Shipping

Sector Study

June 2022

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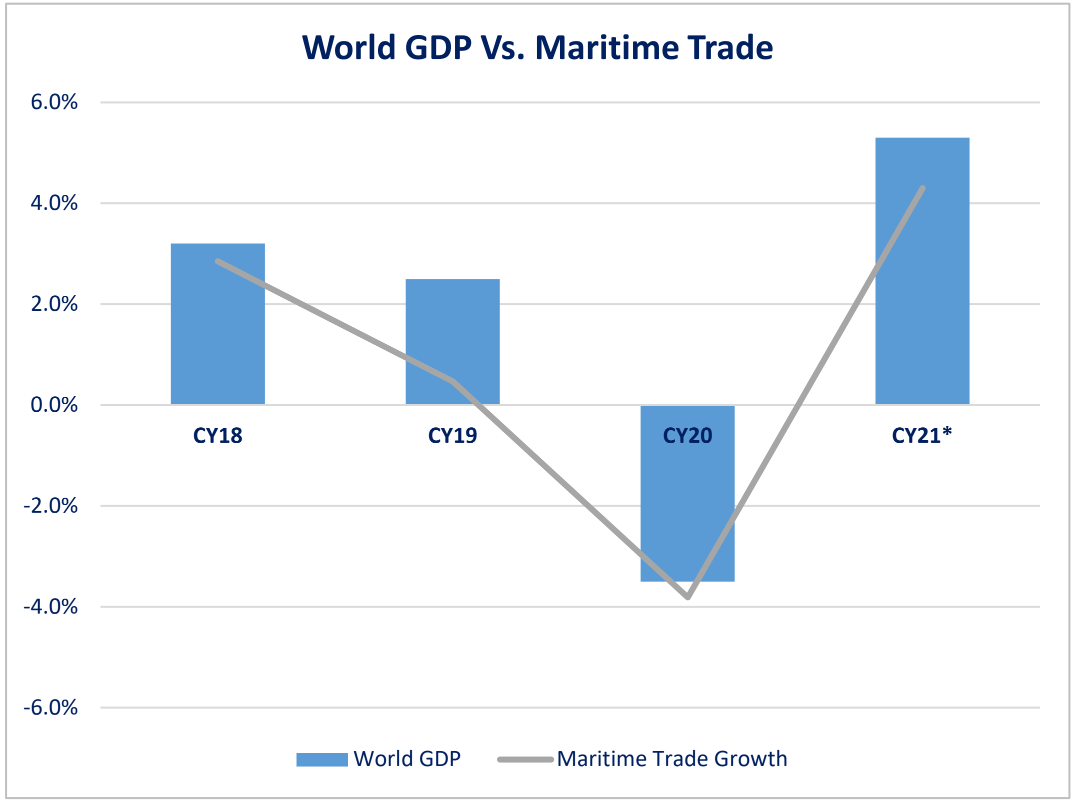
Global Overview

- Shipping industry plays an essential role in the global trade. It accounts for at least 90% of the international bulk transportation of raw materials, commodities, dry and liquid goods, perishable food items, manufactured goods and capital goods. Intercontinental trade would have been negligible if it were not for the shipping industry.
- During CY21, the world shipping fleet increased to ~99,800 ships, a rise by 1,660 units since CY20 (~98,140 ships). The capacity of the ships is equivalent to 2.13 billion DWT.
- However, the deliveries of the new ships declined by ~12% in CY20 owing to the slowdown amid pandemic and induced labor shortages in the first half of the year.
- Since the shipping sector operates globally, its regulations are agreed, adopted and implemented on a global level through the regulatory body, International Maritime Organization (IMO) in the United Nations system.



- Maritime trade generally moves in tandem with the World Gross Domestic Product (GDP). After a decline of ~3.8% in CY20, seaborne trade is projected to grow by ~4.3%* in CY21, following a similar trend to the GDP as World GDP recovered by ~5.3% in CY21 after a negative growth of ~3.5% in CY20.

*Based on forecasted numbers.

Source: World Bank, Review of Maritime Transport, 2021

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Global Statistics

- Combined ownership of the ships around the globe stands at USD~985bln as of January'21 with the highest share of Japan amounting to USD~104bln.
- Trade volume by the ships declined by 3.8% to 10.6bln MT in CY20 as opposed to 11.1bln MT in CY19. The projection shows the trade volume to rise to 11.1bln MT in CY21.
- Average age of the ships around the globe is around 22 years. The highest proportion is attributed to 5 to 9 years old ships.
- Asia contributes the highest of ~54% to the maritime trade while Greece maintains its position at the top in terms of carrying capacity around the world.
- Panama, on the other hand, grabs the highest position as a leading flag registration country in terms of DWT.

Maritime Trade Growth	Total Global Fleet	Capacity
4.3%* In CY21	**99,800** Ships	**2,135** Million DWT

Trade Volume	Average Age	Highest Proportion
11.1* Billion Metric Tons	**21.6** Years	**5-9** Years Old Ships

Highest Maritime Trade Share	Top Owners – Carrying Capacity	Leading Flag Registration (DWT)
Asia 54%	**Greece** (17.6%)	**Panama** (16.1%)

Latest data available is for CY20
*Based on forecasted numbers.

Source: Review of Maritime Transport 2021

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Global Statistics

- Total trade volume loaded for CY20 stood at ~10.6bln MTs as opposed to ~11.1bln MTs in CY19. The volume of cargo discharged for both years was nearly similar to volume of cargo loaded; and can be seen in the table on the right.
- On the other hand, the share of the developing economies maintained its proportion of ~59% in terms of cargo loaded during CY20 while the share of the developed economies remained stagnant at ~41%.
- During CY20, developing economies constituted almost ~69% to cargo discharged against a share of ~66% in CY19. Whereas, the share of developed economies declined by ~3% from ~34% in CY19 to 31% in ~CY20.

Seaborne Trade Statistics | CY20

(In Million Metric Tons)		Cargo Type - Loaded				Cargo Type - Discharged			
Economy	Year	Crude oil	Other tanker trade	Dry cargo	Total goods	Crude oil	Other tanker trade	Dry cargo	Total goods
World	CY20	1,716	1,202	7,730	**10,648**	1,864	1,222	7,545	**10,631**
	CY19	1,860	1,303	7,908	**11,071**	2,023	1,320	7,712	**11,055**
Developing regions	CY20	1,290	772	4,269	**6,331**	1,131	852	5,403	**7,386**
	CY19	1,407	826	4,335	**6,567**	1,121	857	5,299	**7,277**
Developed regions	CY20	426	430	3,461	**4,317**	732	370	2,142	**3,245**
	CY19	454	477	3,573	**4,503**	902	463	2,413	**3,778**

Latest data available is for CY20

Source: Review of Maritime Transport 2021

Types of Ships

Container Ships

A ship structured specifically to hold huge quantities of cargo compacted in different types of containers.

Bulk Carrier

The cargo transported in such ships is loose cargo i.e. without any specific packaging to it and generally contains items like food grains, ores etc.

Tanker Ships

Specialized ships for carrying a large amount of liquid cargo. They are further sub-divided into different types
i.e. Oil Tankers, Liquefied Gas Carriers etc.

Roll-on Roll-off Ships

These are the ships that are used to carry wheeled cargo i.e. Cars, trucks, buses etc.

Source: Marine Insights

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Types of Ships

Passenger Ships

As the name suggests, these are used for transiting passengers. Mainly classified into: Ferries & Cruise Ships.

Offshore Ships

These ships mainly help in oil exploration and construction jobs at sea. These include supply ships, pipe layers, crane barges etc.

Fishing Ships

These ships are used for recreational and commercial fishing at sea. These are classified into two types i.e. Trawlers and non-trawler ships.

Specialty Ships

These ships have onboard machinery and equipment to perform special tasks. These include: anchor handling tug supply, drilling ships etc.

Source: Marine Insights

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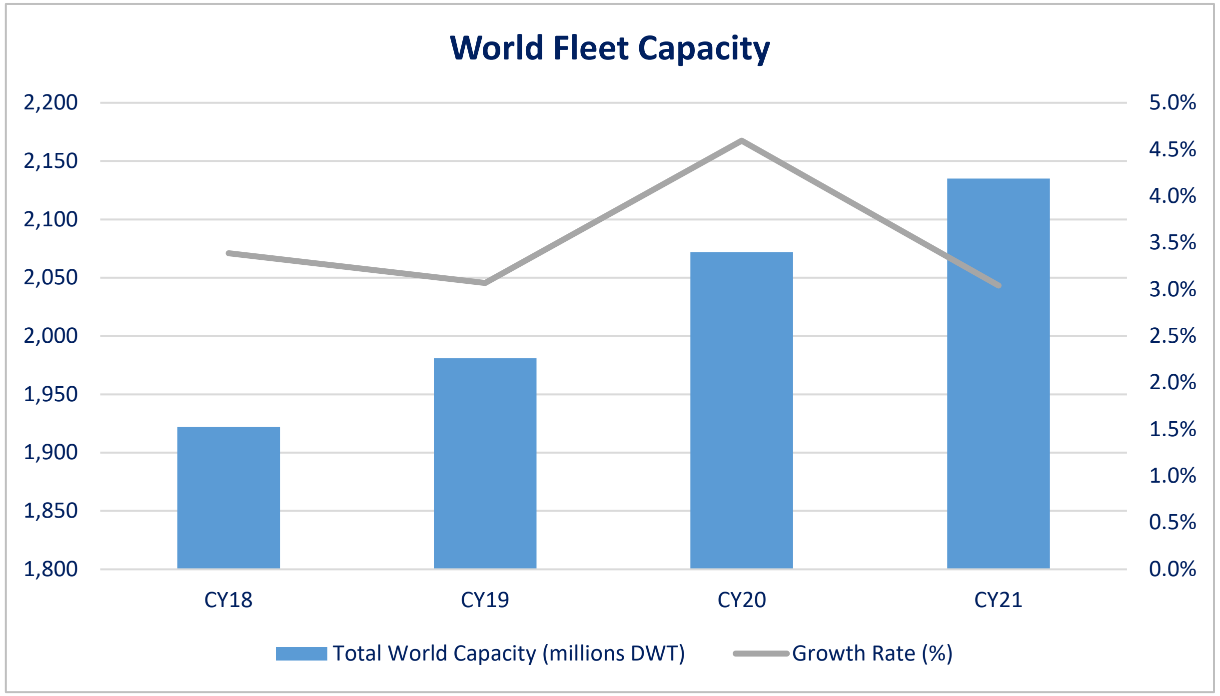
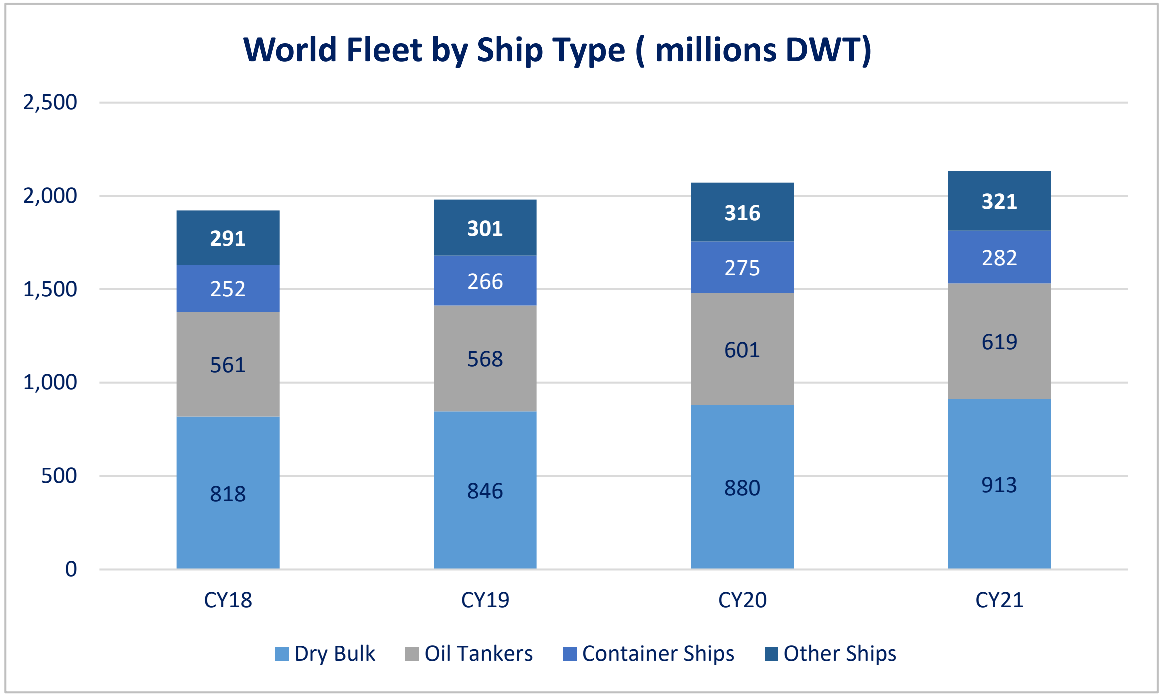
Global Fleet





- The global capacity of fleet expanded by ~3.5% YoY in CY21 and stood at ~2,135mln DWT as compared to ~2,063mln DWT in CY20.
- In the global fleet principal ships type, the proportion of the Dry Bulk is highest at ~43%, followed by Oil Tankers (~29%), Containers (~13%), and Other Ships (~15%).
- During CY21, Offshore supply ships (~26%) contribute the highest to “Other Ships”, closely followed by Gas Carriers (~24%) and General Cargo Ships (~24%). Amongst other types are; Chemical Tankers (~15%), Ferries and passenger ships (~3%) and Others (~8%).

Source: Review of Maritime Transport 2021

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Top Fleet Owners

- As per carrying capacity in deadweight tons (DWTs), the top ten countries with highest ownership of the world fleet are listed below.
- Greece has a total capacity of ~373mln DWTs, highest in the world with a ~17.6% of the global share, followed by China with a share of ~11.6% and Japan with a share of 11.4%.

Ownership of the World Fleet (Ranked by carrying capacity in dead-weight tons)				
	Country/Territory	Total No. of Ships	Deadweight tonnage (mln DWT)	Total as % of World
1	Greece	4,705	373.4	17.6%
2	China	7,318	244.5	11.6%
3	Japan	4,029	241.8	11.4%
4	Singapore	2,843	139.0	6.6%
5	China, Hong King SAR	1,764	104.2	4.9%
6	Germany	2,395	86.2	4.1%
7	Republic of Korea	1,641	86.1	4.1%
8	Norway	2,042	64.0	3.0%
9	Bermuda	553	64.0	3.0%
10	United Kingdom	1,323	53.7	2.5%
	Rest of the World (ROW)	25,360	659.2	31.1%
	World	**53,973**	**2,116.4**	**100.0%**

Source: Review of Maritime Transport 2021

Ship Recycling & Breaking | Global

Top Ship Recycling Countries (000 Gross Tons)								
Ship Type	**Bangladesh**	**India**	**Pakistan**	**Turkey**	**China**	**Rest of the World**	**World Total**	**Percentage**
Bulk Carriers	5,254	1,317	1,718	34	125	61	8,509	49%
Container Ships	160	1,428	282	206	0	68	2,144	12%
Oil Tankers	616	410	617	159	10	226	2,038	12%
Others	664	1,906	273	1,199	60	607	4,709	27%
Total	**6,694**	**5,061**	**2,890**	**1,598**	**195**	**962**	**17,400**	**100%**

- Ship recycling increased by 44% YoY in CY20 because old ship operators believe that they can still earn high incomes by operations than selling it in scrap despite high scrap metal prices.
- Bulk carriers have the highest proportion of ~49% in global ship recycling in CY20; probably because of the declining charter rates and higher recycling trend, while container ships and oil tankers both have ~12% share each. Others accounted for ~27% of the global ship recycling.
- Bangladesh continues to account for the highest in the global recycling with a share of ~38% in CY20. India follows with a ~29% share to the ship recycling while the share of Turkey and China stood at ~9% and ~1% respectively.
- Pakistan's share in global recycling stood at ~17% in CY20. The number of ships recycled increased dramatically by ~982% YoY from 267 ships in CY19 to 2,890 ships in CY20. The dominance of the ship recycling in Asia can primarily be attributed to lower labor costs and limited scope of health and environment regulation as opposed to western countries.

Source: Review of Maritime Transport 2021

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Local Overview

- Seaborne trade holds a significant importance for the economy of Pakistan as the country enjoys a very imperative coastal geographical location, with sea front ranging from the Iranian border in the west to Sir creek in the east.
- Pakistan's coastline dominates sea traffic to and from the Suez Canal, Arabian Sea and Persian Gulf on one side and India to Far East on the other.
- Afghanistan largely depends on Pakistan for its international maritime trade with China being the next to use it fluently; since the Gwadar port is being developed rapidly.
- The economy of Pakistan also has heavy reliance on the shipping industry for the international trade. Almost ~95% of the external trade is based on sea transportation.
- The seaborne trade of the country rose to ~110mln DWT in FY21 against ~94mln DWT in FY20.
- The revenue of the industry decreased by ~7.4% from PKR~14bln in FY20 to PKR~13bln in FY21. For 9MFY22, the revenue jumped by ~68% YoY (9MFY22:PKR~16bln; 9MFY21:PKR~10bln) compared to 9MFY21 period.

Particulars	FY20	FY21	9MFY22
Gross Revenue (PKR mln)	13,804	12,789	16,223
Number of Local Companies	1	1	1
Structure	**Listed & Monopolistic**		
Total Seaborne Trade (mln tons)	94	110	110*
PNSC Share in Total Seaborne Trade	9%	10%	10%*
Fleet Size	11	11	11
Tankers	6	6	6
Dry Bulk Carriers	5	5	5

* Latest Available figures are of FY21

Source: PACRA Database & Company Financials

Pakistan National Shipping Corporation

- In 1974, Pakistan's shipping sector was nationalized with all ship-owning businesses merged under the Pakistan Shipping Corporation (PSC).
- Later, Pakistan National Shipping Corporation (PNSC) was established in 1979 after the National Shipping Corporation (NSC) was merged with Pakistan Shipping Corporation (PSC).
- The Ministry of Maritime Affairs oversees the Corporation and monitors its regulatory framework.
- PNSC has a unique distinction of being the only national flag carrier with a 100% Pakistani fleet including both dry bulk and liquid bulk carriers.
- The company's fleet comprises 11 ships (6 tankers and 5 dry bulk carriers) with a total deadweight capacity of ~831,711 DWT. The fleet is fairly new with an average age of ~15.4 years against the average age od ~21.6 years for the global fleet.

Pakistan's Fleet and Capacity

Sr#	Ship Types	Name of Ship	Years of Manufacturing	Years of Purchase by PNSC	Age	Capacity (DWT)
1	TANKERS	M.T Quetta	2003	2008	18	107,215
2		M.T Karachi	2003	2010	18	107,081
3		M.T Lahore	2003	2010	18	107,018
4		M.T Shalamar	2006	2014	15	105,315
5		M.T Khairpur	2012	2019	9	74,986
6		M.T Bolan	2013	2019	8	74,919
	Total Liquid Bulk					**576,534**
7	BULK CARRIERS	M.V Malakand	2004	2010	17	76,830
8		M.V Hyderabad	2004	2011	17	52,951
9		M.V Multan	2002	2012	19	50,244
10		M.V Chitral	2003	2010	18	46,710
11		M.V Sibi	2009	2011	12	28,442
	Total Dry Bulk					255,177
	Total					**831,711**

Source: PNSC, PACRA Database

Seaborne Trade

- Total Pakistan's seaborne trade increased by ~17% in FY21 from ~94.3mln tons in FY20 to ~110.3mln tons in FY21.
- PNSC has a significant share in the country's Liquid Bulk (tankers) trade of ~30% whereas only a very minimal share of ~2% in country's Dry Bulk (Bulk carriers) trade.

	Dry Bulk			Liquid Bulk			Total		
In Million Tons	FY19	FY20	FY21	FY19	FY20	FY21	FY19	FY20	FY21
Pakistan Seaborne Trade	80.2	66.6	78.0	30.4	27.7	32.3	110.7	94.3	110.3
PNSC's Share	2.4	1.5	1.5	8.0	7.3	9.6	10.4	8.8	11.1

- Division of total cargo transported by PNSC by nature:

	Unit of Measurement	FY19	FY20	FY21
Dry Cargo (Bulk Carrier)	Million tons	2.34	1.53	1.54
Liquid Cargo (Tanker)	Million tons	7.99	7.28	9.55
Slot Charter				
Break Bulk	Higher of MT or CBM (W/M)	0.05	0.01	0.01
Containerized Cargo	Thousand TEUs	2.35	1.68	1.73

* Latest Available figures are of FY21

Source: PNSC

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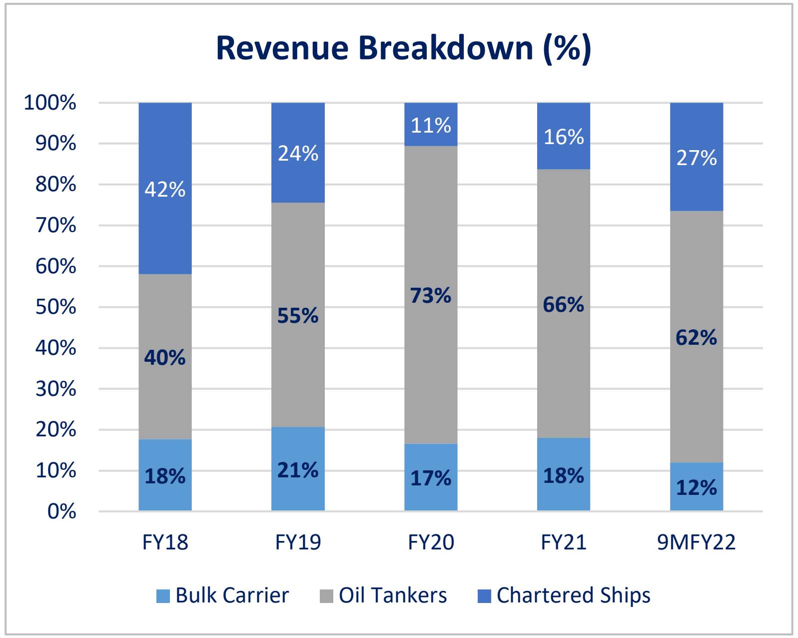
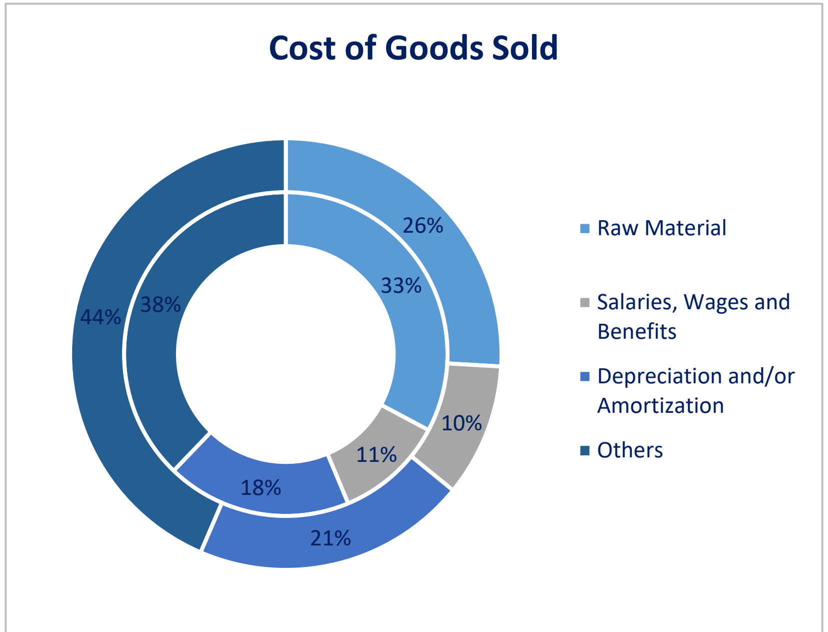
Business Risk | Margins & Revenue Breakdown

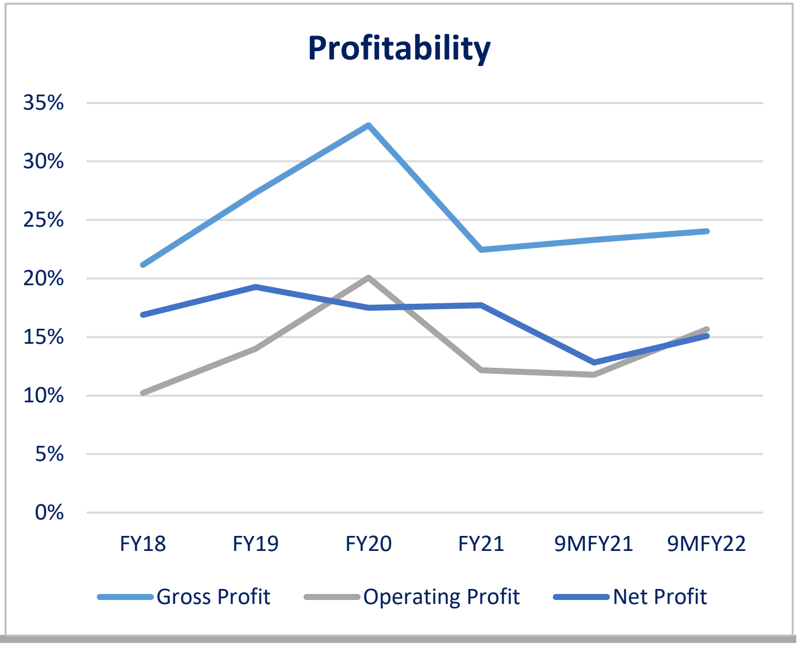
- Revenue earned from oil tankers constituted the highest chunk of ~66% to PNSC's topline in FY21. The share decreased to ~62% in 9MFY22. Whereas, the bulk carriers contributed ~18% and chartered ships ~16% in FY21. The share of the Bulk ships also decreased to ~12% in 9MFY22 while the share of Chartered ships increased to 27% for the same period. Total Revenue of the industry stood at PKR~13bln in FY21 down by ~7.4%. Revenue for 9MFY22 stood at PKR~19bln.

- Raw material cost which is primarily lubricants costs has declined by ~7% YoY in 9MFY22 as compared to 9MFY21; an increase oof ~3% YoY was witnessed in depreciation costs for the same period. The costs are expected to go up with globally high inflation and oil prices.

- Gross margin and operating margin declined substantially in FY21 by approximately 10% except for the Net Margin which increased by ~1% as shown in the graph below. The reason for depressed margins has been pressured freight rates. The margins improved for 9MFY22 against the 9MFY21 period marginally. Net Profit Margin for 9MFY22 stood around ~15%.







Note: Calculation based on PNSC Financials.

Source: PACRA Database, PNSC

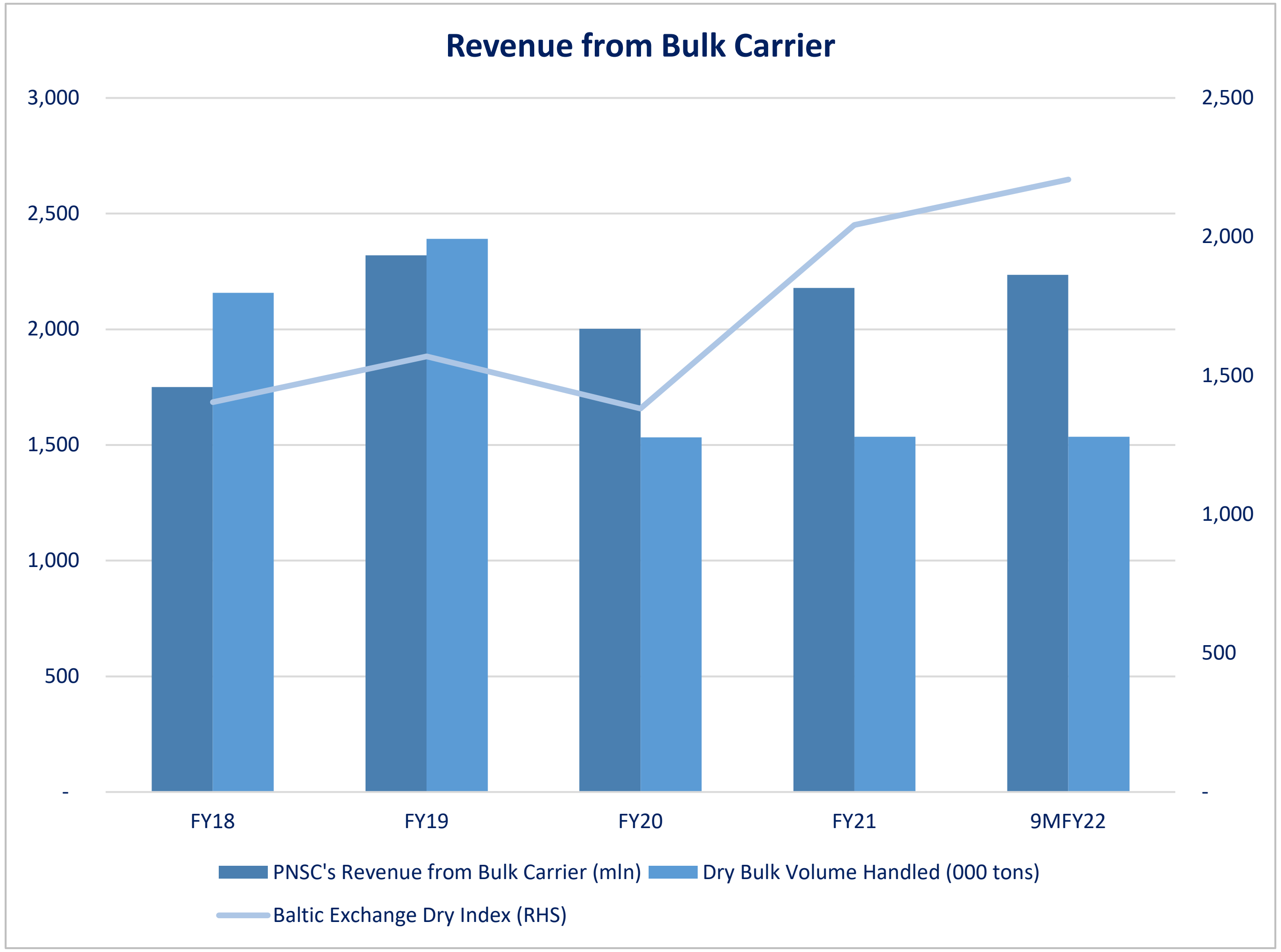
Business Risk | Baltic Exchange Dry Index

- The Baltic Dry Index issued by London-based Baltic Exchange, takes into account 23 different shipping routes carrying coal, iron ore, grains and many other commodities.

- The pricing of the dry bulk carrier based on the Baltic Dry Index, rose to 2,206 points on 31 March 2022, because of the ongoing international inflation, and trade sanctions on Russia.

- Baltic Exchange Dry Index influences the revenue inflows of the PNSC directly. And despite ~48% jump in the index, the revenues from the dry bulk increased by ~9% in CY21 as opposed to CY20.

- For 9MFY22, the revenue of PNSC from dry bulk stood at PKR~2,235mln up by ~43% YoY against the PKR~1,567mln in 9MFY21.



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Business Risk | Average Freight Rate Assessment (AFRA)

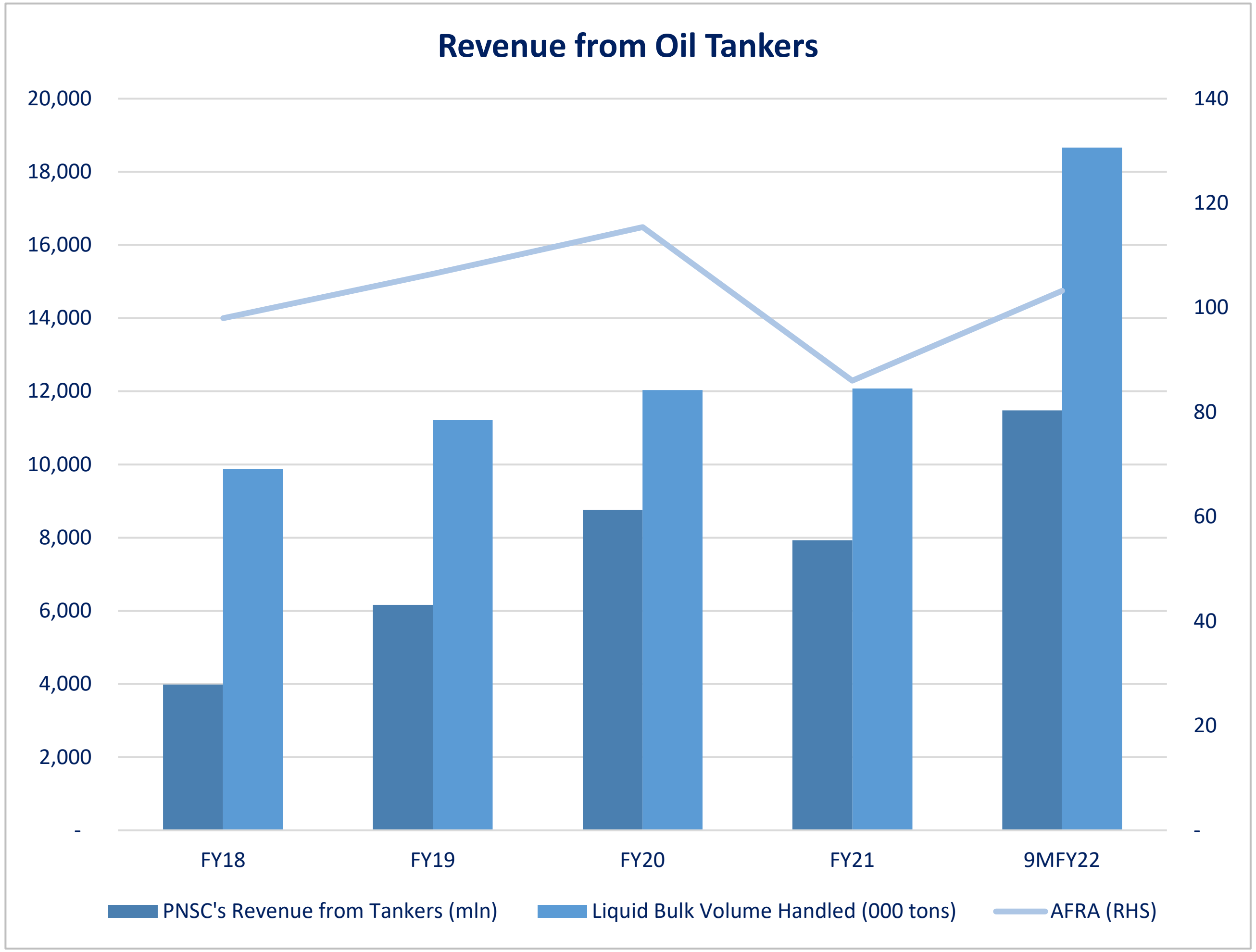
- Average Freight Rate Assessment (AFRA) is a system that uses the global crude oil and refined product tanker fleet classification system to standardize contract terms, establish shipping costs, and determine the ability of ships to travel into ports or through certain straits and channels.

- It was established by Royal Dutch Shell six decades ago, and is overseen by the London Tanker Brokers' Panel (LTBP), an independent group of shipping brokers.

- PNSC revenue from oil tanker segment is linked with AFRA rates. The industry remained under pressure during 9MFY22 due to global inflation and economic downturn and as the AFRA rate increased by ~37% in March FY22 from March FY21.

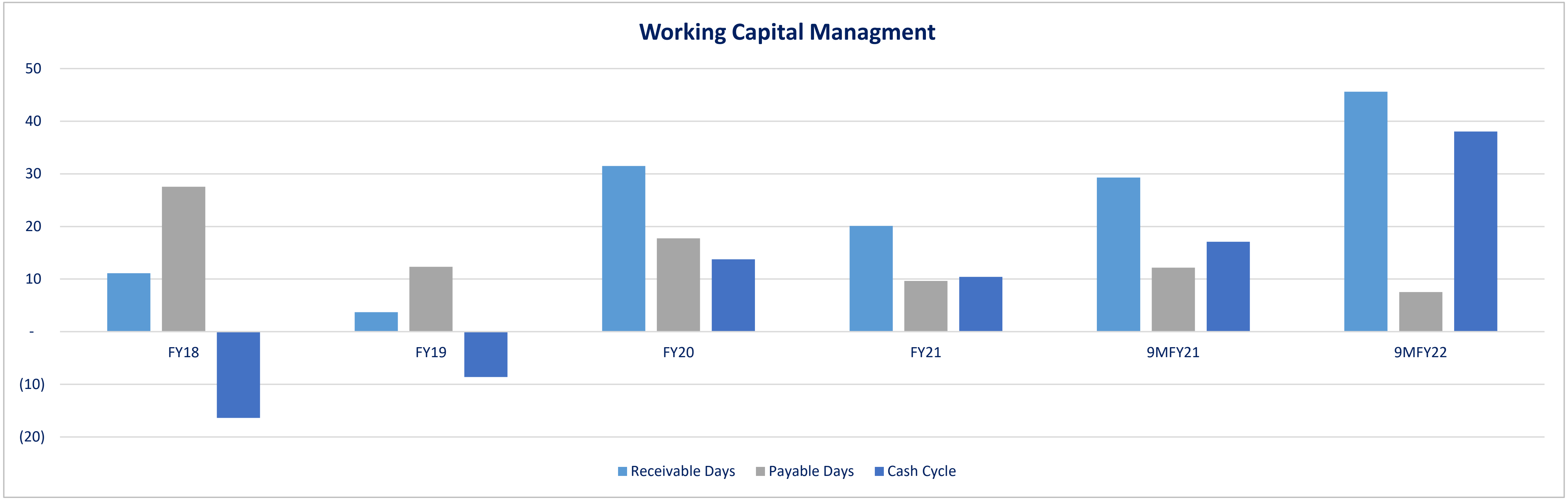
- Revenue from liquid bulk declined by ~9% in FY21 with respect to FY20.

- For 9MFY22, the revenue for Liquid bulk stood at PKR~11,476mln up by ~63% YoY as against a revenue of PKR~7,056mln in 9MFY21.



Financial Risk | Working Capital Management

- The cash conversion cycle of PNSC improved in FY21 in contrast to FY20 by ~4 days, since the receivable days and payable days both dropped significantly. A major chunk of receivables (~83%) reflects trade debts owed by the Pakistan State Oil Company (PSO).
- The cash cycle however, has increased substantially to ~38 days in 9MFY22 almost twice that of 9MFY21. This has been driven by historically large receivable days.

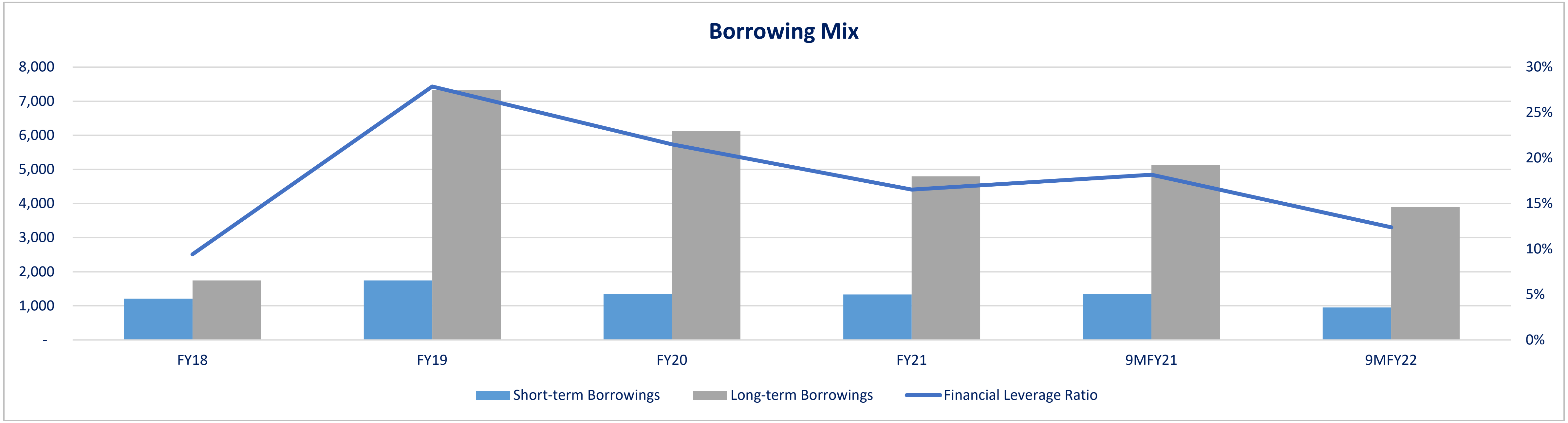


Note: Workings are based on PNSC Numbers

Source: PACRA Database, PNSC

Financial Risk | Borrowing

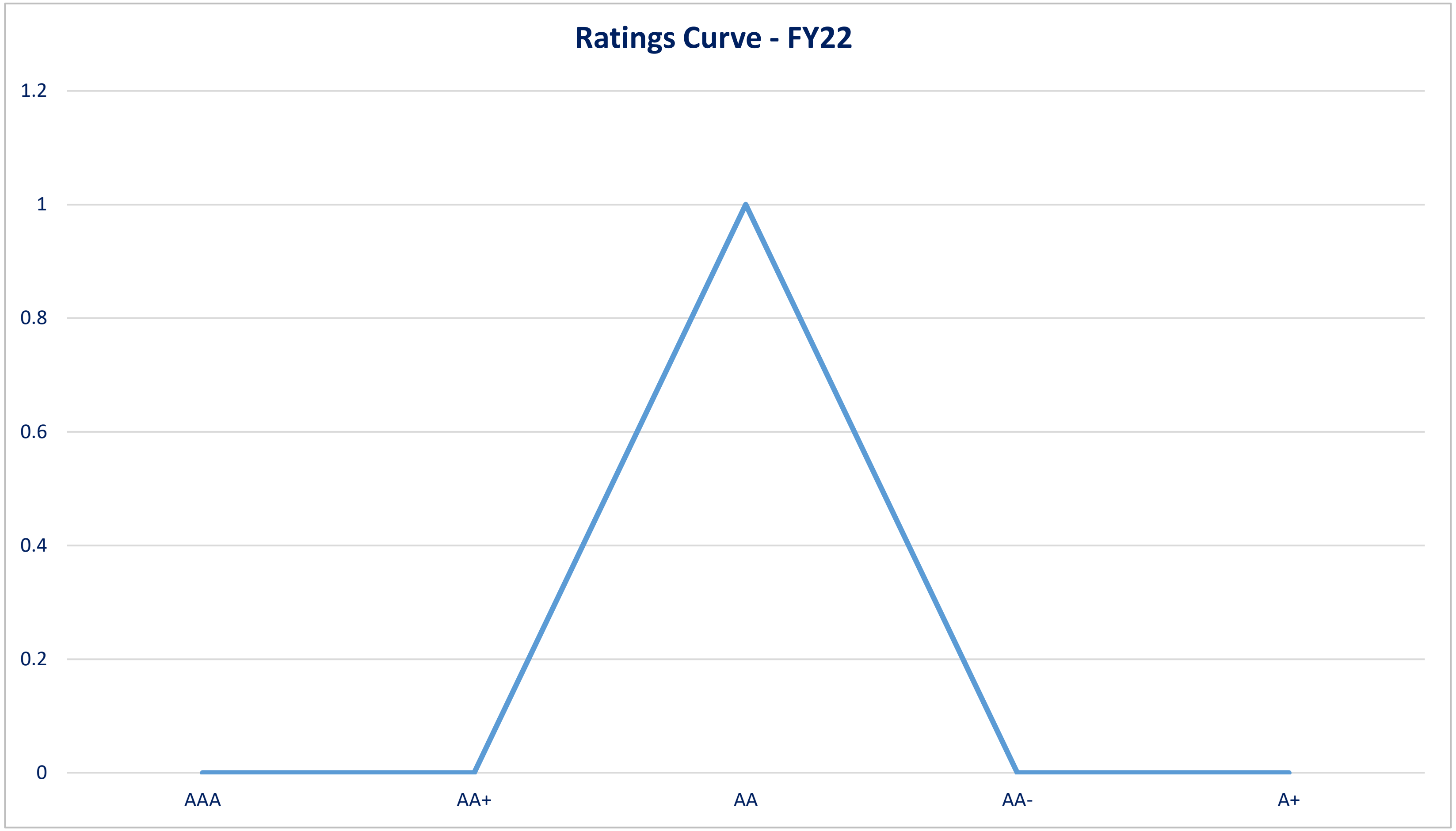
- Total borrowings of the industry stood at PKR~6,136mln in FY21 down by ~18% from PKR~7,461mln in FY20. A major portion of the borrowings is reflective of long-term borrowings.
- For 9MFY22, the total borrowings of PNSC stood at PKR~4,853mln which was ~25% less than the borrowings for the same period last year. Long-term borrowings make ~80% of the total borrowings while short-term borrowings contribute only ~20%.
- Despite high borrowings, PNSC's capital structure has been improving since FY19. Debt leverage was recorded at ~17% in FY21, which further declined to ~12% in 9MFY22 (~18% in 9MFY21) depicting robust internal capital generation.



Source: PACRA Database

PACRA | Rating Curve

- PACRA rates The Pakistan National Shipping Corporation (PNSC).
- Rating bandwidth falls in ‘AA’ category.



SHIPPING

SWOT Analysis

Strengths

- An International sector in true essence, wherein compliance and safety requirements are devised, managed and monitored on a global scale.
- Significantly important sector of the economy in terms of catering over ~90% of the country's external trade movement.
- Regulated.
- Sovereign Control
- Capital intensive thus high barrier to entry.

Weaknesses

- Significant dependence on specific trade routes
- Inability to set pricing, dependence on international index.
- High reliance on global trade dynamics.
- Lack of technological expertise and resources to increase penetration in shipping landscape.

Threats

- Litigation risks
- Major accidents or oil spillage
- Fluctuation in Interest rate
- Volatility in fuel Cost
- Trade Risks
- Adverse changes in global laws e.g., taxation po
- Economic uncertainty in the country
- Strict protective measures on import
- Very high oil prices.

Opportunities

- Unique coastal geographical position of the country holds the potential to grow tremendously on global shipping services.
- Strategic alliances and joint ventures
- Web-Enabled logistic operations.
- Bilateral agreements for development and growth

SHIPPING | Outlook & Future Prospects

Outlook: Stable

- Following the global economic revival post pandemic and rising inflation, the freight rates took a hike in the second half of CY21. However, the rates then started to normalize at the end of CY21 and are expected to continue the same trajectory in CY22.
- Average Aframax earnings for CY21 have declined by ~62% per day from USD~22,161 per day to USD~8,326 per day. However, the global demand is expected to remain robust with an expected growth of ~4.6% in CY22 for Dry Bulk and 4-5% for Tanker.
- As majority of PNSC's revenue streams are pegged with international freight indices, the company's performance is dependent on the health of global economy. With reduced freight rates and rising fuel prices, the margins of the corporation may have an adverse impact.
- The performance of seaborne trade and its volume is also directly dependent on the economic activity within the country. Pakistan's GDP grew by ~6% in FY21 and has grown by ~5.9% in FY22 *(provisional)*. The growth rate is expected to slowdown in FY23. Hence, the potential for further growth remains uncertain; rising fuel prices amid high inflation may have a negative impact on the Industry's margins, going forward.
- Pakistan's Shipping industry in comparison to the regional competitors still remains underdeveloped despite the fact of a very imperative and naturally gifted coastal location of the country.
- Financial position of the industry besides the economic uncertainty and import restrictions remains relatively stable with high positive YoY growth rates in margins and seaborne trade and sound capital structure.

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