10.3% (FY22: ~11.8%) owing majorly to supply chain disruptions which resulted from SBP-imposed import restrictions and consequent sluggish demand across major industrial sectors.
- Pakistan's POL products demand is largely driven by the Transport sector and level of industrial activity in the country. Automotive sales across all segments registered a decline owing to the aforementioned supply chain disruptions which led to an increase in vehicle prices and therefore a decline in sales. On the other hand, LSM also registered a dip of ~10.3% during FY23. Subsequently, total consumption of petroleum products during FY23 was recorded at ~17.1mln MT (SPLY: ~23.1mln MT), declining by ~25.5% YoY.
- The three major POL products, i.e., HSD, MOGAS and RFO, cumulatively accounted for ~94.0% of the total POL products consumption in the country during FY23 (SPLY: ~97.0%). However, MOGAS and HSD consumption declined by ~74.6% and ~78.1% YoY, respectively, in FY23, signaling slowdown in demand and a concomitant dip in Automotive sales. The Industrial consumption of POL products comprised ~6.6% of country's total POL consumption (SPLY: ~5.7%) and stood at ~1.1mln MT, declining YoY by ~15.5% during FY23. On the other hand, Power segment's POL consumption (comprising HSD and FO) declined ~54.1% YoY to ~1.7mln MT (SPLY: ~3.7mln MT) due to shift from FO to cheaper and environment-friendly alternatives (the Segment consumed ~53.4% lower FO during the year).
- Pakistan's supply of POL products, a function of domestic production and imports, declined ~26.5% YoY during FY23, clocking in at ~17.2mln MT. This came on the back of lower imports, which declined by ~37.4% YoY, while local refineries' output also went down ~12.6% YoY. Lower imports resulted from SBP's curb on imports during May'22-Jun'23. With respect to meeting local supply of POL products, the country remains dependent on imports, owing to lower local reserves and low new discoveries., with imports forming ~64.5% of the total supply in FY23 (SPLY: ~78.8%). Therefore, petroleum products made up ~22.7% of country's total imports bill (in USD terms).
- For FY23, OMC margins averaged at PKR~4.9/liter, compared to PKR~3.3/liter SPLY in the case of MOGAS, whereas for HSD, these clocked in at ~4.8% (SPLY: ~3.4%). Average gross profit margins for the Sector declined to ~3.8% during FY23 (SPLY: ~7.4%). This dip could likely be attributed to lower sales across all demand-driving segments of the economy. In terms of gross margin retention, OMCs can only retain their fixed government-determined margins, and due to recent increase in overall prices the share of OMCs in per liter price declined to ~2.0% in the case of MOGAS sales and ~1.9% with respect HSD sales (SPLY: ~2.3% and ~2.2%, respectively). Interest coverage of the Sector clocked in at ~43x compared to ~37x in FY22. This may have occurred due to exponential increase in PBIT of more than ~68.2% YoY, since OMCs recorded, on average, a surge in sales revenue of ~24.4% YoY driven likely by higher prices component of the equation, in the presence of lower POL consumption/ sales across all segments during the year. Moreover, the Sector remained moderately-leveraged with average gearing ratio of ~43% in FY23 (SPLY: ~38%).
- With the economy starting to show early signs of recovery during 1QFY24, demand for POL products is expected to pick up pace. Other factors likely to impact Sector's performance are international oil prices, which lead to inventory gains/ losses depending on local pricing, PKR depreciation and OMC margins set by OGRA.

Oil Marketing Companies

Bibliography

- World Bank
- IMF
- OGRA
- OCAC
- BP STATS
- Cabinet Division
- EIA
- IEA
- S&P Global
- OPEC
- Pakistan Bureau of Statistics (PBS)
- Economic Survey of Pakistan
- State Bank of Pakistan (SBP)
- Pakistan Stock Exchange (PSX)
- Financial Statements
- PACRA Database

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