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The Art of Investment

REFINING SECTOR

NEW POLICY IS A US$ 3.7BN CREDIT OPPORTUNITY

Rating by VIS
AM2+
Very Good Quality Management

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REFINING SECTOR – NEW POLICY A US$ 3.7BN CREDIT OPPORTUNITY

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The refining sector's current business model consists of obsolete technologies making gross refining margins (GRMs) vulnerable to adverse international energy price movements and impairing the sector's ability to generate sustainable cash flows. An opportunity exists for technologically obsolete refineries in the form of the upcoming Refinery Policy (fiscal incentives contingent on commitments for upgrades), which has the potential to transform the business case of the refinery sector, in our view. Against this backdrop, upgraded complexes should shift production mix towards higher-value products (petrol and diesel) away from black oil weak margin products like furnace oil (structural decline in demand – competition from RLNG). The oil refining sector (post upgraded complexes) has a relatively strong demand outlook over the next ten years. In our base case, the refinery sector is forecasted to post an annual volumetric growth rate of 11% compared to our overall POL products consumption (volumetric CAGR of 4% over the next ten years) forecast. As a result, utilization levels are expected to materially improve from 66% in 2019 to +80% post upgrades. In this regard, we estimate free cash flows to turn positive by the entire year of upgraded operations (FY25-27).

Refining Capacity (BPD)	
BYCO	155,000
PARCO	100,000
NRL	65,050
ATRL	53,400
PRL	47,110

Source: OCAC

New Policy: Contingent upon firm upgrade commitments by Dec'21, refiners will receive six-year tariff protection to become Euro-V compliant for MOGAS (petrol) and HSD (diesel). The tariff protection entails duty protection of 10% import duty on MOGAS (petrol) from 0% currently and 10% on HSD from 7.5% now, effective from 1st Jan'22 to 31st Dec'27. Another major incentive includes a 10-year tax holiday on transitioning to deep conversion refineries. Upgraded complexes should shift production towards more premium fuels by moving away from low-margin products like furnace oil (avg. 27% or production mix), consequently improving the cash flow profile.

Capital Requirements: Except for BYCO, the remaining refineries have not disclosed plans for upgrading complexes, pending approval of the upcoming refinery policy. Our channel checks suggest that projects under consideration include Continuous Catalyst Regeneration (CCR) Complex, Hydrocracker, and Diesel Hydro-Desulphurization (DHDS) units to alter production mix toward retail fuels (petrol and diesel) by shifting away from furnace oil (FO). Against this backdrop, we estimate an aggregate capital requirement of ~US$ 3.7bn by the listed sector (does not include any potential expansion as avg. capacity utilization is 66%).

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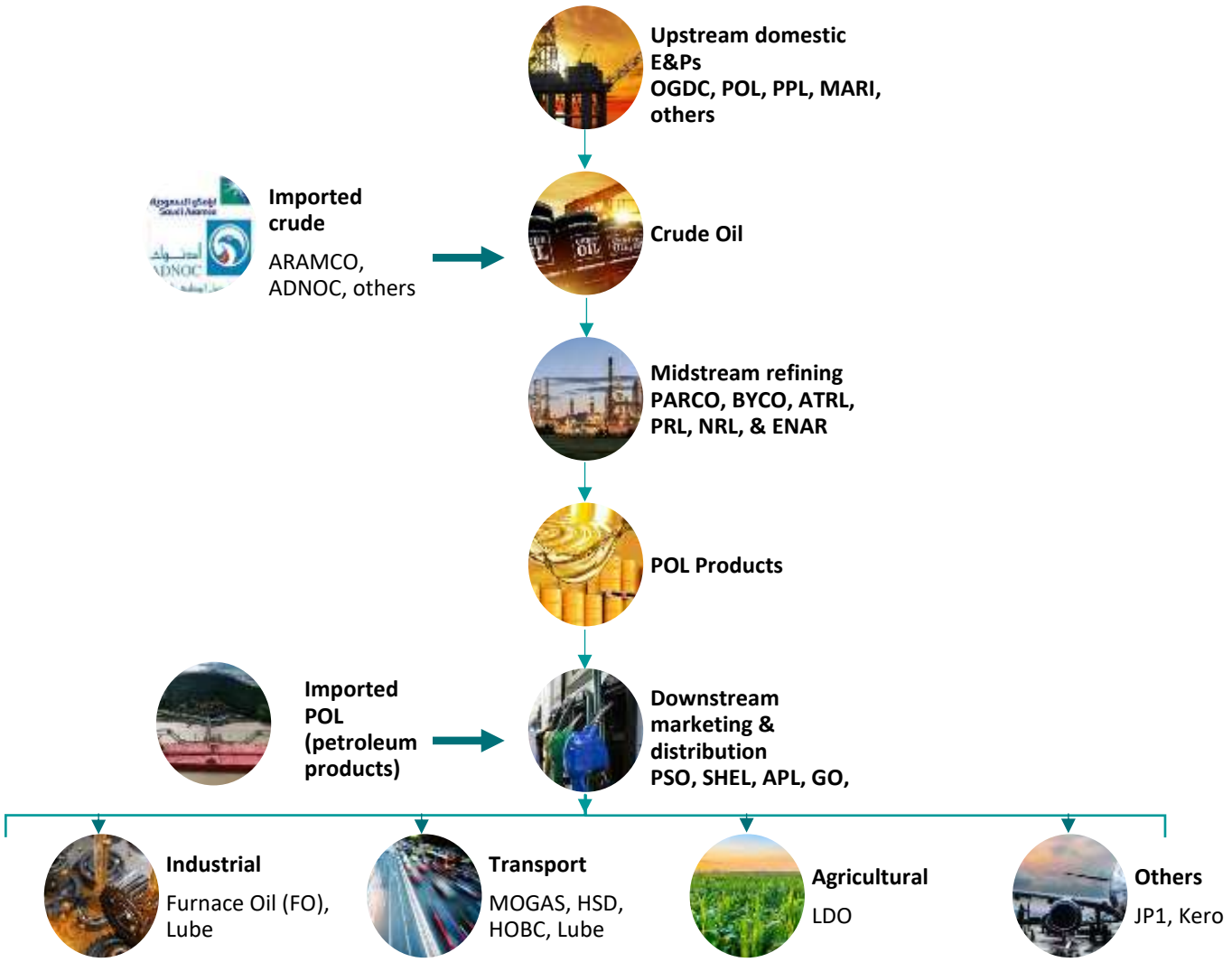
Mixed Leverage Profile: Refineries have a mixed leverage profile in the listed space driven by a stressed working capital trend (ratio of current assets to current liabilities has continuously stayed below 1.0x and has averaged 0.84x in the last five years). A sharp decline in international oil price exacerbated leverage positions and, consequently, the earnings profile in 2020, which triggered higher borrowing (largely short-term) to finance working capital requirement as total borrowing by the listed sector reached PKR 109bn in 2020 (~21% of aggregate revenues). Excluding PRL (D/E: 9.07x / D/A: 0.35x as of Mar 31'21) and BYCO (D/E: 1.60x / D/A: 0.27x), the remaining two refineries specifically ATRL (D/E: 0.17x / D/A: 0.08x) and NRL (avg. D/E: 0.61x / D/A: 0.25x) have relatively manageable leverage levels. Against this backdrop, we have assumed average financing of 90-100% of the expected capital requirements (target financing structure will change depending on sponsor support) for upgrades to shift towards more premium fuels. Incorporating the fiscal incentives of the upcoming policy and expected upgrades, we estimate free cash flows to turn positive by the full year of upgraded operations (FY25-27).

Risks to thesis
A prolonged delay in the new refinery policy would weaken the business case for refineries
Sharp adverse movement in international oil price to negatively impact GRMs
Shift in demand dynamics (e.g. structural demand contraction in the case of FO and prolonged covid related lockdowns)
Unfavorable movement in interest rates to increase finance costs
Depreciation of the PKR against the US$ exacerbates the margin profile

PAKISTAN ENERGY CHAIN



CODE	DETAILS	SECTOR
OGDC	Oil and Gas Development Co Ltd.	Exploration & Production
POL	Pakistan Oil Fields Limited	Exploration & Production
PPL	Pakistan Petroleum Limited	Exploration & Production
MARI	Mari Petroleum Company Limited	Exploration & Production
PARCO	Pak Arab Refinery Limited	Refinery
BYCO	Byco Petroleum Pakistan Limited	Refinery
ATRL	Attock Refinery Limited	Refinery
PRL	Pakistan Refinery Limited	Refinery
NRL	National Refinery Limited	Refinery
ENAR	Enar Petrotech Services Limited	Refinery
PSO	Pakistan State Oil Co. Ltd.	Oil Marketing Company

CODE	DETAILS	SECTOR
SHEL	Shell Pakistan Limited	Oil Marketing Company
APL	Attock Petroleum Limited	Oil Marketing Company
GO	Gas & Oil Pakistan Ltd.	Oil Marketing Company
FO	Furnace Oil	Industrial
LUBE	Lubricants	Industrial
MOGAS	Motor Gasoline (Petrol)	Transport
HSD	High Speed Diesel	Transport
HOBC	High Octane Blending Component	Transport
LDO	Light Diesel Oil	Agriculture (Tube Wells)
JP1	Aviation Fuel	Aviation
KERO	Kerosene	Domestic

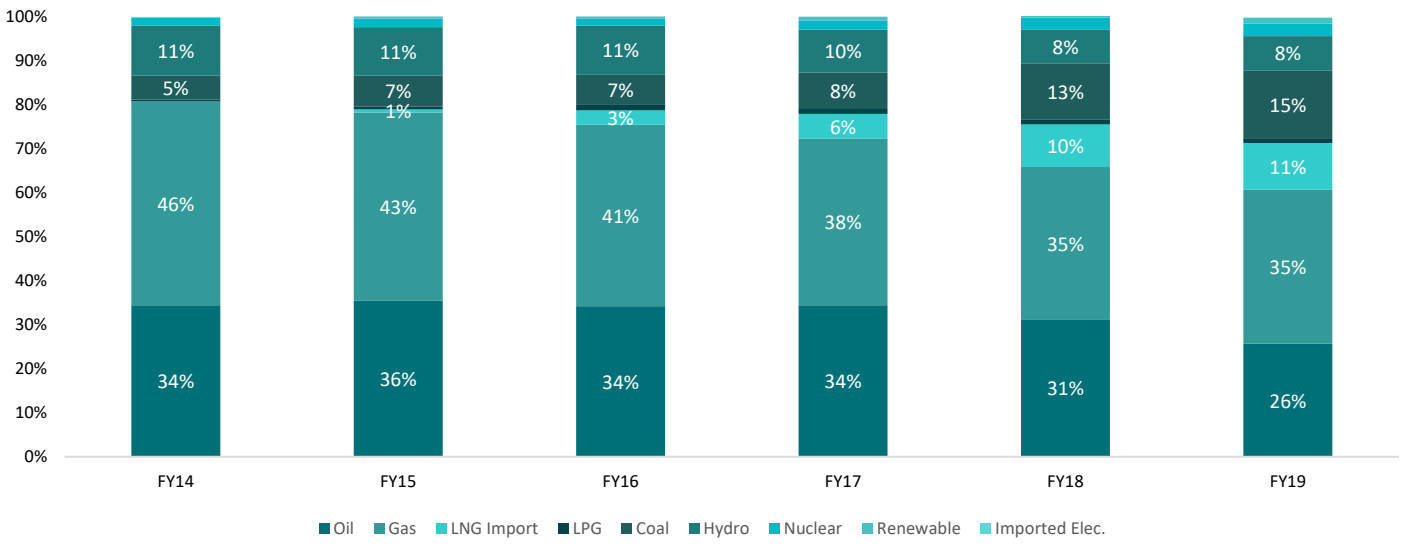
OIL: DECLINING SHARE DUE TO UNDERUTILIZATION OF RESOURCES

The current energy supply mix of the country shows a heavy reliance on natural gas (35.0% and 45.6% incl. LNG imports) as a primary source of energy in Pakistan, followed by oil (25.7% of which the majority is imported) and coal (15.4%). Hydro, Nuclear, and Renewable (less than 1.5% at present) together form only ~12% of the total energy supplies to the country. Due to low and underutilized crude oil reserves, crude oil's share in primary energy supplies to the country has been gradually declining over the past many years. During 2013-14, oil accounted for 34.4% of the total energy supplies of 66.84mn TOE, which has come down to 25.7% (5-year CAGR of -1.3%) of the aggregate energy supply totaling 83.81mn TOE during 2018-19. Against this backdrop, LNG imports (10.6% share in total energy supply in 2018-19; 3-year CAGR of 55%) have reduced the impact from declining supply from gas fields (5-year CAGR of -1.1%). On this same note, increasing coal supplies (5-year CAGR of 29.2%) due to higher utilization of the fuel by the industry (e.g., new coal-fired power plants, expansion by cement industry) have together driven energy supplies to the country. Primary energy supplies have increased at a 5-year CAGR of 4.6% to reach 83.8mn TOE in 2018-19.

In the supply mix, gas at ~46% (35% without LNG imports) is the primary source of energy, followed by oil (~26% - majority imported) and coal (15%) in 2018-19.

Exploration should move away from the know oil & gas corridors towards frontier areas and the unexplored regions of Sindh, Balochistan, and KPK.

PRIMARY ENERGY SUPPLY MIX



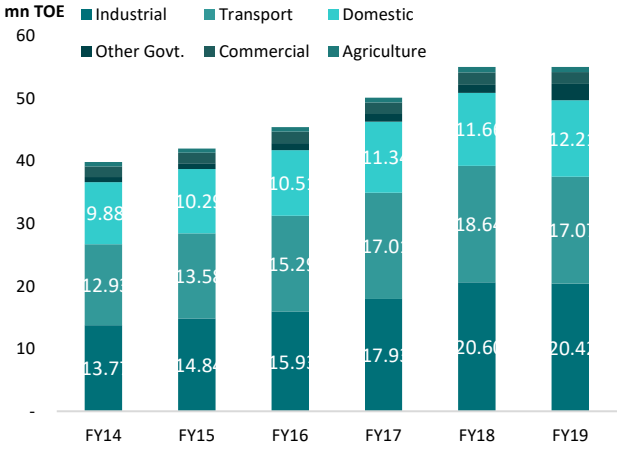
Source: Pakistan Energy Yearbook 2019

ENERGY CONSUMPTION INCREASING

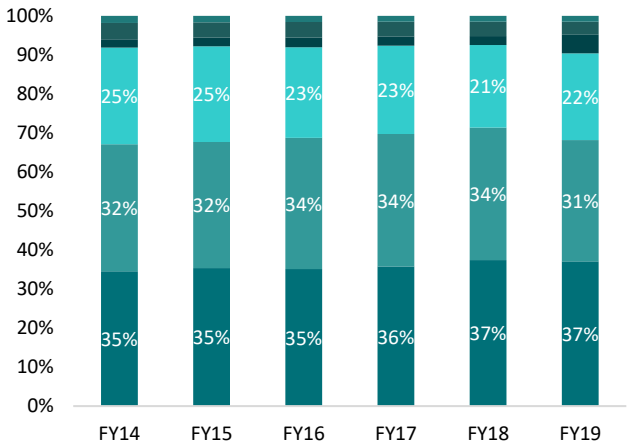
Energy consumption in Pakistan has been increasing at a 5-year CAGR of 6.7% from 2013-14 to 2018-19. Industrial (5-year CAGR of 8.2%) and transport (5-year CAGR of 5.7%) sectors are the significant consumers of energy products with a share of 37% and 31%, respectively. Apart from natural gas, coal, and electricity, oil energy consumption in Pakistan consists of the entire spectrum of petroleum products which include liquefied petroleum gas (LPG), high-speed diesel (HSD), motor spirit (MOGAS), kerosene, furnace oil, aviation fuel and non-energy products like lubricants and greases.

The Industrial (37%) and transport (31%) sectors are the significant consumers of energy products.

ENERGY CONSUMPTION BY SECTOR



SECTOR SHARE IN ENERGY CONSUMPTION



Source: Pakistan Energy Yearbook 2019

CLASSIFICATION OF OIL INDUSTRY

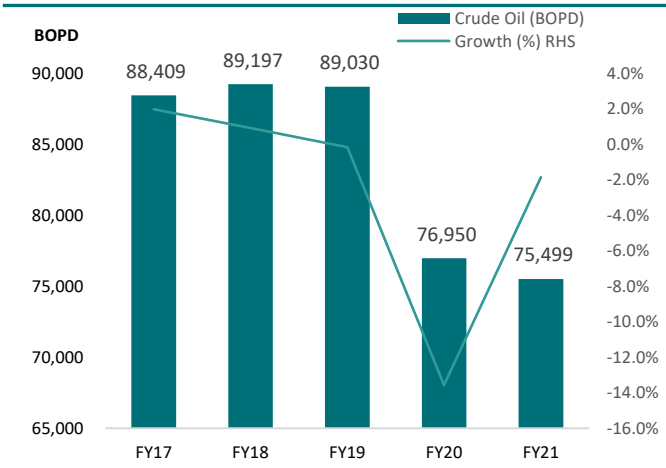
The oil industry in Pakistan is classified into three categories: 1) Upstream - Exploration & Production, 2) Midstream - Refining, and 3) Downstream – Oil Marketing & Distribution. The upstream exploration and production sector of Pakistan is composed of 15 players. The combined crude oil production of these players is ~3.8mn MT (75,449 BOPD) as of 2021 compared to 4.4mn MT (88,409 BOPD)/3.5mn MT (70,145 BOPD) in 2017/2008, respectively. Indigenous crude volumes have grown by 0.6% p.a. since 2008 (peaked in 2014-15 at 94,493 BOPD) and continues to decline after stabilizing during 2017-19. Like crude oil, natural gas production is also declining with an output of 3,505 MMCFD in 2021 compared to its peak output of 4,259 MMCFD (2012) since 2008.

The oil industry in Pakistan can be classified into three categories:

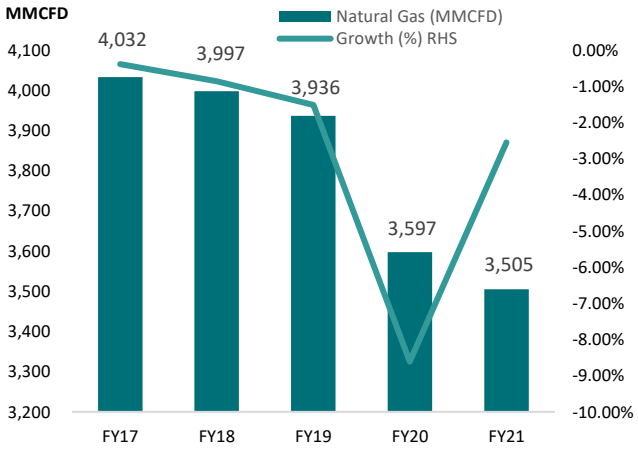
1. *Upstream - Exploration, and Production*
2. *Midstream - Refining*
3. *Downstream - Oil Marketing and Distribution*

Upstream companies satisfy ~19% of the country's demand for crude oil.

CRUDE OIL PRODUCTION



NATURAL GAS PRODUCTION

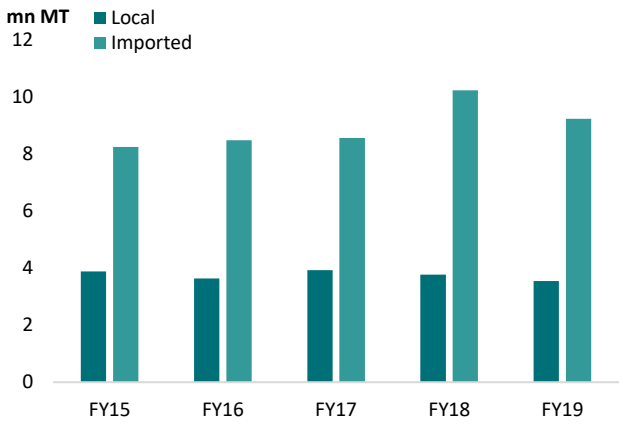


Source: PPIS, Pakistan Energy Yearbook 2019

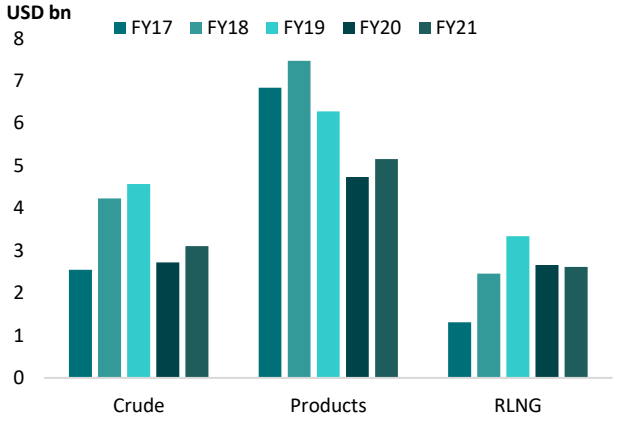
Despite a relatively attractive success ratio of 1:2.8 (incrementally smaller oil & gas discoveries), Pakistan continues to rely on mature oil fields that continue to decline production. Lack of significant oil & gas discoveries due to decreased exploration and investment activities have led to slower reserve replacement which is a primary reason for the decline in oil & gas production in Pakistan. In this backdrop, indigenous crude production, which is currently meeting 18% of total demand, is likely to contract further going forward. Consequently, Pakistan has to rely on imports to meet excess demand through three main oil docking facilities, which during 2020 handled 14.9mn MT of crude and petroleum product imports (KPT managed 8.5mn MT, Port Qasim handled 4.9mn MT, and BYCO SPM managed 2.0mn MT).

Despite a relatively attractive success ratio of 1:2.8 (incrementally smaller oil & gas discoveries), Pakistan continues to rely on mature oil fields, which continue to decline production.

CRUDE OIL PROCESSING - LOCAL VS. IMPORTED



PETROLEUM IMPORTS



Source: Pakistan Energy Yearbook 2019, PBS

There are six refining companies (midstream segment) in the country with a combined capacity of 19.37mn MT currently. Over the last few years, critical developments in the refining sector include the merger of Byco refineries and ATRL's installation of Naphtha isomerization unit, which has increased its capacity from 1.96mn MT to 2.44mn MT in 2017. Amidst a lack of sizable domestic crude discoveries, the refiners are increasingly dependent on imported crude. As a result, the sector refined 9.2mn MT of crude (imported) and 3.5mn MT of crude (indigenous) in 2019. The refining industry processed 12.76mn MT of oil at a utilization level of 66% in 2019 compared to 12.14mn MT (64% utilization) in 2015. The refining sector has been unable to improve utilization levels materially due to the current nature of refining technologies and the conversion of FO as a fuel for power plants towards RLNG/natural gas and coal. Refineries have a market share of 57% in 2019 amongst top petroleum products (MOGAS, HSD, and FO) consumed in Pakistan compared to 38% in 2017. Visible improvement in market share is due to a decline in total OMC sales as the business cycle peaked in 2017, followed by an economic contraction. Refining market share is likely to contract going forward as Pakistan is likely to import an increasing volume of refined petroleum products in the backdrop of projected economic recovery (5% real GDP growth) as per IMF/GoP

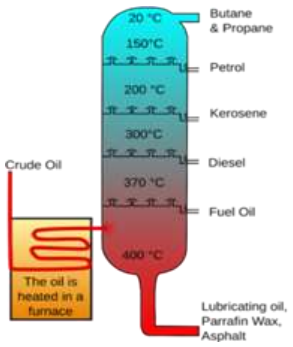
Local refiners are primarily configured with hydro skimming refining capabilities, which produces a heavy proportion of black oils and low-margin products (largely residual fuels such as Furnace Oil).

The refining sector consists of six refineries that satisfy ~62% (5-year avg. 51%) of the country's demand for POL products (energy products in 2019).

A refinery is a processing plant where the reformation of crude oil into various petroleum products takes place. There are stages and processes involved in oil refining, namely: distillation, cracking, and treatment. The distillation stage consists of boiling crude at two boiling points known as atmospheric and vacuum distillation. Refiners can obtain methane, light gas, propane, kerosene, gas, and fuel oils at the atmospheric stage. Gas oils, lubricating oil, and heavy oil for propane de-asphalting are extracted at the vacuum distillation stage. The cracking process entails converting large hydrocarbons into lighter products such as petrol and light fuel oil. The treating stage involves removing non-environment-friendly contents from the finished products.

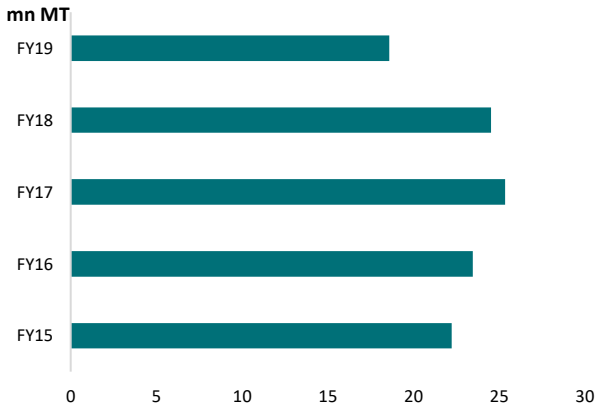
The next element in the downstream energy chain is oil & gas marketing and distribution companies (OMCs). The principal activities of OMCs include import, storage, and marketing of petroleum products, while gas distribution companies are engaged in the procurement and transmission of natural gas. Petroleum products sales increased to 19.38mn MT during 2021 vs. 23.47mn MT in 2016 (5-year CAGR of -4%). Pakistan State Oil (PSO), Attock Petroleum Limited (APL), and Shell Pakistan Limited (SHEL) accounting for 46%, 9%, and 8% are the major players in the oil marketing segment. As per the latest official numbers, OMCs' total storage capacity stands at 2.4mn MT, where MOGAS, HSD, and Furnace capacity stands at 0.79mn MT, 1.07mn MT, and 0.43mn MT, respectively. Oil consumption is driven 76% by the transport sector, 14% by the power sector, 7% by the industrial sector, and the rest by the domestic and agriculture sector. Natural gas consumption is driven 35% by the power sector, 33% by the industrial sector, and 21% by domestic consumers.

REFINING PROCESS



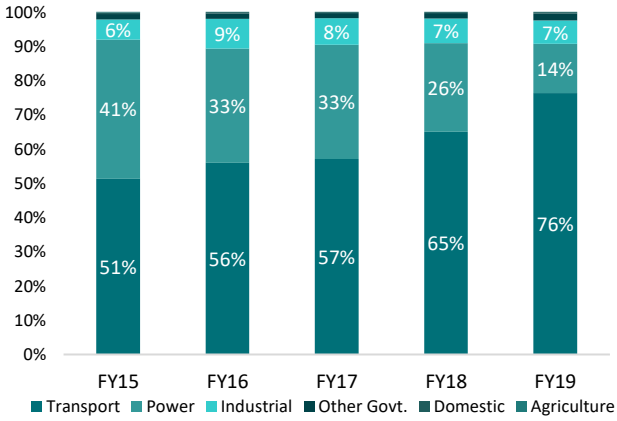
Energy products consist of 1) White oil products like motor spirit (MOGAS), kerosene, high-speed diesel (HSD), and aviation fuel, and 2) Black oil products, which include bulky commodities such as furnace oil (FO). Non-energy products include lubricants, motor oil, asphalt, greases, solvent oil, etc. fall into this category.

OMC SALES VOLUME



Source: Pakistan Energy Yearbook 2019, OCAC

POL CONSUMPTION BY SECTOR

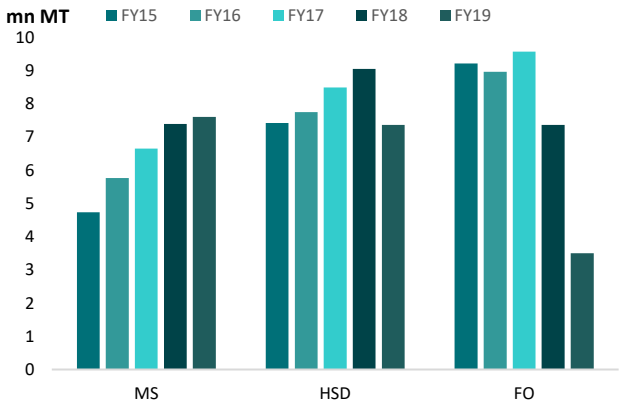


POL PRODUCTS DEMAND OUTLOOK IS STRONG GOING FORWARD

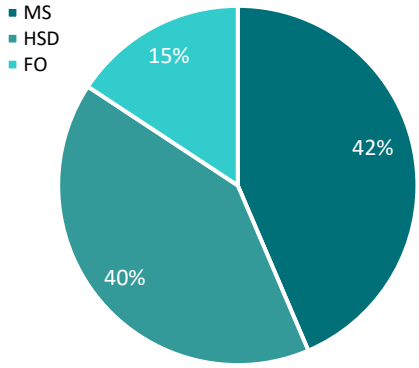
Pakistan has annual petroleum demand of 19.4mn MT in 2021, which consists of motor gasoline (8.2mn MT/42% share), high-speed diesel (7.7mn MT/40% share), FO (2.9mn MT/15% share), and others (0.5mn MT/3% share). Since 2008, MOGAS volumes (proxy of growing consumption) have posted annual volumetric growth CAGR of 14%, and its market share has increased from 8% in 2008 to 42% in 2021. In contrast, HSD volumes (proxy of industrial economic growth) have remained constant with a static market share of 40%. That said, furnace oil volumes have posted a declining volumetric CAGR of -8% as domestic electricity production has shifted from furnace oil to coal/RLNG/nuclear.

A relatively high population growth rate coupled with increasing urbanization and an improving road network has resulted in increased consumption by the transport sector which is the major consumer of POL products with a share of 76% in 2019.

POL PRODUCTS CONSUMPTION



FY21 POL PRODUCTS CONSUMPTION



Source: Pakistan Energy Yearbook 2019, OCAC

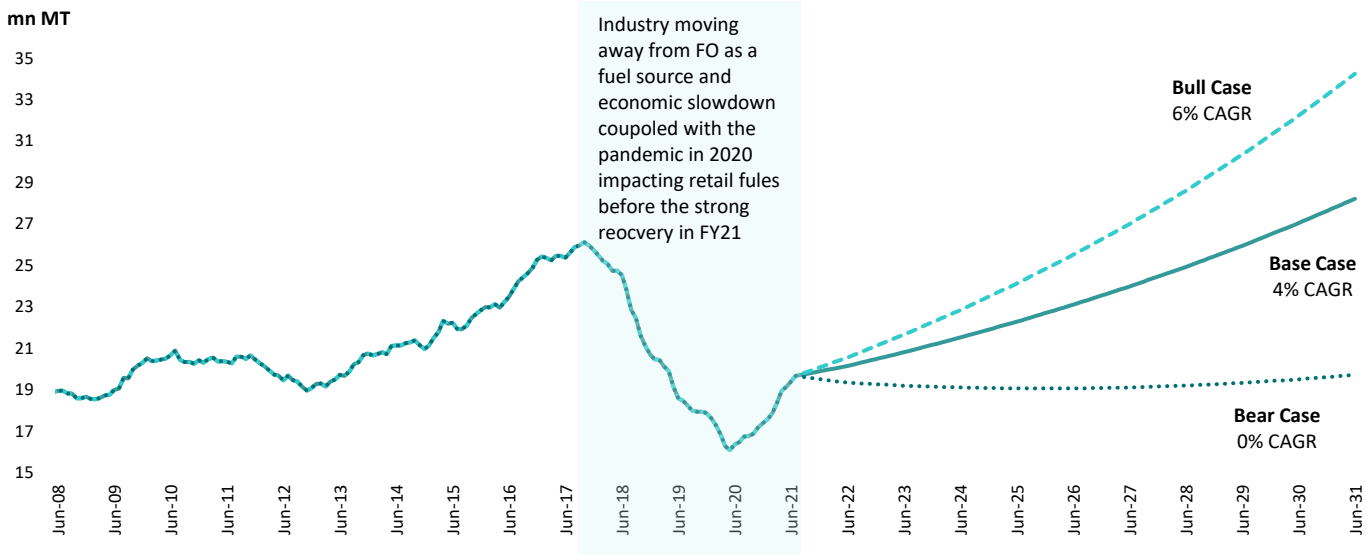
Historically, the economic growth of Pakistan frequently heats up due to consumption-led growth patterns. In the absence of a large industrial base coupled with low productivity, the increase in consumption is mainly met through imports negatively impacting trade and current account deficits. Against this backdrop, the international oil price has acted as a critical trigger in improving or deteriorating the domestic business cycle. However, the new flexible market-based exchange rate regime acts as a pressure venting valve on the current account. Since 2000 (an era covering multiple economic cycles to date), we estimate that the normalized PKR/USD has depreciated by 5%/10%/15% for every 10%/20%/30% increase in international energy price. Additionally, the current account is impacted by ~US$ 1bn for every US$ 5/bbl movement in the international oil price. The understanding of such macro relationships holds critical importance in forecasting the future energy demand of Pakistan. IMF expects Pakistan to post sustainable GDP growth of 5% over the medium term. However, a lack of structural developments like the

The current account is impacted by ~US$ 1bn for every US$ 5/bbl movement in the international oil price.

significant growth in tax to GDP, phasing out public subsidies, and material gain in exports can continue to limit a sustained real GDP of 5% in the medium term, in our view. Therefore, as part of our base, we expect sustainable GDP growth of around 3.5%, which can drop to below 1.0% (bear case) if international oil price posts a sustained double-digit growth rate. As part of our base case, macro assumptions include an economic growth of 3.5% p.a. and currency depreciation of 6.0% p.a. Auto sales which are a proxy for the transportation sector (consumer of MOGAS and HSD volumes), is expected to post an average growth of 12% p.a. Incorporating these assumptions into our model, petroleum product volumes of Pakistan are expected to grow to 28.2mn MT by 2031, reflecting a notably conservative 4% volumetric CAGR over the next ten years.

Under our base-case assumptions, petroleum product volumes of Pakistan are expected to grow to 28.2mn MT by 2031, reflecting a notably conservative 4% volumetric CAGR over the next ten years.

POL PRODUCTS CONSUMPTION PROJECTIONS



Source: Pakistan Energy Yearbook 2019, OCAC, FAML Research

Against this backdrop, the oil refining sector (post upgraded complexes) has a relatively strong demand outlook over the next ten years. In our base case, the refining sector can post an annual volumetric growth rate of 11% p.a., The sector's volumetric growth will be flat under our bear case (GDP 0.5%, currency depreciation 15%).

REFINING SECTOR - CURRENT LANDSCAPE

Although Pakistan has six refineries with a total refining capacity of 19.4mn (100% of total demand in 2021), inadequate availability of local crude oil and production of low demanded products by design leads to alarmingly low-capacity utilization in the sector. Apart from PARCO's MCR in Mehmoodkhot, installed refining technology in Pakistan is obsolete (hydro-skimming), producing relatively large amounts of furnace oil (FO), a weak margin product. The decline in FO demand has further impaired the domestic refining industry as its demand has gradually come down to 3.0mn MT during 2021 compared to 8.1mn MT during 2008. Contraction in demand has primarily been led by FO contribution in electricity generation that has come down to 8% during June 2021 compared to 34% in June 2013. At the same time, the share of FO in the total refining production mix is still high at ~25%. It is expected to become a challenge for refiners in the future as FO-based power plants are replaced with natural gas (RLNG) and renewable power projects. The cost of electricity, circular debt, and climate change (IMO 2020) are key catalysts behind conversion to RLNG. The refining sector lacks the infrastructure to produce value-added products even if crude is available (local or imported). In this regard, the output and storage of an undesirable low-value product also hinder the manufacturing of MOGAS & HSD. As a result, refineries continue to operate at less optimal utilizations. The FO supply glut negatively impacts the entire energy chain as it limits the refineries' ability to lift crude from exploration & production companies. As a result, the production of indigenous crude oil and natural gas is impacted.

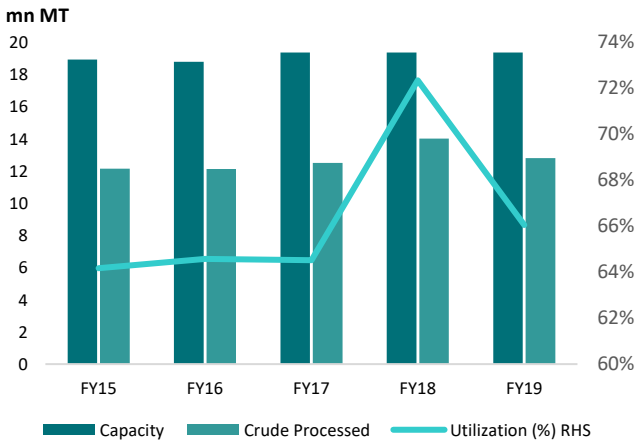
Refining Capacity (BPD)	
BYCO	155,000
PARCO	100,000
NRL	65,050
ATRL	53,400
PRL	47,110

Source: OCAC

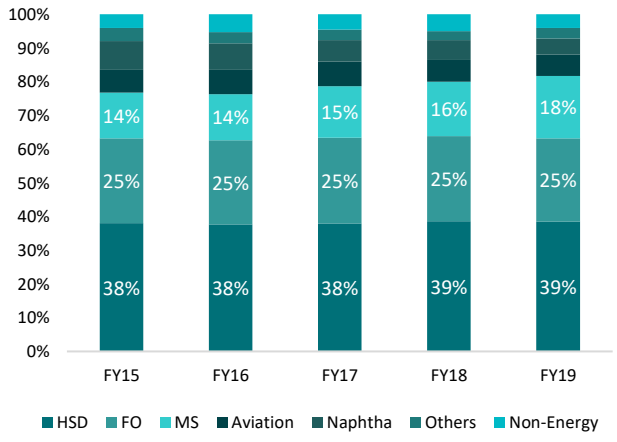
The refining industry processed 12.76mn MT of crude at a utilization level of 66% in 2019 compared to 12.14mn MT (64% utilization) in 2015.

HSD and FO have the major share (39%/25%) in total production of energy products while MOGAS and HSD has the major share in (42%/40%) in the country's consumption mix.

REFINING CAPACITY UTLIZATION



PRODUCTION SLATE

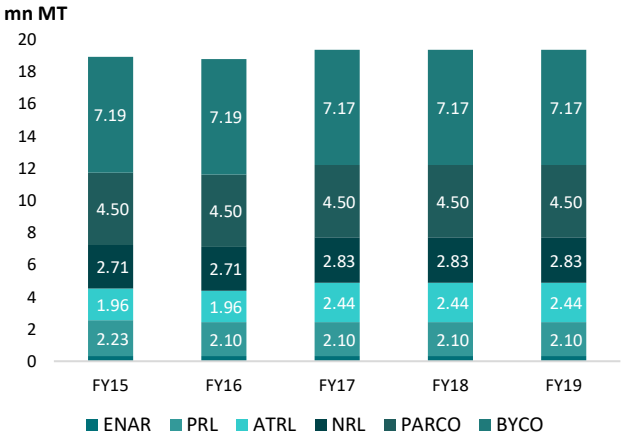


Source: Pakistan Energy Yearbook 2019, OCAC

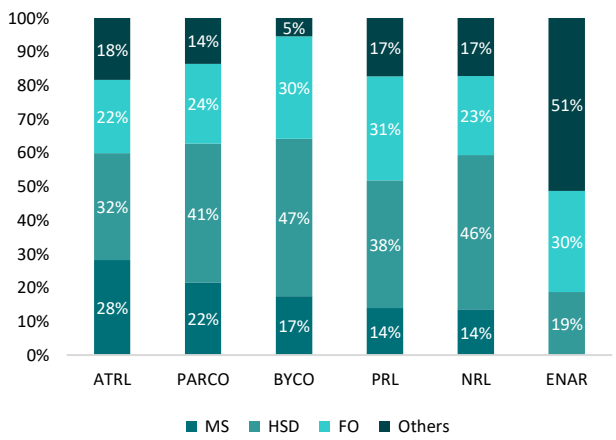
In 2019, out of a total of 12.80mn MT of crude oil processed by the local refineries, 9.24mn MT (72%) was imported, whereas 3.55mn MT of crude processed was from indigenous sources. In other words, imported crude oil accounts for almost three-fourths of Pakistan's petroleum need. According to data compiled by the Pakistan

Bureau of Statistics (PBS), imports of crude oil during 2021 were valued at US$ 3.10bn while import of crude jumped from 7.50mn MT in 2012 to 8.81mn MT in 2021, an increase of 17%. With suboptimal refining utilization, Pakistan imports an increasing quantity of refined petroleum products leading to a higher import bill.

SECTOR INSTALLED CAPACITY



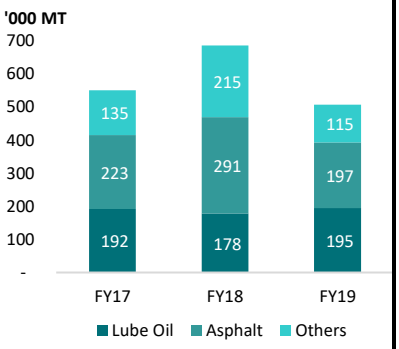
PRODUCTION SLATE - ENERGY (2019)



Source: Pakistan Energy Yearbook 2019

Production of non-energy products in Pakistan is on the lower side, and the growth trend is only single-digit (5-year CAGR of 1.9% to reach 0.5mn MT in 2019). Lube base oil and Asphalt together make up 77% of non-energy products of the refining sector. Since the price of lube base oil (lubricants) is deregulated, and its primary use is in the transport sector, it has one of the highest demands amongst non-energy products. However, smuggled lube base oil severely affects the demand for locally refined lubes and is evident from a 5-year negative CAGR of 0.5%. Asphalt, which is mainly used in the construction of roads and motorways, has witnessed a relatively healthy demand growth of 4.4% (5-year CAGR).

NON-ENERGY PRODUCTS TREND



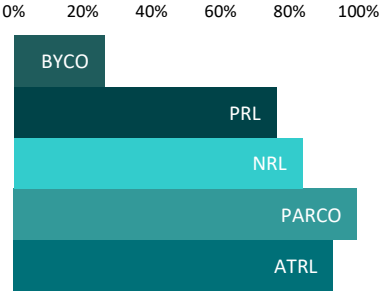
Source: Pakistan Energy Yearbook 2019

Products (MT)	MOGAS (95/97 RON)	MOGAS	JP-1	SK	HSD	LDO	FO	TOTAL
OMC Storage	32,604	788,877	46,848	28,092	1,068,617	6,788	429,870	2,401,696
% Share	1%	33%	2%	1%	44%	0%	18%	100%
Refineries/Pipelines/Power Plants Storage/Jimco	4,800	105,694	35,230	18,659	622,511	3,500	1,409,350	2,199,744
% Share	0%	5%	2%	1%	28%	0%	64%	100%
Total Storage Capacity	37,404	894,571	82,078	46,751	1,691,128	10,288	1,839,220	4,601,440
% Share	1%	19%	2%	1%	37%	0%	40%	100%

Source: Pakistan Oil Report 2019-2020 - OCAC

Out of the six refineries operating in Pakistan, Byco Petroleum Pakistan (BYCO) and Pak-Arab Refinery (PARCO) retain a large chunk of the market share of 60% (in terms of installed capacity). At the same time, National Refinery Ltd. (NRL), Attock Refinery Ltd. (ATRL), and Pakistan Refinery (PRL) together contributed 38% to the total domestic supply of POL products in 2019. Byco Petroleum Pakistan (BYCO) is the largest refinery in the country with a refining capacity of 7.17mn MT, and it accounts for 37% of Pakistan's refining capacity (merger of BYCO with Byco Oil Pakistan Ltd in 2018). Pak-Arab Refinery (PARCO) is the second-largest refinery with a capacity of 4.50mn MT and a 23% share in the refining capacity. National Refinery Ltd. (NRL), Attock Refinery Ltd. (ATRL), and Pakistan Refinery (PRL) are the other majors with capacities of 2.83mn MT (15% share), 2.44mn MT (13% share), and 2.10mn MT (11% share), respectively. The sixth refinery is ENAR Petrotech Services, specializing in the production of fuels for the defense sector and operating under the administrative control of the Ministry of Industries and Production. PARCO has the highest capacity utilization (100%) in the past five years, followed by ATRL (93%), NRL (84%), PRL (76%), and BYCO (26%). For the relative positioning of the players in the premium products (MOGAS and HSD) and the low value-added FO, BYCO had a cumulative 95% share (highest) in its production slate (HSD/MOGAS/FO at 17/47/30%) in 2019. ATRL has the highest proportion of MOGAS at 28%, with PARCO next at 22% of their respective production mix.

CAPACITY UTILIZATION – 5YR AVG



Source: Pakistan Energy Yearbook 2019

ATRL has the highest proportion of MOGAS at 28%, with PARCO next at 22% of their respective production mix.

REGIONAL COMPARISON – CAPACITY VS. THROUGHPUT (2020)

'000s bbl daily	Capacity	Throughput	Utilization
China	16,691	13,857	83%
India	5,018	4,493	90%
South Korea	3,572	2,679	75%
Japan	3,285	2,492	76%
Singapore	1,514	798	53%
Thailand	1,245	1,005	81%
Taiwan	1,131	726	64%
Indonesia	1,127	826	73%
Malaysia	955	491	51%
Pakistan	**411**	**210**	**51%**
Vietnam	367	276	75%
Philippines	180	106	59%
Bangladesh	48	22	45%

Source: BP Statistical Review of World Energy 2020

Pakistan has one of the lowest refining capacity utilization compared to some other regional countries. However, the domestic refining sector has an opportunity to narrow this gap as the upcoming refinery policy with its focus on value addition, and fiscal incentives (subject to upgrade plans) should act as an impetus for growth going forward.

UPCOMING REFINERY POLICY AN IMPETUS FOR GROWTH

An opportunity exists for technologically obsolete refineries in the new Refinery Policy, which is currently under consideration. Contingent upon firm upgrade commitments by Dec'21 and an undertaking to the Government, refiners will receive six-year tariff protection to become Euro-V compliant for MOGAS (petrol) and HSD (diesel). The tariff protection entails duty protection of 10% import duty on MOGAS (petrol) from 0% currently and 10% on HSD from 7.5% currently, effective from January 1, 2022, to December 31, 2027. While the Finance Act FY22 has reduced custom duty (CD) on import of crude oil from 5.0% to 2.5% with effect from January 1, 2022, subsequent newsflow has highlighted proposals to eliminate the CD on crude oil import. With respect to the tax regime, the minimum turnover tax on refineries has been reduced to 0.5% from 0.75% in the Finance Act FY22 (originally proposed to be eliminated and is expected to be addressed in the new policy). Finally, another major incentive being provided to local refiners is a 10-year tax holiday on transitioning to deep conversion refineries. There is a lack of clarity on this front as subsequent news flow has highlighted that this incentive is only applicable to setting up a 100kbpd or more complex. At the same time, upgraded projects of at least 100kbpd of current refineries will also be liable to a 10-year tax holiday.

Eligibility criteria to avail new policy
Must commit to upgrade by Dec 31'21 and provide undertaking to the GoP.
The undertaking shall include proposed timeline, size, tentative post product slate and other relevant info.
Thereafter, GoP shall provide a waiver for the Refinery to continue marketing its products, until the agreed completion data.
Refineries shall be blocked from selling products in Pakistan after Jun 30'22 if the required undertaking is not provided.

New Refinery Policy - Proposed Incentives	Effective from	Proposed	Current
Custom Duty on HSD (for 5 years)	January 1 2022	10.00%	7.50%
Custom Duty MOGAS (for 5 years)	January 1 2022	10.00%	nil
Custom Duty on crude oil*	January 1 2022	2.50%	5.00%
GST on crude oil imports (adjustable)	January 1 2022	17.00%	0.00%
Reduction in Turnover Tax	January 1 2022	0.50%	0.75%
Tax holiday (deep conversion**/upgradation)	COD	10 years**	nil
Target date for full deregulation	December 31 2027	End 2027	nil

*news flow indicates proposals to eliminate this duty after one year
**min 100kbpd and possible extension to 20 years tax holiday
Source: Federal Budget FY22, Finance Act FY22, Downstream data

As highlighted earlier, technological upgrade of plants is unfortunately not prioritized by both the refineries and the Ministry of Energy-Petroleum Division (MoEPD), which has led to almost all the existing refineries functioning with semi conversion and technologically obsolete hydro-skimming refineries. Even BYCO, which was installed in 2004, is operating with hydro skimming technology. As a result, the refined petroleum products in Pakistan are of Euro II standards (comparatively lower RON 87 and RON 91). MoEDP's policy framework for up-gradation and expansion of refinery projects issued on March 27, 2013, refineries were required to install Diesel Hydrodesulphurization Unit (DHDS) by June 30, 2017, to produce Euro-II compliant HSD. In the case of non-compliance, the ex-refinery price of HSD was downward adjusted based on the Import Parity Pricing (IPP)

In the first draft of Refinery Policy 2021, 10% customs duty on MOGAS and HSD was applicable from July 2021, withdrawal of customs duty on crude oil was applicable from July 2021, and turnover tax exemption was also applicable from July 2021 to June 2025. The target date for deregulation of the downward energy sector was June 2026.

formula due to higher Sulphur content. The government initially offered a 1.5% increase in deemed duty on HSD to incentivize the upgrade to Euro V standard, which was later taken back. On a positive note, the investment tax credit offered in the first year of commissioning of isomerization unit to convert Naphtha to MOGAS was delivered. ATRL, NRL, and PARCO availed the opportunity while PRL could not avail the opportunity and hence was liable to pay HSD price differential to the GoP.

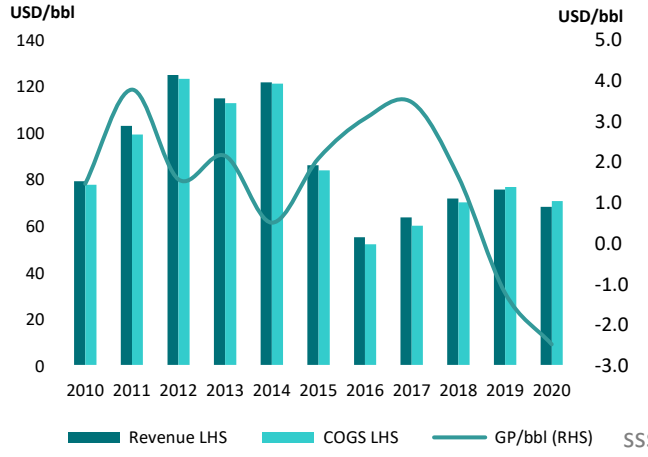
REFINING SECTOR BUSINESS DYNAMICS

The core earnings model is the spread earned between crude oil prices and refined value-added products. The spread made varies between refineries due to differences in product output based on refinery specifications and quality, such as RON and EURO standards. Crude oil procurement is from local exploration and production companies (E&Ps) and imported directly via contractual agreements with foreign E&Ps such as Saudi Aramco and ADNOC. Refineries do not operate under a cost-plus formula. Every incremental cost element also cannot be entirely offset by charging customers. Therefore, according to the market dynamics of de-regulated products, especially furnace oil (FO), raw material cost for refineries increases unless cost is recovered in the form of additional duties. This is hard to achieve considering the already reduced demand for FO in the economy. Even though energy products like MOGAS (petrol) and HSD (diesel) are de-regulated, refiners cannot charge more than PSO's average actual import prices, including incidentals. That said, non-fuel products such as Bitumen (Asphalt) and Base Oils are unregulated, and refiners with a higher concentration of lubricants (e.g., NRL) can improve their margin profile.

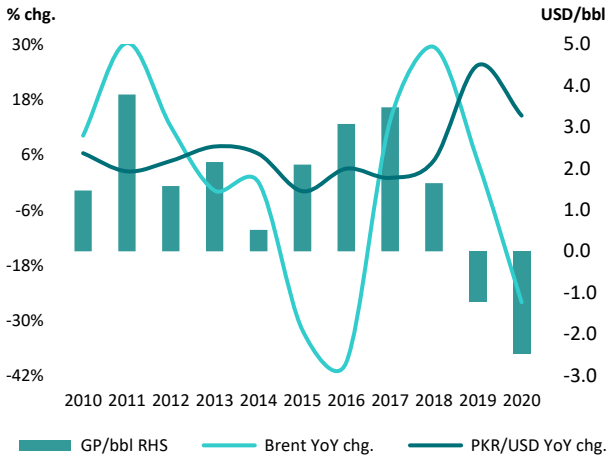
Refineries do not operate under the cost-plus formula, and earnings are driven from the spread earned between crude oil prices and refined value-added products.

Refiners with a higher concentration of base oil/ lubricants (e.g., NRL) can improve their margin profile.

GPM/BBL (PROXY FOR GRM) TREND*



GP VS. BRENT AND PKR



*Listed Refineries
Source: Company Reports, Energy Year Book 2019, Pakistan Oil Report 2020 (OCAC)

Existing pricing formulas expose the margin profile (gross refining margins) to movements in crude oil as ex-refinery prices are set with a lag (recent revision to fortnightly price frequency is expected to improve alignment with international oil price). For instance, as product prices rise with a lag to increasing international

Existing pricing formulas expose the margin profile (gross refining margins) to movements in crude oil as ex-refinery prices are set with a lag (recent revision to fortnightly frequency to improve alignment with int. oil price.

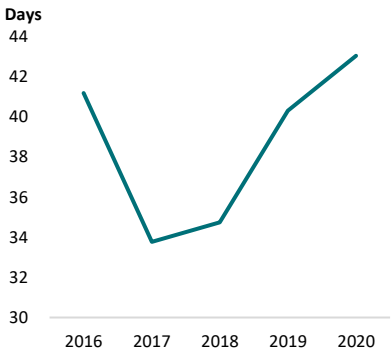
prices, higher raw material cost lowers GRMs and consequently cash flows. In this scenario, currency depreciation (PKR against the US$) leads to a higher cost of spot crude purchased, further aggravating the weak margin profile. Additionally, seasonality and economic conditions also impact the price of derivative products (pricing lined to refined product prices of Arabian crude blends). For example, demand and cost of Kerosene rise during winters in the North while MOGAS (petrol) price rises during the summer driving season. Effective September 2020, GoP, under the import parity pricing formula, has changed the revision of the product selling price from monthly to fortnightly. The modifications are now linked to Import Parity Price of Arab Gulf (AG) Market Platts daily FOB average. Besides this, the government mandates specific minimum quality standards of products such as Research Octane Number (RON) and EURO V environmental standards. Refineries face price differential penalties on MOGAS and HSD if their products do not conform to the abovementioned standards. The government has mandated imports of only EURO V compliant MOGAS as of September 2020 and similar compliance level HSD as of January 2021. Currently, only NRL has started producing Euro V standard High-Speed Diesel effective January 2021 to meet the new standards as applicable in Pakistan and hence qualifies for the price entitlement of Euro V product.

The government has mandated imports of only Euro V compliant MOGAS as of September 2020 and similar compliance level HSD as of January 2021. Currently, only NRL is compliant with Euro V HSD standard w.e.f. Jan'21.

STRESSED WORKING CAPITAL

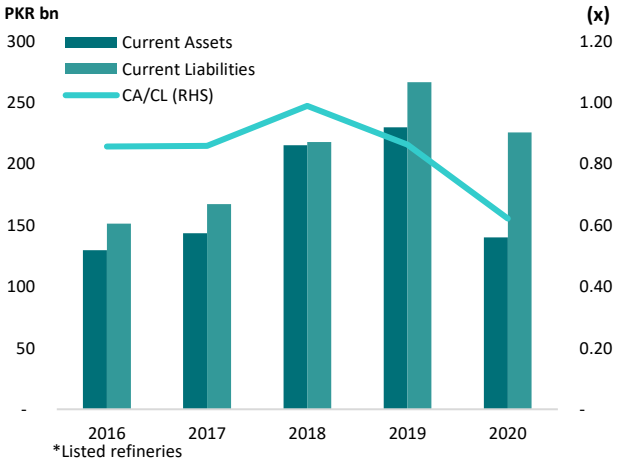
Financing inventories (larger portion of foreign crude oil procurement via Saudi Aramco and ADNOC) and receivables (from domestic OMCs) with different credit terms (estimate 30-45 days difference) is challenging, mainly when there is a sharp movement in oil prices and demand. The sector's working capital trend has remained stressed over the past few years as current liabilities have grown at a comparatively faster rate vs. current assets. In this regard, the sector exhibits negative working capital the ratio of current assets to current liabilities has continuously stayed below 1.0x and has averaged 0.84x in the last five years. Working capital was exacerbated during FY19 and further worsened in FY20 due to the pandemic as inventory holding days went up during the lockdown and consequent demand contraction.

INVENTORY DAYS OUTSTANDING



Source: Company Reports, PACRA

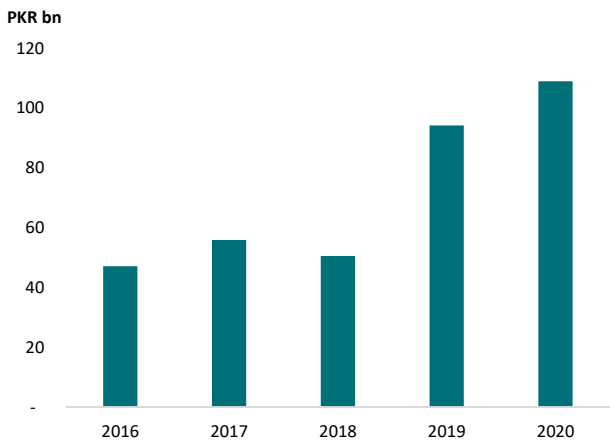
WORKING CAPITAL TREND - STRESSED



*Listed refineries

Source: Company Reports, PACRA

INTEREST BEARING DEBT TREND*



The buildup of inventory is a consequence of stretched liquidity position reflected through average inventory days, which have gradually increased over the last few years to stand at ~43 days in 2020. The buildup of circular debt in the system coupled with demand contraction (initially the shift away from FO), which was worsened by the pandemic, also played a key role in the buildup of inventories and consequential losses. Against this backdrop, the sharp decline in international oil price negatively impacted the earnings profile in 2020 (illustrated in the previous section), which triggered higher borrowing (primarily short-term) to finance working capital requirements. In this regard, total borrowing by the listed sector reached PKR 109bn in 2020 (~21% of aggregate revenues).

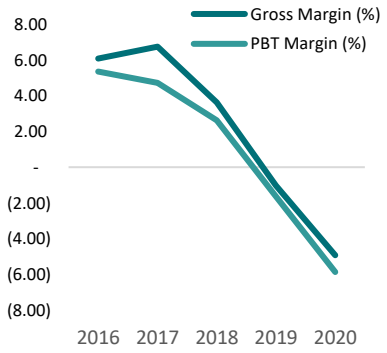
Refineries take around 40 to 45 days cycle for importing crude oil and producing finished products.

The sector has also undertaken the SBP's debt relief scheme by deferring outstanding loans by 12 months.

CORE PROFITABILITY – DEPENDENT ON SOVEREIGN SUPPORT

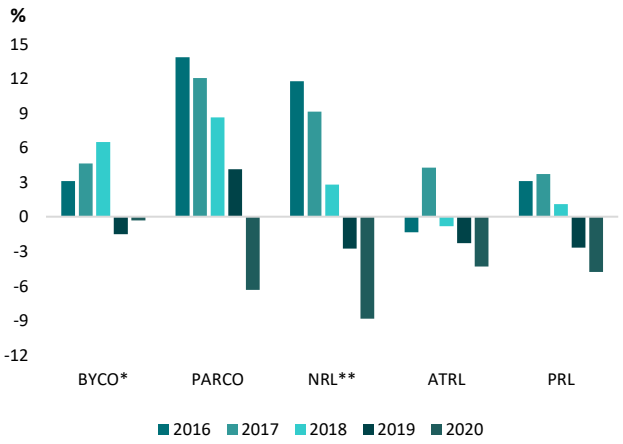
Apart from PARCO's MCR and NRL to some extent (earnings profile is supported by the production of higher-margin lubricants), core refinery operations for the sector have struggled to sustain profitability. Profitability profile (Gross Refining Margins (GRMs) and profitability margins) of the sector is adversely impacted by: 1) exchange rate depreciation (purchasing of crude oil and condensate) leading to exchange losses, 2) inventory accumulation (however, marginal strategic buying), and NRV adjustments leading to inventory losses (the volatile price of crude), and 3) demand-side factors (recently the decline in FO demand and covid related slowdown). Looking at the last two decades, the volatility in profitability can also be attributed to the changing level of protection by the government. In this regard, various deemed duties and fiscal incentives on petroleum products have frequently been either changed or removed. Consequently, a volatile protection level has resulted in greater exposure to price fluctuations, which has resulted in inventory losses.

AVERAGE INDUSTRY MARGIN PROFILE

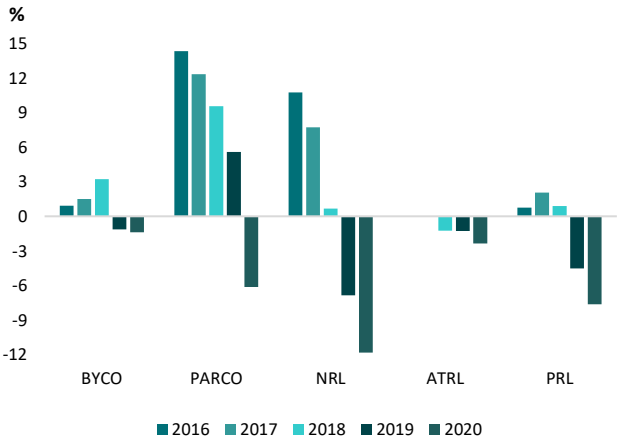


Company Reports, PACRA

GPM TREND (LISTED REFINERIES)



PBT TREND (LISTED REFINERIES)



* Only Oil Refining segment profitability considered
** NRL's earnings profile is supported by production of higher margin Lubes
Source: Company Reports, PACRA

PRICING FORMULA - EX-REFINERY PRICE

Ex-refinery is the price at which the refinery sells its refined petroleum products (MS&HSD) to the OMCs. The Government regulates ex-refinery price under the Import Parity Formula determined by OGRA. This is based on Pakistan State Oil's (PSO's) weighted average cost of import cargoes which was previously for the preceding month but has now been revised (effective Sept 1st, 2020) to a fortnightly frequency (15 days). The cost of import (C&F) is calculated from the buying cost of PSO's cargoes spread over 05 days average of Arab Gulf (AG) Market Platts around the date of the Bill of Lading (a source of benchmark price assessment in the physical commodity market). For example, if PSO buys a shipment at US$X/bbl on the 5th of any particular month, the buying price would be average of Platts rates on 3,4,5,6,7 of that month. After accounting for currency (US Dollar) conversion, refinery overheads, incidentals, and taxes/surcharges, the final ex-refinery price is determined at which local refineries are obligated to sell.

Effective 1st Sep'20, the pricing mechanism has been revised from PSO's import price of the preceding month to fortnightly pricing frequency. These are now linked with Import Parity Price of Arab Gulf Platts daily FOB average. This is expected to reduce the pricing lag.

Ex-Refinery Price Build-up		
1	Average fortnightly FOB price:	Prices of petroleum products as published in Platts Oilgram (AG Market)
2	Marine Freight:	Published by London Tanker Brokers Panel (LTBP) on monthly basis
3	Premium/Discount:	Average HSD & SKO premium/discount published in Platts Oilgram (AG Market)
4	**C&F Price:**	**Total of above items (1 to 3)**
5	Import Incidentals:	Actual as per PSO imports (MS & HSD only) excluding Ocean Losses
6	Custom/Deemed Duty:	7.5% of CIF (Only on HSD, both Imported & Local)
7	**Ex-Refinery Price:**	**Sum of above items (5 to 6)**

Source: FAML Research, Downstream Data

Refineries take 40 to 45 days cycle for importing crude oil and producing finished products. In this backdrop, production is curtailed if PSO's procurement prices are lower (commercially unsuitable), ultimately leading to shortages of products. While MOGAS (petrol), Aviation Fuel, and Light Diesel Oil (LDO) have been de-regulated since FY12, refineries' prices cannot exceed the import prices of the relevant product of PSO's average actual import prices, including incidentals. If these prices are not available, then refineries have to fix their prices as per the existing Import Parity Pricing Formula. Subsequently, in FY13, the price of HSD was also de-regulated and linked with PSO's import price (conditional on completion of the DHDS project). According to the Import Parity Pricing (IPP) formula, the distribution of profits from Fuel Segment are restricted to 50% of the paid-up capital as of FY03. The remaining amount is required to be transferred to special reserves. Refineries are not allowed to adjust losses from special reserves till the completion of up-gradation projects. The capped payout policy has reportedly been taken up in Downstream Petroleum Policy with the government and has yet to be decided.

Refineries take 40 to 45 days cycle for importing crude oil and producing finished products. Production is curtailed if PSO's procurement prices are on the lower side, ultimately leading to shortages of products.

According to the Import Parity Pricing (IPP) formula, the distribution of profits from Fuel Segment is restricted to 50% of the paid-up capital as of FY03. The remaining amount is required to be transferred to special reserves.

CAPITAL REQUIREMENTS

Except for BYCO, the remaining refineries have not disclosed plans for upgrading complexes, pending approval of the upcoming refinery policy. Our channel checks suggest that projects under consideration include Continuous Catalyst Regeneration (CCR) Complex, Hydrocracker, and Diesel Hydro-Desulphurization (DHDS) units to alter production mix toward retail fuels (petrol and diesel) by shifting away from furnace oil (FO). Against this backdrop, we estimate an aggregate capital requirement of ~US$ 3.7bn by the listed sector (does not include any potential expansion as avg. capacity utilization is 66%).

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New Refinery Policy Expected Upgrades	ATRL	BYCO	NRL	PRL
Planned Upgrade	CCR, RFCC & DHDS (BMR)	DHDS & FCC	CCR & Hydrocracker	DHDS & Hydrocracker
Result/Outcome	1) MOGAS ↑ 2) FO ↓	1) MOGAS & HSD ↑ 2) FO ↓	1) MOGAS ↑ 2) FO ↓	1) MOGAS ↑ 2) FO ↓
Capacity Expansion	NIL	NIL	NIL	NIL
Euro Grade	Euro V MOGA & HSD	Euro V MOGAS & HSD	Euro V MOGAS	Euro V MOGAS & HSD
Current Euro V Compliance	MOGAS (N), HSD (N)	MOGAS (N), HSD (N)	MOGAS (N), HSD (Y)	MOGAS (N), HSD (N)
Est. Capital Requirement	US$ ~1.2BN	US$ 0.9 BN	US$ 0.9 BN	US$ 0.9 BN
Target Funding (D/E)	90%;10%	100%;0%	90%;10%	100%;0%
Commercial Operation	2026	2024	2026	2026

Source: FAML Research, Downstream Data

REGULATOR

Before the promulgation of Pakistan Oil (Refining, Blending, Transportation, Storage & Marketing) Rules, 2016, refineries were governed under the Petroleum Rules, 1971. According to Section 7 to 14 of Pakistan Petroleum Rules, 1971, submission, approval, change in the production program, processing of crude oil, approval of specification of products and imported petroleum products, specify minimum crude oil stocks, and submission of information by refineries were under the domain of DG Oil. After the promulgation of Petroleum Rules 2016, OGRA has assumed exclusive control on the licensing of the existing refineries while the Ministry of Energy-Petroleum Division (MoEPD) continues to oversee the operation of refineries under the previous Petroleum Rules, 1971. Out of the six refineries, ENAR Petrotech Services operates under the administrative control of the Ministry of Industries and Production.

After the promulgation of Petroleum Rules 2016, OGRA has assumed exclusive control on the licensing of the existing refineries while MoEPD continues to oversee the operation of refineries under the previous Petroleum Rules, 1971.

RISKS TO THESIS

DELAY IN THE NEW REFINERY POLICY

The sector's current business model consists of obsolete technologies. Refineries in Pakistan are hydro skimming complexes and tend to have lower margins leading to more vulnerability to adverse movement in oil prices. GRMs determine the profitmaking ability and ultimate profits for a particular refinery. According to the latest draft of the upcoming refinery policy and fiscal incentives allowed in the Finance Act FY22 (contingent upon firm upgrade commitments by Dec '21), refiners will receive six-year tariff protection to become Euro-V compliant for MOGAS (petrol) and HSD (diesel). The tariff protection entails duty protection of 10% import duty on MOGAS (petrol) from 0% currently and 10% on HSD from 7.5% currently, effective from January 1, 2022, to December 31, 2027. These incentives are expected to improve the margin profile of the sector. Additionally, a shift towards retail premium fuels is also expected to benefit the cash flow profile. Refineries would continue to produce low-value-added products, and the cash flow profile will similarly suffer in the absence of the new policy.

SHARP ADVERSE MOVEMENT IN INTERNATIONAL OIL PRICES AND SHIFT IN DEMAND

A recent revision in the pricing mechanism to fortnightly pricing frequency should closely align with international oil prices. However, our analysis suggests that sharp downward movements in international oil prices adversely impact gross refining margins. Therefore, the prices of key products (MOGAS, HSD, and FO) will be critical in determining refining margins going forward. An absense of the new policy will lead to a status quo environment where the local refining sector will unlikely upgrade its production mix towards more premium fuels (e.g. MOGAS) particulalry, as the demand for the low margin FO is in a decline as the industry/power sector moves towards natural gas/RNLG based fuels.

UNFAVORABLE MOVEMENT IN INTEREST RATES

In the listed space, excluding ATRL (D/E: 0.17x / D/A: 0.08x as of Mar 31’21), refineries have stretched leverage ratios (excl ATRL avg. D/E: >1x / D/A: 0.29x) currently on balance sheets. After the pandemic and in line with global peers, the key policy rate has been adjusted downwards by 625bps to 7% currently. With upside risks to inflation, SBP can be prompted to gradually move interest rates upwards in the next 12 months, which can negatively impact the earnings profile of domestic refineries.

DEPRECIATION OF THE PKR/US$ PARITY

A devaluation of the PKR/US$ parity exacerbates the margin profile of the refinery sector, particularly when product prices are rising with a lag. Although the revised fortnightly pricing mechanism mitigates this risk to some extent, however, it does not completely eliminate this risk.

CNERGYICO PK LIMITED (BYCO PETROLEUM PAKISTAN LIMITED)

Shareholders	% Holding
Associated Cos	91.83
General Public	4.47
Banks & DFIs	3.46
Mutual Funds	0.01

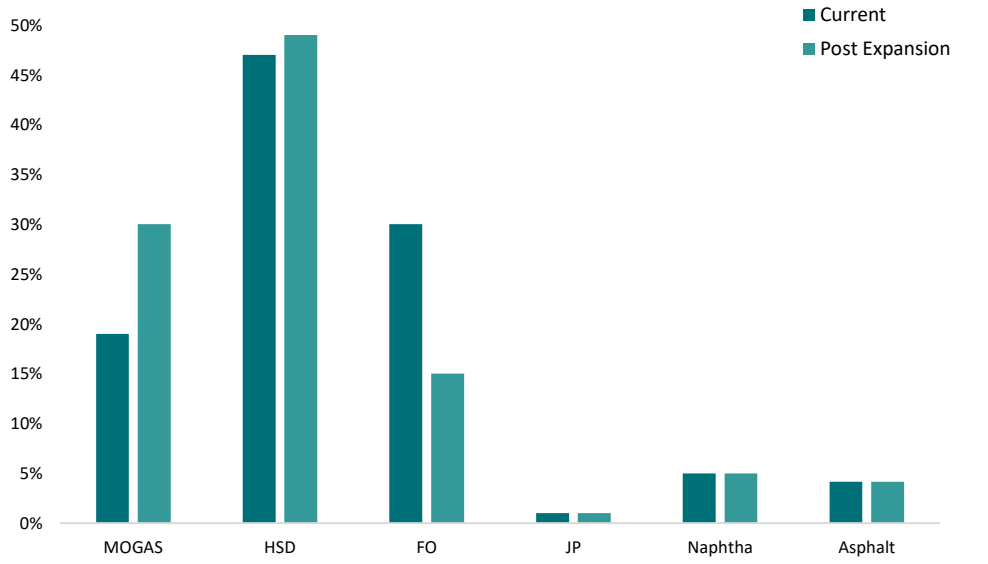
BYCO (holding company) was incorporated in Pakistan as a public limited company on 9 Jan 1995. The Holding Company currently operates two business segments, namely Oil Refinery Business and Petroleum Marketing Business. Petroleum Marketing Business was formally launched in 2007 and has 405 retail outlets across the country as of 31 Mar 2021. In 2018, Byco Pakistan Petroleum Limited merged with Byco Oil Pakistan Limited. BYCO also operates an oil terminal that provides berthing facilities to vessels via a floating port. It is the only refinery in Pakistan with vertically integrated downstream operations of the crude terminal, refinery, and endpoint retail pumps. BYCO also has a wholly-owned subsidiary Byco Isomerisation Pakistan (Private) Limited (BIPL), engaged in blending, refining, and processing petroleum naphtha to produce premium petroleum products such as MOGAS. According to the latest shareholding disclosure, Byco Industries Incorporated held 91.83% shareholding, and the General Public held 4.47%. However, In a recent development, one of the sponsors (IGCF Oil & Gas Ltd., formerly known as Abraaj Mauritius) has reportedly sold its 22% stake in BYCO, which was acquired by various entities.

The terminal and product storage at the refinery complex have a combined crude oil and petroleum products storage capacity of ~0.29 MN MT. The terminal handles approximately 24% of crude oil imports of the country. BYCO has the largest refining capacity in Pakistan, with an aggregate annual refining capacity of 7.17 MN MT (rated capacity of 155,000 bpd).

LAST EXPANSION IMPROVED THE PRODUCTION MIX

The latest round of upgrades undertaken in July 2018 enhanced the production capacity of MOGAS from 9% of the portfolio slate to 19% by 2020 (Isomerization Unit added). This was achieved by converting Light Naphtha to Gasoline, reducing Naphtha and other related product output from 11% to 5%.

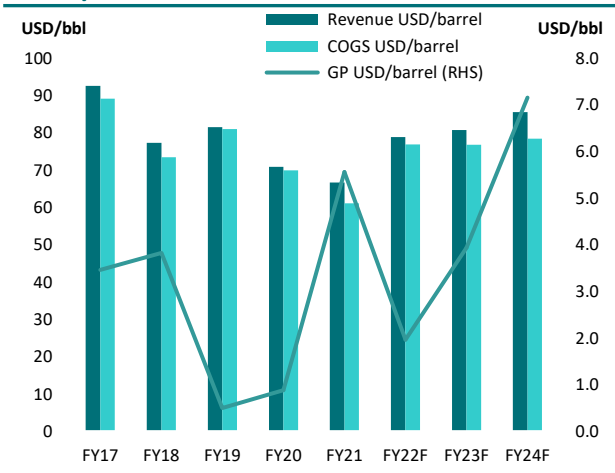
PRODUCTION SLATE IMPROVEMENT POST EXPECTED UPGRADES



Source: Company Reports, FAML Research

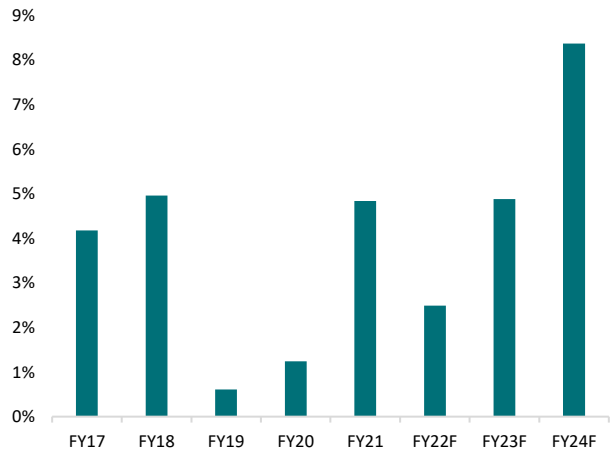
According to the latest disclosed figures, the current product portfolio is composed of 19% MOGAS, 47% HSD, 30% Furnace Oil (FO), 1% Aviation Fuel, 5% Naphtha, Kerosene, LPG, etc. Currently, the company is capable of MOGAS output of 90 RON against imported 92 RON and HSD output of lower quality instead of imported Euro V compliant. According to the management, the expansion projects are Fluid Catalytic Cracker (FCC) and Diesel Hydro-Desulphurization (DHDS). We estimate these upgrades will require a capital expenditure of US$ 900mn and have a planned completion timeline of four years. We expect these projects to be fully debt-financed since the company has accumulated losses of ~PKR 44bn as of 31 March 2021. In our estimates, we assumed the new projects would come online by 2024 with a full-year impact in 2025. Upgrades were approved in April 2020 and civil works have been initiated in 2021. The proposed projects are slated to reduce the output of FO from 30% to 15%, increase MOGAS production from 19% to 30% by 2025. These upgrades should enable BYCO to output efficient and compliant fuel products.

GPM/BBL* TREND FORECAST



*Proxy for GPM
Source: Company Reports, FAML Research

GROSS PROFIT MARGIN TREND FORECAST



GPM PROJECTED TO MATERIALLY IMPROVE POST NEW POLICY

The gross profit margin (GPM) has averaged 3.0% in the previous five years (FY17-FY21). The company recorded a peak trailing twelve-month GPM of 7% in March 2017. This was when BYCO had had FO product composition of 40%, and demand was at its peak levels. However, the average margins on FO of 30% in 2017 reduced to 15% by 2021, and demand reduced to 2.96mn MT by 2021 from 9.53mn MT in 2017 (-70%). Contingent on upgrade plans, we assume a 30% MOGAS/49% HSD product mix and estimate the company to operate at 75% utilization levels. In this backdrop, we forecast gross profit margin (GPM) to average 7% in the next five years (FY22F-FY26F) and stabilize at 9% from FY25 and onwards as the company is expected to produce a higher proportion of value-added products.

Contingent on upgrade plans, we forecast GPM to average 7% in the next five years (FY22F-FY26F) and stabilize at 9% from FY25 and onwards as the company is expected to produce a higher proportion of value-added products.

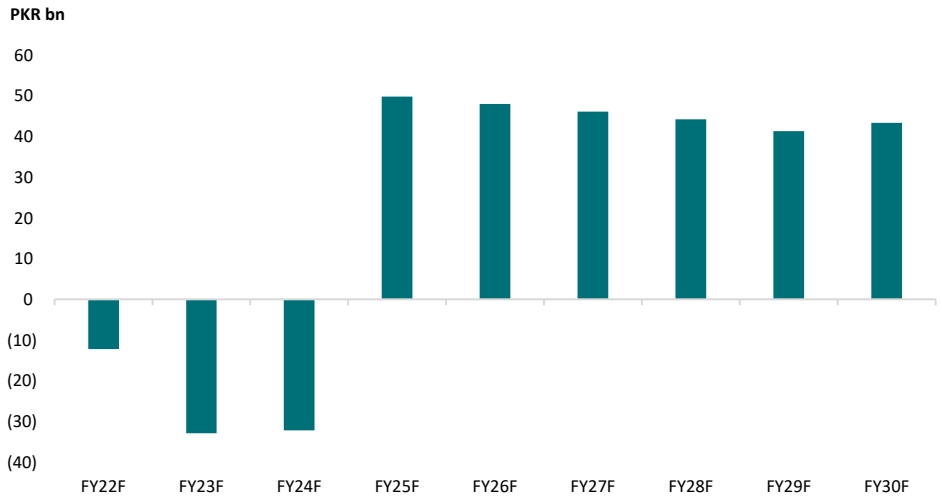
CREDIT REQUIRED AND DEBT SERVICING ABILITY

According to our channel checks, BYCO will require an aggregate capital requirement of ~US$ 0.9bn for its DHDS and FCC units. Looking at its current capital structure (D/A: 0.27x, D/E: 1.60x), we believe that BYCO may look to finance 100% of the required capital through debt. Our macro assumptions include oil at US$70/bbl, policy rate avg. of 8% (K+4%), currency depreciation avg. of 6% over the forecast horizon (FY22-30). Incorporating fiscal incentives offered in the proposed refinery coupled with target avg. capital structure (D/A: 0.30x, D/E: 3.00x) and avg. capacity utilization of 63% (stabilize at 75% from FY26) from 35% currently, we forecast mean interest coverage and debt service coverage ratios of 3.9x and 1.3x, respectively, during our forecast horizon (FY22-28). With expected completion in FY25 (civil works already initiated), we estimate the free cash flows of the company to turn positive by the full year of upgraded operations (FY25).

The company may also opt to go for additional capital raising through a rights issue as the current capital structure is stretched, in our view.

Other forecast horizon assumptions include avg. industry volume growth of 7% for MOGAS and 2% for HSD and avg. company market share at 17% vs. 12% currently due to a higher capacity utilization level of avg. 63% (FY22-FY30) and stabilize at 75% from FY26 onwards (currently at ~35% - relatively higher spare capacity available).

PROJECTED FREE CASH FLOWS TO FIRM



Source: Company Reports, FAML Research

FINANCIALS

Income Statement (PKR mn	Jun-19	Jun-20	Jun-21	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Net Sales	197,831	173,899	182,044	240,916	261,509	403,153	595,534	672,269	715,660	758,222	803,325	851,121
Market Share	*12%*	*13%*	*12%*	*12%*	*11%*	*15%*	*20%*	*21%*	*20%*	*20%*	*19%*	*18%*
YoY	19%	-12%	*5%*	*32%*	*9%*	*54%*	*48%*	*13%*	*6%*	*6%*	*6%*	*6%*
Cost of Sales	196,627	171,740	*166,869*	*234,919*	*248,761*	*369,447*	*543,694*	*616,539*	*653,303*	*692,273*	*733,582*	*777,368*
Gross Profit	**1,203**	**2,159**	***15,175***	***5,998***	***12,748***	***33,707***	***51,839***	***55,730***	***62,357***	***65,948***	***69,743***	***73,753***
GPM%	*1%*	*1%*	*8%*	*2%*	*5%*	*8%*	*9%*	*8%*	*9%*	*9%*	*9%*	*9%*
EBITDA	**4,193**	**5,045**	***13,248***	***135***	***8,213***	***29,638***	***41,328***	***42,987***	***48,519***	***51,065***	***53,752***	***56,587***
Margins%	*2%*	*3%*	*7%*	*0%*	*3%*	*7%*	*7%*	*6%*	*7%*	*7%*	*7%*	*7%*
Depreciation	4,121	4,253	*4,222*	*4,222*	*4,222*	*9,431*	*9,431*	*9,768*	*10,126*	*10,506*	*10,908*	*11,334*
EBIT	**72**	**792**	***9,026***	***(4,086)***	***3,992***	***20,207***	***31,898***	***33,219***	***38,393***	***40,559***	***42,844***	***45,253***
Finance Cost	3,070	3,960	*4,362*	*3,159*	*6,638*	*10,054*	*11,287*	*10,123*	*7,873*	*5,624*	*2,250*	*0*
EBT	**(2,998)**	**(3,168)**	***4,664***	***(7,245)***	***(2,646)***	***10,153***	***20,611***	***23,096***	***30,520***	***34,935***	***40,594***	***45,253***
Taxation	(706)	(233)	*753*	*(2,101)*	*(767)*	*1,320*	*0*	*0*	*0*	*0*	*0*	*0*
Net Profit	**(2,292)**	**(2,935)**	***3,911***	***(5,144)***	***(1,879)***	***8,833***	***20,611***	***23,096***	***30,520***	***34,935***	***40,594***	***45,253***
EPS	(0.4)	(0.6)	*0.4*	*(1.0)*	*(0.4)*	*1.7*	*3.9*	*4.3*	*5.7*	*6.6*	*7.6*	*8.5*

Balance Sheet (PKR mn)	Jun-19	Jun-20	Jun-21 E	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Current Assets	**37,424**	**31,596**	**29,842**	**54,179**	**73,305**	**110,444**	**197,432**	**222,755**	**242,218**	**263,756**	**263,489**	**292,834**
Trade Receivables	5,337	4,357	*6,615*	*12,245*	*17,082*	*32,177*	*56,161*	*73,140*	*88,232*	*93,479*	*99,040*	*104,933*
Inventories	30,953	24,920	*22,617*	*35,115*	*40,652*	*65,524*	*104,007*	*126,537*	*143,190*	*151,731*	*160,785*	*170,382*
Long Term Assets	**87,546**	**88,673**	**102,346**	**118,561**	**156,675**	**206,018**	**205,591**	**205,367**	**205,358**	**205,576**	**206,036**	**206,751**
Fixed Assets	83,073	83,857	*97,000*	*113,214*	*151,329*	*200,671*	*200,245*	*200,021*	*200,011*	*200,230*	*200,689*	*201,405*
Other Assets	4,473	4,816	*5,347*	*5,347*	*5,347*	*5,347*	*5,347*	*5,347*	*5,347*	*5,347*	*5,347*	*5,347*
Total Assets	**124,971**	**120,269**	***132,189***	***172,740***	***229,980***	***316,462***	***403,023***	***428,122***	***447,576***	***469,332***	***469,525***	***499,586***
Liabilities & Equity												
Current Liabilities	71,688	67,662	*74,904*	*95,624*	*111,743*	*136,392*	*231,440*	*261,562*	*278,615*	*293,556*	*281,274*	*298,061*
Long Term Liabilities	15,846	17,092	*20,575*	*45,575*	*88,575*	*141,575*	*112,477*	*84,358*	*56,239*	*28,119*	*0*	*0*
Other Liabilities	16,227	16,827	*15,785*	*15,785*	*15,785*	*15,785*	*15,785*	*15,785*	*15,785*	*15,785*	*15,785*	*15,785*
Total Liabilities	**103,761**	**101,581**	***111,264***	***156,984***	***216,103***	***293,752***	***359,702***	***361,705***	***350,639***	***337,460***	***297,059***	***313,846***
Paid Up Capital	53,299	53,299	*53,299*	*53,299*	*53,299*	*53,299*	*53,299*	*53,299*	*53,299*	*53,299*	*53,299*	*53,299*
Reserves & Others	-32,089	-34,611	*-32,374*	*-37,543*	*-39,422*	*-30,588*	*-9,978*	*13,118*	*43,638*	*78,573*	*119,168*	*132,441*
Total Equity	**21,210**	**18,688**	***20,925***	***15,756***	***13,877***	***22,710***	***43,321***	***66,417***	***96,937***	***131,872***	***172,466***	***185,740***

FINANCIALS

Cash Flows (PKR mn)	Jun-19	Jun-20	Jun-21 E	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
EBITDA	4,193	5,045	13,248	135	8,213	29,638	41,328	42,987	48,519	51,065	53,752	56,587
(Non-Operating Income)	1,018	1,372	1,171	-	-	-	-	-	-	-	-	-
Changes in NWC	-3,520	-4,443	-599	-3,874	3,007	12,491	-8,060	-4,800	2,410	6,598	12,015	12,558
Taxes Paid	-372	-633	-	-	-1,568	-424	-	-	-	-	-	-
Net Cash from Operations	**-717**	**-1,403**	**11,478**	**-3,739**	**9,652**	**41,704**	**33,268**	**38,187**	**50,929**	**57,663**	**65,767**	**69,146**
CAPEX	335	-784	-13,142	-16,215	-38,114	-49,342	-	-	-	-218	-460	-715
Net Cash from Investments	**335**	**-784**	**-13,142**	**-16,215**	**-38,114**	**-49,342**	**-**	**-**	**-**	**-218**	**-460**	**-715**
Financial Exp.	-1,497	-2,155	-4,362	-3,194	-6,638	-10,054	-11,287	-10,123	-7,873	-5,624	-2,250	0
Net Cash from Financing	**-1,497**	**-2,155**	**-4,362**	**-3,194**	**-6,638**	**-10,054**	**-11,287**	**-10,123**	**-7,873**	**-5,624**	**-2,250**	**0**
Net Change in Cash	**-1,879**	**-4,342**	**-6,025**	**-23,148**	**-35,100**	**-17,692**	**21,981**	**28,064**	**43,055**	**51,820**	**63,058**	**68,430**

Key Ratios	Jun-19	Jun-20	Jun-21 E	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Growth%												
Volumes	-10%	-8%	13%	3%	0%	37%	41%	7%	1%	0%	0%	0%
EBITDA		20%	163%	-99%	5973%	261%	39%	4%	13%	5%	5%	5%
Net Profit		28%	-233%	-232%	-63%	-570%	133%	12%	32%	14%	16%	11%
Margins%												
EBIT Margin	0%	0%	5%	-2%	2%	5%	5%	5%	5%	5%	5%	5%
Net Profit Margin	-1%	-2%	2%	-2%	-1%	2%	3%	3%	4%	5%	5%	5%
Profitability%												
ROCE	0%	2%	16%	-5%	3%	11%	19%	20%	23%	23%	23%	22%
ROAE		-15%	20%	-28%	-13%	48%	62%	42%	37%	31%	27%	25%
ROAA		-2%	3%	-3%	-1%	3%	6%	6%	7%	8%	9%	9%
ROE	-11%	-16%	19%	-33%	-14%	39%	48%	35%	31%	26%	24%	24%
Leverage%												
D/A	0.3	0.4	0.3	0.3	0.5	0.4	0.3	0.3	0.2	0.1	0.0	0.0
D/E	1.9	2.3	1.7	3.6	7.9	6.2	3.2	1.7	0.9	0.4	0.0	0.0
Interest Coverage	1.4	1.3	3.0	0.0	1.2	2.9	3.7	4.2	6.2	9.1	23.9	
Debt Service Coverage	0.4	0.8	1.4	0.0	1.2	2.9	1.0	1.1	1.3	1.5	23.9	
Multiples(x)												
P/E	N/A	N/A	13.4	N/A	N/A	5.9	2.5	2.3	1.7	1.5	1.3	1.2
P/B	2.5	2.8	2.5	3.3	3.8	2.3	1.2	0.8	0.5	0.4	0.3	0.3

ATTOCK REFINERY LIMITED (ATRL)

Attock Refinery Limited (ATRL) was incorporated in Pakistan on November 8, 1978, as a private limited company and was converted into a public company on June 26, 1979. It is a subsidiary of The Attock Oil Company Limited, England, and its ultimate parent is Coral Holding Limited (a private limited company incorporated in Malta). According to the latest shareholding disclosure, associated companies Attock Oil Company Limited (61.03%) and Attock Petroleum Limited (1.68%) together held 62.7% shareholding and the General Public held 24.45%. The company has investments in various associate concerns such as National Refinery Limited (NRL) at 25%, Attock Petroleum Limited (APL) at 21.7%, Attock Gen Limited (30%), and Attock Information Technology Services (Pvt) Limited. These investments enable the company to receive material dividend income, mainly from NRL and APL. ATRL is the fourth largest refinery with an annual refining capacity of 2.44mn MT or 53,400 bpd. The company has previously participated in the last round of upgrades proposed by the Government. The latest expansion projects completed by November 2016 comprised a Pre-flash unit, Light Naphtha Isomerization unit, and Diesel Hydro Desulphurization (DHDS) unit.

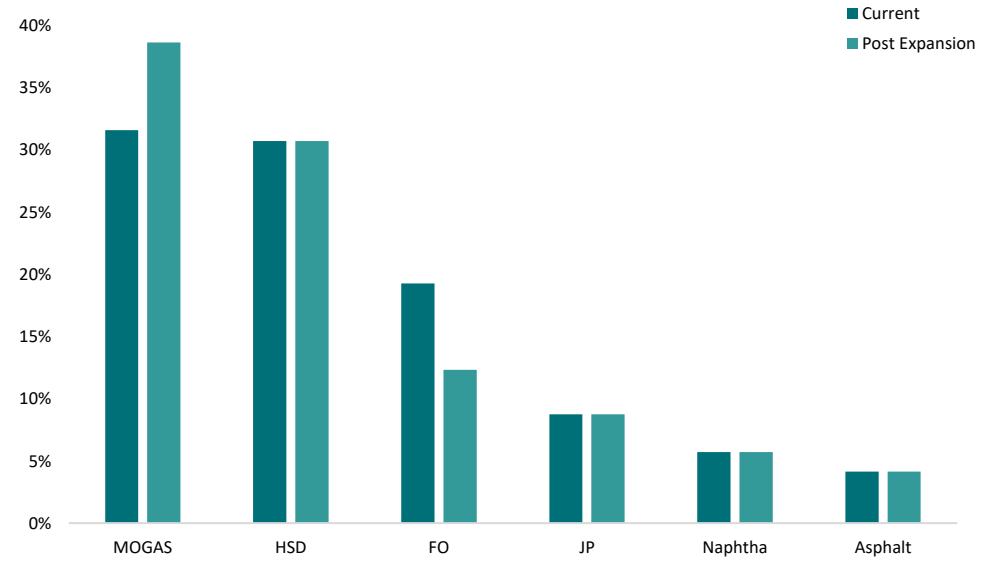
Shareholders	% Holding
Associated Cos	62.7
General Public	24.45
Banks & DFIs	3.6
Mutual Funds	1.15
Insurance	0.62
Dirs. & Rel. Parties	0.33

ATRL is the fourth largest refinery with an annual refining capacity of 2.44mn MT or 18.69 million US barrels.

LAST EXPANSION IMPROVED THE PRODUCTION MIX

The latest round of expansions undertaken in November 2016 increased the crude refining capacity from 1.96mn MT to 2.44mn MT (Pre-flash), enhanced production capacity of MOGAS from 14% of portfolio to 32% in 2020 (Light Naphtha Isomerization) and reduced Sulphur contents in High-Speed Diesel (HSD) to meet Euro II specification.

PRODUCTION SLATE IMPROVEMENT POST EXPECTED UPGRADES

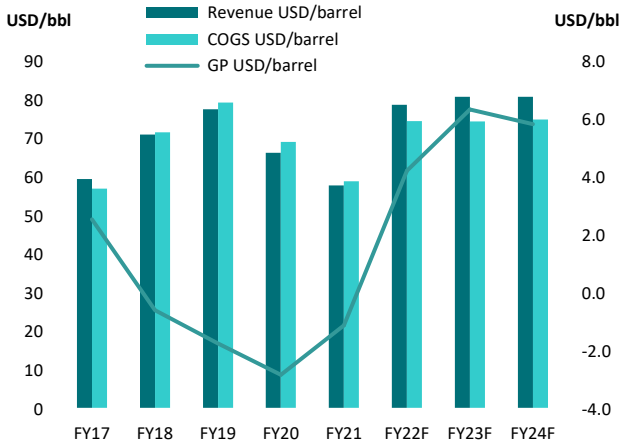


Source: Company Reports, FAML Research

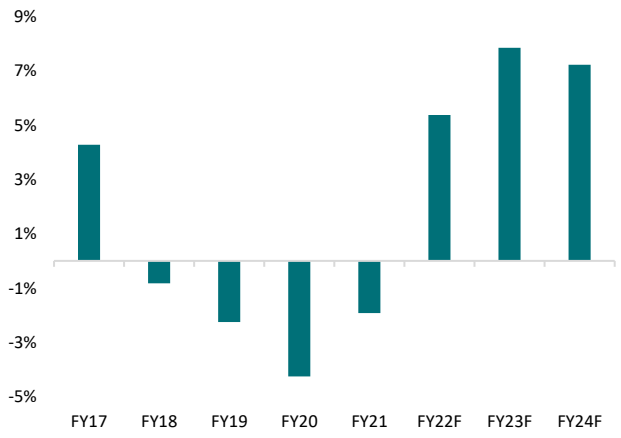
Taking the case of BYCO's upgrade as a proxy, the proposed projects should reduce the output of FO from 19% to 12% and increase MOGAS production from 32% to 39% by 2027.

According to the latest disclosed figures, the current product portfolio is composed of 32% MOGAS, 31% HSD, 19% Furnace Oil (FO), 9% Aviation Fuel, 6% Naphtha, Kerosene, LPG, etc. and 4% Asphalt. Currently, the company can produce MOGAS at a RON rating of 90 against imported 92 RON and HSD production in compliance with Euro III standards (instead of imported Euro V). According to our channel checks, the upgrade projects under consideration are Continuous Catalyst Regeneration (CCR) Complex, revamp of DHDS unit (ability to produce Euro V compliant HSD), and Residual Fluid Catalytic Cracking (RFCC) unit. These upgrades are expected to require a capital expenditure of around US$ 1.2bn and have a planned completion timeline of five years. In our estimates, we assumed the new projects would come online by 2026 with a full-year impact in 2027. Taking the case of BYCO's upgrade as a proxy, the proposed projects should reduce the output of FO from 19% to 12% and increase MOGAS production from 32% to 39% by 2027. These upgrades should allow ATRL to produce better quality and environmentally friendly fuel products.

GPM/BBL* TREND FORECAST



GROSS PROFIT MARGIN TREND FORECAST



*Proxy for GPM
Source: Company Reports, FAML Research

GPM PROJECTED TO MATERIALLY IMPROVE POST NEW POLICY

The gross profit margin (GPM) has averaged -1.0% in the previous five years (FY17-FY21). The company recorded a peak trailing twelve-month GPM of 5% in September 2017. This was when ATRL had just increased its MOGAS output, and it was a time of peak furnace oil demand coupled with an improving economy. However, during the last five years, average margins on MOGAS of 20% in FY17 have been reduced to 10% by FY21 and average margins on HSD have been reduced from 33% in FY17 to 18% by FY21. During this period, the demand for black oil products such as FO and asphalt also decreased dramatically. Contingent on upgrade plans, we forecast gross profit margin (GPM) to average 6.9% in the next five years (FY22F-FY26F) and peak at 9% in FY28 as the company is expected to

Contingent on upgrade plans, we forecast GPM to average 6.9% in the next five years (FY22F-FY26F) and peak at 9% in FY28 as the company is expected to produce a higher proportion of value-added products as it shifts away from FO.

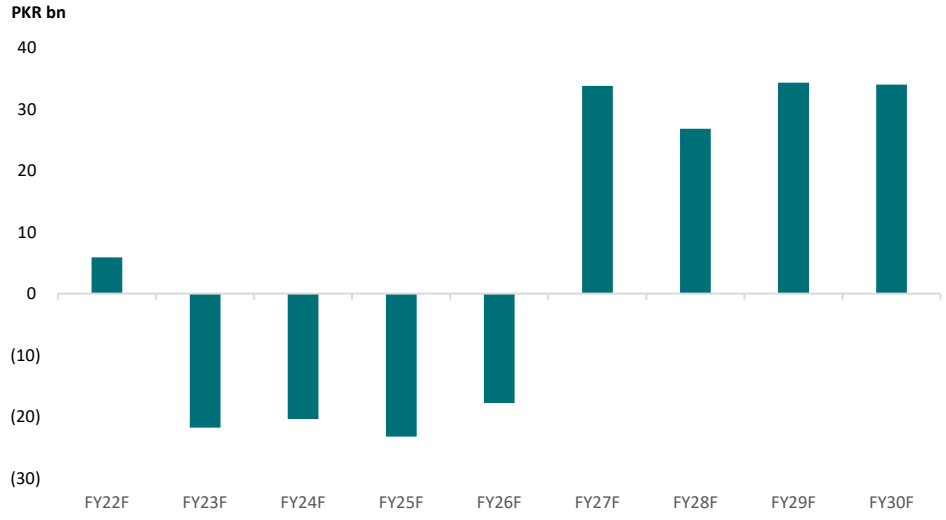
produce a higher proportion of value-added products (MOGAS and HSD) with potential upgrades allowing ATRL to shift production away from furnace oil (FO).

CREDIT REQUIRED AND DEBT SERVICING ABILITY

According to our channel checks, ATRL will require an aggregate capital requirement of ~US$ 1.2bn for its CCR, BMR of DHDS unit, and RFCC unit. Looking at its current capital structure (D/A: 0.08x, D/E: 0.17x), we believe that ATRL is in a position to finance at least 90% of the required capital through debt. Our macro assumptions include oil at US$70/bbl, policy rate avg. of 8% (K+4%), currency depreciation avg. of 6% over the forecast horizon (FY22-30). Incorporating fiscal incentives offered in the proposed refinery coupled with target avg. capital structure (D/A: 0.37x, D/E: 1.75x) and avg. capacity utilization of 95%, we forecast mean interest coverage and debt service coverage ratios of 2.7x and 1.5x, respectively, during our forecast horizon (FY22-30). With expected completion in six years (after civil works), we estimate the company's free cash flows to turn positive by the full year of upgraded operations (2027).

Note that since the company has not disclosed any plans to upgrade pending the approval of the new refinery policy, the target capital structure can change depending on the support from the company's sponsor i.e. The Attock Group.

PROJECTED FREE CASH FLOWS TO FIRM



Source: Company Reports, FAML Research

FINANCIALS

Income Statement (PKR mn)	Jun-19	Jun-20	Jun-21	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Net Sales	176,839	119,901	127,836	213,096	231,856	245,767	260,513	295,620	334,462	354,530	375,802	398,350
Market Share	*12%*	*10%*	*10%*	*10%*	*10%*	*9%*	*9%*	*9%*	*9%*	*9%*	*9%*	*8%*
YoY	36%	-32%	7%	67%	9%	6%	6%	13%	13%	6%	6%	6%
Cost of Sales	180,816	125,000	130,299	201,654	213,658	228,017	243,237	273,318	306,040	324,051	343,143	363,380
Gross Profit	**-3,977**	**-5,099**	**-2,463**	**11,442**	**18,199**	**17,751**	**17,276**	**22,302**	**28,422**	**30,479**	**32,659**	**34,970**
GPM%	*-2%*	*-4%*	*-2%*	*5%*	*8%*	*7%*	*7%*	*8%*	*8%*	*9%*	*9%*	*9%*
EBITDA	**-1,677**	**-2,250**	**4,577**	**2,641**	**9,564**	**9,674**	**9,613**	**14,607**	**22,288**	**24,001**	**25,967**	**28,031**
Margins%	*-1%*	*-2%*	*4%*	*1%*	*4%*	*4%*	*4%*	*5%*	*7%*	*7%*	*7%*	*7%*
Depreciation	2,552	2,665	2,735	2,802	2,874	4,586	6,401	8,325	10,364	10,634	10,920	11,224
EBIT	**-4,229**	**-4,915**	**1,842**	**-161**	**6,690**	**5,087**	**3,212**	**6,282**	**11,924**	**13,367**	**15,047**	**16,807**
Finance Cost	6,624	1,064	853	321	1,284	3,624	6,224	9,012	10,400	10,160	9,360	8,220
EBT	**-10,853**	**-5,978**	**989**	**-482**	**5,407**	**1,464**	**-3,012**	**-2,730**	**1,524**	**3,207**	**5,687**	**8,587**
Taxation	-2,240	-1,293	-79	-140	1,568	424	-873	-396	0	0	0	0
Net Profit	**-8,613**	**-4,685**	**1,068**	**-342**	**3,839**	**1,039**	**-2,138**	**-2,334**	**1,524**	**3,207**	**5,687**	**8,587**
EPS	(80.8)	(43.9)	10.0	(3.2)	36.0	9.7	(20.1)	(21.9)	15.8	33.1	56.3	83.5

Balance Sheet (PKR mn)	Jun-19	Jun-20	Jun-21 E	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Current Assets	**52,631**	**32,485**	**34,424**	**56,175**	**59,089**	**60,952**	**65,482**	**74,090**	**91,575**	**99,743**	**102,696**	**108,374**
Trade Receivables	22,412	12,729	19,754	32,928	35,827	37,977	40,255	45,680	51,682	54,783	58,070	61,554
Inventories	13,596	11,598	10,852	16,794	17,794	18,990	20,257	22,763	25,488	26,988	28,578	30,263
Long Term Assets	**51,876**	**61,085**	**59,476**	**59,176**	**92,912**	**127,073**	**160,690**	**194,784**	**190,041**	**185,365**	**180,760**	**176,230**
Long Term Investments	20,710	18,521	18,261	19,256	20,250	21,244	21,244	21,244	21,244	21,244	21,244	21,244
Fixed Assets	31,166	42,564	41,214	39,920	72,662	105,829	139,446	173,540	168,797	164,121	159,516	154,986
Total Assets	**110,733**	**103,011**	**103,882**	**125,334**	**161,989**	**198,023**	**236,180**	**278,890**	**291,632**	**295,123**	**293,471**	**294,619**
Liabilities & Equity												
Current Liabilities	59,486	43,208	43,128	70,501	74,817	79,812	85,107	95,446	119,664	132,948	138,609	144,170
Long Term Liabilities	7,981	7,936	7,080	1,500	30,000	60,000	95,000	130,000	117,000	104,000	91,000	78,000
Other Liabilities	2,767	2,972	3,267	3,267	3,267	3,267	3,267	2,972	2,972	2,972	2,972	2,972
Total Liabilities	**70,234**	**54,116**	**53,475**	**75,268**	**108,084**	**143,079**	**183,374**	**228,419**	**239,636**	**239,920**	**232,581**	**225,142**
Paid Up Capital	1,066	1,066	1,066	1,066	1,066	1,066	1,066	1,066	1,066	1,066	1,066	1,066
Reserves & Others	39,433	47,829	49,342	49,000	52,839	53,878	51,740	49,406	50,930	54,137	59,823	68,411
Total Equity	**40,500**	**48,896**	**50,408**	**50,066**	**53,905**	**54,944**	**52,806**	**50,472**	**51,996**	**55,203**	**60,890**	**69,477**

FINANCIALS

Cash Flows (PKR mn)	Jun-19	Jun-20	Jun-21 E	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
EBITDA	-1,677	-2,250	4,577	2,641	9,564	9,674	9,613	14,607	22,288	24,001	25,967	28,031
(Non-Operating Income)	686	2,785	5,196	1,183	2,403	2,082	1,566	978	1,898	2,387	3,056	3,746
Changes in NWC	-9,295	-8,916	-1,352	-1,922	-1,397	-3,122	-755	-1,723	-6,733	1,883	-3,708	-1,383
Taxes Paid	-790	-717	-	-	-1,568	-424	-	-	-	-	-	-
Net Cash from Operations	**-12,447**	**-14,668**	**-1,971**	**-464**	**4,196**	**4,045**	**7,291**	**11,905**	**13,658**	**23,497**	**19,202**	**22,902**
CAPEX	2,086	-11,398	1,350	1,294	-32,742	-33,167	-33,617	-34,095	-	-	-	-
Net Cash from Investments	**2,086**	**-11,398**	**1,350**	**1,294**	**-32,742**	**-33,167**	**-33,617**	**-34,095**	**-**	**-**	**-**	**-**
Financial Exp.	-6,074	-1,470	-853	-321	-1,284	-3,624	-6,224	-9,012	-10,400	-10,160	-9,360	-8,220
Net Cash from Financing	**-6,074**	**-1,470**	**-853**	**-321**	**-1,284**	**-3,624**	**-6,224**	**-9,012**	**-10,400**	**-10,160**	**-9,360**	**-8,220**
Net Change in Cash	**-16,435**	**-27,536**	**-1,474**	**509**	**-29,829**	**-32,745**	**-32,550**	**-31,201**	**3,258**	**13,337**	**9,842**	**14,682**

Key Ratios	Jun-19	Jun-20	Jun-21	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Growth%												
Volumes	-1%	-29%	22%	13%	0%	0%	0%	6%	5%	0%	0%	0%
EBITDA		34%	-303%	-42%	262%	1%	-1%	52%	53%	8%	8%	8%
Net Profit		-46%	-123%	-132%	-1223%	-73%	-306%	9%	-165%	110%	77%	51%
Margins%												
EBIT Margin	-2%	-4%	1%	0%	3%	2%	1%	2%	4%	4%	4%	4%
Net Profit Margin	-5%	-4%	1%	0%	2%	0%	-1%	-1%	0%	1%	2%	2%
Profitability%												
ROCE	-8%	-8%	3%	0%	8%	4%	2%	3%	7%	8%	10%	11%
ROAE		-10%	2%	-1%	7%	2%	-4%	-5%	3%	6%	10%	13%
ROAA		-4%	1%	0%	3%	1%	-1%	-1%	1%	1%	2%	3%
ROE	-21%	-10%	2%	-1%	7%	2%	-4%	-5%	3%	6%	9%	12%
Leverage%												
D/A	0.1	0.1	0.1	0.0	0.2	0.3	0.4	0.5	0.4	0.4	0.4	0.3
D/E	0.3	0.2	0.1	0.0	0.6	1.1	1.8	2.6	2.5	2.2	1.8	1.4
Interest Coverage	N/A	N/A	5.4	8.2	7.5	2.7	1.5	1.6	2.1	2.4	2.8	3.4
Debt Service Coverage	N/A	N/A	5.4	8.2	7.5	2.7	1.5	1.6	1.0	1.0	1.2	1.3
Multiples(x)												
P/E	N/A	N/A	22.5	N/A	6.3	23.1	N/A	N/A	15.8	7.5	4.2	2.8
P/B	0.6	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.3

NATIONAL REFINERY LIMITED (NRL)

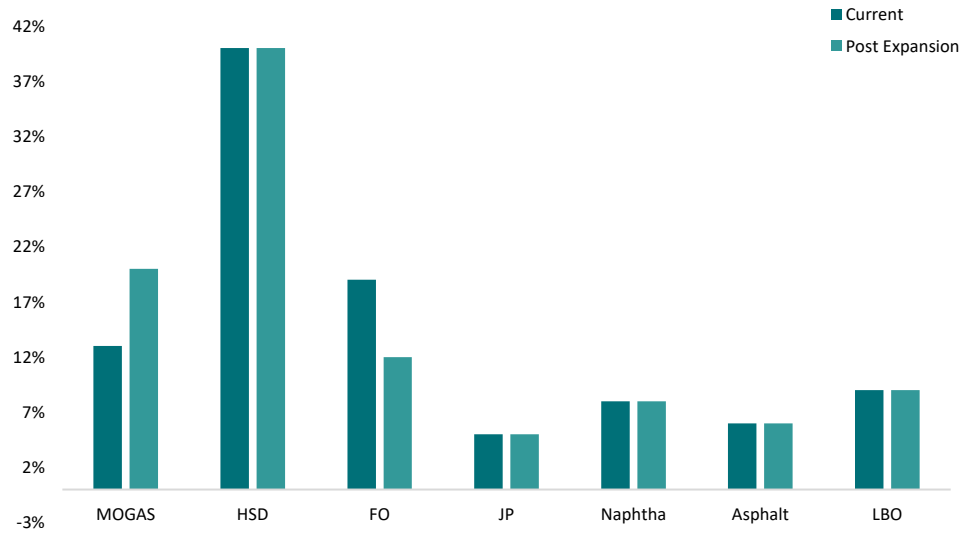
National Refinery Limited was incorporated in Pakistan on August 19, 1963, as a public limited company. The management was taken over by the (Attock) Pharaon Group in Pakistan on July 7, 2005, from the Government of Pakistan. It is a subsidiary of The Attock Oil Company Limited, England, and its ultimate parent is Coral Holding Limited (a private limited company incorporated in Malta). According to the latest shareholding disclosure, associated companies Attock Refinery Limited (25.00%) and Pakistan Oilfields Limited (25.00%) held 50.00% shareholding, Islamic Development Bank held 15.00%, and the General Public held 18.30%. It is the third-largest refiner in the country, with a combined annual refining capacity of 2.83mn MT or 65,050 bpd. The refinery complex of NRL comprises three refineries, consisting of two lube refineries and a fuel refinery. The two lube refineries in the complex have an annual designed capacity of ~0.18mn MT and make about a quarter of the company's total revenues. NRL also participated in the last round of upgrades proposed by the Government. The latest upgrade projects comprised revamp of fuel refinery in March 2017 and the installation of HSD Desulphurization and Isomerization Unit in June 2017 and October 2017, respectively.

Shareholders	% Holding
Associated Cos	50.00
IDB	15.00
General Public	18.30
Insurance	6.16
Banks, DFIs & NBFIs	1.35
Directors & Rel. Parties	0.01

LAST EXPANSION IMPROVED THE PRODUCTION MIX

The latest round of expansions completed by October 2017 increased the crude refining capacity from 2.71mn MT to 2.83mn MT (BMR), the enhanced production capacity of MOGAS from 7% of the portfolio mix to 13% in 2020 (Light Naphtha Isomerization), and reduced Sulphur contents in High-Speed Diesel (HSD) to meet Euro II specification. As of January 2021, the company has started producing Euro V compliant HSD.

PRODUCTION SLATE IMPROVEMENT POST EXPECTED UPGRADES

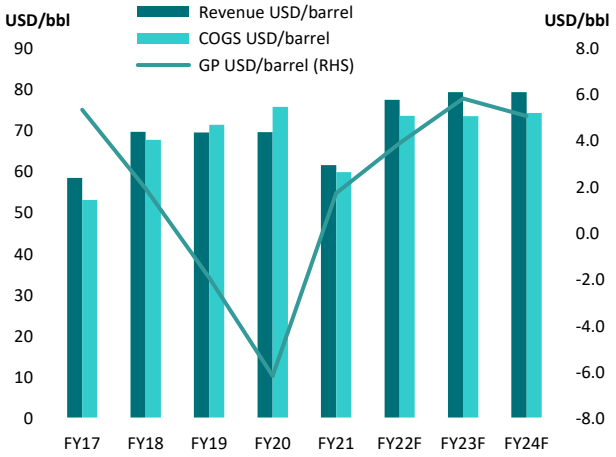


Source: Company Reports, FAML Research

The proposed projects should enable the company to reduce FO output from 19% to 12% and increase MOGAS production from 13% to 20% by 2027. These upgrades should allow NRL to produce MOGAS with a RON rating of 92 and Euro V compliant MOGAS.

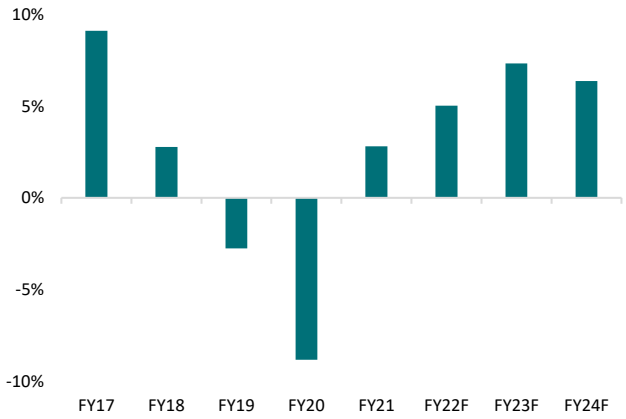
According to the latest disclosed figures, the current product portfolio comprises 13% MOGAS, 40% HSD, 19% FO, 5% Aviation Fuel, 8% Naphtha, Kerosene, LPG, etc., 6% Asphalt, and 9% Lube Base Oils (LBO). Presently, the company can produce MOGAS with a RON rating of 90 against the imported 92 RON and HSD output compliant with imported Euro V HSD. While the management has not disclosed any plans of upgrading its complex, our channel checks suggest that projects under consideration include Continuous Catalyst Regeneration (CCR) Complex and a Hydrocracker. These upgrades are estimated to require a capital expenditure of US$ 960mn and have a planned completion timeline of five years. In our estimates, we assumed the new projects would come online by 2026 with a full-year impact in 2027. The proposed projects should enable the company to reduce FO output from 19% to 12% and increase MOGAS production from 13% to 20% by 2027. These upgrades should allow NRL to produce MOGAS with a RON rating of 92 and Euro V compliant MOGAS.

GPM/BBL* TREND FORECAST



*Proxy for GPM
Source: Company Reports, FAML Research

GROSS PROFIT MARGIN TREND FORECAST



GPM PROJECTED TO MATERIALLY IMPROVE POST NEW POLICY

The gross profit margin (GPM) has averaged 1.0% in the previous five years (FY17-FY21). The company recorded peak trailing twelve-month margins of 13% in September 2016. This was achieved by robust profitability of the fuel segment (up 2x in FY17) in the backdrop of a stable exchange rate and a stable crude oil price. The lube business also supported the earnings profile due to better demand for bitumen (asphalt) and LBO. However, during the last five years, margins on HSD reduced from 33% in 2017 to 18% by 2021, while average margins on FO of 30% in 2017 reduced to 15% by 2021 and demand reduced to 2.96mn MT by 2021 from 9.53mn MT in 2017 (down 70%). Contingent on upgrade plans, we project the company to operate at an average 90% utilization level reaching 100% utilization by FY27 (NRL operated at 100% utilization in FY08 previously) and also forecast gross profit margin (GPM) to average 6% in the next five years (FY22F-FY26F) and

Contingent on upgrade plans, we forecast GPM to average 6% in the next five years (FY22F-FY26F) and stabilize at 8% from FY28 onwards. We also project the company to operate at an average 90% utilization level reaching 100% utilization by FY27 (NRL operated at 100% utilization in FY08 previously).

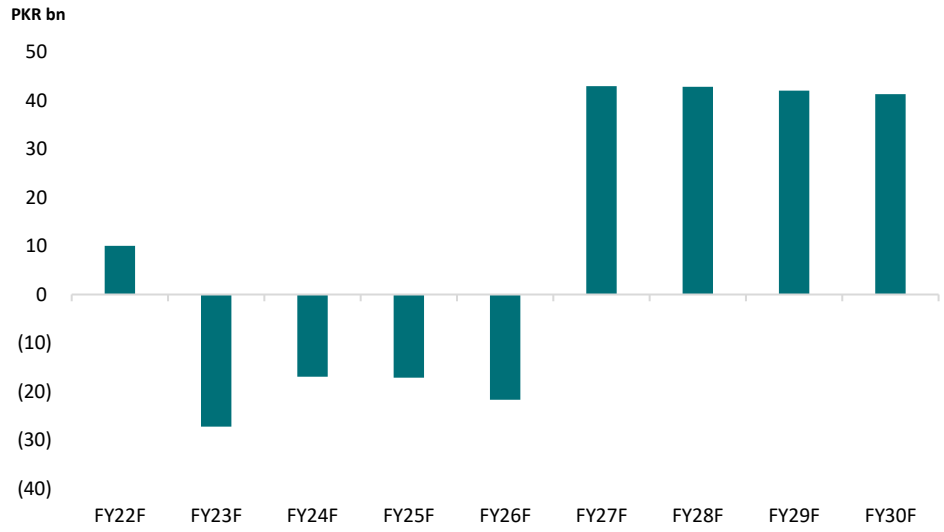
stabilize at 8% from FY28 onwards as the company is expected to produce a higher proportion of value-added products (MOGAS 20% and HSD 40%).

CREDIT REQUIRED AND DEBT SERVICING ABILITY

According to our channel checks, NRL will require an aggregate capital requirement of ~US$ 0.96bn for its CCR and Hydrocracker units. Looking at its current capital structure (D/A: 0.25x, D/E: 0.61x), we believe that NRL is in a position to finance at least 90% of the required capital through debt. Our macro assumptions include oil at US$70/bbl, policy rate avg. of 8% (K+4%), currency depreciation avg. of 6% over the forecast horizon (FY22-30). Incorporating fiscal incentives offered in the proposed refinery coupled with target avg. capital structure (D/A: 0.5x, D/E: 2.4x) and avg. capacity utilization of 90%, we forecast mean interest coverage and debt service coverage ratios of 3.4x and 2.5x, respectively, during our forecast horizon (FY22-30). Shift away from FO towards value-added products (MOGAS to 20% from 13% currently) is slated to impact margins positively. However, the lube segment is the real value creator for the company due to its ~20% share in the production mix. NRL's ability to offset potential fuel segment losses with the lube segment, shift away from FO towards premium fuel products should enable the company to record healthy free cash flows. In this regard, we estimate the company's free cash flows to turn positive by the full year of the upgraded complex (2027).

Note that since the company has not disclosed any plans to upgrade pending the approval of the new refinery policy, the target capital structure can change depending on the level of support from the company's sponsor.

PROJECTED FREE CASH FLOWS TO FIRM



Source: Company Reports, FAML Research

Other forecast horizon assumptions include avg. industry volume growth of 7% for MOGAS and 2% for HSD and avg. company market share to be maintained at 10%.

FINANCIALS

Income Statement (PKR mn)	Jun-19	Jun-20	Jun-21	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Net Sales	160,906	125,613	139,625	200,255	227,291	240,928	255,384	308,496	367,993	390,073	413,477	438,286
Market Share	*12%*	*13%*	*12%*	*12%*	*11%*	*15%*	*20%*	*21%*	*20%*	*20%*	*19%*	*18%*
YoY	17%	-22%	11%	43%	14%	6%	6%	21%	19%	6%	6%	6%
Cost of Sales	165,355	136,730	135,700	190,190	210,611	225,548	241,381	288,626	340,535	360,532	381,730	404,201
Gross Profit	**-4,449**	**-11,118**	**3,925**	**10,065**	**16,680**	**15,381**	**14,003**	**19,870**	**27,458**	**29,541**	**31,747**	**34,085**
GPM%	*-3%*	*-9%*	*3%*	*5%*	*7%*	*6%*	*5%*	*6%*	*7%*	*8%*	*8%*	*8%*
EBITDA	**-2,347**	**-8,913**	**6,097**	**5,710**	**12,311**	**13,925**	**14,753**	**21,633**	**30,185**	**31,986**	**33,894**	**35,916**
Margins%	*-1%*	*-7%*	*4%*	*3%*	*5%*	*6%*	*6%*	*7%*	*8%*	*8%*	*8%*	*8%*
Depreciation	3,397	3,437	3,756	4,024	4,316	6,867	9,570	12,435	15,473	15,956	16,468	17,010
EBIT	**-5,743**	**-12,350**	**2,341**	**1,685**	**7,995**	**7,059**	**5,183**	**9,198**	**14,712**	**16,030**	**17,427**	**18,906**
Finance Cost	5,286	2,513	940	1,221	2,475	4,415	6,735	9,768	11,520	10,880	9,600	8,320
EBT	**-11,029**	**-14,863**	**1,401**	**465**	**5,520**	**2,644**	**-1,552**	**-569**	**3,192**	**5,150**	**7,827**	**10,586**
Taxation	-2,337	-10,799	-370	133	1,599	765	-452	-84	0	0	0	0
Net Profit	**-8,692**	**-4,064**	**1,771**	**332**	**3,921**	**1,879**	**-1,100**	**-486**	**3,192**	**5,150**	**7,827**	**10,586**
EPS	(108.7)	(50.8)	22.1	4.1	48.9	23.4	(13.8)	(6.2)	39.8	64.3	97.8	132.3

Balance Sheet (PKR mn)	Jun-19	Jun-20	Jun-21 E	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Current Assets	**35,719**	**17,948**	**9,674**	**41,572**	**45,117**	**46,693**	**49,939**	**70,832**	**92,192**	**93,775**	**98,336**	**105,976**
Trade Receivables	7,499	4,022	2,341	12,261	15,019	17,089	18,114	21,881	26,102	27,668	29,328	31,087
Inventories	27,241	13,373	6,516	28,700	29,471	29,088	31,130	37,223	43,917	46,496	49,230	52,128
Long Term Assets	**40,435**	**45,352**	**43,208**	**41,126**	**70,295**	**101,181**	**131,630**	**161,613**	**152,885**	**144,079**	**135,189**	**126,212**
Fixed Assets	35,695	34,218	34,205	34,255	65,555	96,441	126,890	156,874	148,145	139,339	130,450	121,472
Other Assets	4,740	11,134	9,003	6,871	4,740	4,740	4,740	4,740	4,740	4,740	4,740	4,740
Total Assets	**76,154**	**63,300**	**52,882**	**82,698**	**115,411**	**147,874**	**181,568**	**232,445**	**245,077**	**237,854**	**233,525**	**232,188**
Liabilities & Equity												
Current Liabilities	41,426	32,270	20,974	45,965	41,293	42,940	44,799	52,391	77,838	81,472	85,325	89,408
Long Term Liabilities	0	188	188	4,688	38,188	67,188	100,188	144,000	128,000	112,000	96,000	80,000
Other Liabilities	868	1,018	1,018	1,018	1,018	1,018	1,018	1,018	1,018	1,018	1,018	1,018
Total Liabilities	**42,294**	**33,476**	**22,179**	**51,671**	**80,499**	**111,146**	**146,005**	**197,409**	**206,856**	**194,490**	**182,343**	**170,427**
Paid Up Capital	800	800	800	800	800	800	800	800	800	800	800	800
Reserves & Others	33,074	29,038	29,916	30,241	34,126	35,941	34,777	34,249	37,434	42,577	50,396	60,974
Total Equity	**33,873**	**29,837**	**30,716**	**31,041**	**34,926**	**36,741**	**35,577**	**35,049**	**38,234**	**43,377**	**51,196**	**61,774**

FINANCIALS

Cash Flows (PKR mn)	Jun-19	Jun-20	Jun-21 E	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
EBITDA	-2,347	-8,913	6,097	5,702	12,304	13,918	14,745	21,626	30,178	31,978	33,887	35,909
(Non-Operating Income)	370	381	370	-	-	-	-	-	-	-	-	-
Changes in NWC	-6,397	-8,614	3,022	6,906	8,217	-71	1,387	13,301	-4,087	-2,051	708	3,556
Taxes Paid	-372	-633	-	-	-1,568	-424	-	-	-	-	-	-
Net Cash from Operations	-9,485	-18,542	8,750	12,608	18,953	13,423	16,133	34,927	26,090	29,928	34,595	39,465
CAPEX	-2,023	-1,477	-13	-50	-31,300	-30,886	-30,448	-29,984	-	-	-	-
Net Cash from Investments	**-2,023**	**-1,477**	**-13**	**-50**	**-31,300**	**-30,886**	**-30,448**	**-29,984**	**-**	**-**	**-**	**-**
Financial Exp.	-5,286	-2,513	-940	-1,221	-2,515	-4,495	-6,815	-9,808	-11,520	-10,880	-9,600	-8,320
Net Cash from Financing	**-5,286**	**-2,513**	**-940**	**-1,221**	**-2,515**	**-4,495**	**-6,815**	**-9,808**	**-11,520**	**-10,880**	**-9,600**	**-8,320**
Net Change in Cash	**-16,794**	**-22,532**	**7,797**	**11,338**	**-14,862**	**-21,959**	**-21,131**	**-4,864**	**14,570**	**19,048**	**24,995**	**31,145**

Key Ratios	Jun-19	Jun-20	Jun-21 E	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Growth%												
Volumes	-11%	-24%	28%	5%	5%	0%	0%	13%	11%	0%	0%	0%
EBITDA		280%	-168%	-6%	116%	13%	6%	47%	40%	6%	6%	6%
Net Profit		-53%	-144%	-81%	1081%	-52%	-159%	-56%	-757%	61%	52%	35%
Margins%												
EBIT Margin	-4%	-10%	2%	1%	4%	3%	2%	3%	4%	4%	4%	4%
Net Profit Margin	-5%	-3%	1%	0%	2%	1%	0%	0%	1%	1%	2%	2%
Profitability%												
ROCE	-17%	-40%	7%	5%	11%	7%	4%	5%	9%	10%	12%	13%
ROAE		-13%	6%	1%	12%	5%	-3%	-1%	9%	13%	17%	19%
ROAA		-6%	3%	0%	4%	1%	-1%	0%	1%	2%	3%	5%
ROE	-26%	-14%	6%	1%	11%	5%	-3%	-1%	8%	12%	15%	17%
Leverage%												
D/A	0.3	0.3	0.3	0.2	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.4
D/E	0.7	0.6	0.5	0.6	1.2	1.9	2.8	4.1	3.8	3.0	2.2	1.6
Interest Coverage	N/A	N/A	6.5	4.7	4.9	3.1	2.2	2.2	2.6	2.9	3.5	4.3
Debt Service Coverage	N/A	N/A	6.5	4.7	4.9	3.1	2.2	2.2	1.1	1.2	1.3	1.5
Multiples(x)												
P/E	N/A	N/A	18.1	96.5	8.2	17.1	N/A	N/A	10.0	6.2	4.1	3.0
P/B	0.9	1.1	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.7	0.6	0.5

PAKISTAN REFINERY LIMITED (PRL)

Pakistan Refinery Limited (PRL) was incorporated in Pakistan as a public limited company in May 1960. PRL is a subsidiary of Pakistan State Oil Company Limited (PSO). The refinery complex and registered office are at Korangi Creek Road, Karachi. The Refinery is operating at two locations – the main processing facility is located at Korangi Creek with supporting crude berthing and storage facility at Keamari. According to the latest shareholding disclosure, associated company Pakistan State Oil (PSO) held 63.56% shareholding and the General Public held 24.33%. PRL operates a simple configuration hydro skimming refinery designed to process various imported and local crude. It is the fifth-largest Refinery in Pakistan, with an annual refining capacity of 2.10mn MT or 47,110bpd. PRL did not fully participate in the last round of upgrades proposed by the Government. In this regard, PRL commissioned an isomerization project in 2015, but the company was not able to install a DHDS unit since it required a CAPEX of ~US$ 400mn at the time of the initial study.

Shareholders	% Holding
Associated Cos	63.56
General Public	24.33
Banks & DFIs	0.07
Mutual Funds	5.64
Insurance	1.41
Dirs, & Rel. Parties	0.01

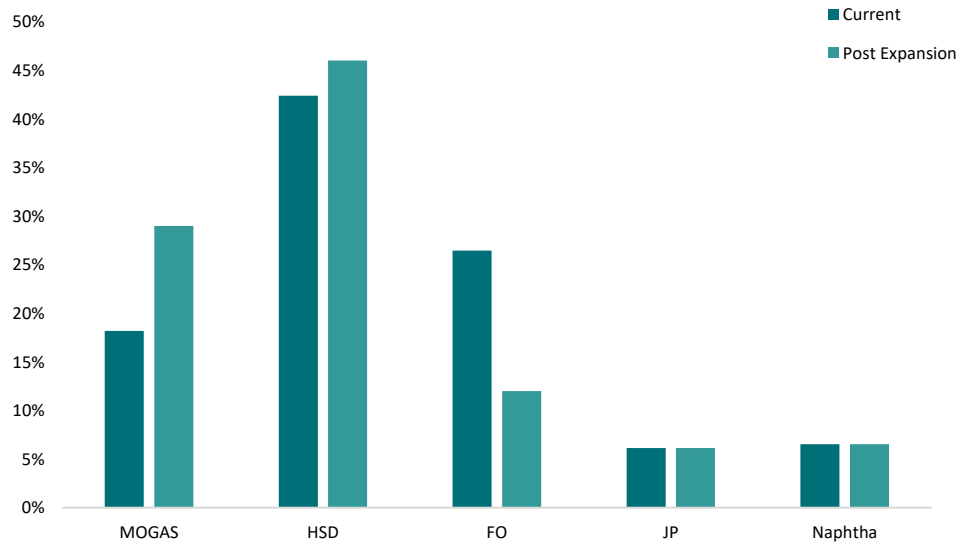
PRL is the fifth largest refinery in Pakistan, with an annual refining capacity of 2.10mn MT or 47,110bpd.

Under the policy framework issued by the Ministry of Energy on March 27, 2013, refineries were required to install Diesel Hydrodesulphurization Unit (DHDS) and Isomerization Unit by June 30, 2017, to produce EURO II compliant HSD and increase product mix in favor of MOGAS

THE COMPANY'S SURVIVAL DEPENDS ON UPGRADE/EXPANSION

PRL has not realized any significant CAPEX for the last 15 years with designed capacity remaining at the same levels of 15.7mn US barrels per annum or 47,110bpd. The latest upgrade was an isomerization unit coming online in 2015 at a CAPEX of US$ 50mn. According to the latest disclosed figures, the current product portfolio is composed of 18% MOGAS, 42% HSD, 26% Furnace Oil (FO), 6% Aviation Fuel, and 7% Naphtha, Kerosene, LPG, etc. Currently, the company can produce MOGAS with a RON rating of 90 against imported 92 RON and HSD output of lower quality instead of imported Euro V compliant fuel.

PRODUCTION SLATE IMPROVEMENT POST EXPECTED UPGRADES

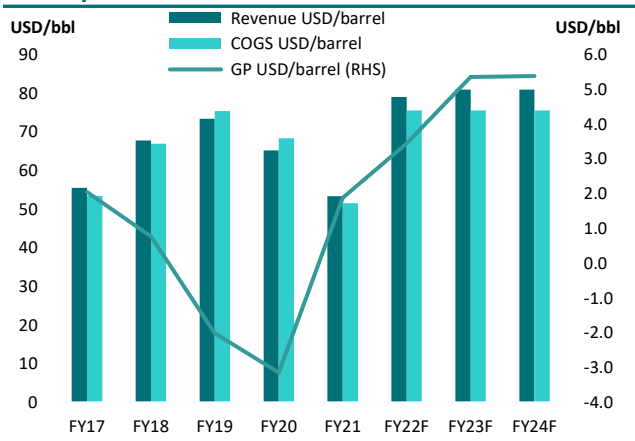


Source: Company Reports, FAML Research

The upgrade projects are slated to reduce the output of FO from 26% to 12% and increase MOGAS production from 18% to 29% by 2026.

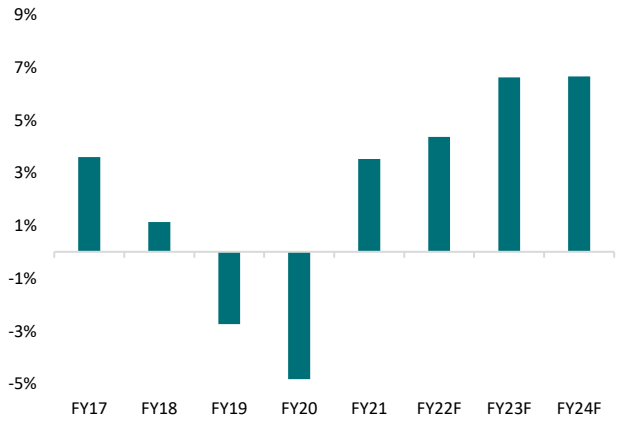
According to the management, the company intends to take advantage of incentives offered for upgrading complexes in the upcoming petroleum policy. In this regard, the company is considering two options, i.e., 1) acquire a pre-owned refinery or 2) set up a new refinery. According to the company, both the projects are possible. However, acquiring a pre-owned refinery will be a cheaper option as it will cost 50% less than a new refinery. With a stretched capital structure, we assume the company will choose to upgrade to become compliant with imported fuels (Euro V) by installing a Hydrocracker and Diesel Hydro-Desulphurization (DHDS) units. Our estimates have assumed the new projects to come online by 2025 with a full-year impact in 2026. Upgrades should allow PRL to significantly reduce FO production by converting it into MS and HSD. Besides this, the regulatory requirements of Euro V MOGAS and HSD will also be met. The upgraded complexes are slated to reduce the output of FO from 26% to 12% and increase MOGAS production from 18% to 29% by 2026.

GPM/BBL* TREND FORECAST



*Proxy for GPM
Source: Company Reports, FAML Research

GROSS PROFIT MARGIN TREND



GPM IMPACT OF NEW POLICY TO BE RELATIVELY WEAK INITIALLY

The company's average gross profit margin (GPM) has been flat in the previous five years (FY17-FY21). The company recorded a peak trailing twelve-month GPM of 4% in June 2017. This was when PRL had an FO product composition of 31%, and demand was at its peak levels. After that, the average margins on FO of 30% in 2017 reduced to 15% by 2021, and demand reduced to 2.96mn MT by 2021 from 9.53mn MT in 2017 (down 70%). Going forward, with a product mix of 29% MOGAS and 46% HSD, we have estimated PRL to operate at 100% utilization levels and expect GPM to stabilize at 8% by 2025. The impact of the upcoming petroleum policy in its current form is relatively the least favorable for the company in the initial years since it has the lowest ratio of MOGAS (currently 18%) in the product mix.

The impact of the upcoming petroleum policy in its current form is relatively the least favorable for the company in the initial years since it has the lowest ratio of MOGAS (currently 18%) in the product mix.

CREDIT REQUIRED AND DEBT SERVICING ABILITY

According to the management, a CAPEX of USD 0.8bn - USD 1.0bn is required if the company decides to upgrade to become compliant with imported fuels (Euro V). Meanwhile, if the company increases its capacity by an additional 50k bpd, the CAPEX requirement will be around USD 1.3bn - USD 1.4bn. Developing a pre-owned refinery will take 3-4 years, whereas setting up a new refinery or upgrading the existing complex can take five years. Against this backdrop, we have assumed that the company will upgrade by installing a Hydrocracker and Diesel Hydro-Desulphurization (DHDS) units. These upgrades are estimated to require a capital expenditure of US$ 900mn and have a planned completion timeline of five years. Looking at its current capital structure (D/A: 0.35x, D/E: 9.07x) and accumulated losses of PKR 17.74bn (31 March 2021), we assume that PRL may look to finance 100% of the required capital through debt (can also look for capital raising through another rights issue to complement required CAPEX).

Note that since the company has not disclosed firm plans to upgrade pending the approval of the new refinery policy, the target capital structure can change depending on the support from the company's sponsor or if the company opts for additional capital raising through a rights issue to keep leverage ratios under control.

PROJECTED FREE CASH FLOWS TO FIRM

Source: Company Reports, FAML Research

Our macro assumptions include oil at US$70/bbl, policy rate avg. of 8% (K+4%), currency depreciation avg. of 6% over the forecast horizon (FY22-30). After incorporating the fiscal incentives offered in the proposed refinery coupled and avg. capacity utilization of 90% (reach 100% from FY26) from 70-75% currently), and expected completion in FY26; we estimate free cash flows of the company to turn positive by the entire year of upgraded complex (FY26). However, despite the tilt towards a more premium product mix and a consequently improved margin profile post-upgrade, we forecast relatively weaker mean interest coverage and debt service coverage ratios of 1.8x and 1.3x, respectively, during our forecast horizon (FY22-30). The company may also need to go for an additional rights issue in the next two years to keep leverage ratios under control. In this regard, the

We forecast relatively weaker mean interest coverage and debt service coverage ratios of 1.8x and 1.3x. However, the company may also need to go for an additional rights issue in the next two years to keep leverage ratios under control.

company had negative equity in FY20, after which it issued a 1:1 rights share (315mn shares raising PKR 3.15bn) in early FY21 to meet working capital requirements. PRL has also undertaken the SBP's debt relief scheme by deferring outstanding loans by 12 months (bullet payment of PKR 3.5bn long term facility).

FINANCIALS

Income Statement (PKR mn)	Jun-19	Jun-20	Jun-21	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Net Sales	115,741	90,524	92,084	152,482	165,481	175,410	221,477	273,819	290,249	307,664	326,123	345,691
Market Share	*9%*	*7%*	*8%*	*7%*	*7%*	*7%*	*8%*	*9%*	*8%*	*8%*	*8%*	*7%*
YoY	25%	-22%	2%	66%	9%	6%	26%	24%	6%	6%	6%	6%
Cost of Sales	118,915	94,893	88,843	145,840	154,532	163,745	204,807	251,180	265,998	281,705	298,354	316,002
Gross Profit	**-3,174**	**-4,368**	**3,241**	**6,642**	**10,949**	**11,665**	**16,669**	**22,639**	**24,251**	**25,959**	**27,769**	**29,688**
GPM%	*-3%*	*-5%*	*4%*	*4%*	*7%*	*7%*	*8%*	*8%*	*8%*	*8%*	*9%*	*9%*
EBITDA	**-3,042**	**-4,070**	**3,930**	**2,285**	**6,137**	**6,505**	**13,546**	**21,761**	**23,066**	**24,450**	**25,917**	**27,472**
Margins%	*-3%*	*-4%*	*4%*	*1%*	*4%*	*4%*	*6%*	*8%*	*8%*	*8%*	*8%*	*8%*
Depreciation	761	841	980	980	980	980	3,521	7,336	7,523	7,722	7,932	8,155
EBIT	**-3,803**	**-4,911**	**2,950**	**1,305**	**5,157**	**5,525**	**10,025**	**14,425**	**15,543**	**16,729**	**17,985**	**19,318**
Finance Cost	1,443	1,995	1,311	1,483	3,071	5,111	10,591	14,589	14,188	13,808	13,288	12,668
EBT	**-5,246**	**-6,906**	**1,639**	**-178**	**2,087**	**415**	**-565**	**-165**	**1,355**	**2,921**	**4,697**	**6,650**
Taxation	576	686	702	-52	605	120	-82	0	0	0	0	0
Net Profit	**-5,822**	**-7,592**	**937**	**-126**	**1,482**	**295**	**-483**	**-165**	**1,355**	**2,921**	**4,697**	**6,650**
EPS	(19.8)	(24.5)	1.5	(0.2)	2.4	0.5	(0.8)	(0.3)	2.2	4.6	7.5	10.6

Balance Sheet (PKR mn)	Jun-19	Jun-20	Jun-21 E	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Current Assets	**22,896**	**13,821**	**15,189**	**24,736**	**26,311**	**30,587**	**34,188**	**42,517**	**45,300**	**47,190**	**50,287**	**53,083**
Trade Receivables	13,195	3,667	7,648	11,904	12,095	12,820	16,187	20,013	21,214	22,487	23,836	25,266
Inventories	9,447	7,964	7,181	12,243	13,455	14,257	17,832	21,870	23,160	24,528	25,977	27,514
Long Term Assets	**19,037**	**21,273**	**21,683**	**38,214**	**58,402**	**86,809**	**197,436**	**191,882**	**189,979**	**188,215**	**186,599**	**185,138**
Long Term Investments	62	65	65	65	65	65	65	65	65	65	65	65
Fixed Assets	18,975	21,208	21,618	38,149	58,337	86,744	197,371	191,816	189,914	188,150	186,533	185,073
Other Assets	947	358	726	726	726	726	726	726	726	726	726	726
Total Assets	**42,881**	**35,452**	**37,598**	**63,675**	**85,439**	**118,122**	**232,350**	**235,125**	**236,004**	**236,131**	**237,611**	**238,947**
Liabilities & Equity												
Current Liabilities	34,669	30,636	29,598	31,889	31,671	33,560	56,271	92,342	95,867	99,073	103,871	108,573
Long Term Liabilities	4,300	4,371	4,231	28,131	48,631	79,131	171,131	138,000	134,000	128,000	120,000	110,000
Other Liabilities	402	621	478	478	478	478	478	478	478	478	478	478
Total Liabilities	**39,371**	**35,627**	**34,307**	**60,498**	**80,780**	**113,169**	**227,880**	**230,820**	**230,344**	**227,550**	**224,348**	**219,051**
Paid Up Capital	2,940	3,150	6,300	6,300	6,300	6,300	6,300	6,300	6,300	6,300	6,300	6,300
Reserves & Others	569	-3,325	-3,009	-3,123	-1,641	-1,347	-1,830	-1,995	-640	2,281	6,963	13,596
Total Equity	**3,509**	**-175**	**3,291**	**3,177**	**4,659**	**4,953**	**4,470**	**4,305**	**5,660**	**8,581**	**13,263**	**19,896**

FINANCIALS

Cash Flows (PKR mn)	Jun-19	Jun-20	Jun-21 E	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
EBITDA	(3,042)	(4,070)	3,930	2,285	6,137	6,505	13,546	21,761	23,066	24,450	25,917	27,472
(Non-Operating Income)	253	167	637	-	-	-	-	-	-	-	-	-
Changes in NWC	6,168	17	(14,159)	8,507	1,793	2,388	(19,111)	(27,741)	(742)	(1,315)	(1,702)	(1,906)
Taxes Paid	(576)	(686)	(702)	46	(605)	(120)	82	-	-	-	-	-
Net Cash from Operations	**2,297**	**(4,906)**	**(11,568)**	**10,838**	**7,325**	**8,773**	**(5,483)**	**(5,981)**	**22,324**	**23,135**	**24,215**	**25,567**
CAPEX	(5,531)	(2,233)	(409)	(16,531)	(20,188)	(28,407)	########	-	-	-	-	-
Net Cash from Investments	**(5,531)**	**(2,233)**	**(409)**	**(16,531)**	**(20,188)**	**(28,407)**	**########**	**-**	**-**	**-**	**-**	**-**
Financial Exp.	(5,286)	(2,513)	(940)	(1,221)	(2,515)	(4,495)	(6,815)	(9,808)	(11,520)	(10,880)	(9,600)	(8,320)
Net Cash from Financing	**(5,286)**	**(2,513)**	**(940)**	**(1,221)**	**(2,515)**	**(4,495)**	**(6,815)**	**(9,808)**	**(11,520)**	**(10,880)**	**(9,600)**	**(8,320)**
Net Change in Cash	**(8,520)**	**(9,652)**	**(12,917)**	**(6,914)**	**(15,378)**	**(24,129)**	**########**	**(15,788)**	**10,804**	**12,255**	**14,615**	**17,247**

Key Ratios	Jun-19	Jun-20	Jun-21 E	Jun-22 E	Jun-23 E	Jun-24 E	Jun-25 E	Jun-26 E	Jun-27 E	Jun-28 E	Jun-29 E	Jun-30 E
Growth%												
Volumes	-3%	-24%	26%	3%	0%	0%	17%	14%	0%	0%	0%	0%
EBITDA		34%	-197%	-42%	169%	6%	108%	61%	6%	6%	6%	6%
Net Profit		30%	-112%	-113%	-1279%	-80%	-264%	-66%	-923%	116%	61%	42%
Margins%												
EBIT Margin	-3%	-5%	3%	1%	3%	3%	5%	5%	5%	5%	6%	6%
Net Profit Margin	-5%	-8%	1%	0%	1%	0%	0%	0%	0%	1%	1%	2%
Profitability%												
ROCE	-46%	-102%	37%	4%	10%	7%	6%	10%	11%	12%	13%	15%
ROAE		-455%	60%	-4%	38%	6%	-10%	-4%	27%	41%	43%	40%
ROAA		-19%	3%	0%	2%	0%	0%	0%	1%	1%	2%	3%
ROE	-166%	4342%	28%	-4%	32%	6%	-11%	-4%	24%	34%	35%	33%
Leverage%												
D/A	0.4	0.5	0.4	0.4	0.6	0.7	0.8	0.8	0.7	0.7	0.7	0.6
D/E	5.4	N/A	4.2	8.9	10.4	16.0	41.5	41.6	31.0	19.8	12.3	7.7
Interest Coverage	N/A	N/A	3.0	1.6	2.0	1.3	1.3	1.5	1.6	1.8	1.9	2.2
Debt Service Coverage	N/A	N/A	3.0	1.6	2.0	1.3	1.3	0.7	0.7	0.8	0.8	0.9
Multiples(x)												
P/E	N/A	N/A	15.1	N/A	9.6	48.0	N/A	N/A	10.5	4.9	3.0	2.1
P/B	4.0	N/A	4.3	4.5	3.0	2.9	3.2	3.3	2.5	1.7	1.1	0.7

Management Team

Mr. Khaldoon Bin Latif
Chief Executive Officer

Mr. Ayub Khuhro
Chief Investment Officer

Mr. Umer Pervez
Director Research

Mr. Ghazil Jabbar
Head of Private Equity

Mr. Umair A. Khan, CFA
Head of Investment Advisory

Mr. Omer Bin Javaid
Chief Distribution Officer

Mr. Imad Ansari
Head of Risk Management

Mr. Khurram Salman
Head of Compliance and Internal Audit

Rating by VIS
AM2+
Very Good Quality Management

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