



Construction Sector Study



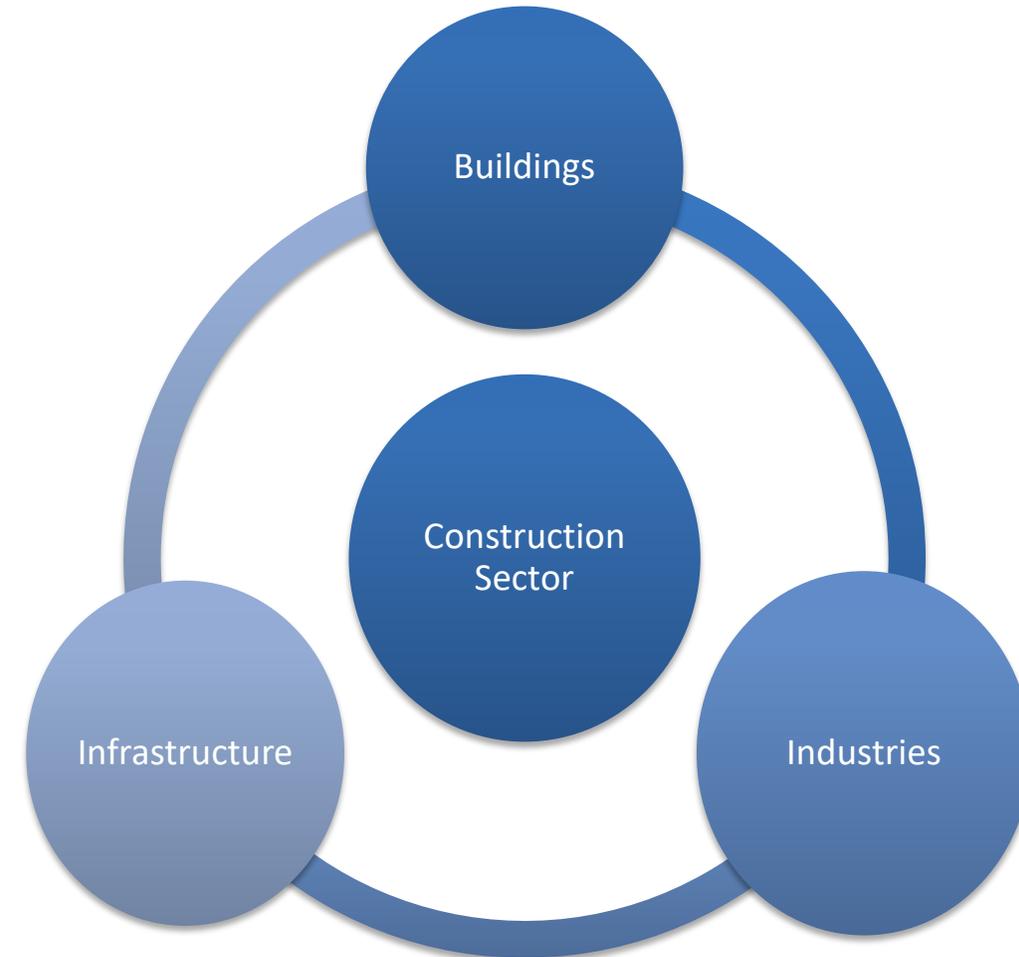
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Global Overview

- Construction comprises all economic activities directed to the creation, renovation, repair or extension of fixed assets in the form of buildings, land improvements of an engineering nature, and other engineering constructions such as roads, bridges, dams and so forth.
- Global construction industry size was valued at USD~13.6tln in CY21 with expectations to reach USD~15.2tln in CY22, while in the long term the industry is expected to grow with a CAGR of 11.8% with its size reaching USD~23tln by CY26.
- The construction sector can be broadly classified into the following segments:
 - a) Buildings
 - b) Infrastructure
 - c) Industries
- The buildings construction is further divided into residential and non-residential market; valued at USD~6.5tln in CY21 (CY20: USD~5.9tln) representing ~47.6% share in the global construction market. It is expected to grow with a CAGR of ~8% reaching a size of ~9.5tln by CY26.
- Global construction industry is of a major economic significance; it contributed ~14.3% to the global GDP in CY21 and is expected to contribute ~14.8% in CY22 while on average it employees 7% of the global labor force.



Construction

Top 10 Players

- Construction is primarily driven by infrastructure demand arising from level of economic activity, population growth and population income levels.
- In CY21, Asia having the largest share in global population of ~59.5% and the fastest growing GDP averaging at ~4.7% (pre-Covid average) lead the global construction activities, particularly in China as 6 of the top 10 firms are located there and output from construction activities contributed ~7.1% to their GDP.
- Due to high linkages of construction industry with other allied industries, the growth in construction sector will bode well for the overall growth of economic activity.
- Building construction segment of the industry is shifting towards green construction techniques; aimed at reducing construction cost and improving the energy efficiency of the building, these techniques employ sustainable materials and processes to minimize environmental impact.
- As per World Green Building Trends Survey, upward of 60% major construction companies around the world were a part of green construction projects; certifications related to these techniques enable companies to build efficient and sustainable commercial and residential infrastructure while providing positive public image and tax benefits in many jurisdictions.

Global Top 10 Player Revenues (USD bln)			
Sr.#	Company	Origin	Net Revenues CY21
1	China State Construction Engineering*	China	322
2	China Railway Construction*	China	186
3	China Railway Engineering Group*	China	181
4	China Communications Construction*	China	134
5	Metallurgical Corporation of China*	China	86
6	The Power Construction Corporation of China*	China	72
7	Vinci Construction	France	59
8	Bouygues	France	44
9	Daiwa House Industry*	Japan	39
10	ACS Construction Group	Spain	33

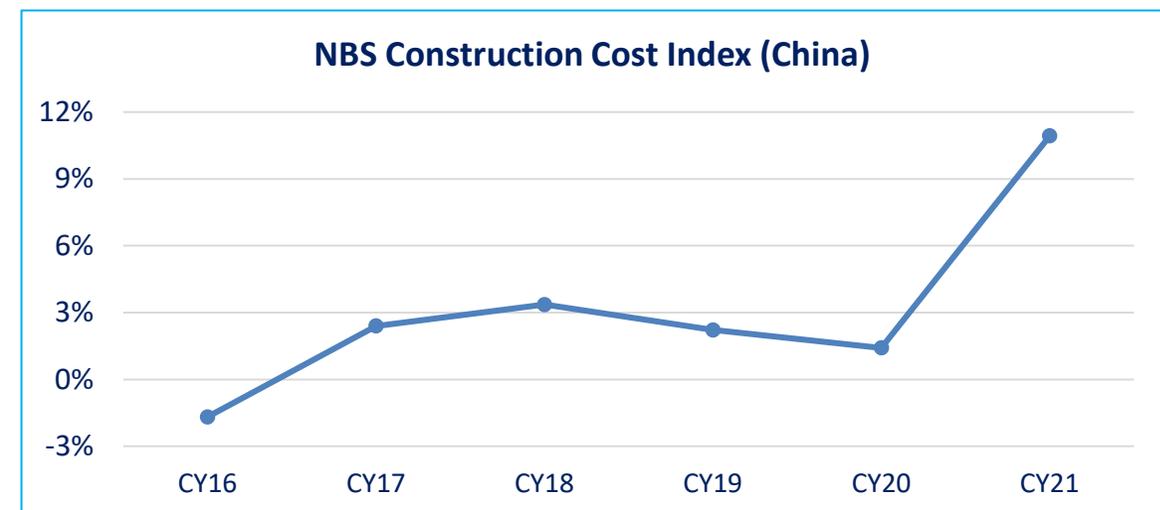
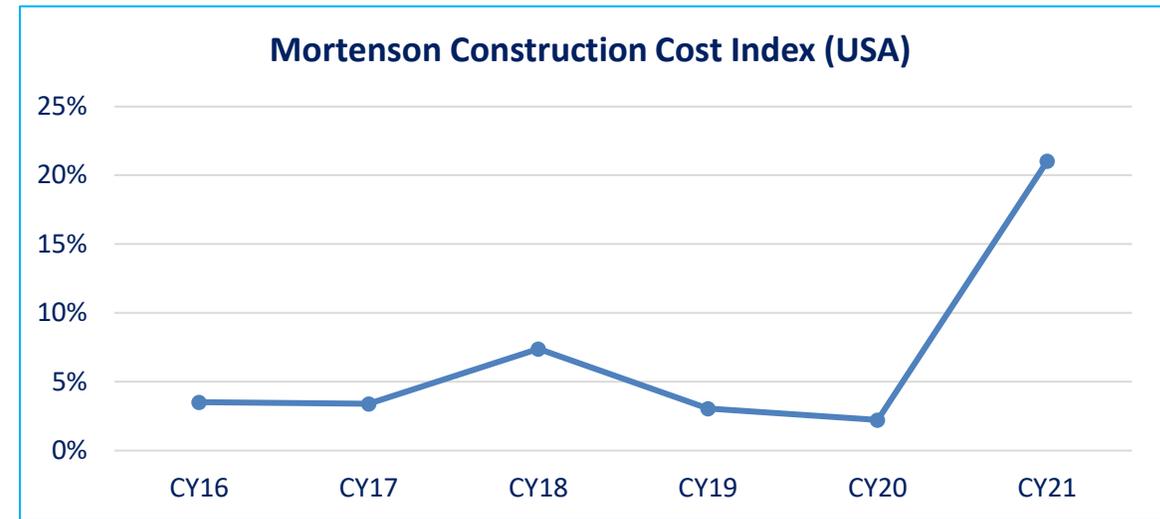
*estimated on latest reported interim growth rate



Construction

Construction Costs

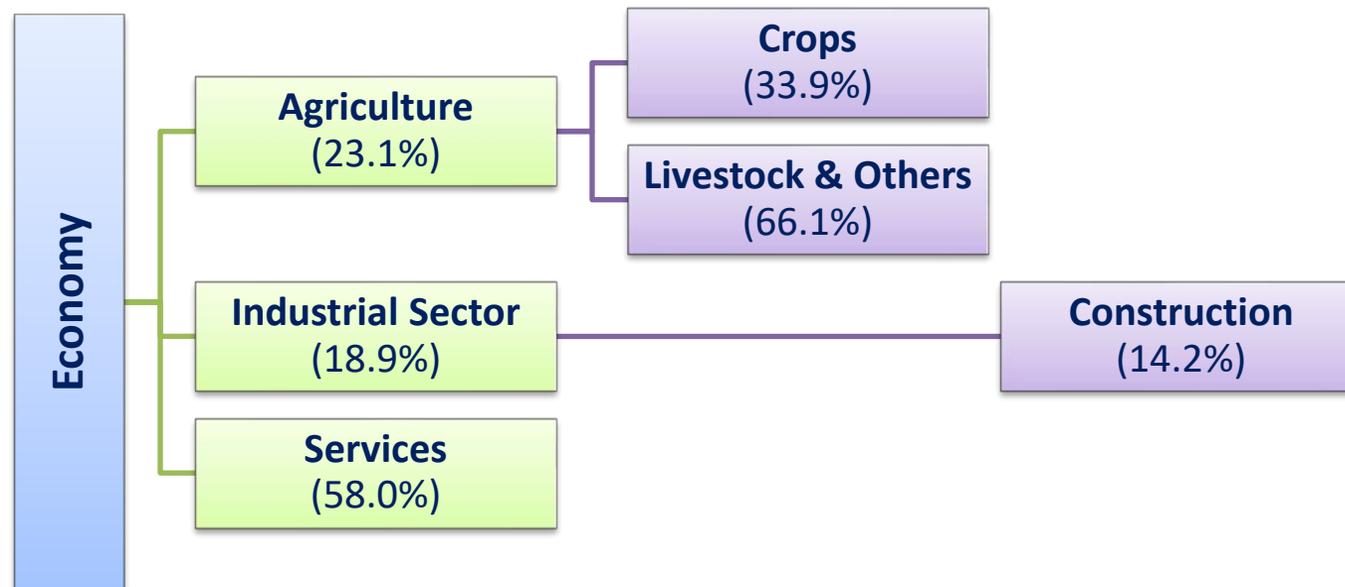
- In CY21 construction costs around the globe increased significantly following the international commodity price spiral brought on by increased post-COVID demand and logistics issues.
- As in CY21 Mortenson construction cost index tracked increase of ~21% in USA, while China's NBS construction cost index recorded an increase of ~11% for the same period.
- The cost increase has a significant cost pushed pressure, as in CY21 YoY prices of primary construction materials witnessed significant upward movements.
- Price of bitumen, primarily used in developing road infrastructure increased ~48.6%.
- Prices of metals such as aluminum, iron and copper increased by ~45%, 48% and 51% YoY respectively.
- Timber and softwood prices increased between ~7% to ~11% YoY.
- The cement industry has also been facing increased production costs due to increasing international energy prices and as those get passed on to customers, it is expected to further put upward pressure on construction costs.
- Increased costs are expected to keep construction industry margins under pressure until they significantly subside.



Construction

Local Economy Overview

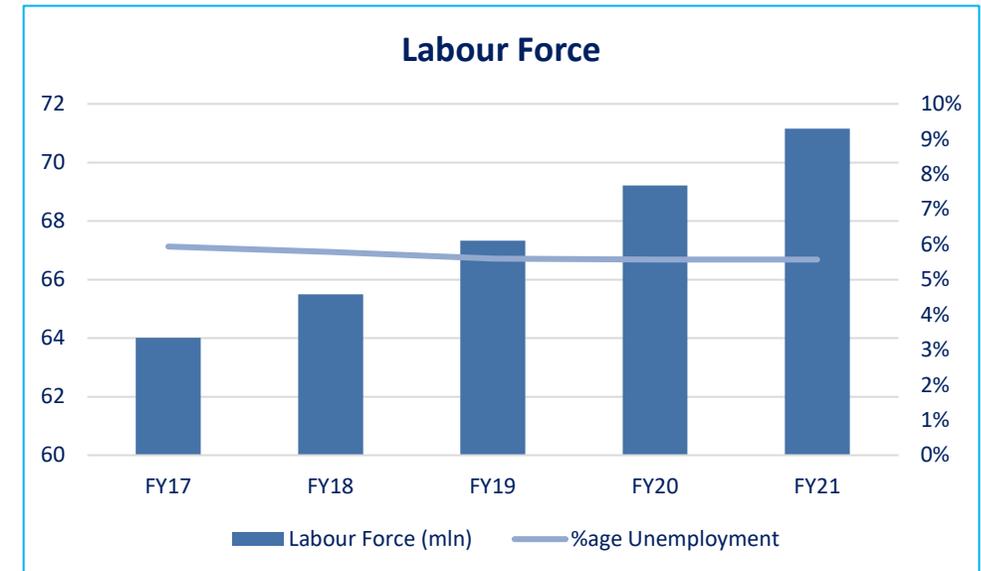
- In FY21, Pakistan’s GDP (nominal) stood at PKR~52tn (FY20: PKR~45tn) while the real GDP stood at PKR~39tn (FY20: PKR~37tn) posting a growth rate of ~6% YoY.
- Industrial sector is essential for economic growth considering its linkages with other sectors, represented ~19% share in the GDP and rebounded at ~7.8% YoY (FY20: ~-5.8%).
- The construction industry (including all types) held a ~14.2% share in total industrial activities in FY21 and posted a growth rate of ~5.3% YoY; however in terms of real value the industry stood at PKR~979bn, ~17.3% lower than its real value levels in FY18 as it experienced two consecutive years of recession i.e. ~-18.1% in FY19 and ~-4.0% in FY20.



Construction

Local Industry Overview

- Pakistan is the 5th most populous country in the world. According to 2020 data of world bank, the country’s population stands at ~221mln with a strong labour force of ~72mln. The country’s population growth rate averages around ~2.1% which is almost double the global growth rate of ~1.1%; this creates an ever increasing demand for construction and a supply of labour force to the construction industry.
- The construction sector contributed almost PKR~1,409bln to the Gross Domestic Product (GDP) of Pakistan in FY21 (FY20: PKR~1,231bln), registering a growth of ~14.4% YoY basis; Contribution to GDP decreased since FY19 from ~3.2% to ~2.8% on average; Construction activity during FY21 increased by ~14.4% in the industrial sector due to an increase in government support and uptick in investment by private sector; the industry is expected to grow up to PKR~2,706bln by FY29 at a CAGR of 11.8%
- Gross fixed capital formation (GFCF) in private sector grew by ~6.6% between FY20 and FY21; Private sector GFCF amounted over 72% of the total; By 8MFY22 construction financing stood at PKR~211bln after recording a growth of ~70% YoY.
- Construction sector absorbs ~7.61% of the total labour force and also provides stimulus to over 42 ancillary sectors including aluminum, brick, cables, cement, fixtures, glass, kitchen and bathroom fittings, marble, paint, steel, tiles, transportation, warehousing and wood.



	FY17	FY18	FY19	FY20	FY21
GDP-GVA (PKR tln)	32	34	35	35	36
Construction Sector % GDP	3.1%	3.5%	2.8%	2.7%	2.7%

Construction

Demand

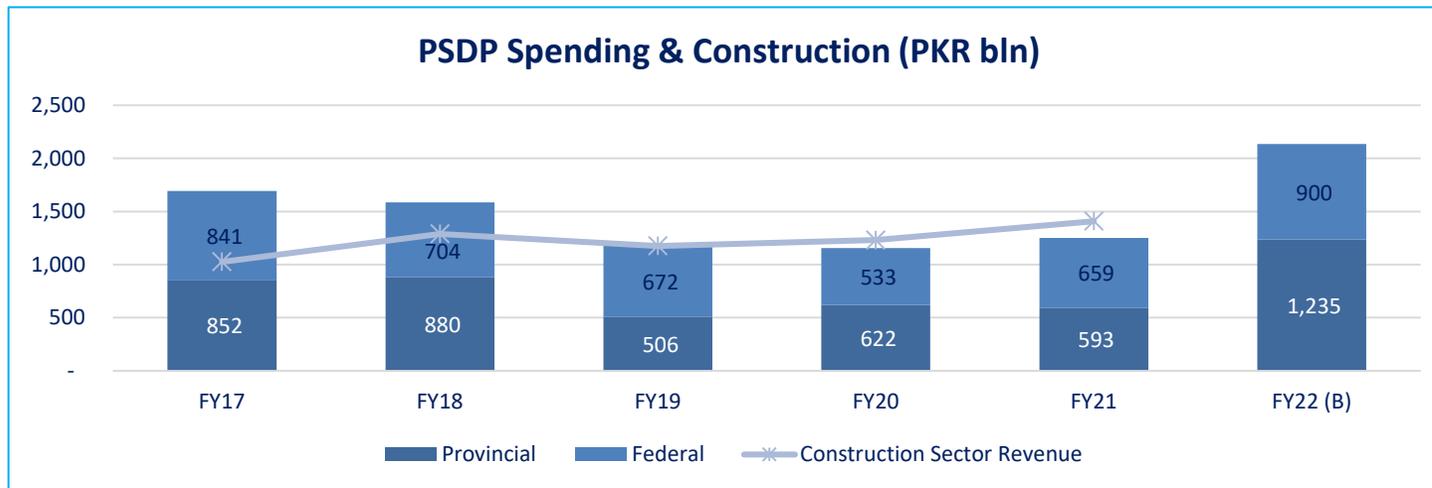
- The major drivers of demand in the construction sector is the Public Sector Development Programme (PSDP) expenditure followed by Private Investments in the construction sector. Majority of the construction revenue is from government contracts ranging from building of Infrastructure to Highways to Offices and airports. With the launch of CPEC, construction sector activity has picked up the pace. In addition, the Government relief packages and subsidies are also pushing further growth in the industry. PSDP budget allocation for FY22 is ~2135bln (FY20 ~ 1325bln) which comprises of ~1235bln (~650bln FY20) for provincial and ~900bln (~675bln FY20) for federal expenditure.
- Pakistan’s Highway network comprises 39 national highways, motorways, expressways and strategic roads. The existing portfolio of National Highway Authority (NHA) consists of 47 on-going projects with an allocation of PKR~99bln and 15 new schemes with an allocation of PKR~14bln; Pakistan ranks at 22nd position worldwide for the size of its road network as per road length of 263,775 Km. The country is likely to improve its ranking significantly with the construction of new mega projects under the CPEC.
- Private and residential buildings and homes are also a major driver in construction especially in the rural areas. The demand for residential homes is steadily growing with the growth of population pace.
- The construction industry is considered as a backbone of any economy as it provides enormous employment opportunities to skilled and unskilled workers. The construction sector also provides stimulus to its allied industries and to the economy as a whole; Hence the federal government has allocated PKR~24bln to Housing and Works division while PKR~36bln was allocated to provide subsidy on markups for purchase of new houses

PSPD Allocation	Budgeted		Authorized	
	FY21	FY22	8MFY21	8MFY22
Total Federal (PKR bln)	650	900	479	581

Construction

Demand

- The budgeted size of PSDP allocation for FY22 is PKR~2,135bIn (FY20: PKR~1,324bIn).
- Of the budgeted expenditure the largest apportionment has been made to the National Highway and Railways development, followed by water resources and energy.
- Another boost for demand is SBP’s initiative of setting mandatory targets to banks to increase their construction and housing loan portfolios to a minimum of 5% of their advances to the private sector and as of CY21 end housing finance stood at PKR~20bIn representing ~7% of total sector wise advances.



Ministry/Sector (FY21)	Amount PKR in bIn	% Allocation
National Highways & Railways	144	16%
Water Resources	103	11%
Energy/Power	96	11%
SDGs & PPP	84	9%
Special Areas (FATA, GB and AJ&K)	70	8%
Climate Change	46	5%
Education	42	5%
Health & Population	39	4%
Science & Info	25	3%
Housing	24	3%
Food & Agriculture	12	1%
Other Development	213	24%
Total Federal PSDP	900	100%

Latest Developments

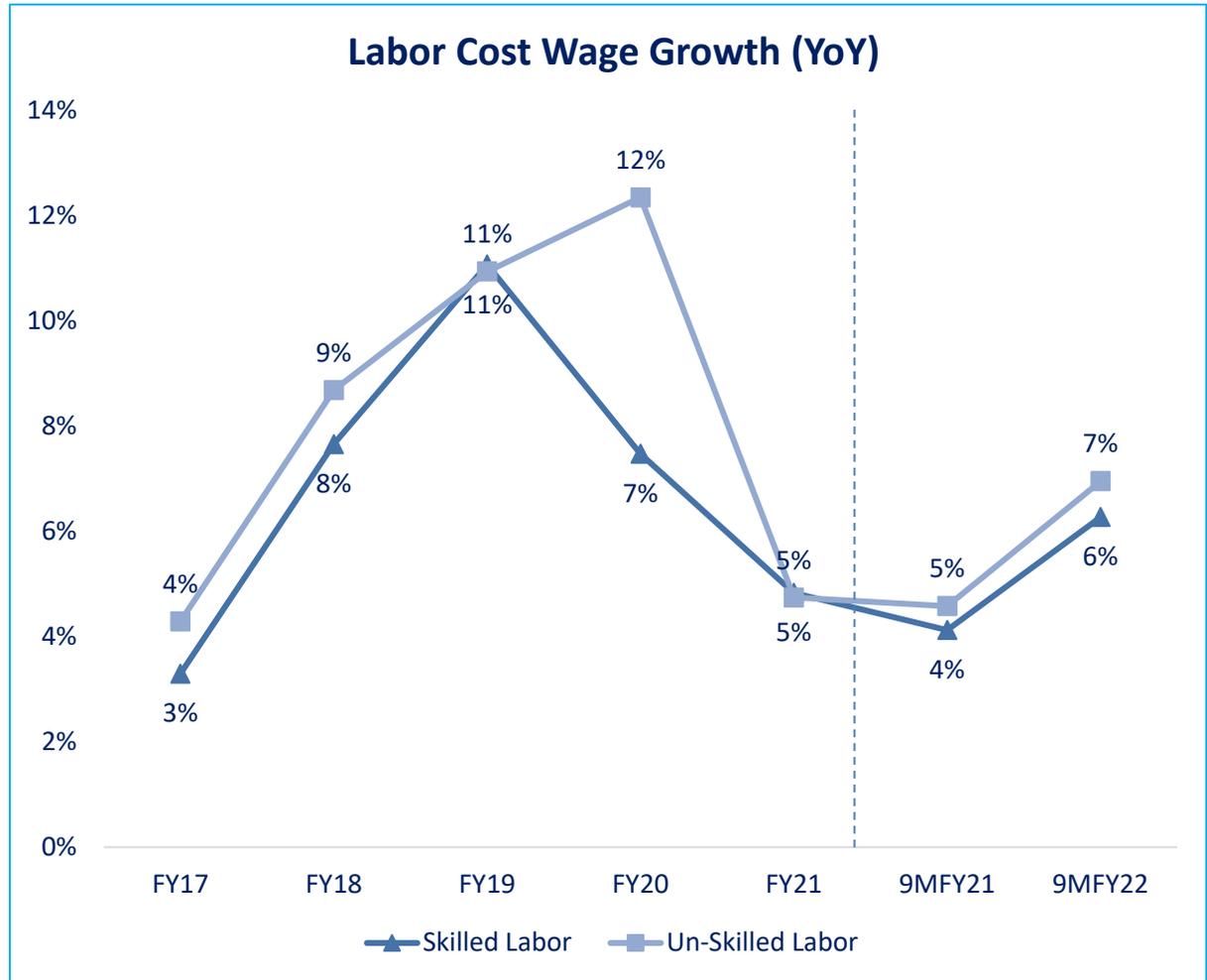
Major Public Sector Ongoing Projects:

- Construction of 4 Dams is underway with a cumulative capacity of ~8 MAF and a total cost of PKR~638bln.
- CEPC authority has currently under construction:-
 - 6 energy projects with cumulative generation capacity of 3,870 MW, of which 4 are thermal (Coal based) and 2 are hydropower.
 - 5 transport infrastructure projects with cumulative road length of 813 Kms and 6 projects of cumulative road length of ~2989Kms in the pipeline.
 - 7 Gwadar development projects including road, power, healthcare, water resources and an airport, with 4 more similar projects in the pipeline.
 - 4 special economic zones under construction with 5 more in the pipeline.
- 9 Construction and rehabilitation of road and transit projects of cumulative road length of ~1677Kms are in the pipeline under Public Private Partnership.
- 71 projects related to health care are underway with a cumulative worth of PKR~121bln.



Industry Dynamics - Supply

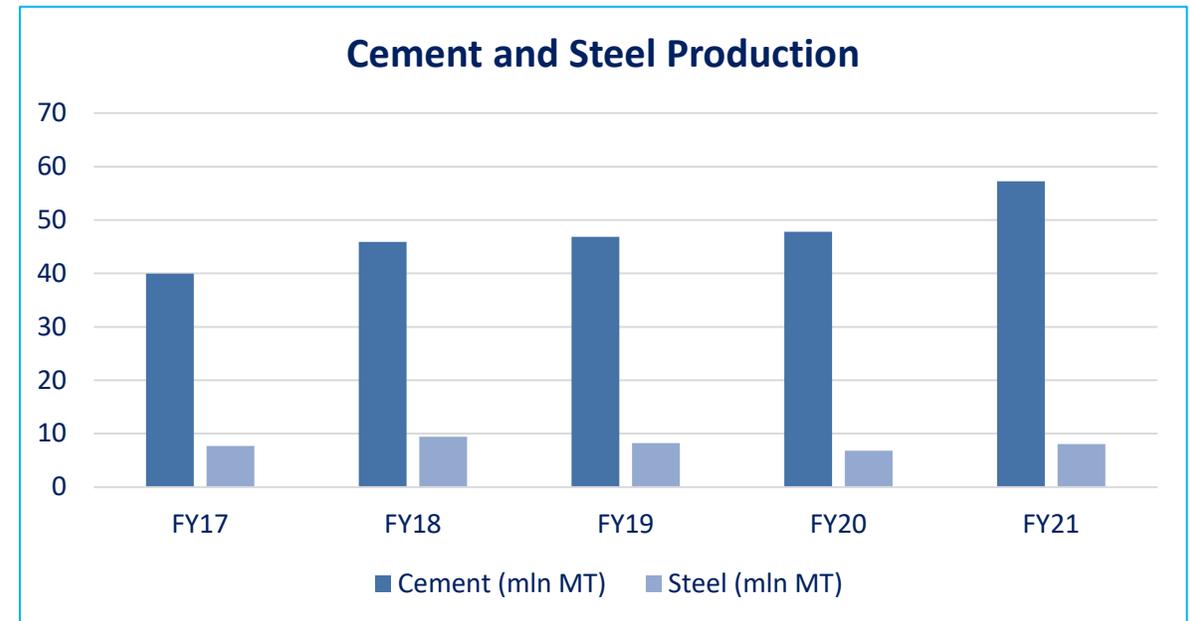
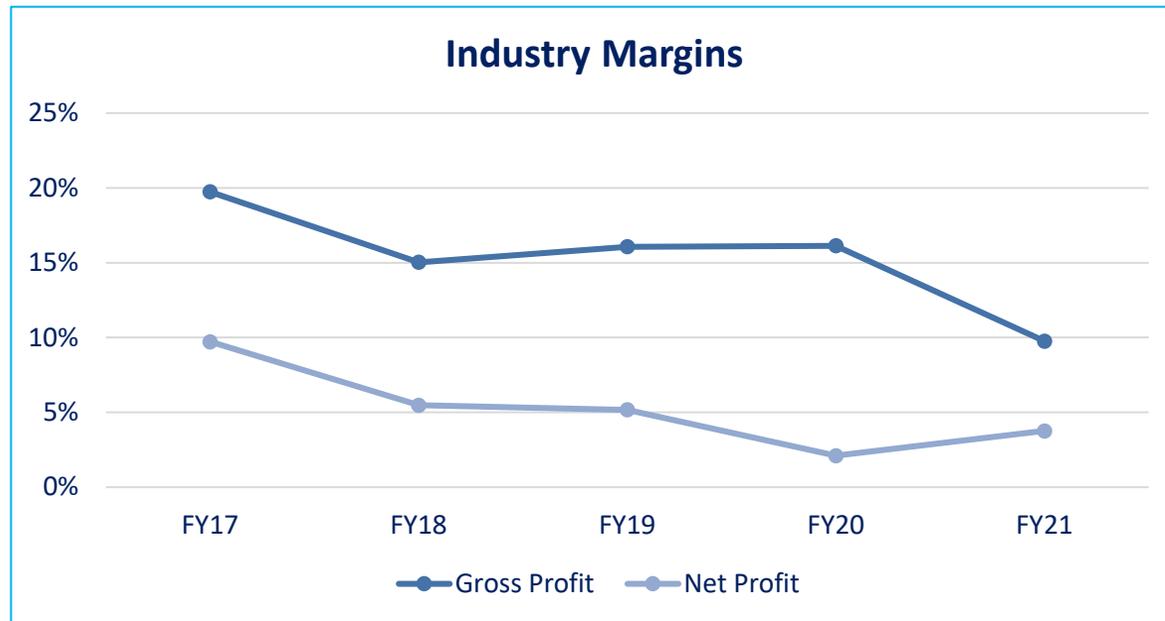
- Over 10,000 firms are registered with the Pakistan Engineering Council as constructors/operators. However, only ~100 (1%) of them hold the prestigious CA category (no limit) license and High Carbon Steel Technology (HCS) which enables them to be on the pre-qualifying list of approved constructors.
- The quantity of raw material and requirement of professional expertise is different and dependent on the nature of the projects.
- Generally, material cost constitutes a major portion of the cost of sales of the construction companies followed by salaries and wages of both technical staff and labor. The basic construction material like cement and steel is available in abundance locally.
- Construction is a capital intensive business requiring uninterrupted financial backing from banks. The nature of construction work is uneven wherein delays and prolonged deadlines are very common. These factors make construction sector high working capital consuming as well as long term debt based sector.



Construction

Business Risk

- The industry revenues rebounded at ~14.4% in FY21 standing at PKR~1409bIn (FY20: PKR~1,231bIn) owing to higher demand in construction.
- However over ~50% of industry cost of goods sold comprises of raw material (i.e. construction materials) given the hikes in their prices the industry gross margins have shrunk to ~10% in FY21 and recently global construction material prices still are in an upward spiral which are expected to keep gross margins under pressure.
- While the industry net margins improved to ~4% in FY21 (FY20: ~2%) indicating enhanced retention owing partly to a variety of incentives provided to the industry.



Business Cycle



Every construction project has the following 7 stages in its life cycle:

- **Win Contract:** After successful bidding the contract is awarded to the contractor.
- **Mobilization Advance:** Is given to the contractor so that machinery, equipment and labour can be mobilized.
- **Construction Starts:** Within a stipulated time period, as mentioned in the contract.
- **Stages of Completion:** The project is divided into certain number of stages and the contractor is paid after successful completion of each milestone.
- **Delivery:** The project needs to be delivered within an agreed timeframe after which the contractor may accrue damages.
- **Certificate:** When the client is satisfied and there are no pending disputes, a certificate of completion is issued.
- **Retention Money:** Is returned to the contractor after completion of a certain time period after project delivery.

Business Risk

Major Delay Causes with Responsible Entities– Various Delay Categories

Major Delay Causes with Responsible Entities– Various Delay Categories			
Change orders/ directives	Contract Related Delays	Owner	1
Labor productivity issues	Labor Related Delays	Contractor	2
Poor site management and supervision	Management/ Administrative Delays	Contractor	3
Inspections/ Audits	Construction Site Related Delays	Contractor	4
Poor cost estimation & control	Management/ Administrative Delays	Contractor	5

- The biggest delay in the construction deadline is caused by the owner. Any changes in design or orders could delay or even halt the construction activity all together.
- Availability of skilled labour is also an issue for the contractor especially in rural areas. The second most deteriorating reason for any project is poor cost estimation and management.

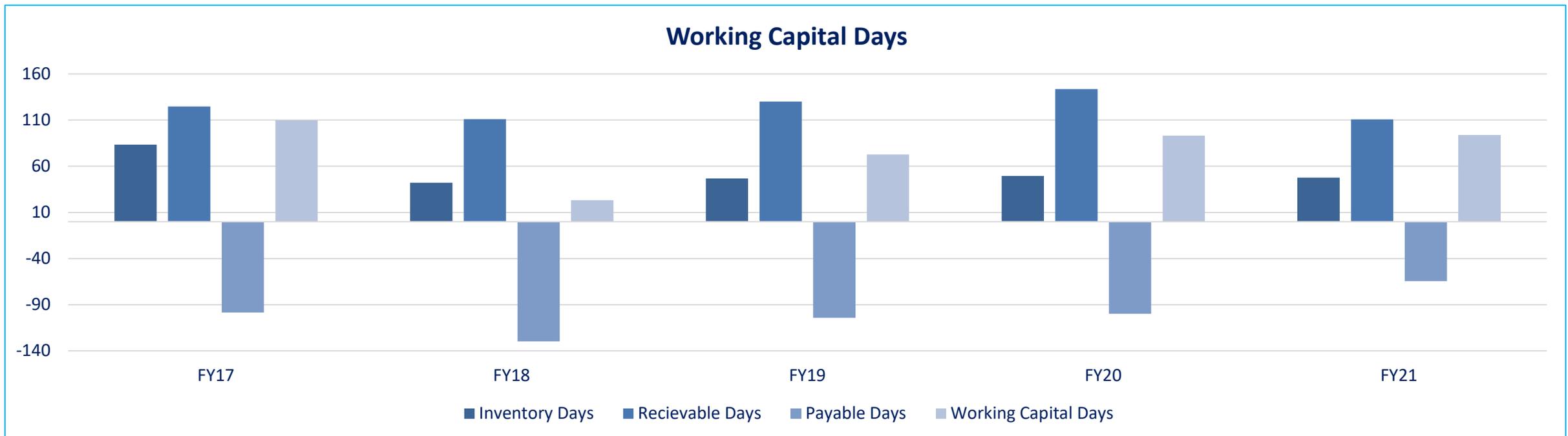
Categorical Delay Criticality Ranking with Responsible Entities

Category of Delay	Major Responsible Entity	Delay Criticality Ranking
Design related delays	Consultant	1
Financial/ Economic Delays	Owner	2
Contract related delays	Owner	3
Construction site related delays	Contractor	4
Subcontracted work related delays	Contractor	5

- After design related delays, unavailability of funds is the most crucial element. Subcontracted or third party contractors are also a major element. Their profitability is not directly tied towards the project or contract, hence delays in regarding subcontractors or third party related work are more frequent.
- Although time delay and cost overrun are very common in construction projects but it can be reduced or eliminated by adopting a proper performance monitoring mechanism and control system that will be integrated with all the key aspects and activities of each phase of the construction project.
- Better communication among all the stakeholders of the projects with a clear understanding of the project success criteria and KPI will lead to the successful completion of the project without delay and cost overrun but providing the best quality.

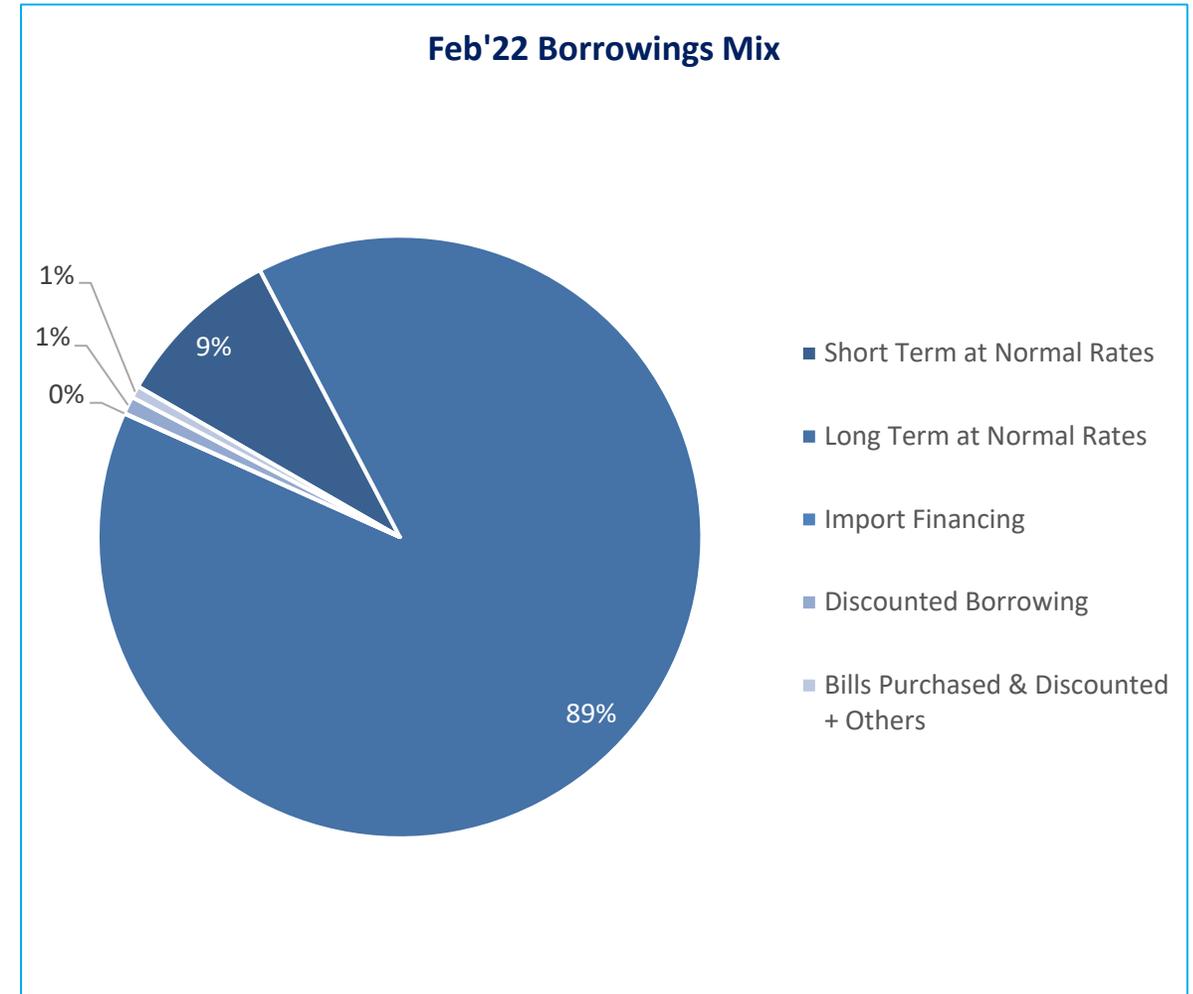
Financial Risk-Working capital

- In FY21 industry inventory days reduced slightly and stood at ~42 (FY20: ~49 days), receivable days also saw significant reduction as they stood at ~111 (FY20: 143.50); implying improved business activity and enhanced recoveries.
- However the payable days also reduced and stood at ~65 days (FY20: ~100 days) implying increased drag on liquidity.
- Cumulatively working capital management days experienced no significant change as they stood at ~94 days (FY20: ~93 days) as improved inflows pace was almost equivalently offset by the pace of outflows.



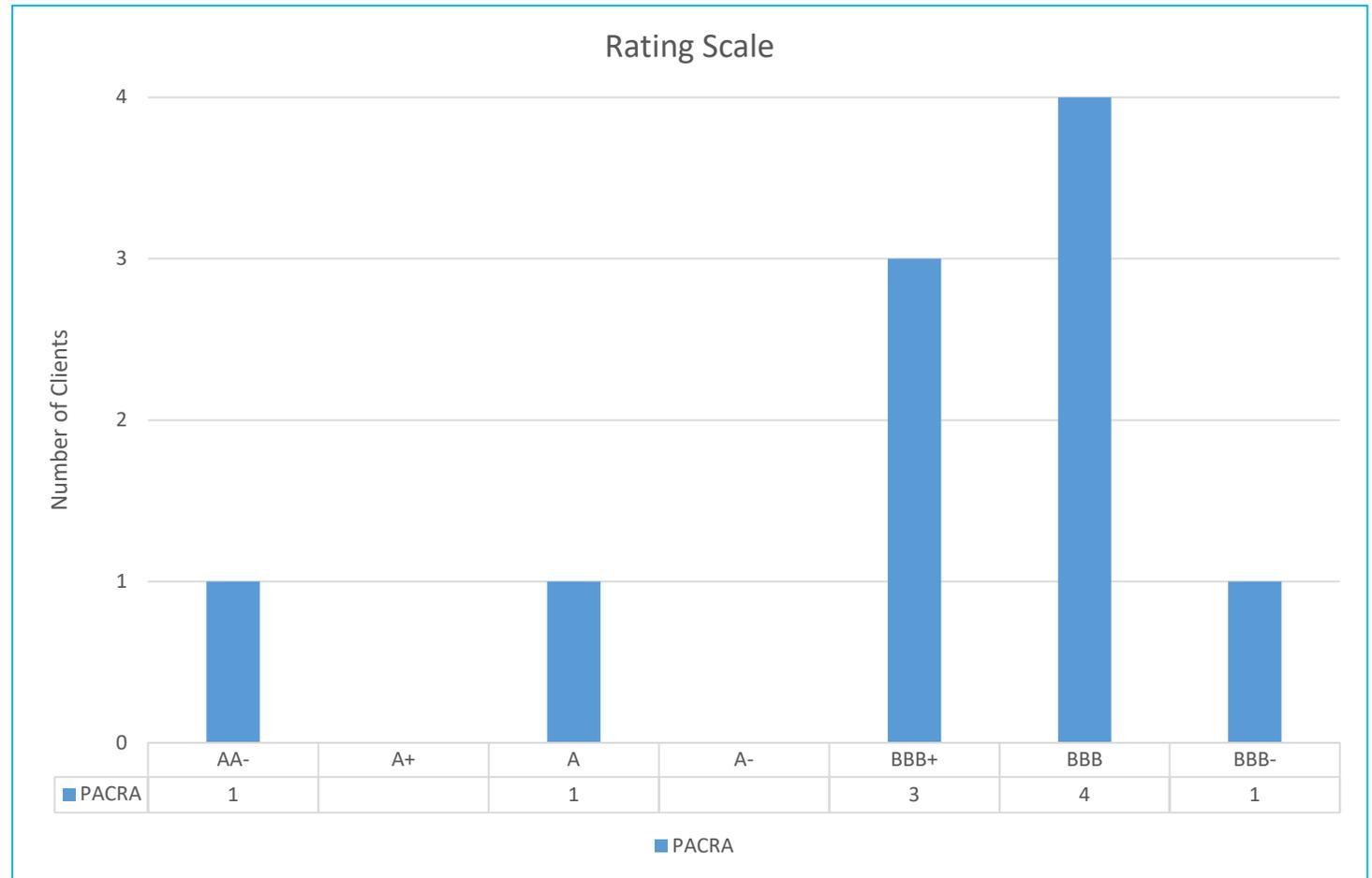
Financial Risk - Borrowings

- By February'22 end the sector total borrowings stood at PKR~167bln (8MFY21: PKR~130bln), posting a growth of 28.6% YoY.
- Short term financing at nominal rate stood at PKR~15bln (8MFY21: PKR~18bln) and held a ~9% share in the sector borrowing mix after decreasing by ~17%.
- Long term financing at nominal rate held the largest chunk of the borrowings mix with a ~89% share and stood at PKR~149bln (8MFY21: PKR~104bln), experiencing a growth of ~43.6%.
- Import financing stood at PKR~47mln (8MFY21:PKR~122mln) and held the lowest share of ~0.03% in the mix.
- While discounted borrowing including LTFF and TERF stood at PKR~1.6bln and held a share of ~1% in the borrowings mix.
- Bills Purchase Discounting and other similar items stood at PKR~1bln with a share of ~0.7% in the total borrowings mix.



Rating Curve

- PACRA rates 10 players of the construction sector in the AA- and BBB- ratings bandwidth.





Construction

SWOT Analysis

- Steady growing Demand
- Large labour force
- Government Incentives and Support
- Readily available raw materials.
- Increased Government spending

Strengths

- Unskilled Labour Force
- Lack of Technology Innovation
- Highly Impacted by Allied Industries
- Deadlines and Delays

Weaknesses

- Low Barrier to entry
- Possibility of Lockdown
- Exchange rate fluctuation
- Inflation

Threats

- Naya Pakistan Housing Scheme initiative
- Government initiatives
- Lower Capital Gain Tax
- Advancement in Technology

Opportunities





Regulatory Environment

- The Federal Government announced an incentive package for the construction sector, fulfilling the longstanding demand of builders and developers for fixed income tax regime and declaration of the construction sector as an industry. With the declaration of the construction sector as an industry, the import of plants and machinery used in this sector would have the same incentives as enjoyed by other industries.
- Disclosure of source of investment is not required in case of construction of new residential/commercial building or first purchase of a newly constructed project. This will be very beneficial for the construction sector as a lot of investment would be done without the lengthy process of background checks and money trail.
- A fixed tax regime irrespective of the profit margins for developers and builders is underway. Furthermore, a new taxation system for builders has been offered to relief taxes. The builder will pay PKR~250 per square feet on units sold in commercial and residential buildings in Islamabad, Lahore, and Karachi, whereas builders engaged in the sale of property units in Peshawar, Rawalpindi, Hyderabad, Multan, Faisalabad, Gujranwala, Sukkur, and Sahiwal will pay PKR~230 per square feet. The rate for urban areas is PKR~210 per square feet.

Regulatory Environment

- In an effort to boost construction sector, the government has made changes in its incentive scheme for subsidized mark up rates on loans for houses. Previously, individuals who obtain loans from banks to build their homes were offered a subsidized interest rate. The interest rate for 5-marla house was ~5% and for 10-marla house it was ~7%.
- According to the revised scheme, the scheme has been divided into three tiers. To facilitate the participation of microfinance banks, a tier 0 category has been added. Under the scheme, disbursement of financing up to PKR~2 million per housing unit has been added. In view of the fact that MFBs specialize in extension of financing to low income households, it is believed that participation of MFBs will significantly enhance outreach of scheme to these segments.
- In tier 1 category, mark up rates are now ~3% for the first five years and ~5% for the next five years for houses build up to 5 marlas. Previously, they were ~5% and ~7% respectively. This will help to reduce the burden of installments on low income strata of applicants under NAPHDA projects even more. For tier 2, the maximum allowed financing has also been doubled from PKR~3 million to PKR~6 million and for tier 3, from PKR~5 million to PKR~10 million.
- Previously, the requirement for the house to fall under this scheme to be maximum one year old has been waived off till March-23. Further, restriction on first transfer of housing unit and maximum value of housing units have also been removed. Maximum covered area for flats and apartments has been increased whereas, covered area restriction has been removed in case of land based housing units.
- Minimum tenor for housing finance has also been lowered from 10 years to 5 years to facilitate individuals desiring shorter financing periods.

- World Bank Data
- Deloitte
- Business Wire
- Pakistan Bureau of Statistics
- State Bank of Pakistan
- The Economic Survey of Pakistan

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