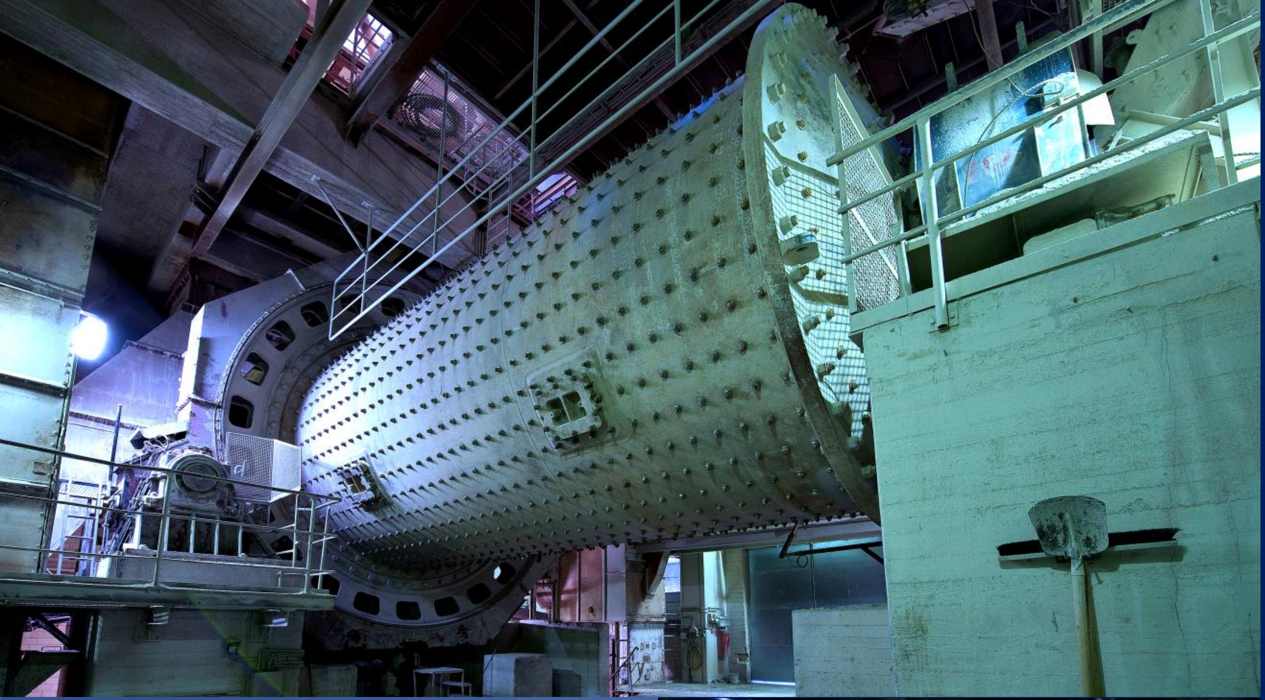

Cement
Sector Study

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March 2023

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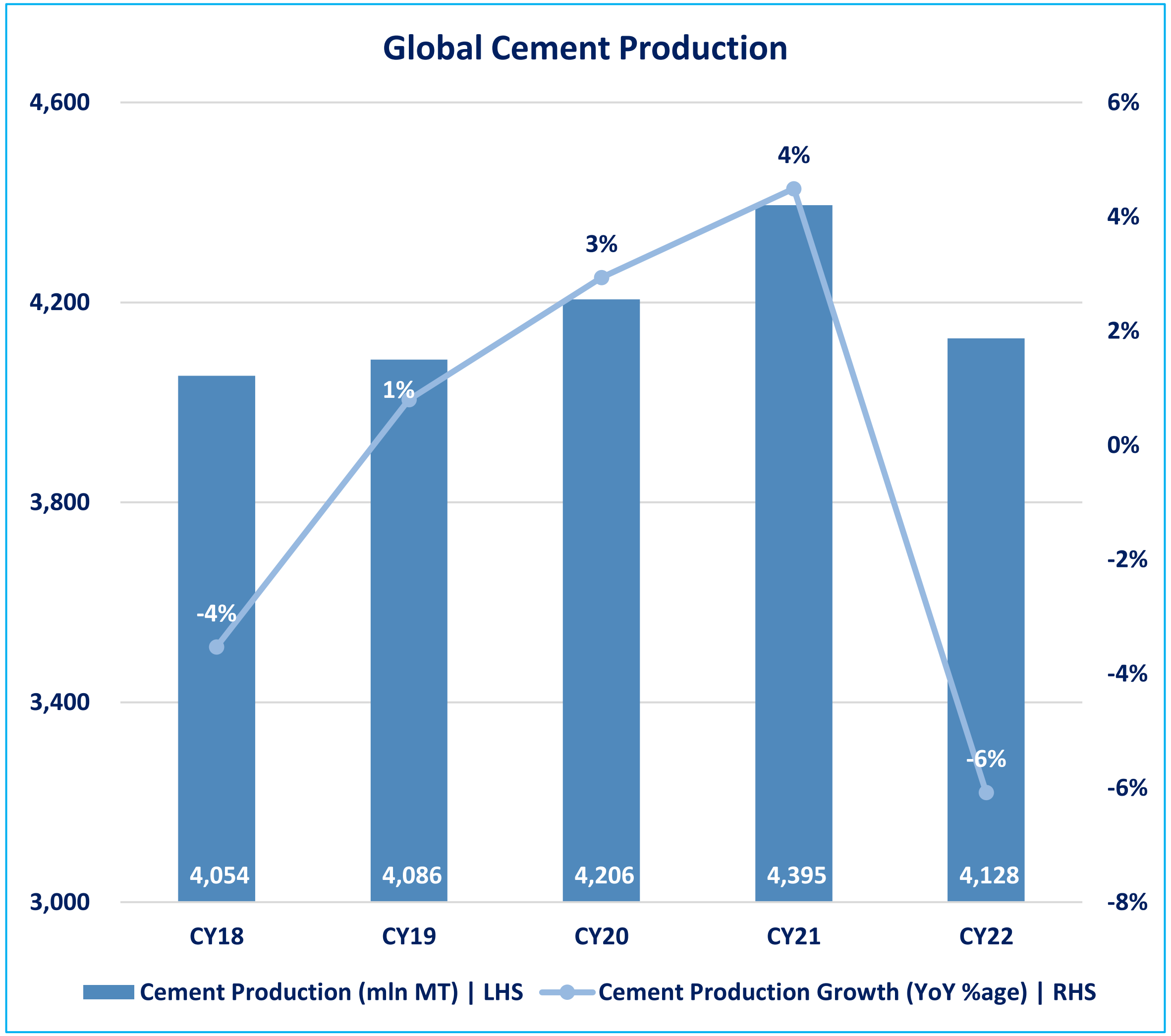
Cement

Global Overview

- Cement is an important building material. The Sector has a huge economic impact due to its long and diverse supply chain.
- **Size:** In CY22, global cement industry was estimated at USD~341bln (CY21: USD~327bln), contributing ~0.4% to the global GDP. The market is expected to reach USD~482bln by CY29 with a CAGR of ~5.1%. The industry also contributes ~7.7% to the world employment.
- **Production:** Global cement production stood at ~4.1bln MT recording a decline of ~6.1% YoY.
- Cement production volumes are highly dependent on clinkering capacity; the process is highly energy intensive and clinker is the primary raw material of all cement blends; In CY22 global clinker production capacity grew by ~20mln MT and stood at ~3.8bln MT.
- **Consumption:** Cement is a hydroscopic substance with a maximum shelf life not greater than 3 months, therefore cement consumption closely matches its production numbers.
- **Regional Distribution:** China is the largest producer and consumer of cement, as it contributes over half of the global cement production (~51%).



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Global Industry | Production

- Global cement production is regionally concentrated. With reference to clinker capacity, top five countries accounted for ~68.6% of the world's clinker production capacity which hovered around ~3.8bln MT in CY22.
- Global cement production stood at ~4.1bln MT in CY22 (CY20: ~4.4bln MT), a dip of ~6.1% primarily on account of slowdown in construction activities in China along with a slowdown in global economy, following the conflict in Eastern-Europe.
- China stands as the outlier in global cement manufacturing both in terms of capacity and actual production with more than half of the global market share. The next country to follow, India, has a market share of less than ~10% in the global production.
- Being an energy intensive process, cement manufacturing is the third largest industrial polluter.
- Tightening government regulations and increasing environmental concerns are pushing adoption of green cement. Green cement concept refers to cement manufactured from emissions reducing processes and/or use of less clinker substituted with fly-ash or blast-furnace slag.

Regional Capacity and Production (mln MT)

Sr#.	Country	Clinker Capacity		Cement Production	
		CY21	CY22	CY21	CY22
1	China	53.4%	53.1%	54.6%	50.9%
2	India	7.5%	7.7%	8.0%	9.0%
3	Vietnam	2.4%	2.7%	2.5%	2.9%
4	USA	2.7%	2.7%	2.1%	2.3%
5	Turkey	2.5%	2.4%	1.9%	2.1%
6	Brazil	1.6%	1.6%	1.5%	1.6%
7	Indonesia	2.1%	2.1%	1.5%	1.6%
8	Iran	2.2%	2.2%	1.4%	1.5%
9	Russia	2.1%	2.1%	1.4%	1.5%
10	KSA	2.0%	2.0%	1.2%	1.3%
11	Others	21.5%	21.4%	23.9%	25.5%
	Total	**100%**	**100%**	**100%**	**100%**

Source: Fortune Business Insights, Global Trade, U.S Geological Survey

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Global Industry | Top Players

- Cement industry is one of the essential sectors of the global economy. This is due to its massive standalone output as well as its significance in being an essential part of the supply chain for some major industries such as construction, chemicals and exploration of natural resources.
- Due to high capital intensive nature of the business, the industry tends to be oligopolistic as the market is mostly controlled by a few firms in many countries around the world.
- The global cement market is dominated by big companies and top ten largest cement companies have an estimated market share of ~67.6%.
- China is the world's largest producer and consumer of cement as it accounts for ~51% of the total global production. Therefore, 3 of the top 10 global players are located there.
- China's cement production is eight times that of the world's second largest producer, India (~9.0%) where only 1 of the top 10 players is located.

Top 10 Global Players

Sr.#	Company	Origin	CY21 Revenues (USD bln)
1	China National Building Material Group	China	42.4
2	Cement Roadstone Holdings	Ireland	31.0
3	Holcim	Switzerland	29.4
4	Anhui Conch Cement Co Ltd	China	26.0
5	HeidelbergCement AG	Germany	22.1
6	BBMG Group	China	19.2
7	The Siam Cement Public Co Ltd	Thailand	16.6
8	Mitsubishi Materials Corp	Japan	16.1
9	CEMEX SAB de CV	Mexico	14.5
10	Grasim Industries Ltd	India	13.0
Total			**230.4**

Source: Companies' Financial Statements

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Global Industry | Exports

CY21 Global Export Dynamics							
Sr.#	Exporters	Export (total) USD mln	%age Volume Share	Clinker Export mln MT	Cement Export mln MT	Clinker Export Value USD/MT	Cement Export Value USD/MT
1	Vietnam	1,646	18%	27.2	14.6	37	44
2	Türkiye	1,368	15%	13.3	19.5	34	47
3	Indonesia	407	5%	10.2	1.8	32	44
4	Thailand	500	5%	7.3	4.4	35	55
5	Japan	382	5%	5.4	6.1	33	34
6	Saudi Arabia	266	4%	5.1	2.8	33	34
7	Pakistan	271	3%	3.7	3.7	33	40
8	Germany	616	3%	0.2	6.7	61	89
9	Egypt	394	3%	4.7	1.9	47	89
10	Spain	430	3%	2.6	3.9	40	83
11	Others	5,758	36%	18.0	62.9	50	77
	World	**12,038**	**100%**	**97.7**	**128.5**	**38**	**65**

- In CY21, the estimated global clinker and cement export volumes stood at ~226.2mln MT, representing ~5.1% of the global cement production.
- Around ~43% of the total export volumes comprised of clinker while ~57% comprised of multiple varieties of cement including Portland grey & white, aluminous and others.
- In USD value terms, clinker exports held a ~31% share while cement exports comprised ~69% of total exports by value, as cement had ~69% higher export per MT value in addition to almost ~32% higher export volumes.
- Top 10 exporting counties held ~64% share in global exported volumes; while the top 7 exporting countries on average exported clinker at ~11% and cement at ~34% cheaper rates than the global average.

Source: UN Comtrade

Cement

Global Industry | Imports

CY21 Global Import Dynamics							
Sr.#	Importers	Imports USD mln	%age Volume Share	Clinker Import mln MT	Cement Import mln MT	Clinker Import Value USD/MT	Cement Import Value USD/MT
1	China	1,619	18%	27.7	3.6	51	54
2	USA	1,830	12%	2.4	19.7	69	84
3	Philippines	608	6%	3.7	7.2	52	58
4	Sri Lanka	293	3%	2.6	2.7	54	57
5	Australia	286	3%	4.1	0.8	50	103
6	Singapore	233	3%	0.0	4.5	392	52
7	Hong Kong	233	2%	0.6	3.8	51	54
8	Israel	341	2%	0.9	3.4	59	84
9	Kuwait	302	2%	1.6	1.6	142	48
10	Oman	124	2%	1.9	1.3	37	43
11	Others	7,036	47%	32.7	51.7	64	95
	World	**12,907**	**100%**	**78.2**	**100.2**	**59**	**83**

- In CY21, estimated global import volumes of cement and clinker stood at ~178mln MT distributed ~44% in clinker and ~56% in cement. In terms of USD imports value, clinker held ~36% share while ~64% USD imports value comprised cement.
- Top 10 importing countries held ~58% share in global clinker imports, with China dominating the segment as it holds ~35% share in global clinker imports.
- The cement import segment was more fragmented as the top 10 importers held a ~48% share with USA dominating the segment with a global share of ~20%.
- Average USD values per MT of cement imports were ~40% higher than the USD per MT values of clinker exports.

(Global Import and export values have a mismatch due to multiple factors including but not limited to reporting errors, estimations, different reporting periods, freight charges, insurance charges, tariffs and re-exports and reporting by Country)

Source: UN Comtrade

Cement

Production Process

Mining of raw material including limestone, clay, gypsum and others.

Grinding raw material to a fine powder, called raw meal.

Raw meal is heated at a temperature of ~1,450 °C in a cement kiln to produce clinker.

Hot clinker exits from kiln and enters the clinker cooler to reduce its temperature from 1450 °C to 100 °C .

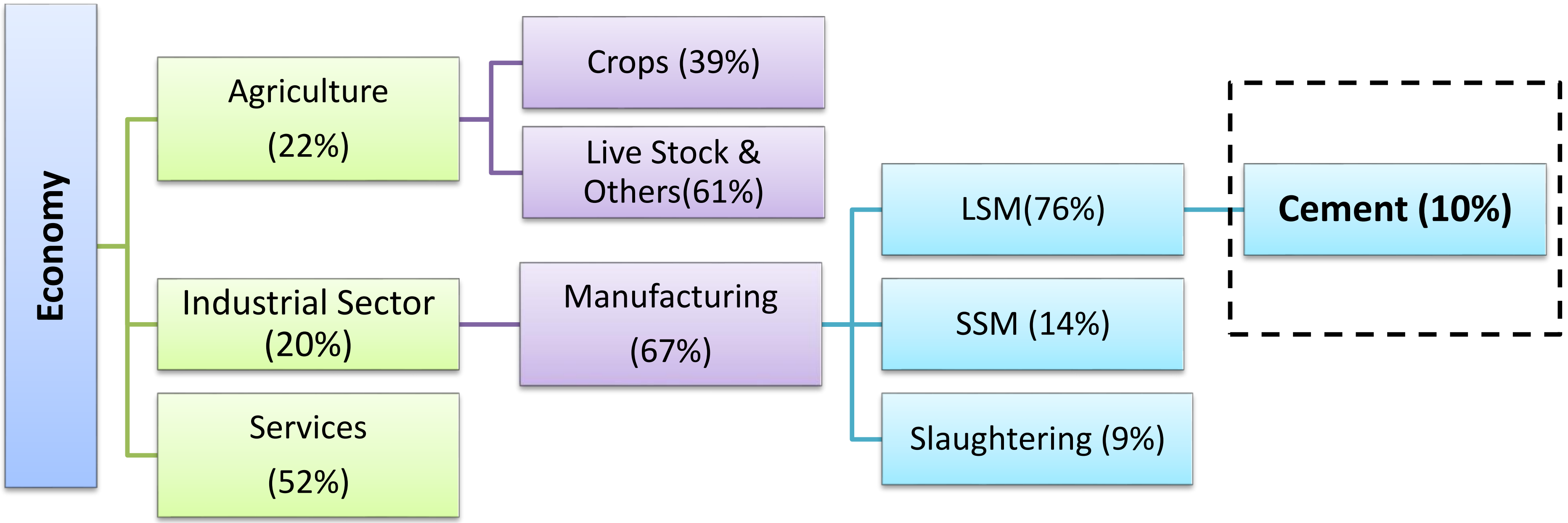
Cooled clinker mixed with gypsum and other additions. It is grinded into fine and homogenous powder, cement.

Manufactured cement then stored in silos before packaging and sale to end consumers.

Source: PACRA Internal Database

Local | Economy - Overview

- In FY22, Pakistan's GDP (nominal) stood at PKR~67tln (FY21: PKR~56tln) and posted real growth of ~6.2% (FY20: ~6.5%). Industrial activities in FY22 represented ~20% share in the GDP and grew at ~7.2% YoY (FY21: ~-7.8%), while manufacturing activities representing ~65% value in industrial activities grew at ~9.8% (FY21: ~10.5%) in the same period.
- Large Scale Manufacturing (LSM) in Pakistan is essential for the economic growth considering its linkages with other sectors, as it represented ~76% value of all manufacturing activities in FY22 and grew at ~10.5% YoY in FY22 (FY21: ~11.5%).
- FY23, however inherited multiple macro-economic and socio-political vulnerabilities, both at local and international levels from the last quarter of FY22, including a devastating flood.
- Culmination of these have led to 8MFY23 inflation levels soar to ~31.5%, 7MFY23 LSM manufacturing to shrink by ~4.4%; while the SBP forecasts real GDP growth to restrict at ~1.5% in FY23.



Source: PBS, Financial Statements

Cement

Industry Snapshot | Local

- Cement is an important sector of the country and is also vital for its economic development. The country's infrastructural developments and construction activities alongside multiple allied sectors (steel, wood, tiles etc.) are directly influenced by the performance of the cement sector.
- In FY22, the overall sector gross revenue grew by ~24% and were recorded at PKR~671bln; although total dispatches dipped by ~7%, the ~31% higher retention prices per bag drove the industry's topline.
- Cement Sector is composed of 16 companies (after Askari Cement merged with Fauji Cement). The Sector is divided into two regions; North and South, with North covering areas of Punjab, KPK and AJK and South including areas of Sindh and Baluchistan.
- Cement sector is organized and is oligopolistic in nature, with most of the players listed on the PSX, market capitalization of the sector was recorded around PKR~378bln in March'23.
- Overall economic growth and government's spending on development projects are the main drivers of the sector's growth.
- Pakistan's per capita cement consumption is ~215kg whereas world average per capita consumption is recorded at ~550kg, more than double the consumption in Pakistan, reflecting an immense potential for growth in cement demand.

Overview	FY21	FY22	1HFY23
Gross Revenue (PKR bln)	542	671	417*
Contribution to GDP	1.04%	1.07%	-
Sector Players	17	16	16
Structure	Oligopoly		
Production Capacity mln MT	69	70	73
Offtake Local mln MT	48	48	22
Export mln MT	9	5	2
Total Offtake mln MT	57	53	20
North Region (Avg Price/50Kg Bag)	613	764	1,041
South Region (Avg Price/50Kg Bag)	631	777	1,038
Regulator	Securities and Exchange Commission of Pakistan (SECP)		
Associations	All Pakistan Cement Manufacturers Association (APCMA)		

*Net Revenue grossed up on average sales tax, duties, rebates and carriage charges

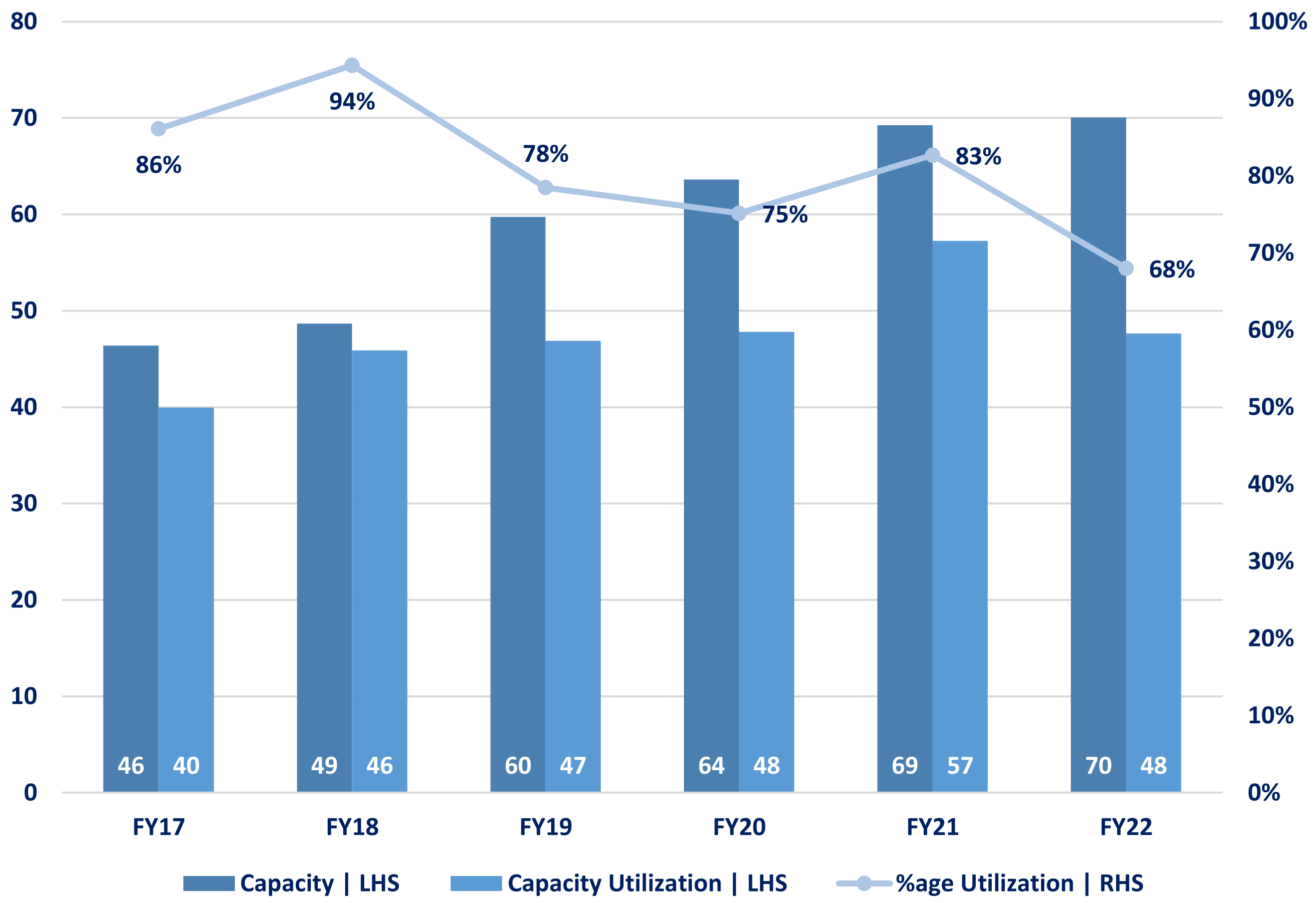
Source: Economic Survey, APCMA, PBS, Financial Statements

Cement

Supply Side | Production

- Cement sector's production capacity is recorded around ~70mln MT in FY22 (~69mln MT in FY21), an increase of ~0.8% YoY.
- Almost ~70% of the operational plants are located in the North Region, while remaining ~30% capacity is located in the South Region.
- Expansion plans for enhancing the sector's capacity up to ~87mln MT by FY24 are underway; the industry held PKR~48bln worth of LTFF & TERF financing facilities by Feb'23 end.
- The TERF facility has overall diluted the borrowing cost of projects, making it an attractive opportunity for the players to expand.

Production Capacity & Utilization (mln MT)



Source: Pakistan Economic Survey, APCMA, PBS

Cement

Supply Side | Production

- The sector has 15 operational companies with 26 operational plants across the country.
- 10 companies have presence in north region and 3 have presence in the south region only whereas 3 companies have production plants in both south and north regions.
- As of June'22, Lucky Cement is the largest player with estimated cement production capacity of ~12mln MT followed by Bestway and D.G Khan cement with ~10mln MT and ~7mln MT capacities respectively.
- Companies in the South Region have to incur low transportation costs while transporting imported coal from port to their plants. Moreover, due to their close proximity to the port, their access to export markets through sea routes increases in comparison to their northern counter parts.
- Although the companies in the North Region have to incur more transportation cost, these companies have access to Afghanistan and Indian market for Exports.

Production Capacity FY22 (000 MT)

Sr.#	Company	# of Plants	North	South	Total
1	Lucky Cement Limited	2	7,066	5,084	12,150
2	Bestway Cement ltd	4	10,274	-	10,274
3	D.G. Khan Cement Company	3	2,010	4,710	6,720
4	Maple Leaf Factory Ltd	2	5,700	-	5,700
5	Pioneer Cement Ltd	1	5,195	-	5,195
6	Kohat Cement Company Ltd	2	4,913	-	4,913
7	Cherat Cement Company Ltd	1	4,536	-	4,536
8	Fauji Cement Company Ltd	3	6,363	-	6,363
9	Power Cement Ltd	1	-	3,371	3,371
10	Dewan Cement	2	1,080	1,860	2,940
11	Attock Cement Pakistan ltd	1	-	3,027	3,027
12	Gharibwal Cement Ltd	1	2,010	-	2,010
13	Fecto Cement Ltd	1	945	-	945
14	Flying Cement Company Ltd	1	720	-	720
15	Thatta Cement Company Ltd	1	-	693	576
16	Dandot Cement* Company Ltd	1	504	-	504
	Total	**27**	**51,316**	**18,745**	**70,061**

*Defaulter and not active

Source: APCMA, PACRA Internal Database, Financial Statements

Cement

Supply Side | Cost Break up

- Major raw materials used in cement manufacturing process are limestone, clay and gypsum; these raw materials and packaging, however constitute a smaller portion of the production cost ~14% in FY22 (FY21: ~16%).
- Cement manufacturing is a highly energy intensive process as, 1 MT of clinker requires 4.6mln Btu of energy equant to burning ~160 Kgs of bituminous coal.
- Energy cost constitute ~63% (FY21: ~58%) of the total cost of the production; Coal, being a cheap source of energy, is extensively used by the cement companies in their manufacturing process and it also constitutes of a major chunk of their energy cost.
- Majority of the cement manufacturers rely on imported coal to meet their energy needs, which implies their exposure to exchange rate movements as well as fluctuations in international coal prices.

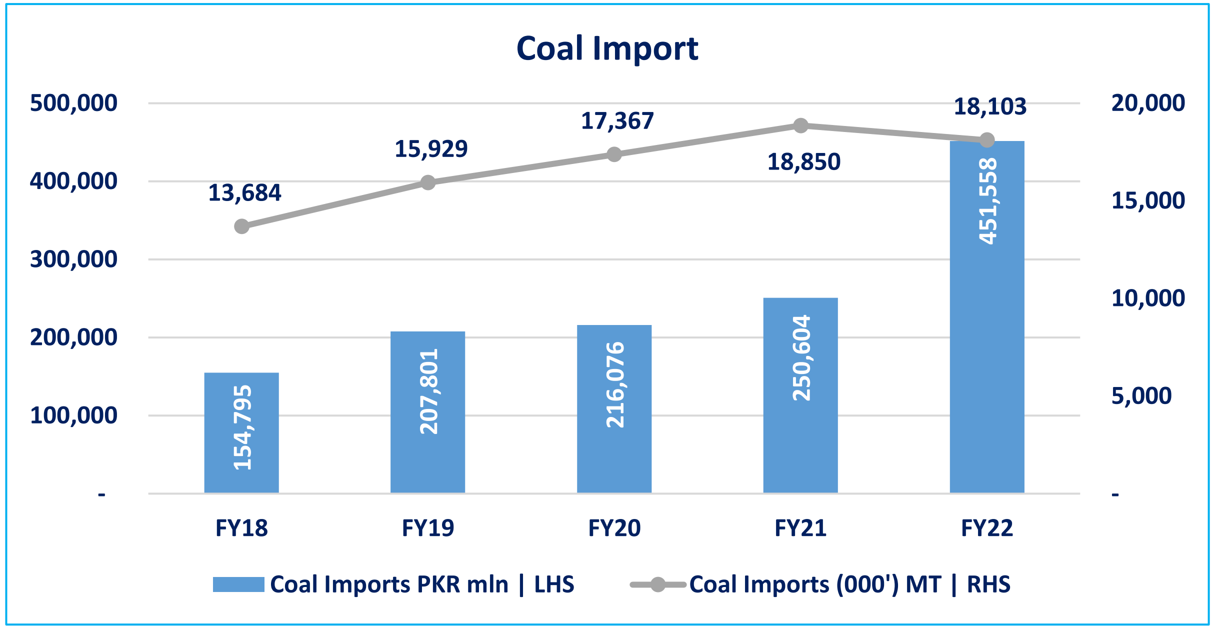
Major COGS breakup (FY22)

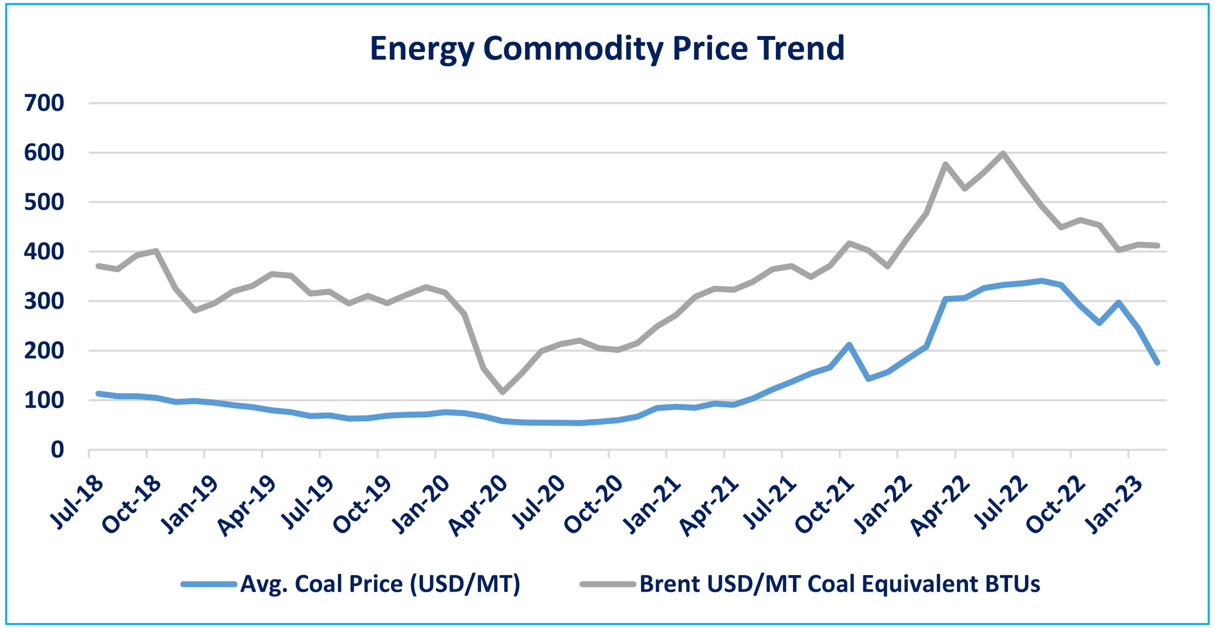
Sr.#	Company	Raw Material	Packaging	Fuel	Power	Others
1	Attock Cement	8%	6%	46%	15%	25%
2	Bestway cement	7%	9%	48%	18%	17%
3	Cherat Cement	7%	9%	43%	16%	25%
4	DG Khan Cement	2%	7%	51%	19%	21%
5	Dewan Cement	6%	8%	51%	19%	15%
6	Fauji Cement	8%	7%	45%	18%	23%
7	Flying Cement	3%	10%	43%	29%	15%
8	FECTO Cement	5%	6%	49%	19%	20%
9	Gharibwal Cement	4%	5%	53%	11%	26%
10	Kohat Cement	5%	9%	49%	22%	14%
11	Pioneer Cement	7%	9%	54%	20%	10%
12	Maple Leaf Cement	7%	8%	49%	18%	19%
13	Power Cement	10%	6%	50%	18%	15%
14	Thatta Cement	9%	7%	52%	19%	13%
15	Lucky Cement	6%	8%	55%	20%	10%
	Industry	**6%**	**8%**	**46%**	**17%**	**23%**

Cement

Raw Material | Coal

- In FY22, ~24% of total coal supply of the country was consumed by the cement industry (FY21: ~36%).
- National coal imports in FY22 were ~18.1mln MT recording a YoY decrease of ~4% (FY21: ~18.9mln MT); however, the estimated value of imports increased by ~80.2% to PKR~452bln (FY21:PKR ~251bln) due to a massive hike in global energy prices and PKR devaluation.
- Energy commodity prices remained at multi-year high levels throughout CY22. Coal prices in particular were 2.2x higher than its previous 5 year average(CY17-CY21) , while prices of oil was ~65.1% higher than its 5 year average (CY17-CY21). However coal remained ~41% cheaper per BTU.
- The ensuing inflation and consequent monetary tightening have lead to economic slowdowns around the globe, with fears of a looming recession. Prices of energy commodities started to decrease in the last quarter of CY22, however demand resurgence from China is expected to provide upward impetus going forward.



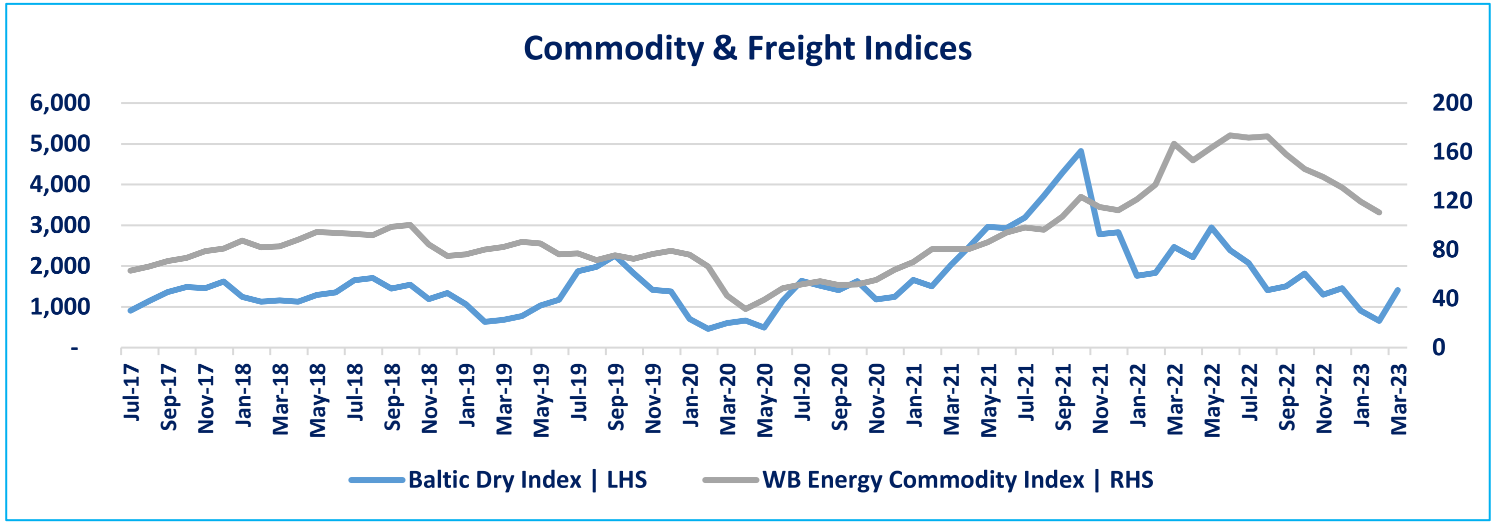


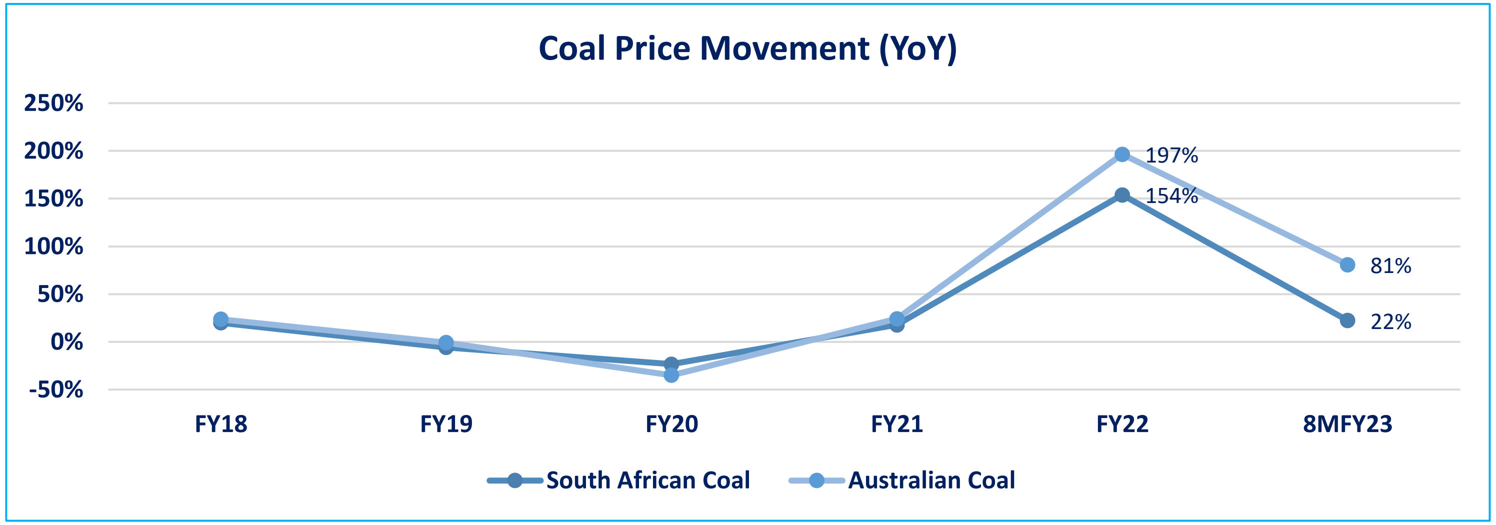
*Prorated

Cement

Raw Material | Coal

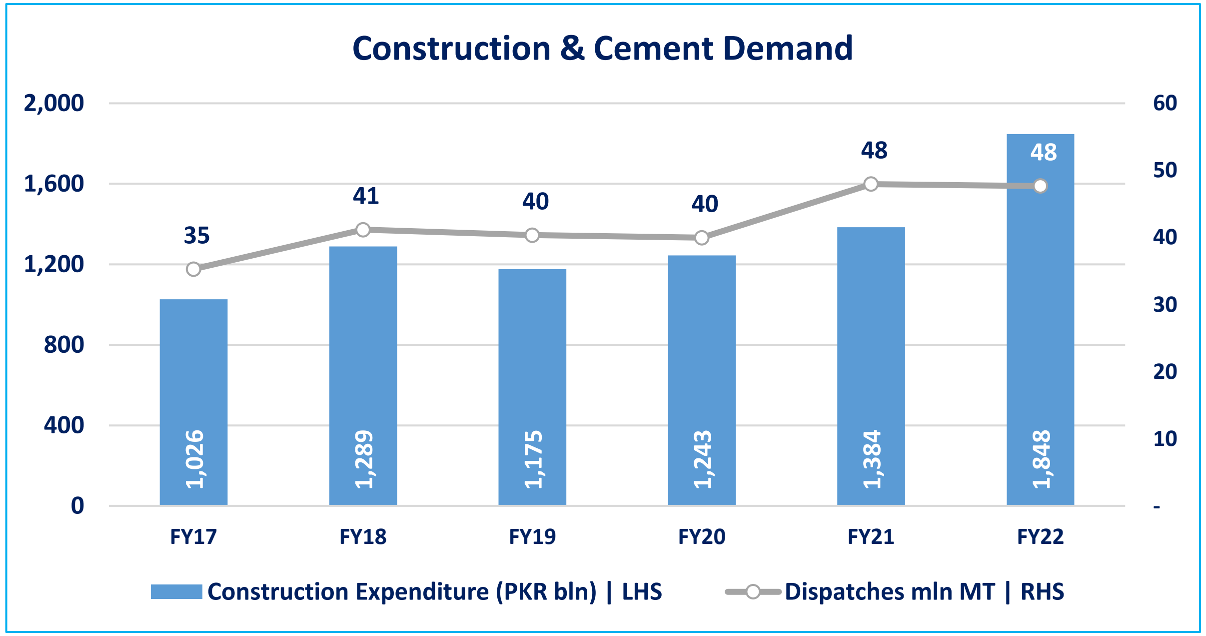
- Throughout FY22, global energy commodities as well as global freights remained at their multi-year/all-time highs, the Baltic dry index peaked in October’21, up 2x YoY. While energy commodity prices peaked in June’22 up 77% YoY.
- South African and Australian average FOB coal prices have grown by ~22% and ~81% in 8MFY23 YoY and stood at USD~145/MT and USD ~207/MT by February’23.
- In FY22 South African bituminous coal held a ~59% share in total coal imports with landing cost clocking in at ~PKR28,386/MT up ~1.1x YoY. Local manufacturers kept energy cost in check by importing Afghan coal. It held a ~15% share in total coal imports and landing cost of bituminous variety clocked in at ~PKR17,255/MT up ~29% YoY; and had a ~-36% price delta. While non-bituminous quality clocked in at ~PKR15,636/MT up ~15% YoY; with a price delta of ~-6%.
- Hike in energy commodity and freight rate prices together with PKR devaluation imply major cost pressure on the local cement industry.

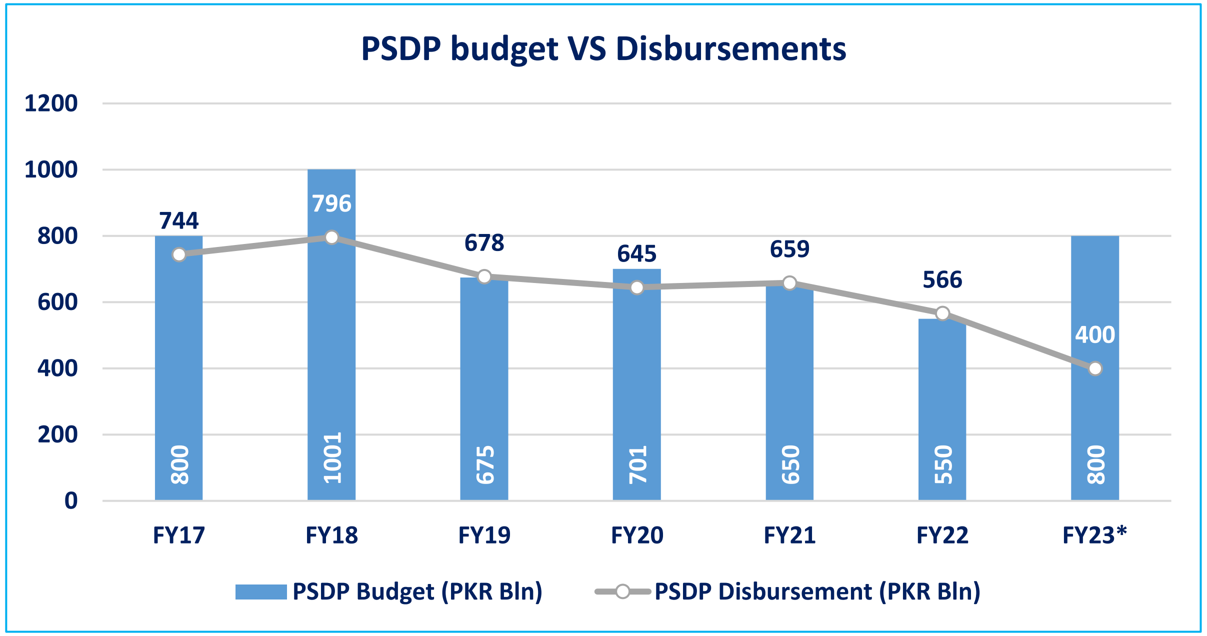




Demand Side | Local

- Cement demand is highly correlated to construction and infrastructure development including private and Public Sector Development Program (PSDP).
- The construction sector grew by ~3% in FY22 in real terms while cement dispatches declined by ~0.6% in the same period.
- Historically the construction sector has on average held ~3% share in the national GDP (at nominal GVA). Given the recent economic adversities, IMF has cut Pakistan's GDP (real) forecast to ~2% for CY23, but the economy is expected to recover at ~4.4% in CY24 and subsequently grow at ~4.9% on average. This is indicative of stable demand for construction materials once current economic challenges get navigated.
- Historically, PSDP fund disbursements have been almost ~7% lower than the budgeted amounts. However, due to the prevailing economic and socio-political vulnerabilities, PSDP spending was cut to PKR550bln from PKR900bln (Federal only) for FY22. While as of 7MFY23 only ~50% of the planned PKR800bln PSDP spending for FY23 got disbursed.

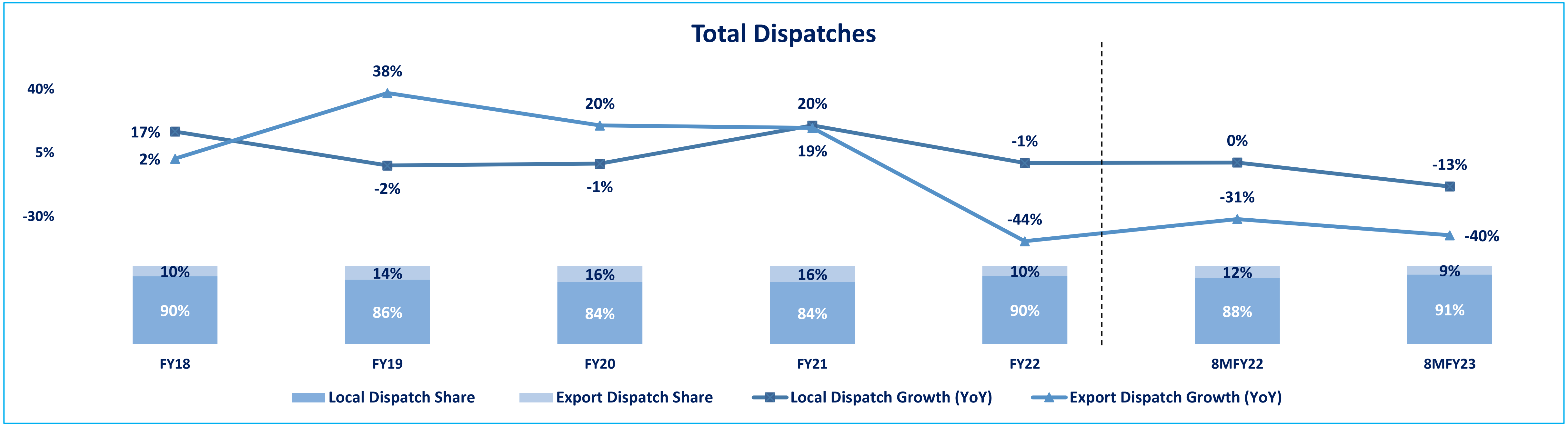




*FY22 disbursement figures reported as at 8MFY23

Source: APCMA, PC, Economic Survey

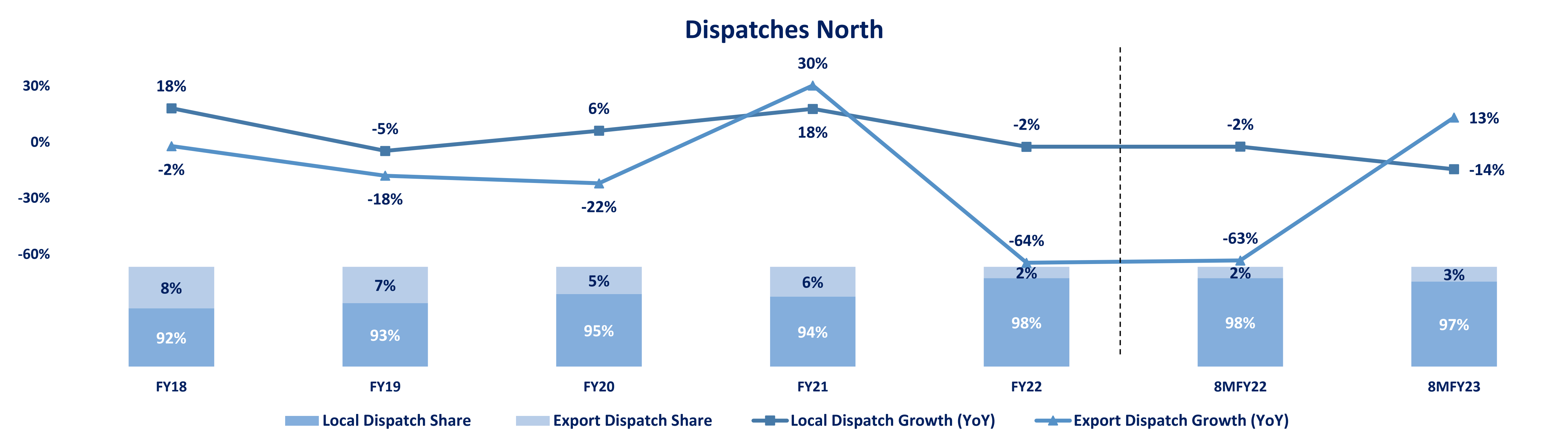
Demand Side | Total Dispatches



- The country's south to north dispatch ratio stands around 1:3 in terms of total volumes dispatched.
- In FY22, total dispatches stood at ~53mln MT (FY21: ~57mln MT) declining ~7.6% YoY; Of these, export volumes held a ~10% share while local dispatches held an ~90% share.
- In 8MFY23, total dispatches receded by ~17% YoY, as local dispatches declined ~14% and export dispatches declined by ~40.3% in the same period, due to suppressed demand caused by high freight charges, increased prices and economic difficulties in many countries.
- Total dispatches for 8MFY23 stood at ~30mln MT of which ~9% dispatches by volumes comprised of exports while ~91% volumes comprised local dispatches.

Source: APCMA, PC, Economic Survey

Demand Side | North Dispatches



- The North market represents 3/4th share in total national dispatches on average.
- In FY22, North dispatches stood at ~40mln MT (FY21: ~42mln MT) declining ~6% YoY; of these, export volumes held a ~2% share while local dispatches held a ~98% share.
- In 8MFY23, North dispatches receded by ~6% YoY, as local dispatches declined ~14% YoY; export dispatches grew by ~13% YoY in the same period.
- Total dispatches for 8MFY23 stood at ~23mln MT (8MFY22: ~26mln MT) of which ~3% dispatches by volumes comprised of exports while ~97% volumes comprised local dispatches.

Source: APCMA, PC, Economic Survey

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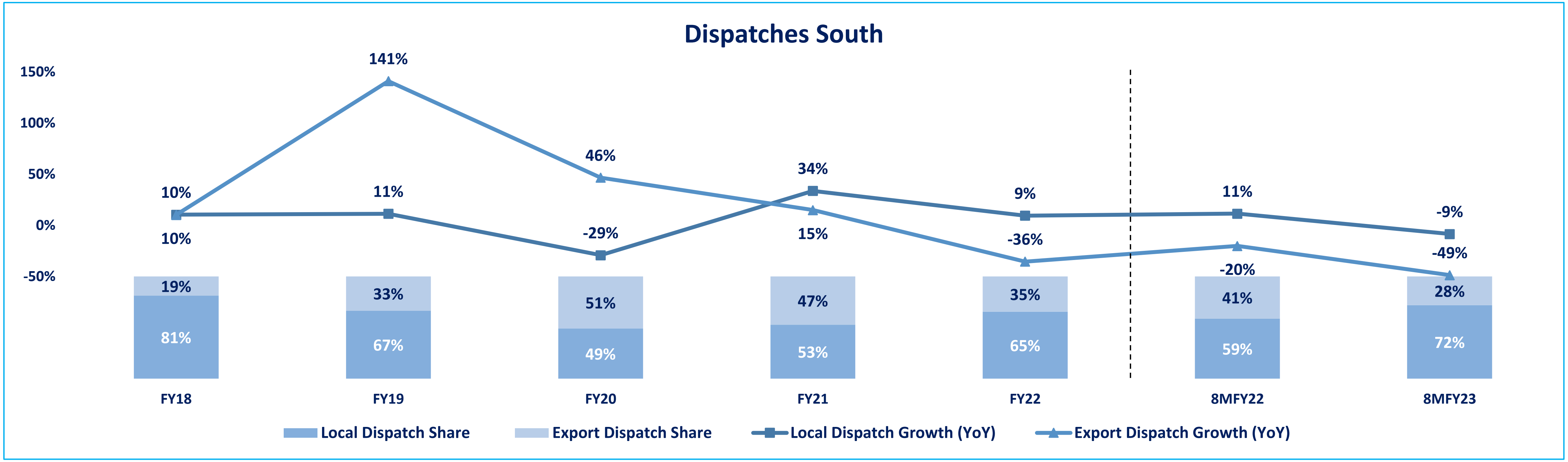
Demand Side | South Dispatches



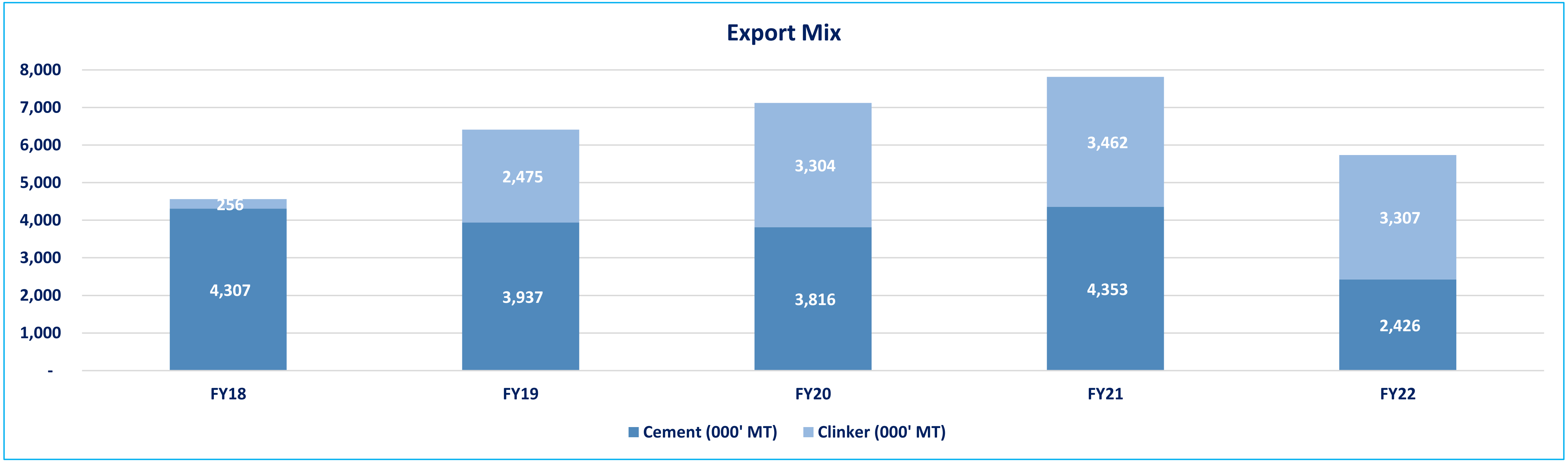
- The South market represents 1/4th share in total national dispatches on average.
- In FY22, South dispatches stood at ~13mln MT (FY21: ~14mln MT) declining ~12% YoY; of these, export volumes held a ~28% share while local dispatches held a ~72% share.
- In 8MFY23, South local dispatches declined by ~9%, while export dispatches declined by ~49% leading to a ~25% decline in total dispatches.
- Total dispatches for 8MFY22 stood at ~7mln MT of which ~28% dispatches comprised of exports while ~72% volumes comprised local dispatches.

Source: APCMA, PC, Economic Survey

Cement

Demand Side | Export Mix

- Pakistan's cement exports in FY22 were valued at PKR~39bln (FY21: PKR~43bln), representing ~0.8% of total country exports (FY21: ~1.0%); while export volumes stood at ~5.2mln MT (FY21: ~9.3mln MT).
- Total exports during 8MFY23 by value stood at PKR~27bln (8MFY22: PKR ~31bln), down ~12% YoY and represented ~0.6% of national exports (8MFY22: ~0.9%); while export volumes stood at ~2.6mln MT (8MFY22~4.3mln MT) for the same period.
- In recent years, clinker exports have gained a sizeable chunk in cement related product exports. In value terms, FY22 cement to clinker export mix stood at 21:29 (FY21: 31:19)



Source: PBS

Cement

Demand Side | Export Partners

- In FY22 Clinker export value per 50Kg bag stood at PKR~299 (FY21: PKR~233), while cement export value per 50Kg bag stood at PKR~401 (FY21: PKR~308) i.e. ~34.1% (FY21: ~32.2%) higher than clinker.
- Although white cement fetched the most premium price among all categories, but held less than ~0.2% share in the overall export mix.
- Bangladesh held the highest share of ~44% in clinker exports, as its cement industry relies heavily on imported raw material due to non-availability of raw material for cement locally.
- Afghanistan in FY22 held the highest share in Pakistan's cement exports at ~36%.
- in 8MFY23 due to increased energy cost, export value per MT of cement increased by ~26% in USD terms and ~70% in PKR terms.

Clinker (FY22)						
Sr.#	Export Partner	Exports (MT 000')	Exports (PKR mln)	Share (Vol.)	Share (PKR Value)	PKR Value/MT
1	Bangladesh	1,469	8,396	44%	43%	5,717
2	Sri Lanka	981	5,860	30%	30%	5,973
3	Qatar	320	2,077	10%	11%	6,482
4	Others	537	3,409	16%	17%	6,349
	Total	**3,307**	**19,741**	**100%**	**100%**	**5,970**

Ordinary Portland Cement (FY22)						
Sr.#	Export Partner	Exports (MT 000')	Exports (PKR mln)	Share (Vol.)	Share (PKR Value)	PKR Value/MT
1	Afghanistan	962	6,938	40%	36%	7,210
2	Sri Lanka	684	6,646	28%	34%	9,711
3	Oman	478	3,630	20%	19%	7,596
4	Others	294	2,188	12%	11%	7,450
	Total	**2,418**	**19,402**	**100%**	**100%**	**8,023**

White Portland Cement (FY22)						
Sr.#	Export Partner	Exports (MT 000')	Exports (PKR mln)	Share (Vol.)	Share (PKR Value)	PKR Value/MT
1	Afghanistan	4	67	44%	44%	18,581
2	Sri Lanka	1	31	18%	20%	20,718
3	Madagascar	1	27	18%	17%	18,082
4	Others	2	28	20%	19%	16,924
	Total	**8**	**153**	**100%**	**100%**	**18,540**

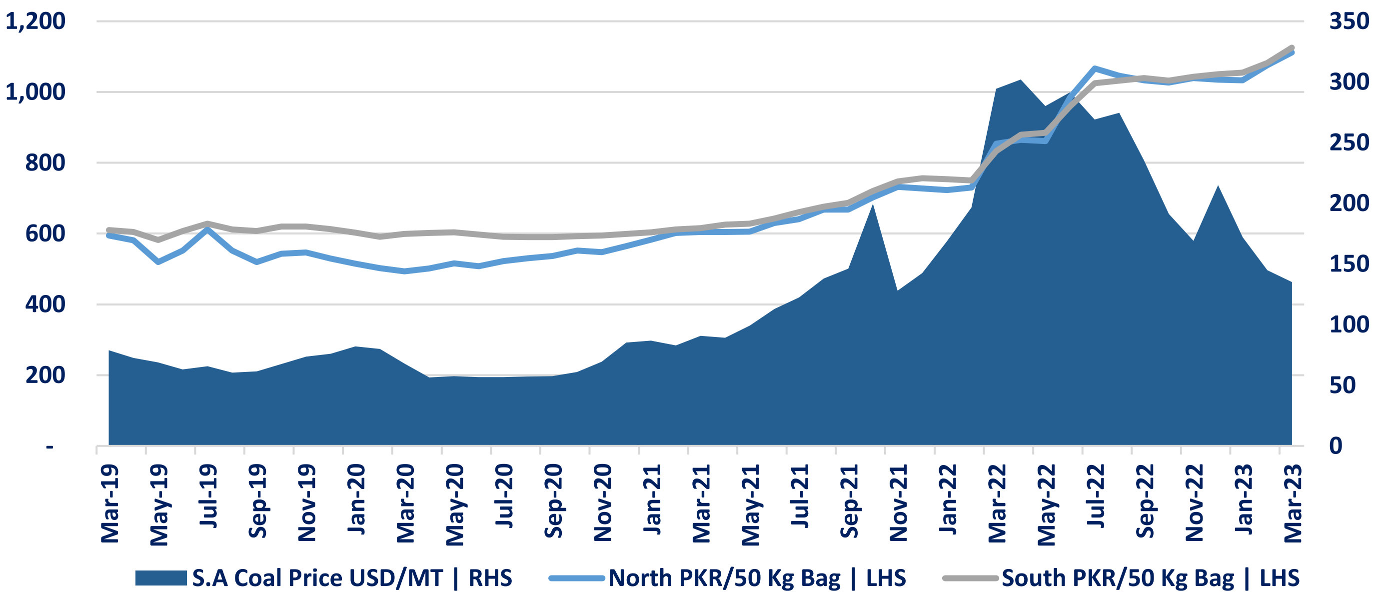
Source: PBS

Cement

Demand Side | Price Dynamics

- Cement prices are a function of the market demand and supply dynamics. Variations in prices are generally dependent upon the behavior of major cost components of cement production, including coal prices, exchange rate, fuel costs and freight charges.
- Since the beginning of FY22, local cement prices have shown a steady month-on-month growth of ~2.9% in the North and ~2.4% in the South on average.
- As of Mar’23 the correlation between local cement prices and South African coal dipped to 0.66 on average, compared to 0.91 a year ago. As prices of coal fell by ~54% YoY. However local prices of cement rose by ~33% YoY as PKR declined by ~57% YoY for the same period, mitigating the coal price respite.
- As mentioned in the table below, clinker is exported at very low price as compared to cement; export of clinker is not very profitable for the companies on stand alone basis but it comes with other additional benefits like increased capacity utilization and availability of export refinance facility at subsidized rates.

Cement and Coal Prices



Comparison of Local and Export Prices

Avg Prices in PKR/bag	FY19	FY20	FY21	FY22	8MFY23
North	584	528	571	767	696
South	595	608	606	777	716
Export Clinker*	336	375	334	401	795
Export Cement*	454	519	442	540	

*Grossed up based on respective year’s Sales tax, duties, carriages and rebates

Source: APCMA, PBS, WB

Cement

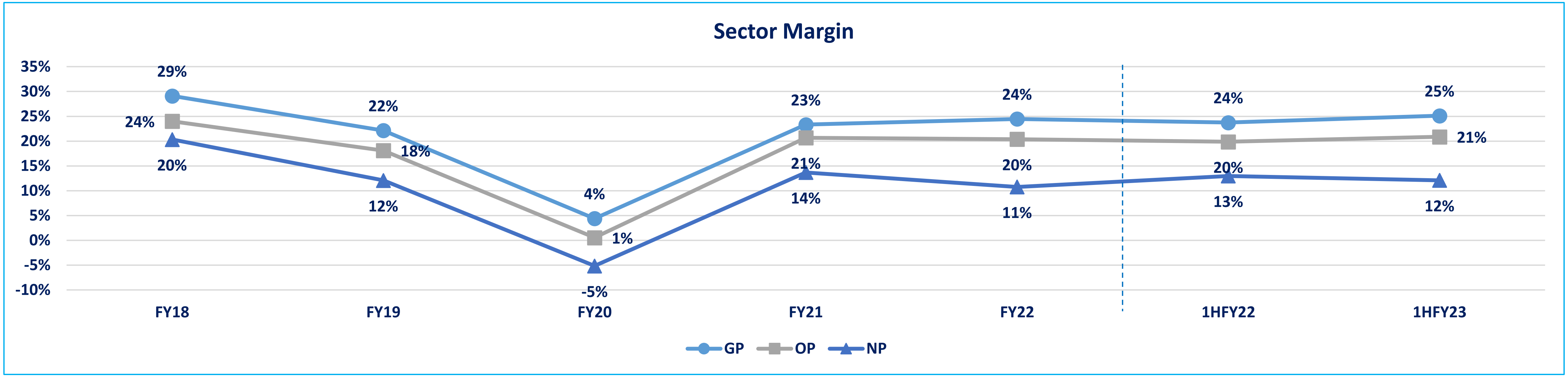
Business Risk

Figures in PKR mln	Sector Financial Highlights						
Listed companies	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**1HFY22**	**1HFY23**
Gross Sales	**412,057**	**440,007**	**401,747**	**541,566**	**670,761**	**340,110**	**417,484**
Net Sales	290,805	307,432	254,779	377,727	498,173	236,017	289,709
Cost of Sales	205,530	238,700	243,517	288,676	376,296	179,095	216,959
Gross profit	**84,643**	**68,042**	**11,234**	**88,079**	**121,877**	**56,039**	**72,750**
Operating Expense	14,833	12,380	9,865	9,922	20,300	9,143	12,272
Operating Profit	**69,809**	**55,662**	**1,369**	**78,157**	**101,577**	**46,896**	**60,478**
Finance Cost	4,287	10,077	18,866	14,407	16,279	7,215	13,690
Profit/(Loss) before Tax	**68,887**	**49,480**	**(13,642)**	**67,892**	**89,724**	**42,157**	**49,708**
Taxation	9,761	12,349	(513)	16,231	36,069	11,505	14,633
Profit/(Loss) after Tax	**59,126**	**37,131**	**(13,129)**	**51,661**	**53,655**	**30,652**	**35,075**

- In FY22, industry size grew by ~24% YoY reaching PKR~671bln (FY21: PKR~542bln), this result came on the back of a massive ~31% average increase in the local 50 kg cement bag retention prices. Recently FED of PKR100/50Kg bag has also been implemented, which will hike the prices even further. While local dispatches remained largely stable and export dispatches fell by ~44% YoY. Sector net revenues grew by ~32% YoY.
- The industry's cost of goods sold also saw major upward movement, growing ~30% YoY, owing to ~55% YoY higher energy and ~19% YoY higher raw material & packaging cost. Sector GP also grew by ~38% YoY, due to ~1.5% positive delta between net revenue and COGS growth rate.

Source: APCMA, Companies Financial, PACRA Internal Database, Economic Survey

Business Risk



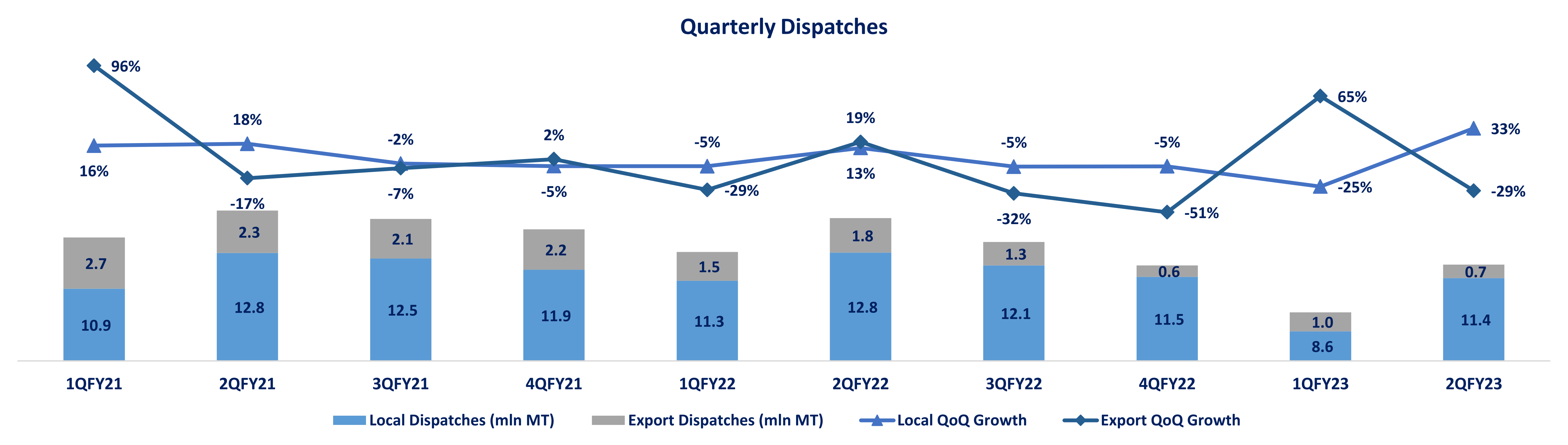
- In FY22 The industry retained ~20% (FY21: ~21%) operating margins owing to, a ~105% YoY increase in operating costs, as operating expenses stood at ~4.1% of net revenues (FY21: ~2.6%). While a ~13% YoY increase in finance cost and ~1.2x increase in tax expense lead to net margins dropping to ~11% (FY21: ~14%).
- Local dispatches further dipped by ~16% YoY in 1HFY23, while retention price per bag increased by ~48% contemporaneously. While prices of coal although on a downwards trend, were on average ~54% higher.
- Improvement in retention prices maintained the sector margins. GP margins stood at ~25% in 1QFY23 (1QFY22: ~24%), operating margins at ~21% (1QFY22: ~20%) and net margins at ~12% (1QFY21: ~13%).

Source: APCMA, Companies Financial, PACRA Internal Database, Economic Survey

Cement

Business Risk

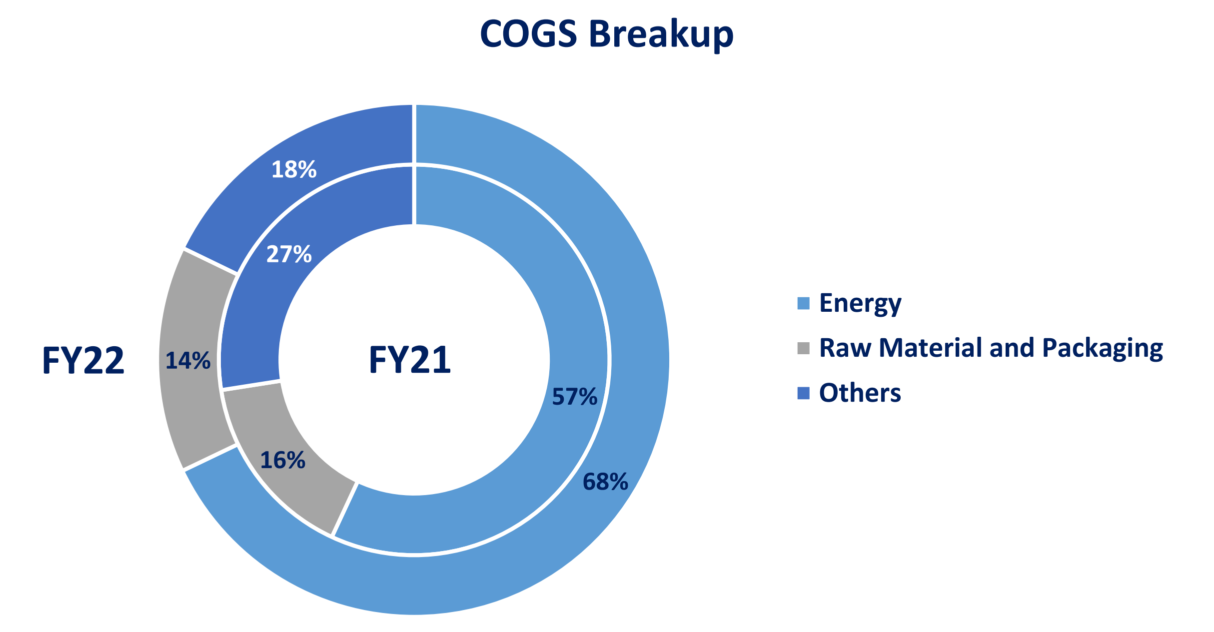
- Being a primary construction material, cement offtake is highly dependent upon infrastructure development and construction activities in the country.
- PSDP budget for FY23 has been set at PKR800bln at federal level and PKR1,463bln at provincial level, bringing the total allocational at PKR~2,263bln, compared to revised amount of PKR~1,836bln for FY22.
- As of 8MFY23 ~50% of the federal PSDP funds were authorized/disbursed, providing a base line support for the construction activities in the country. As the economy at large has slowed down amidst hawkish monetary policy, high levels of inflation and forex reserve crisis, leading to lower levels of dispatches.

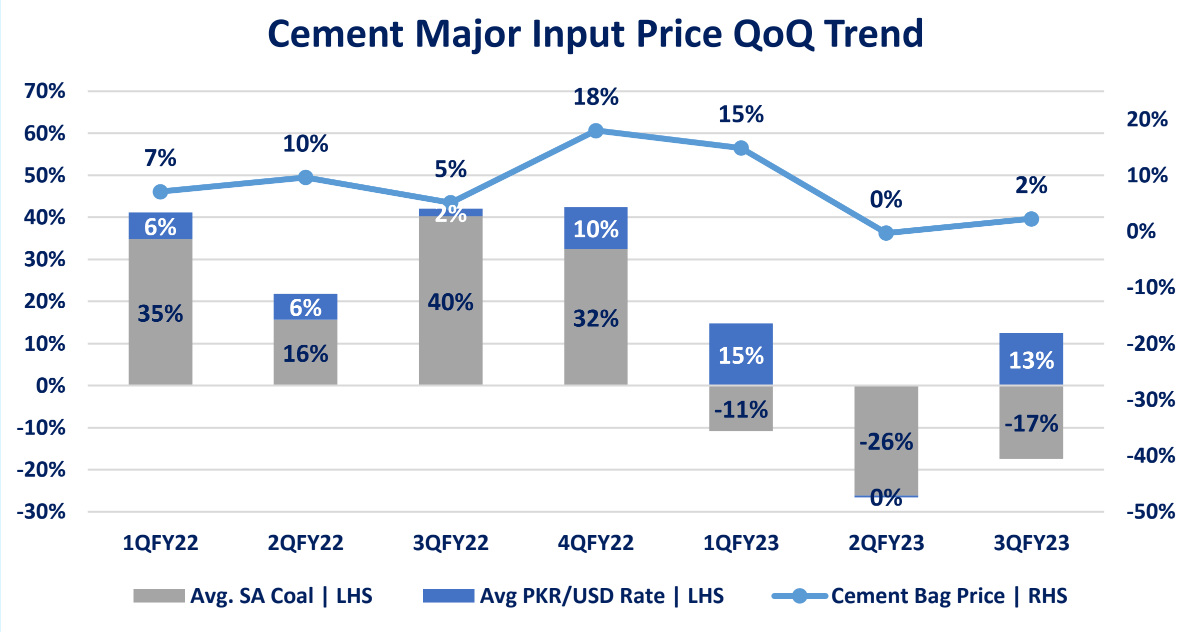


Cement

Business Risk

- Although the industry managed to on average increase YoY prices by ~30% per 50Kg bag in FY22, but the price move was offset by 1.5x hike in South African coal (holds ~62% share on average in Pakistan's coal imports) prices; and average ~11% PKR devaluation. The industry has been relying on imported Afghan coal which is cheaper, but amidst global energy price spiral, that gap too is closing. These dynamics increased energy cost component to ~68% (FY21: ~57%) in the Industry's COGS mix.
- By 3QFY23, cement bag prices rose by ~38% YoY and prices of South African fell by ~28% YoY. This positive development was however thwarted by a ~41% YoY PKR devaluation. Going forward, PKR devaluation and above average energy input prices are expected to keep industry gross margins under pressure; as those can not be passed on to consumers indefinitely.





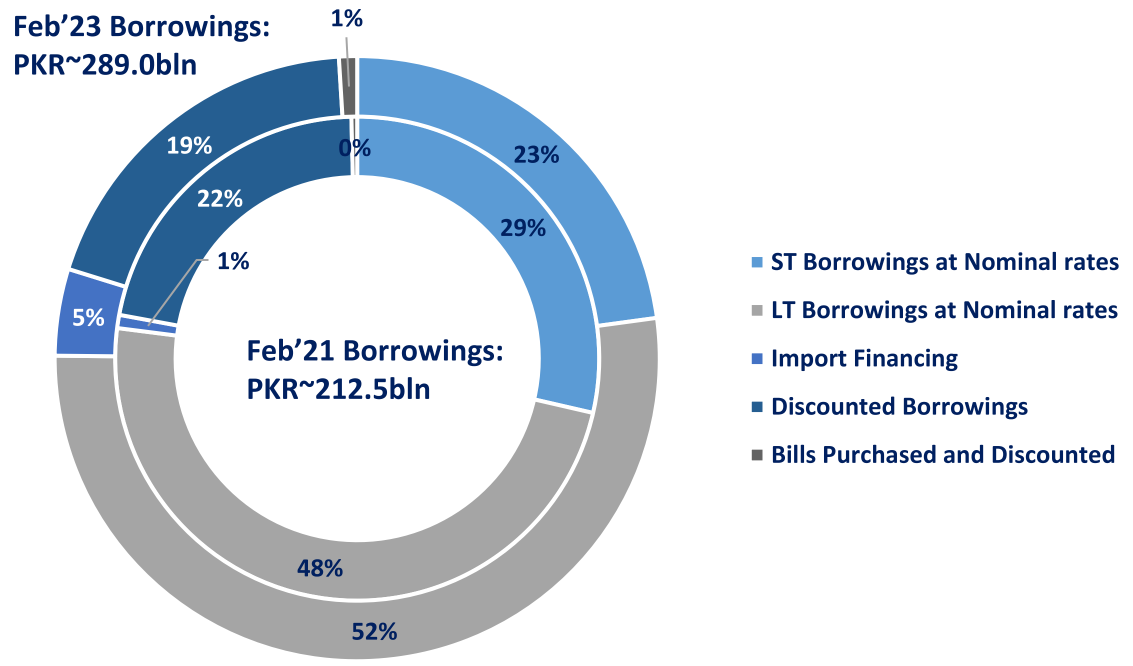
(50 Kgs of cement require 8Kgs of Coal energy equivalent)

Source: APCMA, PBS, IMF, Business Recorder, The News

Financial Risk - Borrowings

- By End-Feb'23 end Sector borrowings stood at PKR~289bln (Feb'22: PKR~213bln) after growing by ~35%YoY.
- Short-term borrowings at normal rates increased to PKR~83bln after growing ~70% YoY and held a ~29% (Feb'22: ~23%) share in the total borrowing mix.
- Long-term borrowings at normal rates stood at PKR~140bln (Feb'22: PKR~111bln) representing ~48% (Feb'22: ~52%) share of total borrowings, up by ~26% YoY.
- Discounted borrowings comprising of LTFF & TERF and EFS represented ~22% of total borrowings and stood at PKR~63bln (Feb'22:~41bln), experiencing a significant growth of ~53% YoY.
- Import financing held ~1% shares in total borrowing, standing at PKR~2.5bln (Feb'22: PKR~10bln), down by ~74% YoY.
- Sector's bills purchased and discounted experienced a significant decrease of ~46% YoY and stood at PKR~1.1bln (Feb'22: PKR~2bln) representing less than ~1% share in the overall borrowing mix.

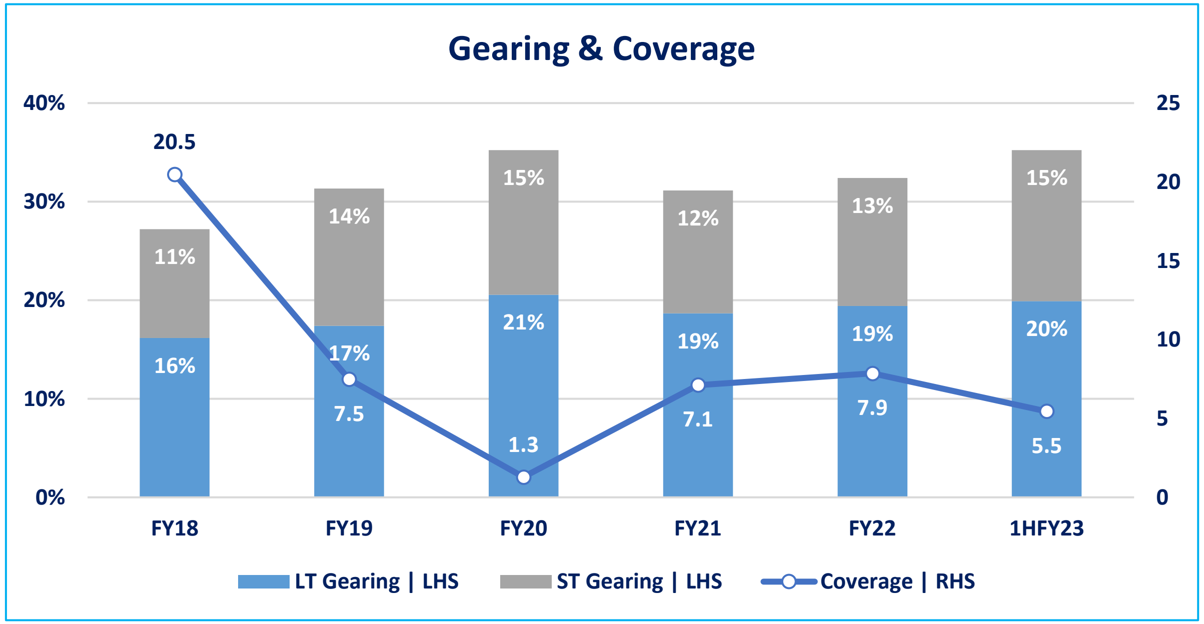
Feb'23 Borrowings Mix

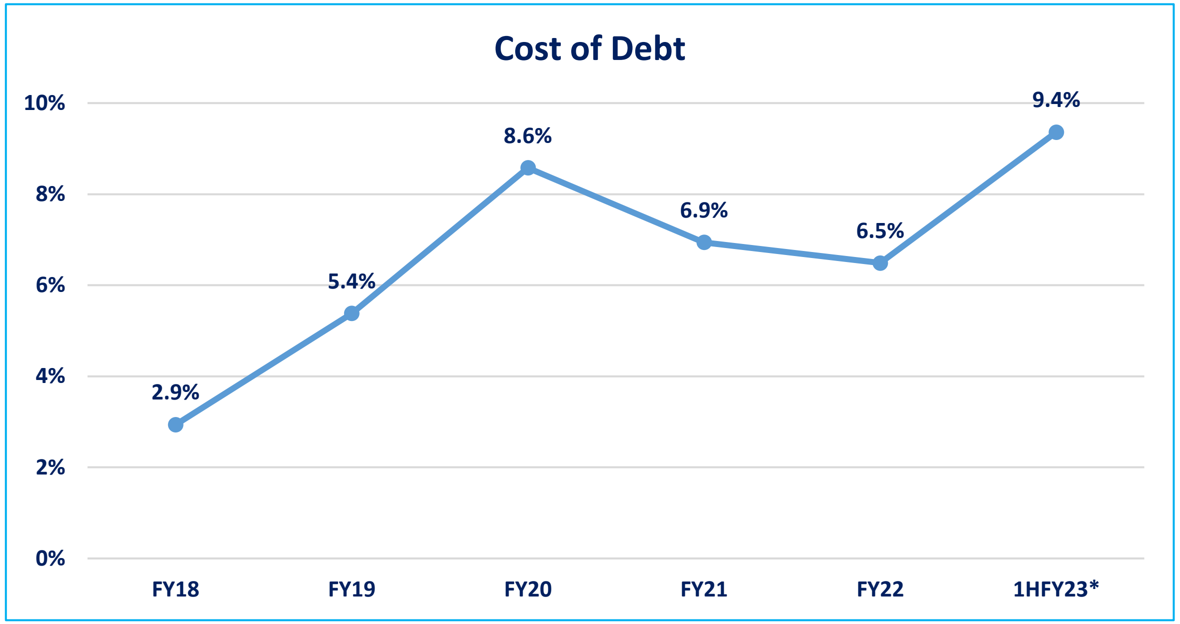


Together. Creating Value.

Financial Risk

- In FY22, the industry's debt to capital ratio stood at ~32% (FY21: ~31%), as both short and long term debt grew by ~21% YoY, while equity grew by ~14%. At 1HFY23 end, industry gearing ratio stood at ~35% as LT debt grew by ~12%, ST debt grew by ~29% and equity only grew by ~5% in the first half of the current fiscal year.
- Coverage ratio grew to ~8x in FY22 (FY21: ~7x) as industry EBITDA increased by ~25%, and finance cost increased by ~13% YoY. In 1HFY22 however coverage dipped to ~6x, as EBITDA grew by ~24% YoY while finance cost grew by ~90% owing to hawkish monetary stance by the SBP.
- Owing to ~6x YoY higher LTFF & TERF borrowings, in FY22 industry effective cost of debt marginally reduced to ~6.5% (FY21: ~6.9%). In 1HFY23 effective cost of debt grew to ~9.4% following multiple upward revisions in the policy rate by the SBP.



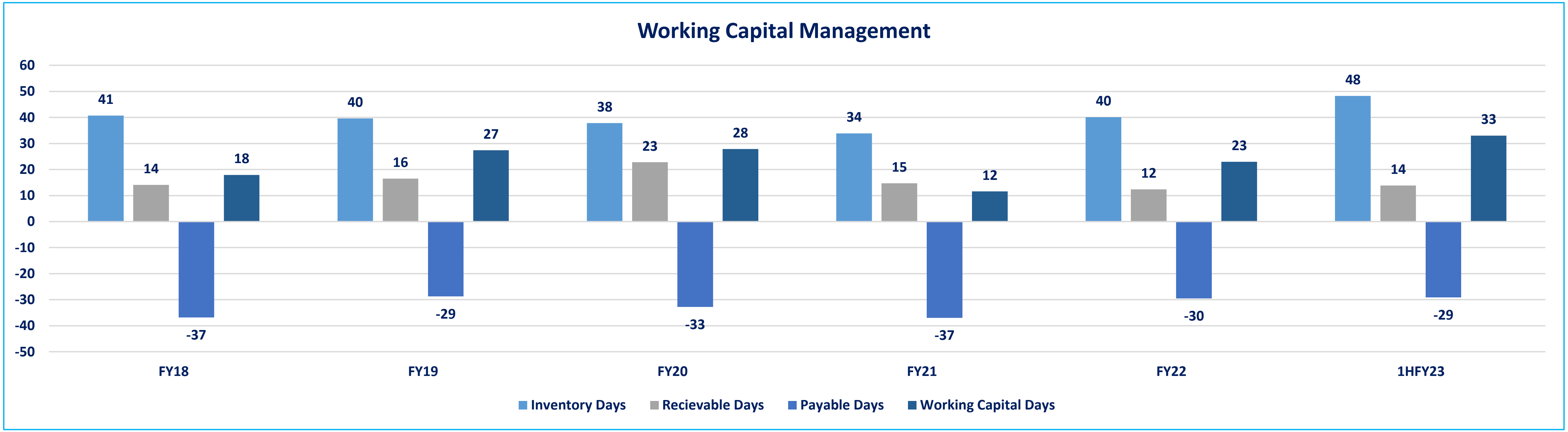


*annualized

Source: Companies Financial, PACRA Internal Database

Financial Risk-Working Capital

- In FY22 the industry's working capital (WC) days were recorded at ~23 (FY21: ~12 days), as inventory days increased to ~40 (FY21: ~15 days) owing largely to growth in inventories by ~54% YoY; receivable days decreased to ~12 (FY21: ~15 days) as industry receivables increased by ~11% YoY and net revenues grew by ~32% YoY; while sector payable days decreased to ~30 (FY21: ~37 days) due to 33.7% YoY increase in balances with creditors.
- 1HFY23 working capital (WC) days stood at ~33, as inventory and receivable days increased to to ~48 and ~14 days respectively; while payable days also stood at ~29; netting an increase of ~10 WC days.

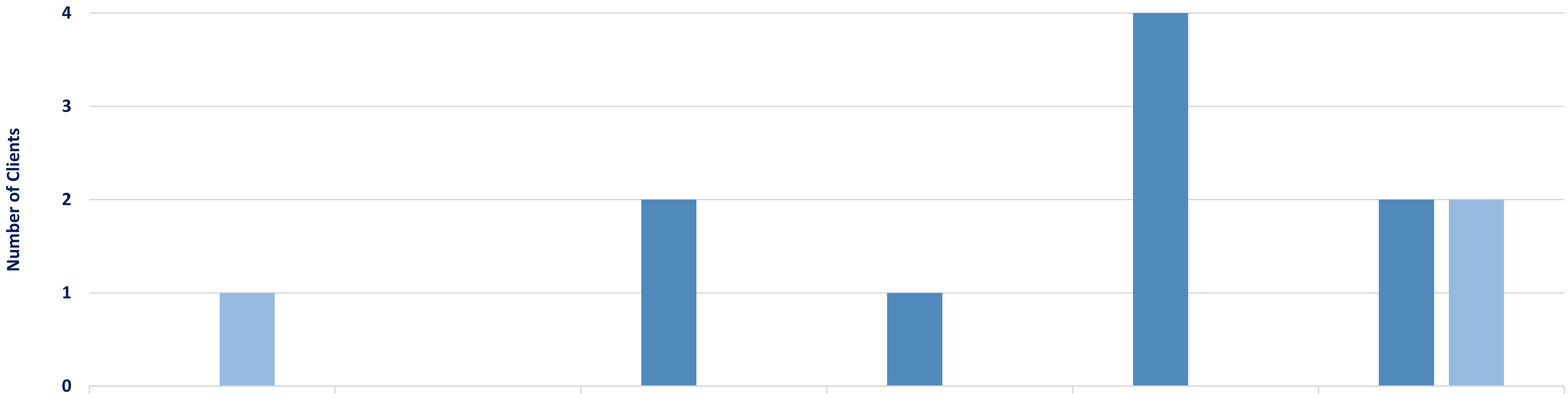


Cement

Rating Scale

- PACRA rates 9 clients in the cement sector. Rating bandwidth of the sector is A- to AA-.
- Collectively PACRA rated clients makeup ~55% of the total sector in terms of its production capacity.

Rating Scale



	AA+	AA	AA-	A+	A	A-
PACRA			2	1	4	2
VIS	1					2

PACRA VIS

Cement

Duties & Taxes

PCT Code	Description	Custom Duty		Additional Custom Duty		Federal Excise Duty		Sales Tax		Income Tax	
	Raw Material for Cement	FY21	FY22	FY21	FY22	FY21	FY22	FY21	FY22	FY21	FY22
2701.12	Bituminous Coal	3%	3%	2%	2%	-	-	17%	18%	4%	11%
2701.19	Other Coal	3%	3%	2%	2%	-	-	17%	18%	4%	11%
2523.1	Cement Clinker	11%	11%	2%	2%	PKR 150/Ton	PKR 2/KG	17%	18%	0.25%	11%
	Finished Goods	FY21	FY22	FY21	FY22	FY20	FY22	FY21	FY22	FY21	FY22
6810.11	Building Block and Bricks	20%	20%	6%	6%	-	-	PKR 2-10	18%	0.25%	11%
2523.21	White Cement	20%	20%	6%	6%	PKR 150/Ton	PKR 2/KG	17%	18%	0.25%	11%
2523.29	Other Cement	20%	20%	6%	6%	PKR 150/Ton	PKR 2/KG	17%	18%	0.25%	11%

Source: FBR

Cement

Porter 5 Forces Model

POTENTIAL NEW ENTRY

- Low threat to Entry
- High Capital cost of plant development and query availability
- Extensive regulatory requirement to establish new plants
- Strong dealer network of established players

BUYERS

- Medium to high
- Abundance supply
- Homogeneous nature of the product

SUBSTITUTES

- No/Low threat of substitutes
- Indispensable component of construction

SUPPLIERS

- Medium to High
- Abundance supply of basic raw material
- Heavy reliance on imported coal comes with its set of challenges

COMPETITIVE RIVALRY

- High
- Capacity enhancement amid stagnant demand increases competition

Cement

SWOT

- Abundance local availability of basic raw material
- Low cost skilled and unskilled labor
- Capital intensive sector
- Good margins in period of robust demand
- Demand Potential
- Strong dealership and distribution network
- Non-availability of substitute

- Quick perishability of finished product
- Heavy reliance on imported coal
- Exposure to exchange rate volatility
- Extensive regulatory requirements

- Increasing cost of energy
- High Production capacity – supply surplus
- Low demand in export markets
- Rising environmental concerns related to production of cement
- Competition in export markets with cheaper Iranian cement

- Low per capita consumption
- Improving infrastructure under PSDP & CPEC related projects.

Cement

Outlook: Watch

- Cement is a major industrial sector in Pakistan due to its high economic significance and association with multiple allied sectors. In FY22, the sector represented ~1.07% of the GDP and ~10% of the LSM; it is also among the exporting industries of the country.
- From FY22 onwards, global supply chain disruptions exacerbated by Russia-Ukraine war, have propelled global commodity prices to their multi-year/all-time highs. High inflation, monetary tightening and economic slowdowns have become a global theme. Along with the global macro economic vulnerabilities, Pakistan further got hit by a devastating flash flood, socio-political unrest and now a grave foreign exchange shortfall as talks with the IMF remain stalled.
- Consequently Pakistan's inflation in Mar'23 clocked in at hyper ~35%; PKR depreciated by ~41% with import restrictions in place; the MPR stood at a prohibitive 20%, and the World Bank now estimates Pakistan's FY23 GDP growth to clock in at ~0.4%. The QIM of the LSM dipped by ~8% YoY in Jan'23 with all but 4 industrial sectors in red.
- On the production side in the construction materials industry at large; the "Manufacturing of Non-Metallic Mineral Products" sub-index of the QIM (includes cement with ~93% weight) has consistently declined since Oct'22 and fell by ~10% by Jan'23; while "Manufacturing of Iron & Steel Products" sub-index has consistently declined since Aug'22 and fell ~6% by Jan'23. On the pricing front in Mar'23, construction material prices on average grew by ~36% YoY and construction worker wages on average, grew by ~18% YoY contemporaneously.
- Given, hiking prices of construction material/wages and high borrowings costs, construction projects facing cost overruns may get stalled with a subdued impetus for newer projects. This would lead to even lower offtake in the near term. On the export front, tightened macroeconomic situations in major importing destinations coupled with a ~26% YoY rise in export price of Pakistani cement (8MFY23), the export dispatches are expected to remain sluggish.
- However, since the prices of all construction materials in general are rising, the industry can be expected to maintain its pricing power. This may help the sector to sustain its margins at the gross and operating levels but some deterioration is expected at the net margins levels due to exorbitant rise in interest rate. Given the industry's prudent shift towards Afghan and local coal; investment in renewable and heat recovery plants is also expected to keep the cost side in check.
- Going forward, elevated input costs and slower offtakes are expected to weigh negatively on the industry in the short term.

Bibliography

- All Pakistan Cement Mill Association (APCMA)
- Pakistan Economic Survey
- State Bank of Pakistan
- Pakistan Bureau of Statistics
- Companies Financial Statements
- PACRA Internal Database
- AI Cement
- IPPA
- US Department of Geology
- FBR
- TIPP
- UN Comtrade
- FED
- WB
- IMF

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