



Coal Mining & Trading Sector Study



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Coal Mining & Trading

Global Overview

- Coal is a combustible organic rock, composed mainly of carbon, hydrogen and oxygen. It is formed from vegetation, which has been consolidated between other rock strata and altered by the combined effects of pressure and heat over millions of years to form coal seams.

Coal uses can be classified into two broad categories:

- Metallurgical coal** (or “coking coal”) is mined to produce the carbon used in steelmaking and allied products.
 - Thermal coal** is used to make steam that generates electricity and provide thermal energy.
- The global coal reserves are estimated to be over approximately ~1,100bln tons in CY21. United States holds the highest reserves of coal in the world of ~249bln tons, 23% of the global share. China is the biggest producer and consumer of coal, but still China comes on number 4 in terms of global coal reserves. Taking into account the rebound in global industrial output, overall coal demand worldwide is expected to grow, bringing it close to the record levels it reached in CY13 and CY14. Coal’s share of the global power mix in CY21 was ~36%.

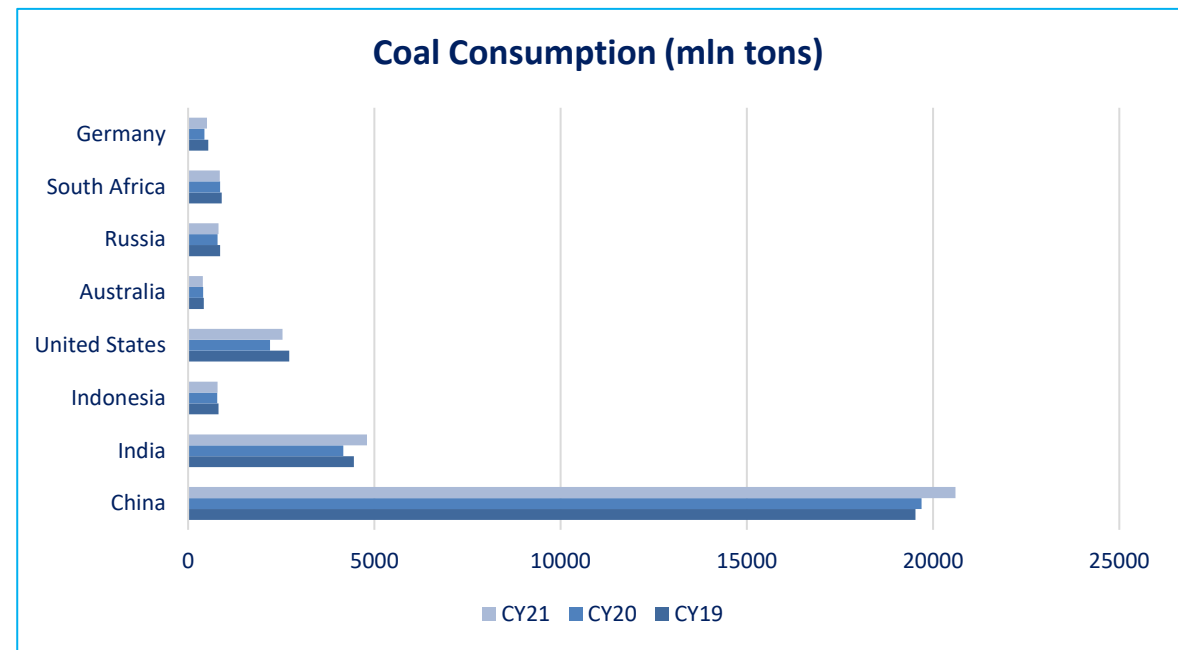
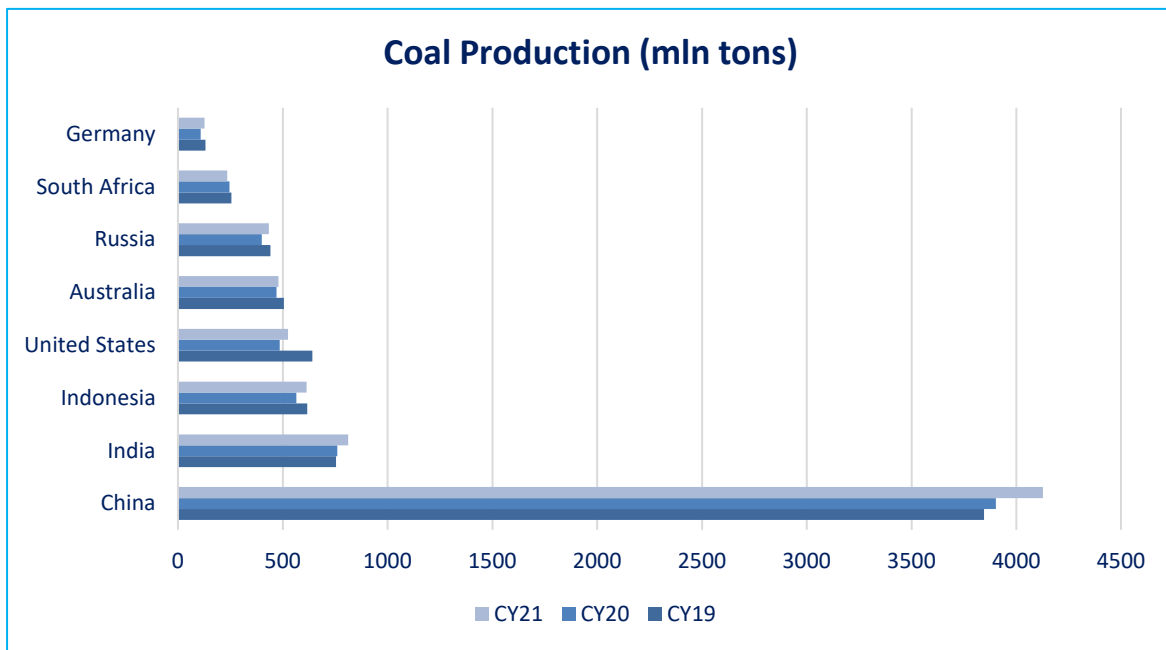
Country	Reserve (bln Tons)	Share in Global Reserves
USA	249	23%
Russia	162	15%
Australia	150	14%
China	143	13%
India	111	10%
Indonesia	35	3%
Germany	36	3%
Ukraine	34	3%
Poland	28	3%
kazakhstan	26	2%
Others	99	9%
Total	1,100	100%

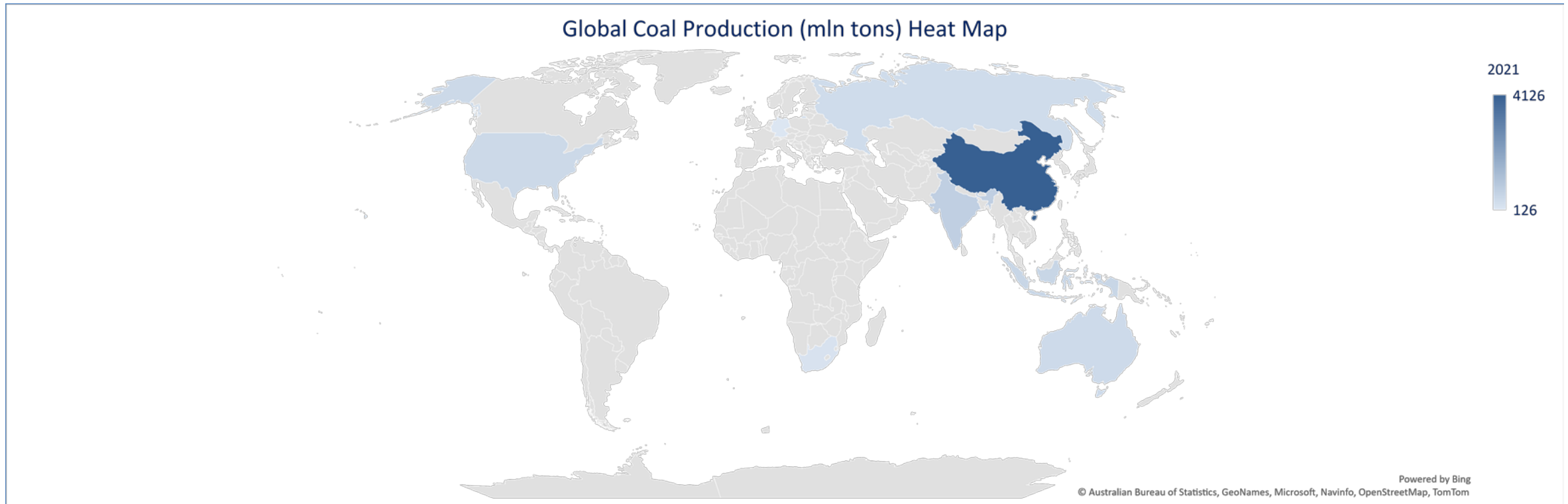


Coal Mining & Trading

Global Overview | Production and Consumption

- By CY25, global coal demand is forecasted to flatten out at around ~7.4bln tons due to environmental concerns. Usage of coal is expected to vary by region over the next five years. In Europe and North America, coal continues its decline after a temporary uptick in CY21. India and China are expected to see their coal consumption increase because of their reliance on coal as an energy source.
- The prominent segment that drives the demand is industry usage. A huge chunk of global coal is used towards electricity generation, cement production and metallurgy. Rising environmental concerns about coal consumption due to its carbon content and green house effect resulting in global warming is a major threat to demand, going forward. The world is paving its way towards renewable/cleaner energy sources. However, coal consumption is still expected to remain stable in the short-term due to limited technology and barriers in renewable sources.





- China's influence on coal markets is difficult to overstate. China's power generation, including district heating, accounts for one-third of global coal consumption. China's overall coal use is more than half of the global total. India's growing appetite for coal is set to add 130mln tons (MT) to coal demand between CY21 and CY24. Coal prices reached all-time highs in early October CY21, with imported thermal coal in Europe, for example, hitting USD~298 per ton.



Coal Mining & Trading

Industry Snapshot

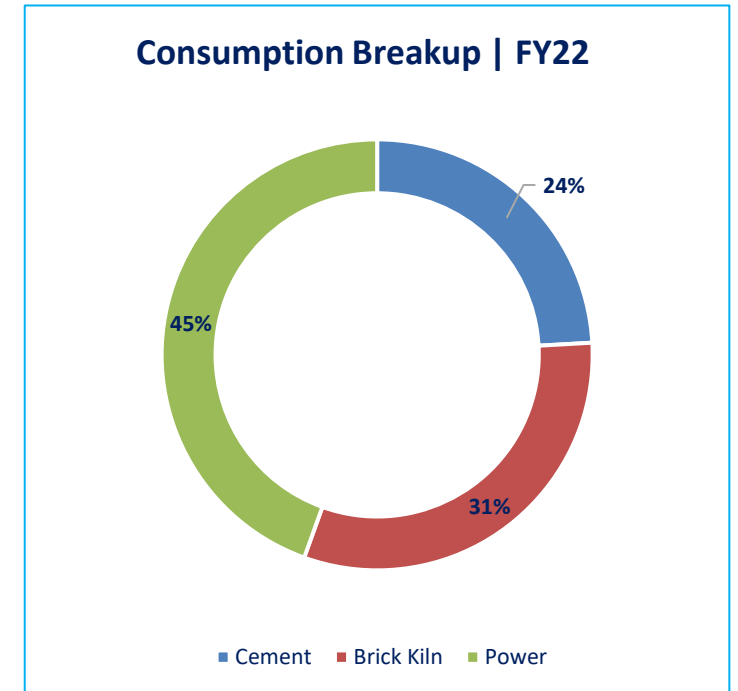
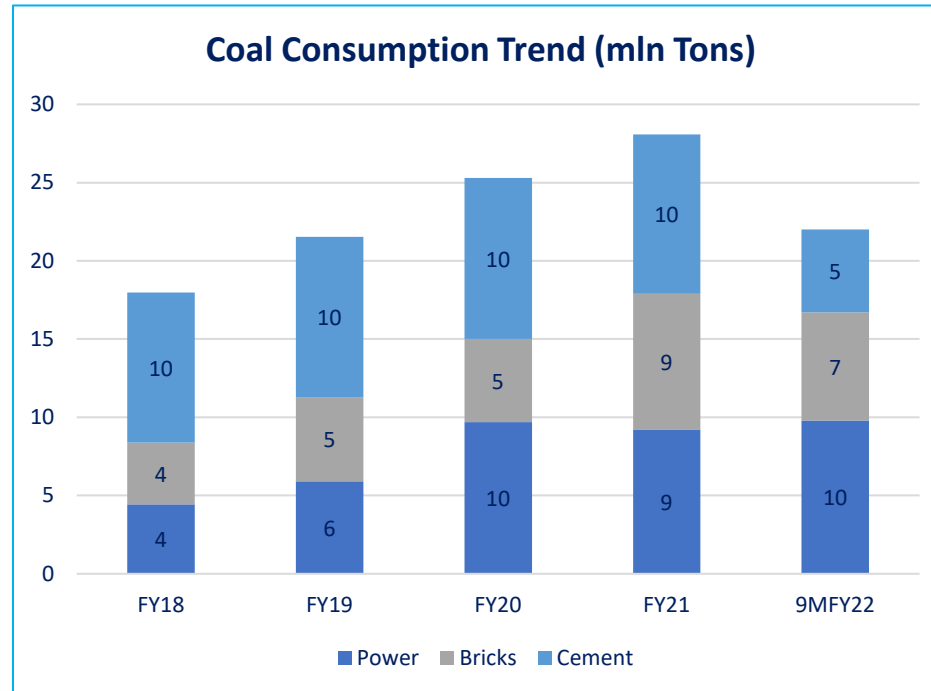
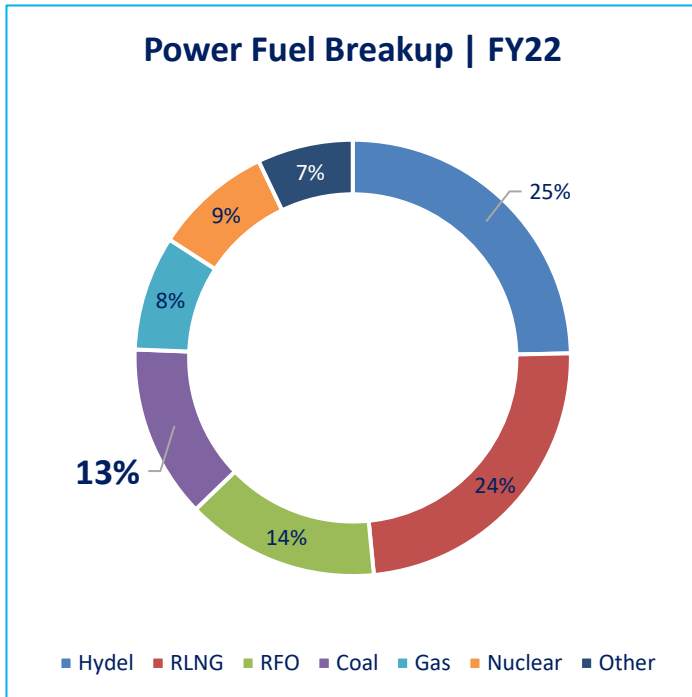
- Coal in Pakistan is made available broadly from two sources, extraction and imports. Exports of coal to other countries are almost non-existent.
- Pakistan has an estimated ~185bln tons of coal reserves, which are largely found in Sindh. These account for ~99% of the total coal reserves in the country.
- The local price is linked to international price of coal, exposing the consumers to international price fluctuations and exchange rate risk.
- During 9MFY22, the import of coal stood at ~12.2mln tons. The consumption of coal in cement and other industry has significantly declined from ~37.6% in 9MFY21 to ~24.1% during 9MFY22.
- In terms of sectoral usage, power sector uses most of the coal and the share has increased to ~44.5% during 9MFY22 from ~42.7% during the corresponding period last year.

Particulars	FY21	9MFY22
Coal Consumption (mln tons)	28	22
Local Production (mln tons)	9	10
Import (mln tons)	19	12
Regulatory Authority	Ministry of Energy (Petroleum Division)	
Association	All Pakistan Mines & Minerals Association	
Coal Used in Power Generation (mln tons)	11.9	9.8
*Avg. Coal Price (USD/Ton) (as at period end)	121.5	284.9

Coal Mining & Trading

Demand

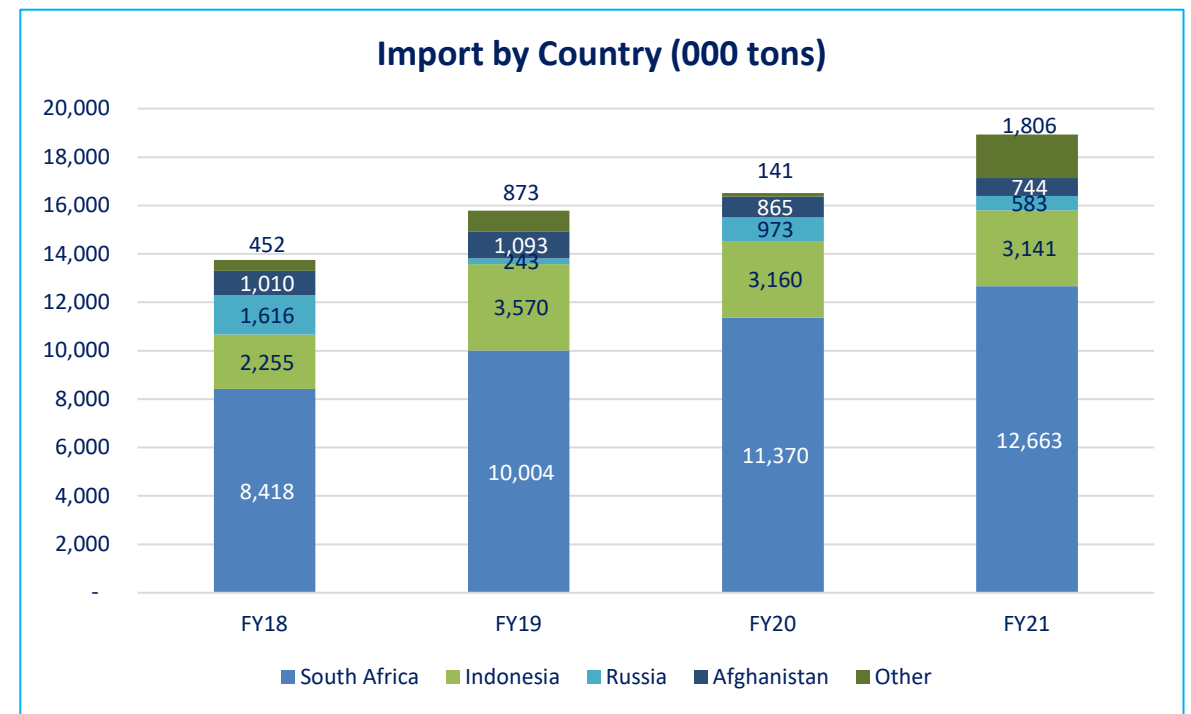
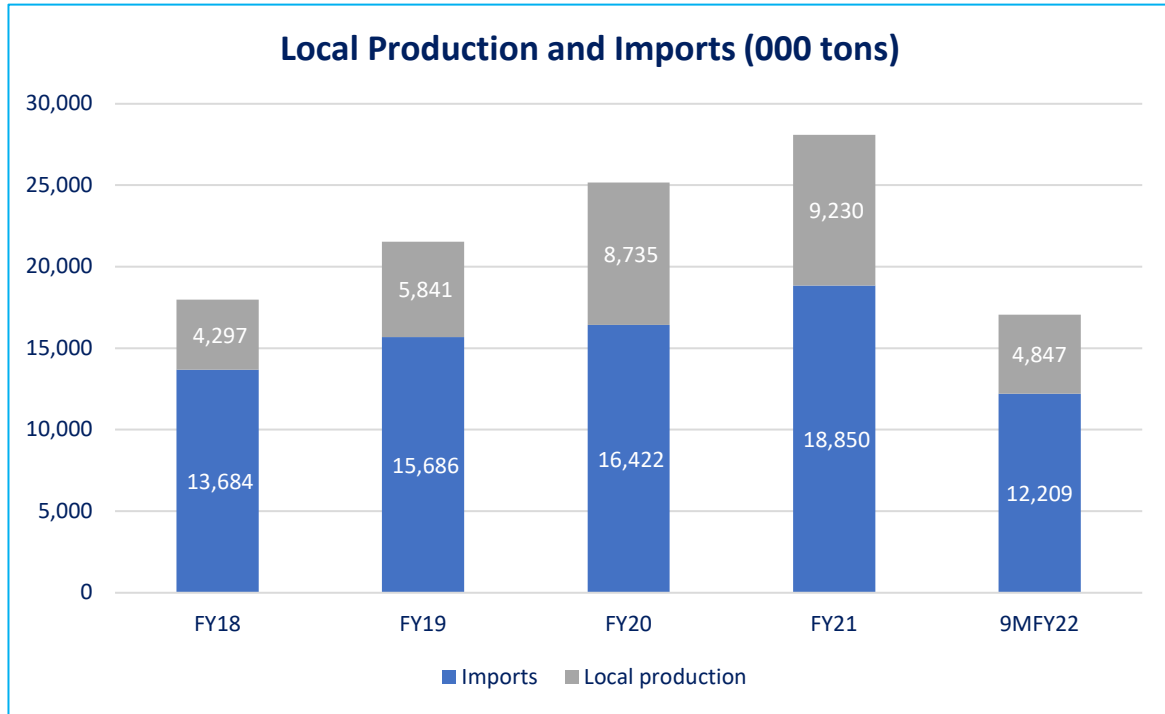
- The percentage share of hydel in total installed fuel-wise capacity has marginally reduced to ~24.7% during 10MFY22 as compared to its share in FY21. The contribution of RLNG in the installed capacity has increased to ~24% in 10MFY22 from ~20%. The percentage share of coal remained the same, although there is an increase in the installed MW from ~4,770MW during 10MFY21 to ~5,332MW during 10MFY22.
- Cement accounts for ~31% of the total coal consumed in FY22 (FY21: ~38%). With an uptick in economic activity, especially from the construction side, demand is expected to receive a boost in the coming years. Bricks demand is also linked to construction and increased demand pull is also expected as bricks production is increased to match construction demand.



Coal Mining & Trading

Supply

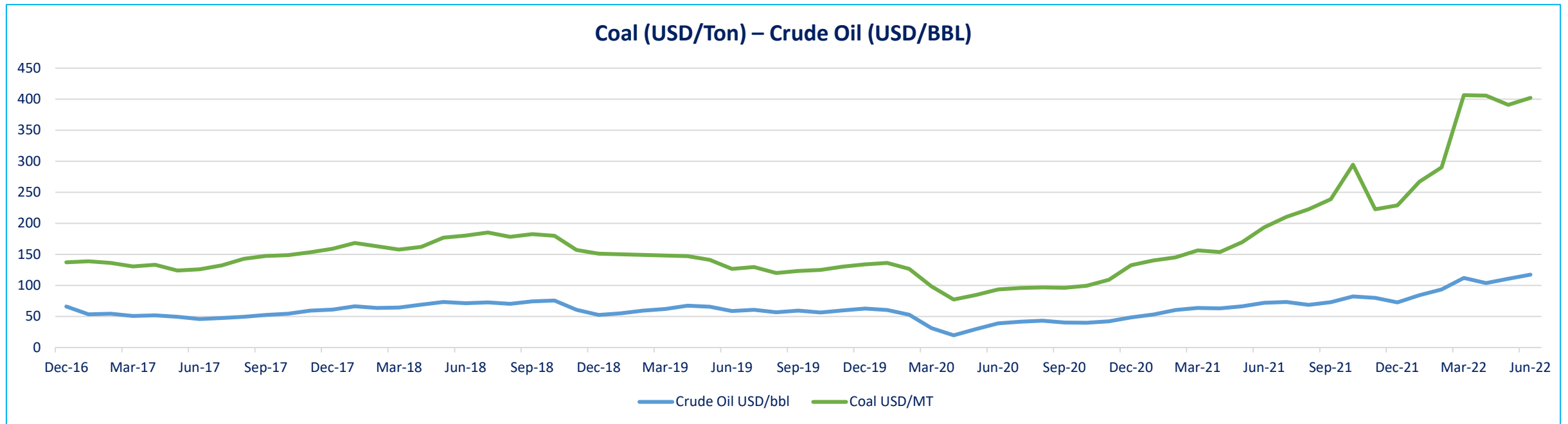
- The share of imported coal has increased over the years in the supply mix of the country. Almost ~67% of the total imported coal was imported from South Africa in FY21, while Indonesia, Russia and Afghanistan make up ~17%, ~3% and ~4%, respectively.
- Thar coal is contributing ~1,320MW, while imported coal contribution in electricity generation is ~3,960MW which is around ~75% of the total electricity generation from coal in the country. Electricity generation configuration is relying heavily on the imported coal and this trend is likely to change as units based on the Thar field are added to the electricity generation mix.



Coal Mining & Trading

Business Risk | Pricing

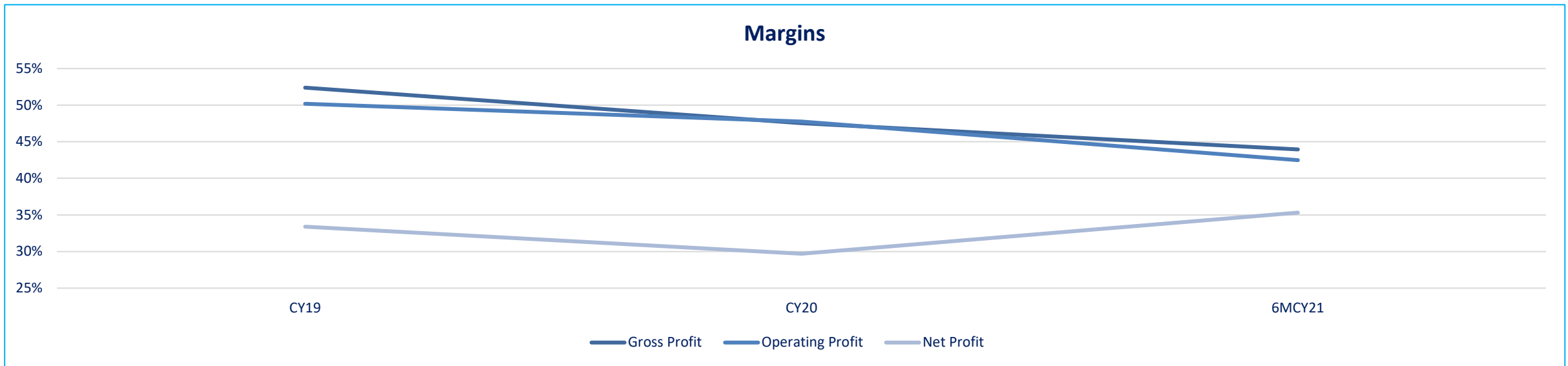
- The glut in coal and oil markets has driven higher cost producers out of business. Three of the six largest coal exporters (Russia, South Africa and Colombia) had their currencies depreciated against USD making them more competitive.
- International crude oil plays a vital role in determining the global coal price. Rising concern about global warming and negativity towards fossil fuels have led similar effect on the price of both coal and oil. The trend is observable in the price movement of these two fossil fuels as it largely remains in the same direction. Lately, coal prices have grown at a steeper rate than crude oil. As major portion of the energy products is imported, both sectors are exposed to exchange rate exposure. There is a sharp increase in coal prices from May-21 from USD~91/ton and up to USD~304/ton in Apr-22.



Coal Mining & Trading

Business Risk | Mining

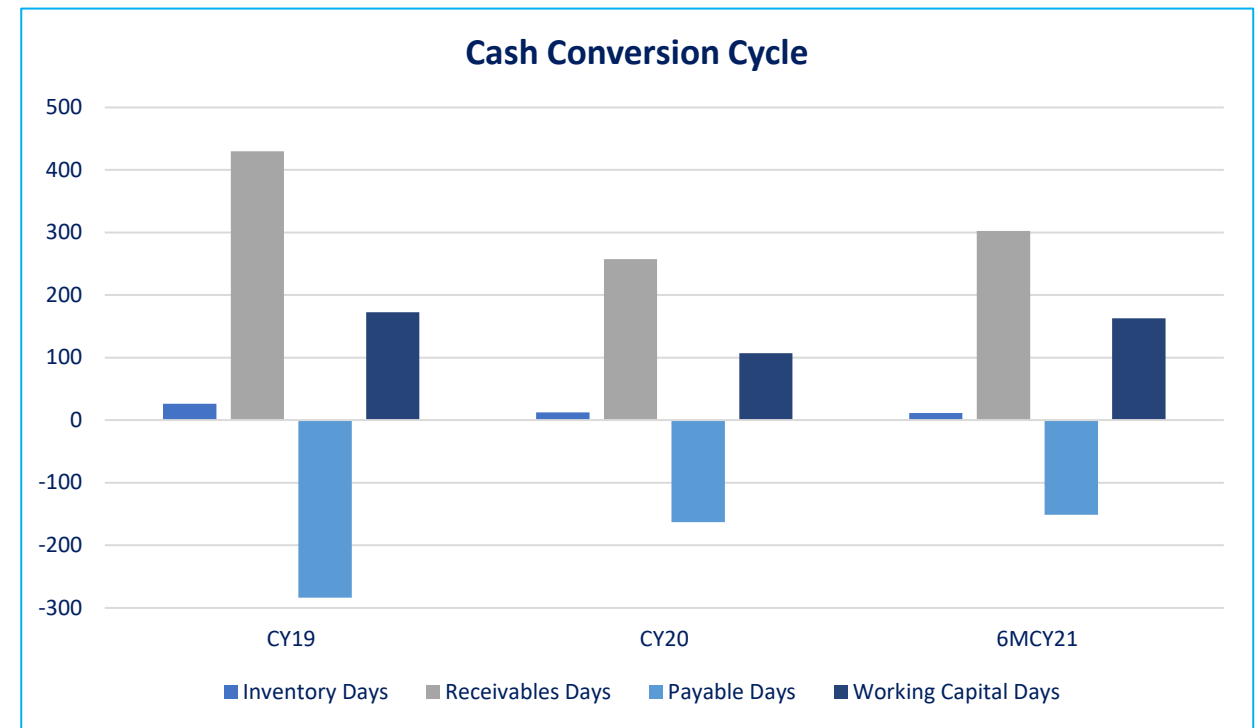
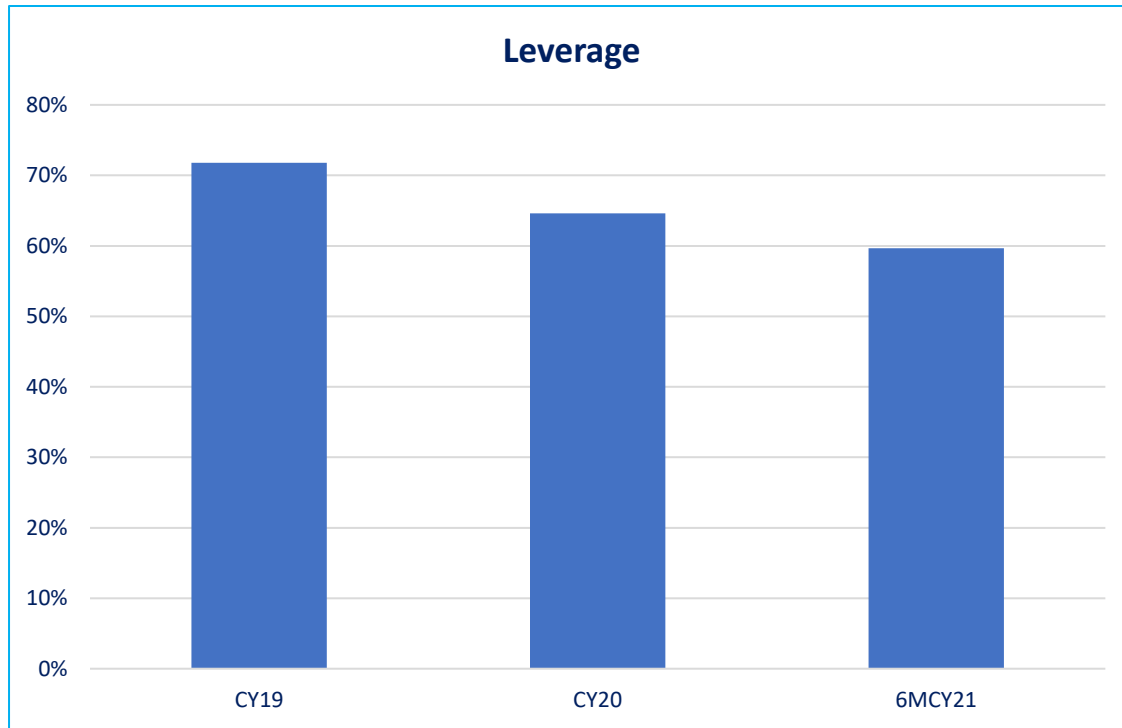
- The primary operation of mining companies is mining of coal. Sindh Engro Coal Mining Company (SECMC) is the largest coal mining player in the sector having an annual mining capacity of ~3.8mln and it provides lignite quality coal to power producers in Pakistan.
- Mining Segment has operations planned in different phases (blocks), due to which operations and management (contractors) cost is high. The portion of depreciation in total cost accounts for ~29%, mining business is highly capital intensive in nature, as large machinery and heavy equipment is required. Meanwhile, smaller players have labor intensive operations.
- Net profit significantly increased owing to lower cost of financing in 6MCY21 for the mining segment. With the rising international coal prices and increasing dependence on coal for power generation is expected to maintain robust margins.



Coal Mining & Trading

Financial Risk | Mining

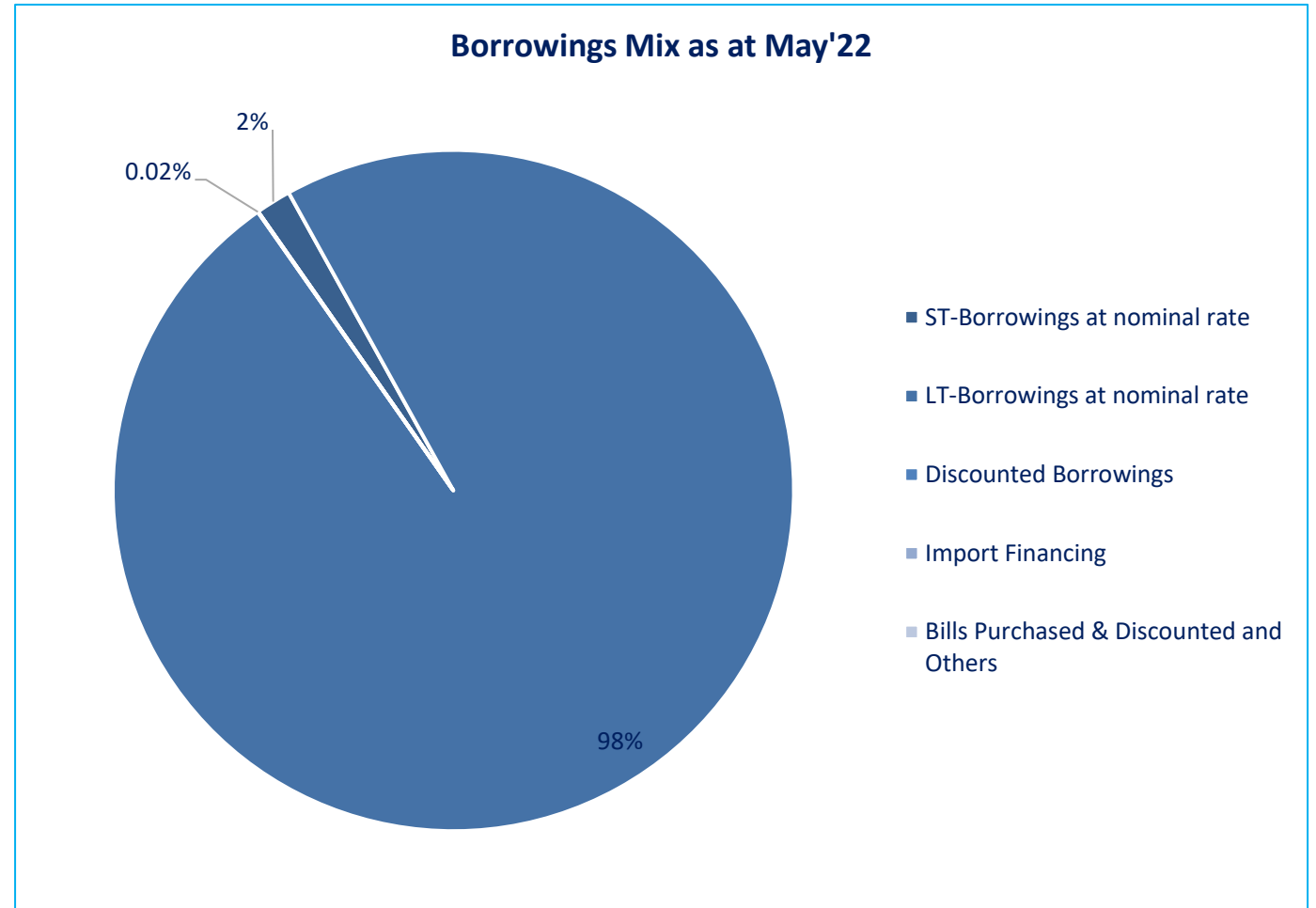
- The cash conversion cycle increased from ~107 days in CY20 to ~162 days in 6MCY21 owing to significant increase in receivables. Receivables days stood at ~258 days in CY20 and increased to ~302 days in 6MCY21.
- Leverage ratio has showed improvement in the last two years as it declined from ~72% in CY19 to ~60% in 6MCY21. However, the sector still remains highly leveraged. Interest coverage also showed significant improvement in 6MCY21 owing to reduced interest cost in low interest rate environment. Overall, the financial risk of the segment remains high.



Coal Mining & Trading

Financial Risk | Mining

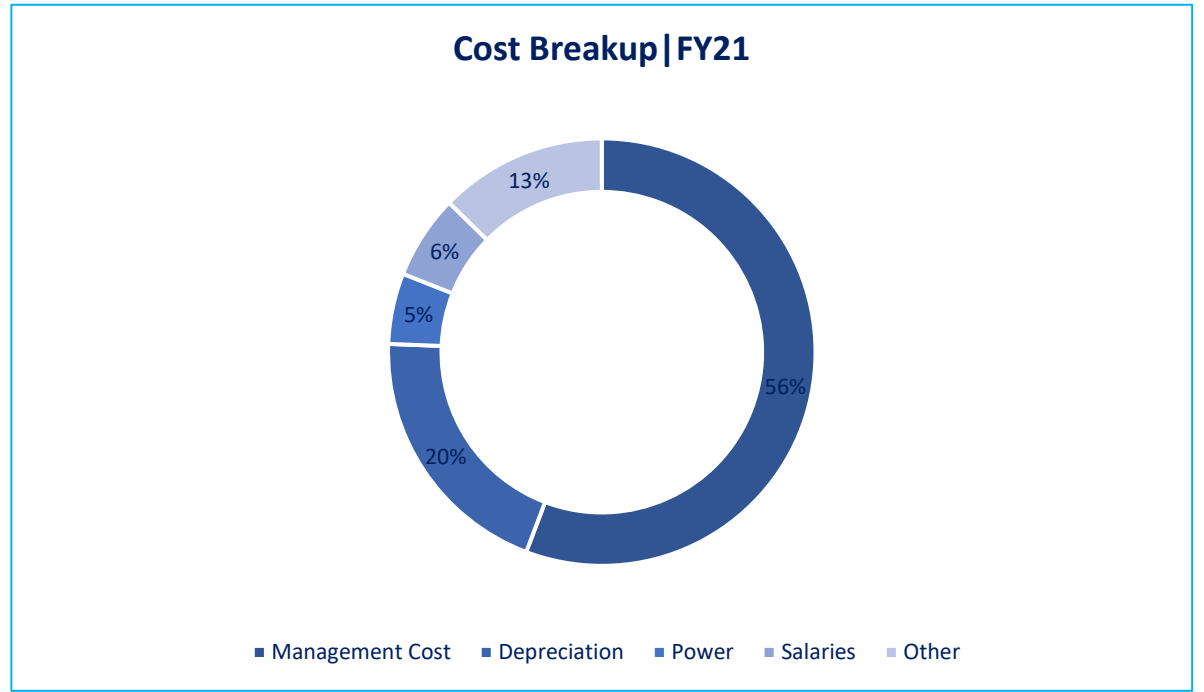
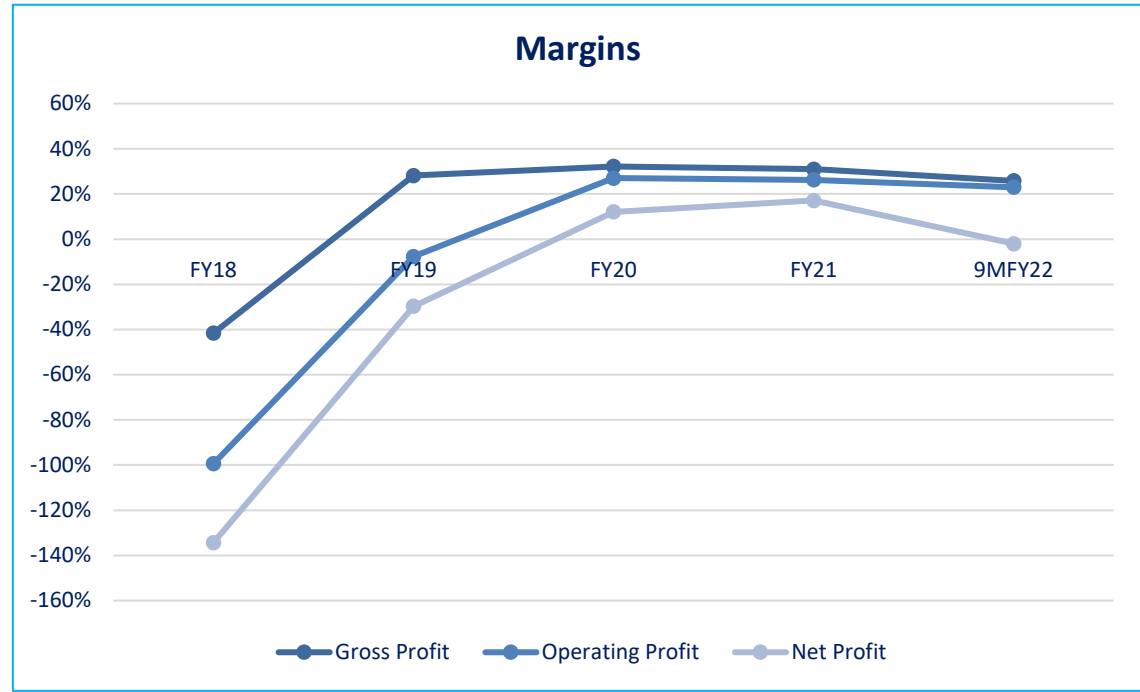
- The coal mining segment borrowings as at May'22 stood at PKR~41bln (May'21: PKR~32bln), posting a growth of ~28% YoY.
- Sector LT-borrowings at nominal rate grew by ~28% YoY and stood at PKR~40bln; representing ~98% of the total borrowings mix.
- Sector ST-borrowings at nominal rate declined by ~20% YoY and stood at PKR~0.7bln, holding the second largest share of ~2% in the borrowings mix.
- Sector discounted borrowings in terms of LTFF, TERF and EFS stood at PKR~8mln; representing a share of ~0.02% in the borrowings mix after declining by ~83% YoY.



Coal Mining & Trading

Business Risk-Terminal

- The primary operations of the terminal segment in the coal sector is the handling of imported coal on the port. The total coal handling capacity stands at ~12mln tons of coal and ~4mln tons of clinker/cement.
- In FY21, management cost constituted major portion of the terminal operations, followed by depreciation, power and salaries. Dominant by a single player in the segment, competitors presence is non existent.
- On the back of rising demand and USD linked revenue tariff, the revenue and margins of the segment are expected to remain robust.

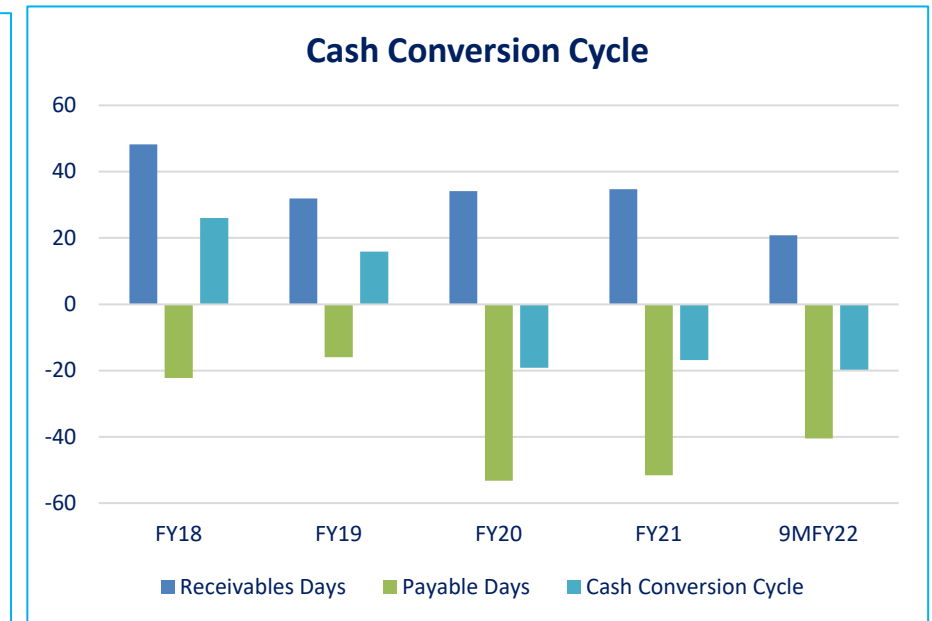
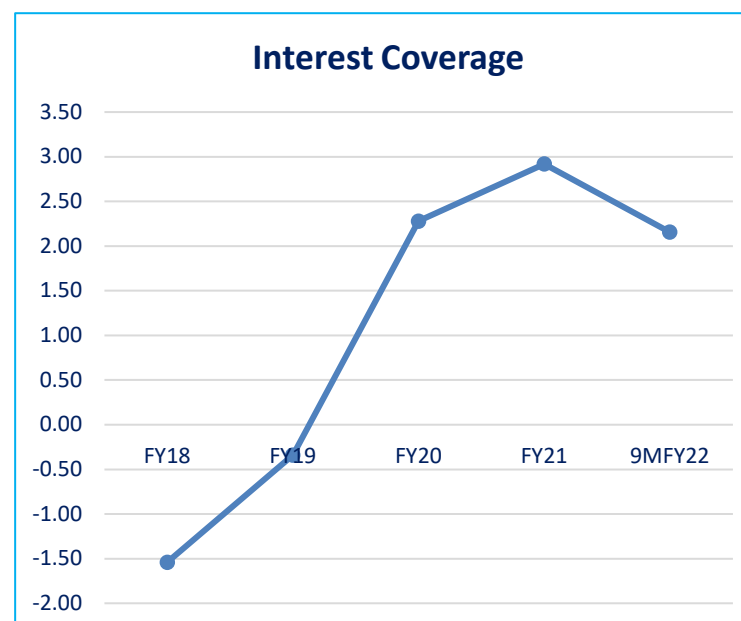
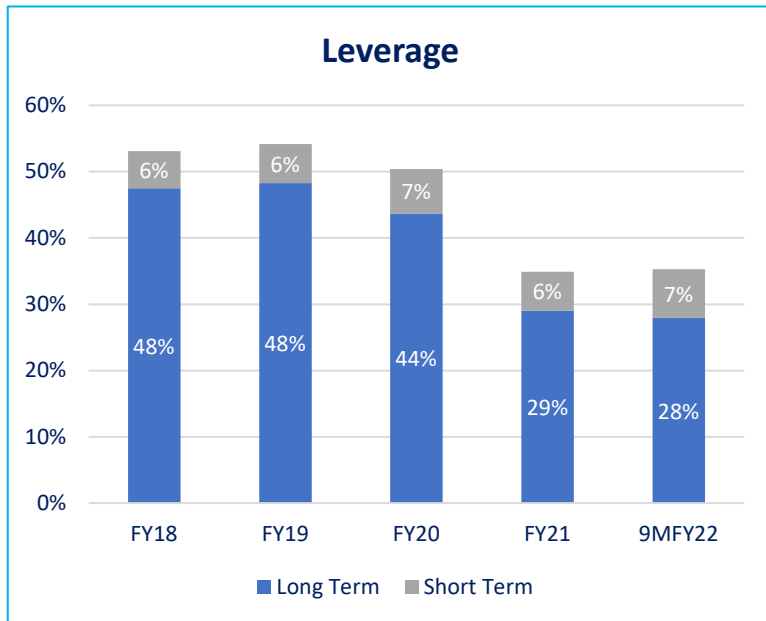


Note: Data based on PACRA rated client.

Coal Mining & Trading

Financial Risk | Terminal

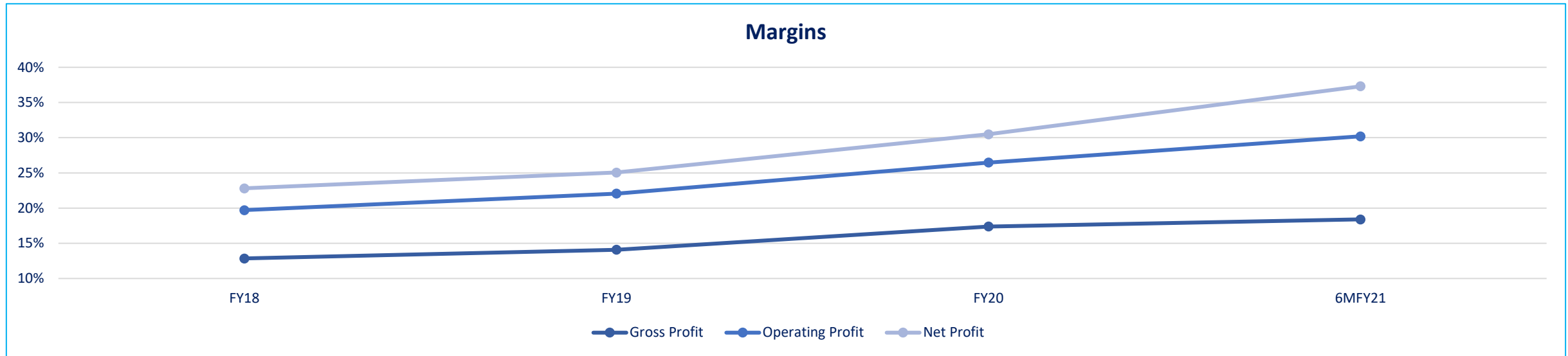
- Terminal segment has no inventory of its own. There is only one commercial coal terminal in the country which started its operations in FY17, after which its cash conversion cycle significantly improved over the years from positive ~26 days in FY18 to negative ~17 days in FY21.
- Leverage ratio declined from highly leveraged, ~53% in FY18 to moderately leveraged, ~35% in FY21. Interest coverage ratio improved significantly from negative ~1.54 times in FY18 to positive ~2.16 times in 9MFY22. The total borrowing mix comprise of ~79% long term and ~21% short term borrowing at 9MFY22.
- With improving Cash Conversion Cycle, leverage ratio and interest coverage, the financial risk of the terminal segment is considered strong.



Coal Mining & Trading

Business Risk | Trading

- Trading segment engages in the activity of storage and supplying coal to various factories throughout the country, mainly cement, steel and textile.
- Due to the nature of trading operations, raw material makes up the biggest portion to its cost of sales, followed by transportation. Coal is exposed to exchange rate risk and international coal price which bear the risk loss on inventory if prices declined and vice versa.
- The margins have been steadily increasing owed to overall increase in coal consumption leading to higher volumes in the last four years. Trading segment operates with tight margins due to competition from large number of players. Due to presence of competitors and lower barriers to entry, increase in cost of operation cannot be fully passed on to consumers at times.

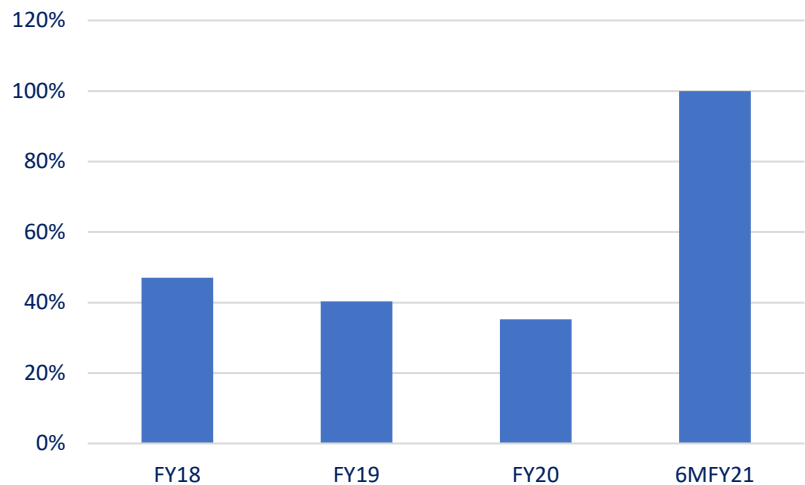


Coal Mining & Trading

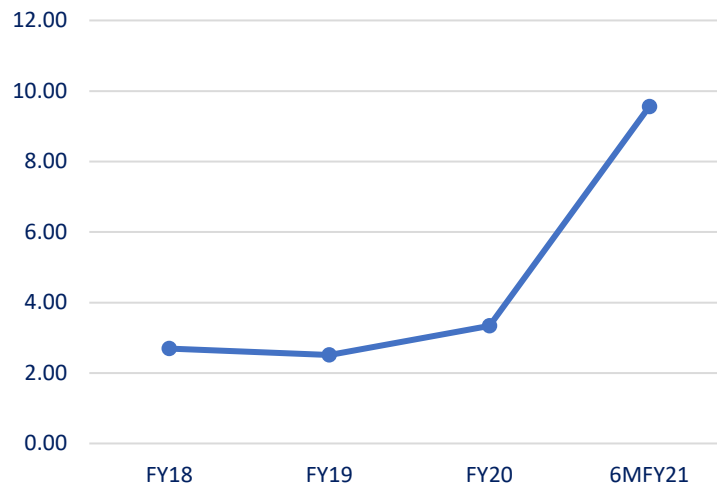
Financial Risk | Trading

- Cash Conversion Cycle has increased in 6MFY21 to ~51 days from ~44 days in FY20. The increase in cash conversion cycle is majorly due to decline in payable days from ~78 day in FY20 to ~50 days in 6MFY21.
- Leverage ratio has shown an exponential increase in the last six months mainly because of an increase in proportion of short term debt in total borrowing mix. However, over the three years tenure, leverage ratio declined from ~47% to ~35% between FY18 to FY20, Interest coverage has also improved in the three and a half year tenure from ~2.7 times in FY18 to ~9.56 times in 6MFY21.
- Overall, the trading segment of the coal sector is moderately leveraged.

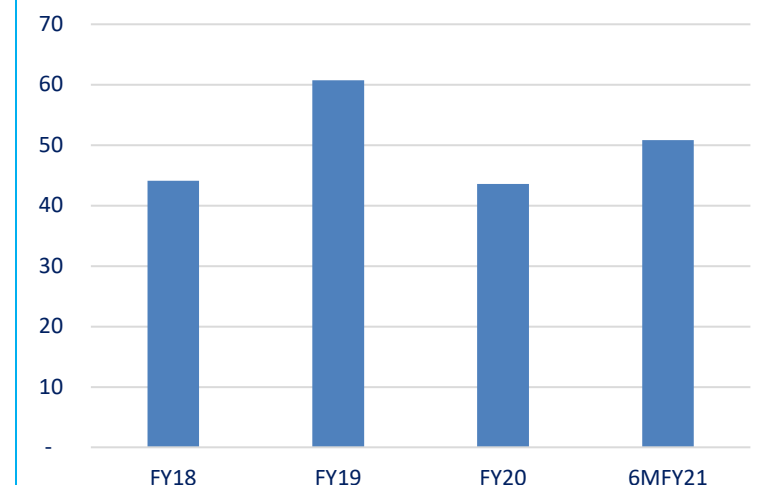
Leverage



Interest Coverage



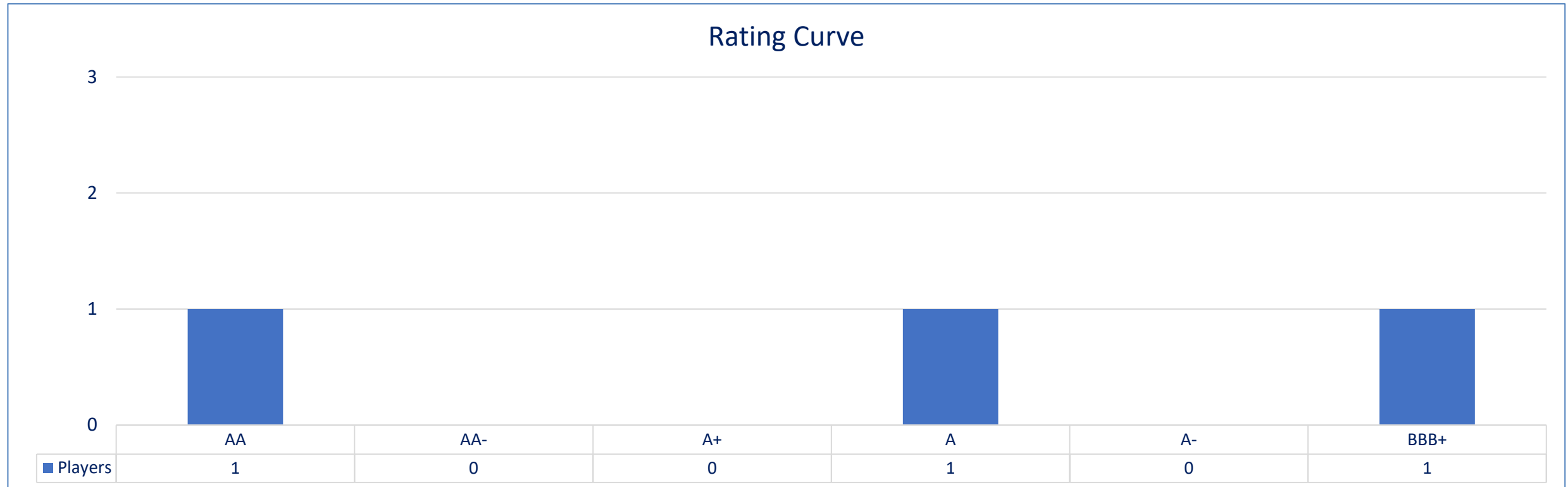
Cash Conversion Cycle



Coal Mining & Trading

Rating Curve

- PACRA rates three players of Coal Mining & Trading sector. One player's rating was upgraded from A- to A. No change in rating was observed for the remaining two players.
- Rating bandwidth is from AA to BBB+



Coal Mining & Trading

Duties & Taxes

- The duty structure is designed to keep the cost of coal low mainly to support power and cement sector, mainly its biggest consumers.

Duty Structure FY23:

HSD code	Product	Custom Duty		Sales Tax		Income Tax Advance		Additional Custom Duty		Regular Duty	
		FY23	FY22	FY23	FY22	FY23	FY22	FY23	FY22	FY23	FY22
2701.1200	Bituminous Coal	3%	3%	17%	17%	4%	11%	0-2%	2%	0%	0%
2701.1900	Other Coal	3%	3%	17%	17%	4%	11%	0-2%	2%	0%	0%
2704.0010	Coke of Coal	3%	3%	17%	17%	2%	11%	0-2%	2%	0%	0%



Coal Mining & Trading

Porters 5 Forces Model

POTENTIAL NEW ENTRY



- **Mining** | Low | Regulated and licensing.
- **Terminal** | Low | Huge investment and licensing.
- **Trading** | High | Less capital intensive.

BUYER Power



- **Mining** | Low | Contract based customer base.
- **Terminal** | Low | PIBT only commercial purpose inbound terminal.
- **Trading** | High | Multiple coal suppliers in the country.

SUBSTITUTES



- **Mining** | Low | Homogenous source .
- **Terminal** | High | Risk of government policies to use local coal.
- **Trading** | Low | Homogenous source.

SUPPLIER Power



- **Mining** | Low | Mining contracts reduced uncertainty of supply
- **Terminal** | Low | PIBT only commercial purpose inbound terminal.
- **Trading** | High | Reliance on local and imported coal.

COMPETITIVE RIVALRY



- **Mining** | Low | Small large scale of miners
- **Terminal** | Low | PIBT only commercial purpose inbound terminal.
- **Trading** | High | Multiple large and small scale trading companies.



Coal Mining & Trading

SWOT



Outlook | Stable

- According to provisional estimates, Pakistan witnessed a real GDP growth of ~6.2% in FY22 (FY21: ~6.5%). The large scale manufacturing sector witnessed a provisional growth of ~10.5% in FY22 (FY21: ~11.5%). Moving forward, the Ministry of Finance projects real GDP growth to slow down to ~5.0% in FY23.
- Coal is a major source that fuels the economy. The two biggest consumers of coal in Pakistan are power and cement sector. Pakistan holds approximately ~185bln tons of coal reserve. ~99% of coal reserves are found in Sindh.
- Although in FY22 Pakistan's cement exports have declined by ~44% YoY, but the local market largely remains stable. The construction industry on average contributes ~2.8% to the GDP and the local demand is showing resilience despite mounting cost pressures.
- Pakistan for the first time was able to export cement to USA which is facing massive commodity shortage due to highest development budget. It opens up a new avenue for Pakistan cement manufacturers, previously they were just exporting to Bangladesh, Afghanistan, India and African countries. This, in turn, reflects promising demand prospects for imported coal in the country, thus boosting the terminal handling segment.
- On the other hand, Power Sector is one of the major demand hubs for local coal in the country. Overall, thirteen power generation projects of 11,648 MW are being facilitated by PPIB under CPEC. These include four hydropower projects of 3,428 MW, five Thar-coal based projects of 3,960 MW and four imported coal-based projects of 4,260 MW.
- Pakistan has an abundance of coal but due to its lower carbon content, major consumers prefer imported coal, which has higher heating value and results in less residue slag, so the sector is exposed to fluctuation international coal prices and exchange rate movements.
- Although the global coal prices have spiked up exorbitantly in the last year, the price pass through ability of cement manufacturers and other allied Industries keeps their margins intact. However, it does take a toll on the demand level as costs of construction shoot up.



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