

VIS

Credit Rating Company Limited

SUGAR SECTOR REPORT

SUGAR SECTOR

Sucrose is a chemical term for sugar, a sweet crystalline substance primarily derived from sugarcane (80%) and sugar beet (20%). Sugarcane thrives in tropical and subtropical regions, while sugar beet is suited in temperate climates. In Pakistan, sugar is almost exclusively derived from sugarcane, grown primarily in Punjab and Sindh, and to a certain extent in KPK.

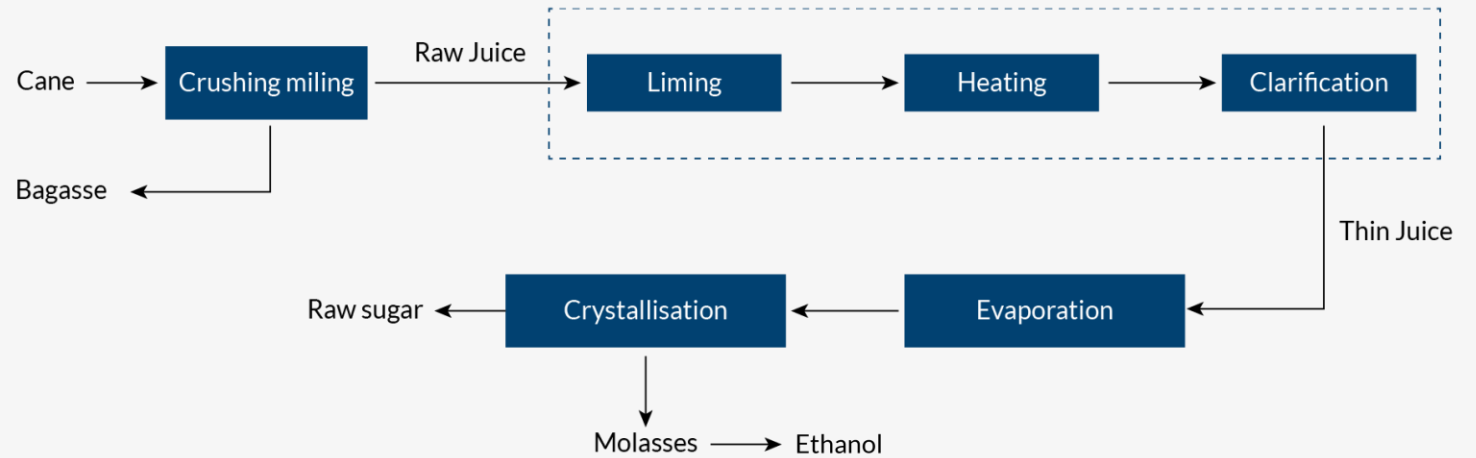
The sugar industry produces a variety of products and by-products.

- **Primary products:**
 - White sugar: refined sugar, a common ingredient in households and food industries.
 - Brown sugar: partially refined or raw sugar with molasses content used for baking and specialty foods.
 - Raw sugar: unrefined sugar produced directly from cane juice, used as an intermediate product for refining.
- **By-products:**
 - Molasses: a thick syrup left after sugar extraction, used in producing ethanol, animal feed and yeast.
 - Bagasse: a fibrous residue of sugarcane, used as fuel for electricity generation, paper production and bio-based materials.
 - Press mud (filter cake): derived from sugar filtration, used as organic fertilizer or in composting.
- **Value-added products:**
 - Ethanol: produced from molasses, used in biofuels.
 - Bioelectricity: generated by burning bagasse for power generation.
 - Vinegar and citric acid: derived from fermentation of sugar by-products.

SUGAR MANUFACTURING PROCESS

To produce the end-product, white refined sugar, sugarcane undergoes several key stages in the manufacturing process.

- 1. Cleaning & Slicing:** Firstly, the sugarcane is thoroughly cleaned to remove any dirt or impurities. It is then crushed to make the juice extraction easier. The crushed sugarcane is mixed with hot water, which helps expand the plant cells and prepares them for the extraction process.
- 2. Extraction:** The juice is separated from the bagasse, the fibrous material left behind, which can later be used as fuel. Mills compress the sugarcane fibers to extract the juice, which initially appears dark green, acidic and murky in texture.
- 3. Purification:** The extracted juice is filtered to remove impurities and its color is lightened through a process called clarification, improving its appearance and quality.
- 4. Evaporation:** The purified juice is then evaporated to remove excess water, concentrating the remaining liquid into a thick syrup.
- 5. Crystallization:** At this stage, the syrup is seeded with small sugar crystals. This process is known as seeding which encourages the formation of larger sugar crystals. The sugar in the syrup breaks down into tiny grains that serve as nuclei, helping the sugar to crystallise.
- 6. Refining:** The raw crystals are refined to remove any remaining impurities, ensuring a pure, high-quality product.
- 7. Separation & Packaging:** The sugar is divided into different sizes and then packaged. Finally, the sugar is separated into different grades or sizes, depending on its intended use and is packaged for distribution.



GLOBAL OVERVIEW

| SUGAR OVERVIEW (MMT) | | | |
|------------------------------|--------------|--------------|--------------|
| Marketing Years | MY23 | MY24 | MY25* |
| Opening Stock | 47.6 | 47.1 | 46.7 |
| Production | 179.2 | 175.7 | 180.8 |
| Imports | 58.7 | 59.9 | 56.6 |
| Total Supply | 285.5 | 282.7 | 284.1 |
| Exports | 61.9 | 59.9 | 67.9 |
| Consumption | 176.5 | 176.1 | 175.4 |
| Total Demand | 238.4 | 236.0 | 243.3 |
| Closing Stock | 47.1 | 46.7 | 40.8 |
| Source: USDA * Forecasted | | | |

GLOBAL PRODUCTION & CONSUMPTION

- Sugar is produced in over 120 countries, with Brazil, India and the EU accounting for over 50% of the global supply.
- Global sugar production declined by 3.6 MMT in MY24 to 175.7 MMT, driven by a late monsoon and red rot infestation in India and reduced cane yields and recovery rates in Thailand due to adverse weather conditions.
- Consumption is concentrated in India, the EU, China, the US and Brazil, which together account for 47% of global demand.
- In MY24, global consumption remained largely stable however, in MY25 it is forecasted to decrease slightly by 0.7 MMT to 175.4 MMT, as changing dietary habits and increased health awareness, particularly in developed markets lead to lower demand from the food and beverage sector.

| SUGAR PRODUCTION (MMT) | | | | |
|------------------------------|-------|-------|--------|---------|
| Marketing Years | MY23 | MY24 | MY25 * | % Share |
| Global | 179.2 | 175.7 | 180.8 | 100% |
| Brazil | 38.1 | 41.0 | 43.7 | 23% |
| India | 37.0 | 29.5 | 28.0 | 17% |
| EU | 13.8 | 15.6 | 16.5 | 9% |
| China | 9.0 | 9.9 | 11.0 | 6% |
| Thailand | 11.1 | 8.8 | 10.4 | 5% |
| SUGAR CONSUMPTION (MMT) | | | | |
| Global | 176.4 | 176.1 | 175.4 | 100% |
| India | 30.0 | 30.3 | 29.5 | 17% |
| EU | 16.5 | 16.4 | 16.4 | 9% |
| China | 15.5 | 15.5 | 15.7 | 9% |
| US | 11.5 | 11.3 | 11.0 | 6% |
| Brazil | 9.5 | 8.8 | 9.0 | 5% |
| Source: USDA * Forecasted | | | | |

GLOBAL TRADE

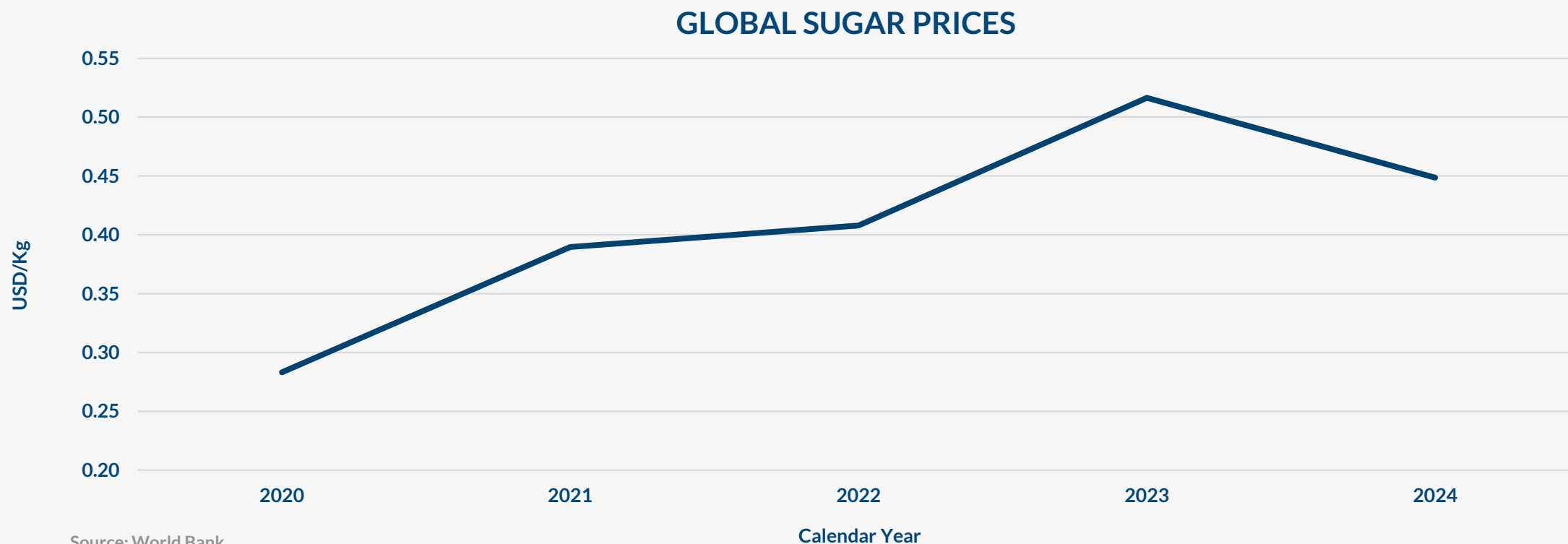
- Indonesia and China remain the top sugar importers, jointly accounting for 17% of global imports. However, overall global sugar imports are projected to decline by 3.3 MMT in MY25 due to improved domestic production in several key importing countries.
- Brazil held a dominant 57% share of global sugar exports in MY24, but this is expected to decrease to 51% in MY25 as Thailand's exports increased, supported by better sugarcane yields and recovery rates.
- Global sugar exports are forecasted to rise by 8.0 MMT, reaching 68.0 MMT in MY25, primarily driven by Thailand's increased output and export volumes.
- This growth emanates amid continued tightness in Indian sugar export availability, with only a limited quota approved in early 2025, prompting global buyers to diversify sourcing and turn to alternative suppliers.

| SUGAR IMPORTS (MMT) | | | |
|------------------------------|------|------|-------|
| Marketing Years | MY23 | MY24 | MY25* |
| Global | 58.7 | 59.9 | 56.6 |
| Indonesia | 5.8 | 5.0 | 5.2 |
| China | 3.8 | 5.0 | 5.2 |
| US | 3.3 | 3.5 | 2.7 |
| India | 1.4 | 3.6 | 2.4 |
| UAE | 1.8 | 2.1 | 2.3 |
| Source: USDA * Forecasted | | | |

| SUGAR EXPORTS (MMT) | | | |
|------------------------------|------|------|-------|
| Marketing Years | MY23 | MY24 | MY25* |
| Global | 62.0 | 59.9 | 68.0 |
| Brazil | 28.2 | 32.5 | 34.9 |
| Thailand | 6.9 | 4.6 | 10.0 |
| India | 8.3 | 4.0 | 3.5 |
| Australia | 3.0 | 3.1 | 2.7 |
| EU | 0.9 | 2.1 | 2.1 |
| Source: USDA * Forecasted | | | |

GLOBAL SUGAR PRICES

- The price peak in 2023 was triggered by adverse weather conditions in major producing countries, elevated energy and fertilizer costs and export restrictions imposed by India.
- In 2024, a bumper crop in Brazil and favorable weather conditions helped partially offset supply shortages from other key producers, contributing to a modest easing of global sugar prices despite an overall decline in production.
- The moderation in prices reduced export profitability potential for surplus producers like Pakistan but supported affordability for domestic consumers.



LOCAL OVERVIEW

- The agricultural sector grew by 6.3% in FY24, driven by a strong recovery in major crops, however, sugarcane output declined by 0.4% as farmers shifted to rice and cotton due to better returns and lower input requirements. Sugar contributed 0.8% to GDP and accounted for 3.5% of agricultural value addition.
- In FY25, agricultural growth slowed down to 0.6% as sugarcane output decreased by 3.9% due to lower rainfall and high temperatures, which negatively affected yield and sucrose content.
- Approximately 90 sugar mills operate in the country, including 46 in Punjab, 38 in Sindh and 4 in KPK. J.D.W Group holds around 12% market share, while all other players have less than 5% each, reflecting a highly fragmented industry with limited scale efficiencies.

MARKET STRUCTURE

| Top 10 Players - MY25 | | | | | |
|-----------------------|-------------------------|------------------------|---------------|----------------------|---------------|
| Region | Company | Sugar Produced (M Ton) | Market Share* | Cane Crushed (M Ton) | Recovery Rate |
| Punjab/Sindh | J.D.W. (Combined) | 679,991 | 12% | 6,559,959 | 10.4% |
| Punjab/Sindh | J.K. (Combined) | 298,653 | 5% | 2,937,061 | 10.2% |
| Punjab | Hamza | 243,825 | 4% | 2,553,976 | 9.5% |
| Punjab | Etihad | 206,466 | 4% | 1,996,968 | 10.3% |
| Punjab | Hunza (Combined) | 186,915 | 3% | 2,240,575 | 8.3% |
| Punjab | Rahim Yar Khan | 176,129 | 3% | 1,949,995 | 9.0% |
| Punjab/KPK | Al-Moiz (Combined) | 168,263 | 3% | 1,696,534 | 8.5% |
| Punjab/KPK | Tandlianwala (Combined) | 165,736 | 3% | 1,954,413 | 8.5% |
| Punjab | Sheikhoo | 154,244 | 3% | 1,591,876 | 9.7% |
| KPK | Chashma (Combined) | 144,654 | 3% | 1,484,965 | 9.7% |
| Others | | 3,345,356 | 58% | 35,293,867 | 9.5% |
| Total | | 5,770,232 | 100% | 60,260,190 | 9.6% |

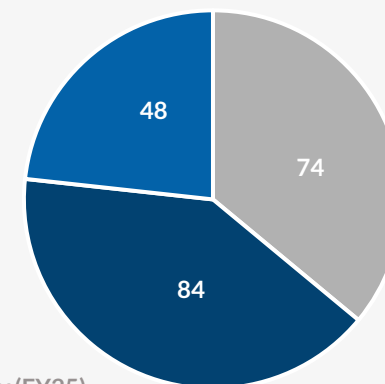
Source: PSMA
* Production Wise

SUGARCANE

- Sugarcane is a key Kharif crop in Pakistan, planted between February and April and harvested from November to March. It is the sole raw material used for domestic sugar production. Pakistan ranks as the fifth largest sugarcane producer globally, with approximately 1.2 million hectares under cultivation, equivalent to around 5% of the country's total cropped area. Cultivation is concentrated in Punjab (67%), followed by Sindh (26%) and KPK (7%), involving primarily large farms as small farmers prefer more diverse crops.
- Sugarcane is purchased based on weight rather than sugar content, which discourages farmers from investing in quality improvements aimed at increasing sugar recovery. Furthermore, sugar mills depend on timely delivery of cane to maintain crushing; delays or supply shortages disrupt the entire production chain.
- In MY24, sugarcane output decreased by 0.4% as growers shifted to alternative crops. In MY25, output fell further by 3.9% due to reduced rainfall and high temperatures during key growth stages, which negatively affected yields and sucrose content.

| MARKETING YEARS | MY21 | MY22 | MY23 | MY24 | MY25 |
|-------------------------------|------|------|------|------|------|
| Cultivated Area (M ha) | 1.2 | 1.3 | 1.3 | 1.2 | 1.2 |
| Production (MMT) | 81.0 | 88.7 | 88.0 | 87.6 | 85.5 |
| Yield (MT/ha) | 69.5 | 70.3 | 66.7 | 74.3 | 71.6 |
| Cane Crushed (MMT) | 58.6 | 79.7 | 65.1 | 67.6 | 60.3 |
| Source: Economic Survey, USDA | | | | | |

REGION WISE CROP YIELD (M HECTARE)



Source: Economic Survey (FY25)

■ Pakistan ■ India ■ Bangladesh

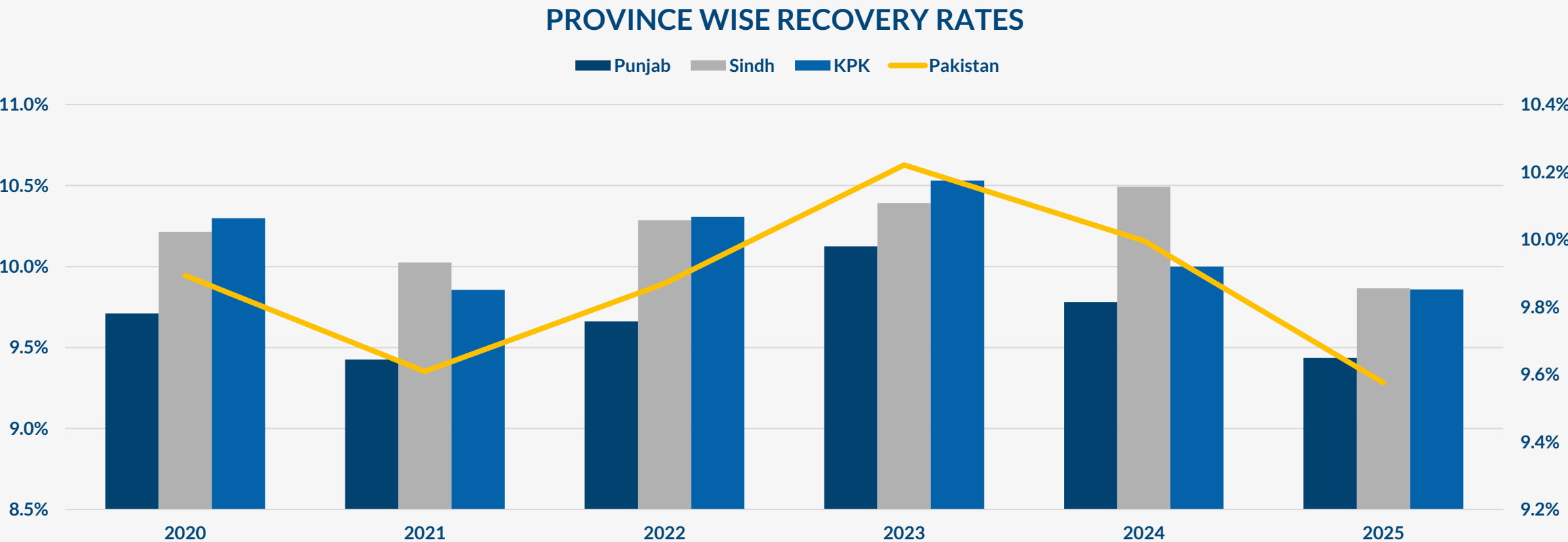
SUGARCANE PRICES

- Traditionally the Minimum Support Price (MSP) protected farmers by ensuring a fixed return, but it also increased operating costs for mills. Mills typically held bargaining power due to the perishable nature of sugarcane and limited buyer options for farmers.
- In MY24, Punjab's MSP hiked to PKR 400/40 Kg, a 33% increase, provided financial support to farmers but put pressure on mill margins during the year.
- In MY25, deregulation under the IMF-led reforms, removed the MSP framework, allowing mills and farmers to negotiate prices.
- While deregulation has the potential to improve market efficiency; in the short term it exposes farmers to potential price suppression in oversupply periods.

| SUGARCANE MSP BY PROVINCE FOR PKR/40 KG | | | |
|---|--------|-------|-----|
| Province | Punjab | Sindh | KPK |
| MY20 | 190 | 192 | 180 |
| MY21 | 200 | 202 | 200 |
| MY22 | 225 | 250 | 225 |
| MY23 | 300 | 302 | 300 |
| MY24 | 400 | 425 | 400 |
| Source: Economic Survey | | | |

RECOVERY RATES

- Punjab consistently records the lowest recovery rates among provinces due to varietal choices, delayed harvesting and agronomic practices.
- Sindh and KPK achieve higher recovery rates, though encounter YoY variations due to changing weather conditions and pest management.



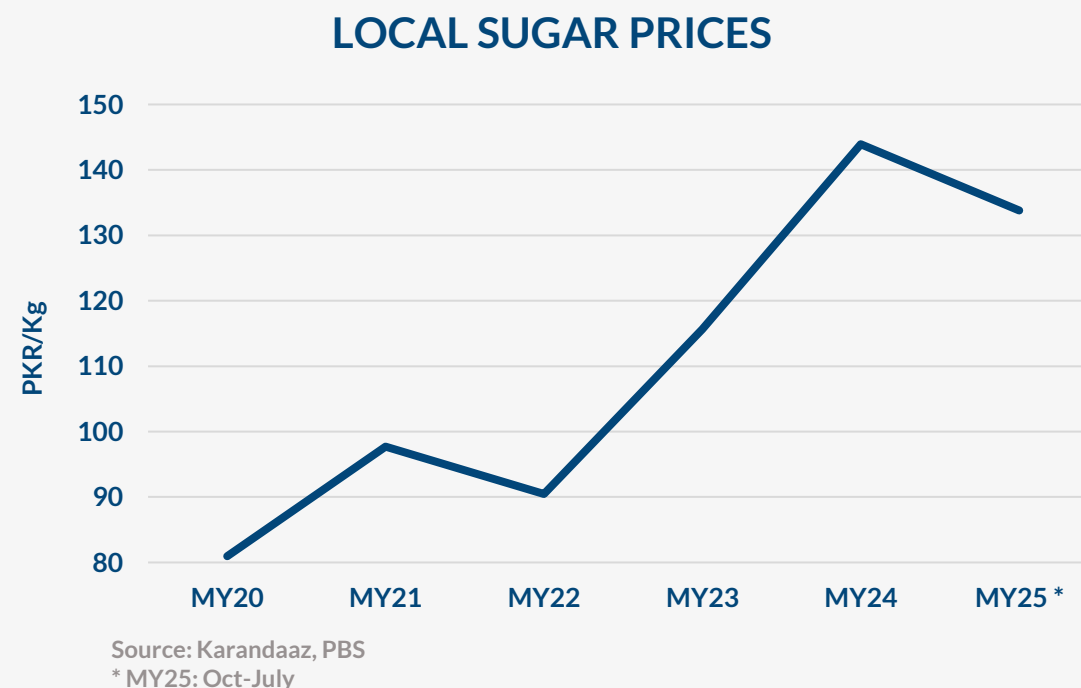
Source: PSMA

SUGAR PRODUCTION & CONSUMPTION

- In MY24, sugar output declined due to slightly weaker cane supply and lower recovery rates caused by heat stress during critical growth phases.
- In MY25, production recorded at 5.8 MMT, reflecting a contraction in cane availability and subpar recovery rates amid ongoing agronomic challenges.
- Domestic sugar consumption is gradually increasing alongside population growth and expansion in the food and beverage sectors, increasing from 25 Kg to 26 Kg per capita.
- While domestic market may remain broadly self-sufficient in the near term, export potential could be constrained in MY26 due to flood-related crop losses and reduced surpluses.

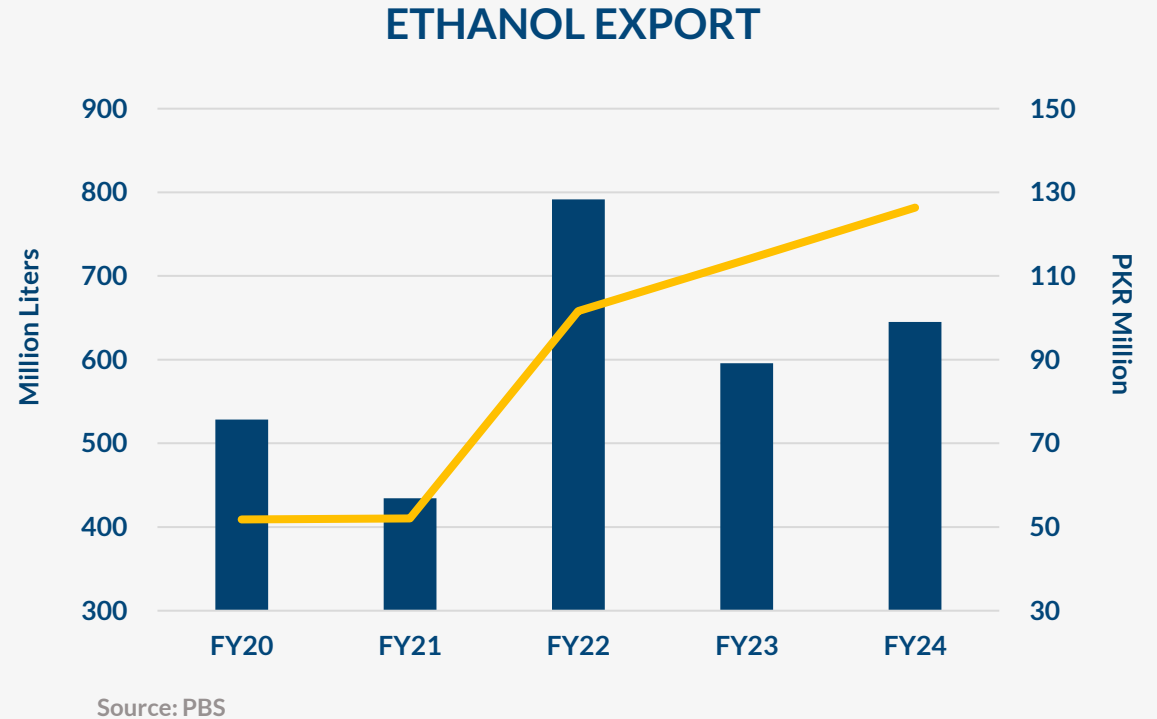
| MARKETING YEARS (MMT) | MY21 | MY22 | MY23 | MY24 | MY25 |
|-----------------------|------|------|-------|-------|------|
| Opening Stocks | 1.7 | 2.7 | 3.8 | 3.4 | 3.3 |
| Production | 6.5 | 7.6 | 6.9 | 6.8 | 5.8 |
| Imports | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exports | 0.0 | 0.5 | 1.0 | 0.3 | 0.7 |
| Consumption | 5.8 | 6.0 | 6.2 | 6.4 | 6.6 |
| Closing Stocks | 2.7 | 3.8 | 3.4 | 3.3 | 1.9 |
| Recovery Rate | 9.6% | 9.9% | 10.2% | 10.0% | 9.6% |

Source: Economic Survey, USDA



SUGAR BY-PRODUCT - ETHANOL

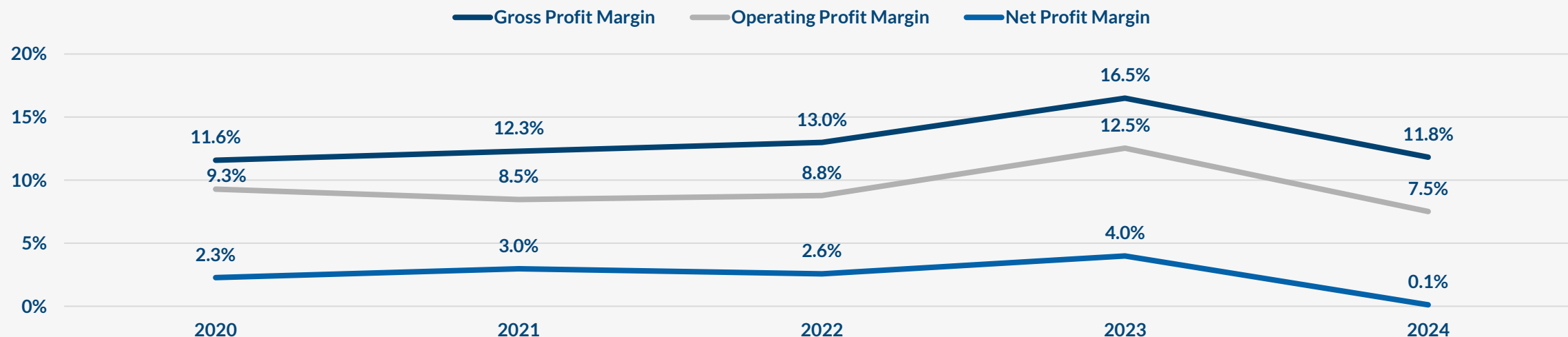
- Ethanol; a commercially valuable by-product of sugarcane, witnessed global production reach 118 billion liters in 2024, with the US and Brazil accounting for nearly 80% of output.
- In Pakistan, ethanol production is closely tied to sugarcane availability and molasses recovery, making it vulnerable to fluctuations in cane yield and crushing volumes. Most of the industry is concentrated in Punjab and Sindh, with distilleries typically integrated into sugar mills. The ethanol produced is primarily anhydrous and industrial-grade.
- Due to the absence of a domestic blending mandate, nearly 100% of Pakistan's ethanol is exported, mainly to the EU, Middle East and Southeast Asia. As a result, the sector is highly exposed to global biofuel demand and PKR/USD exchange rate volatility.
- Ethanol also provides a diversification strategy pathway for the otherwise cyclical sugar sector, offering export earnings and value addition. However, the lack of a national biofuel policy continues to limit domestic consumption and investment in production upgrades.



BUSINESS RISK

- The sugar sector's performance in MY24 was significantly impacted by its inherently cyclical nature and persistent regulatory challenges. Profitability remained volatile across the industry, reflecting domestic price controls, export restrictions, and shifts in global sugar market dynamics. Mills with diversified revenue portfolios demonstrated stronger financial resilience and relatively more stable earnings.
- A sharp increase in the MSP for sugarcane placed pressure on gross margins, as producers were unable to fully pass on rising raw material costs to consumers. This margin compression also weighed on operating profitability, further strained by persistent inflation and elevated overheads.
- The high interest rate environment drove up finance costs, compounding pressure on net earnings. While several mills reported flat or negative profitability, some maintained positive margins, reflecting differences in efficiency, recovery rates, and product mix.
- Overall, the sector recorded subdued bottom-line performance in MY24.

MARGINS



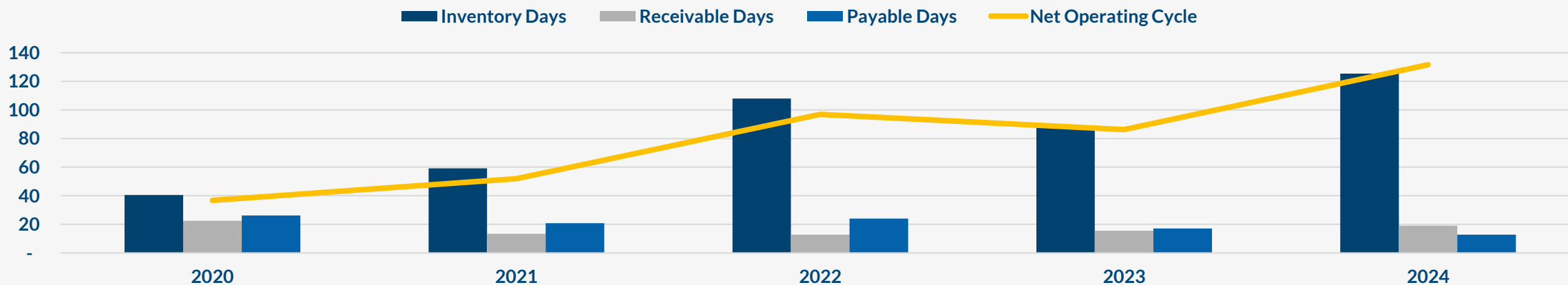
Source: VIS Database

Note: Data reflects approximately 30 VIS rated/listed sector entities as of FY24.

FINANCIAL RISK

- Sugar mills procure sugarcane seasonally and sell sugar throughout the year, leading to large inventory buildup. As a result, the average inventory days are high due to storage requirements and regulatory price controls. In addition, export restrictions further increase stockpiling, extending the cycle. Resultantly, the inventory days increased to ~125 days (MY23: ~88 days).
- Sugar is typically sold to wholesalers and retailers on credit terms ranging from 30-45 days, while sugar mills are required to pay farmers for sugarcane procurement within 15-30 days, often closer to the lower end of that range. In MY24, payable days shortened to ~13 days (MY23: ~17 days), placing additional strain on liquidity.
- As a result, the net operating cycle extended significantly to ~132 days, compared to ~86 days in MY23. This increase was primarily driven by higher inventory holding periods and limited supplier credit for raw materials.
- The mismatch between early cash outflows for cane purchases and delayed cash inflows from sugar sales continues to create substantial cash flow challenges for mills, particularly during the crushing season when working capital is at peak. High working capital requirements and a prolonged operating cycle have increased reliance on short-term financing, pressuring liquidity and profitability; while diversification and exports offer some relief, regulatory constraints and price controls remain key hurdles.

NET OPERATING CYCLE

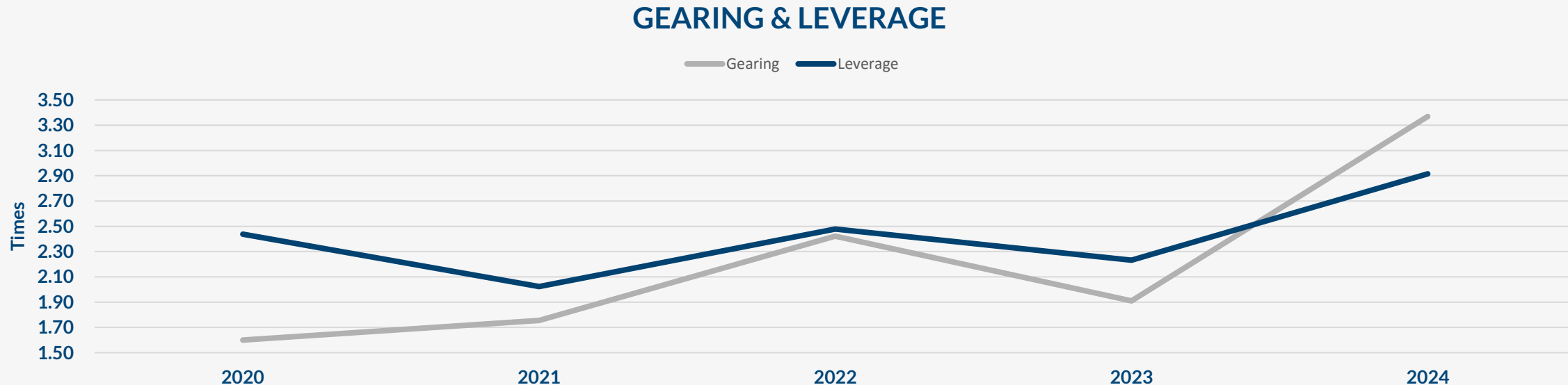


Source: VIS Database

Note: Data reflects approximately 30 VIS rated/listed sector entities as of FY24.

FINANCIAL RISK

- Elevated gearing and leverage levels remained a structural aspect of the sugar sector in MY24, underpinned by its seasonal working capital cycle. Short-term borrowings were primarily utilized for sugarcane procurement at the onset of the crushing season, resulting in a predictable rise in debt levels, which subsequently moderated as revenue was realized.
- Mills continued to pay farmers within ~13 days, while sugar sales were recovered in ~19 days, limiting the receivables-payables gap. However, inventory days remained high at ~125 days, driven by regulatory pricing, export delays and storage constraints, thereby, tying up significant capital in stock.
- Given the working capital-intensive nature of operations, reliance on short-term financing remained prevalent across the sector. While larger, integrated players reflected relatively stronger financial metrics, overall debt dependency is expected to persist in line with the sector's operating dynamics.



Source: VIS Database

Note: Data reflects approximately 30 VIS rated/listed sector entities as of FY24.

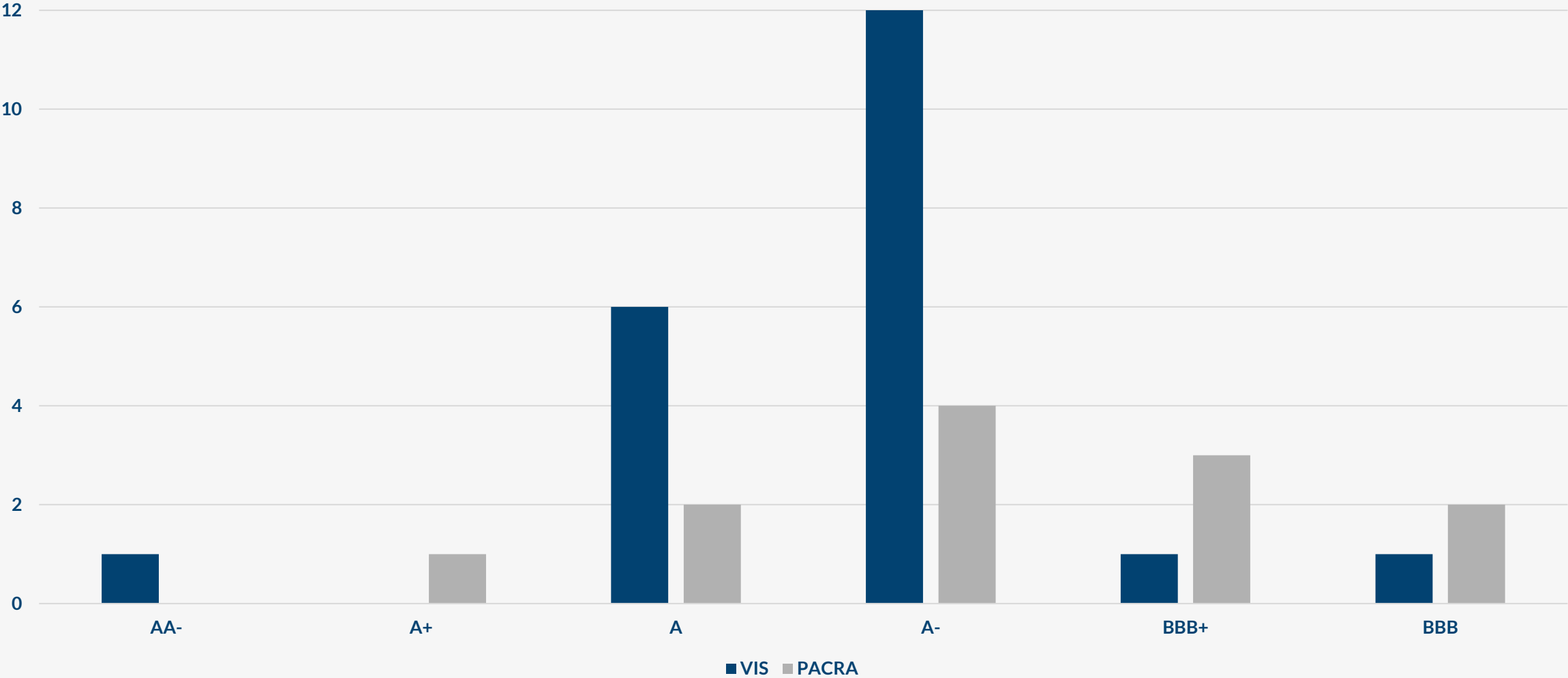
CONSOLIDATED INDUSTRY RISK

| SUGAR | | | | | | | | | |
|-----------------|--------------------------------|------------------------|-----------------------------|------------------|----------------------|-----------------------|-------------------------|-----------------------|-----------------------------|
| Cyclical ity | Competition | | | | Capital Intensity | Technological Risk | Regulatory Framework | Energy Sensitivity | Overall Industry Risk |
| | Risk of barrier to entry | Risk of substitutes | Risk of growth trends | Overall | | | | | |
| High | Medium | Low | Low | Medium to Low | Medium | Medium | High | Low | Medium |

SECTOR OUTLOOK: STABLE

- Globally, sugar demand is expected to grow modestly, driven primarily by population and income growth in developing regions like Asia and Africa. In contrast, demand in developed markets will remain flat or decrease slightly due to shifting dietary habits and increased use of alternative sweeteners. The global sugar market is projected to reach around 200 MMT by 2034. The industry also faces growing pressure to innovate around sustainability and health concerns.
- In Pakistan, domestic sugar demand is expected to remain stable at around 6.6-6.8 MMT annually, underpinned by cultural consumption patterns and a growing population. However, the sector's near-term outlook has weakened due to widespread flooding in 2025, which has disrupted cane production across major growing regions. Preliminary estimates indicate crop damage of up to 30% in Punjab and significant losses in Sindh, placing the government's 80.3 MMT cane target for MY26 at risk.
- National output is now projected to face a 15-20% shortfall, although final figures will depend on post-flood assessments. Beyond volume loss, challenges such as quality deterioration, delayed harvesting and soil degradation are expected to impact mill efficiency, strain farmer incomes and create upward pressure on domestic sugar prices.
- On the supply side, although Pakistan has sufficient milling capacity under normal weather conditions, this year's disruptions highlight the sector's vulnerability to climate events. Additionally, sugar exports may decline sharply – by up to 708,000 tons, representing a potential revenue loss of USD 283 million – due to lower surpluses and prioritization of domestic availability.
- The deregulation of MSPs under IMF-led reforms continues to shape the operating environment, allowing market-based price setting but also introducing new volatility risks amid supply shocks.
- While long-term fundamentals remain intact, the sector's near-term trajectory will depend on post-flood recovery, government policy response and the ability of stakeholders to manage evolving climate and market dynamics.

RATING CURVE



REFERENCES

- [State Bank of Pakistan](#)
- [U.S. Department of Agriculture](#)
- [Economic Survey](#)
- [World Bank](#)
- [Pakistan Sugar Mills Association](#)
- [Pakistan Bureau of Statistics](#)
- [Karandaaz](#)
- [OECD](#)

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