

Sugar

Ethanol blending – Hitting a small bump on a long journey

The government's Ethanol Blended Petrol (EBP) Programme, launched in 2002, went through several ups and down before a structural increase post 2017; it hit a record c.12% in ESY23 (Nov-Oct). However, the programme will encounter a modest hurdle (flat YoY vs. YoY improvement since 2017) in ESY24, in our opinion, on account of the government's restriction on B-heavy/ sugar syrup-based ethanol production (constituted over 75% of supply in ESY23). While the government remains committed to its target of 20% EBP by 2025, we believe this is likely to be deferred by 1-2 years given likely low sugar production due to the weak monsoon. We believe rise in a) C-Heavy ethanol prices and b) sugar realisation and volumes will partially offset lower ethanol volumes. Sugar production in India till 31st Dec'23 showed an 8% decline to 11.2mn tonnes (mnt) led by Maharashtra and Karnataka, partially offset by Uttar Pradesh. We estimate sugar production of 30.5-31.5mnt in the current season. We maintain our positive stance on the sector and retain BUY on Balrampur Chini (Mar'25TP of INR 500).

- **Sugar production in the range of 30.5-31.5mnt in SS24; 11.2mnt produced till 31st Dec'23 (-8% YoY):** Indian Sugar Mills Association (ISMA) in its 1st advance estimate, has pegged sugar production at c.32.4mnt for SS24 (2nd advance estimate by end-Jan'24), reflecting the substantial drop in sugar production in Maharashtra and Karnataka. The country has produced 11.21mnt of sugar till 31th Dec'23, a decline of 8% YoY (Maharashtra and Karnataka declined 19%/10%YoY respectively while UP is up 13% YoY). We estimate India sugar production at 30.5-31.5mnt in SS24 based on the current momentum, climatic vagaries (extreme cold/dry weather), weak monsoon and our interaction with industry participants.
- **EBP to be in the slow lane in ESY24:** EBP gained significant momentum post 2018 as the government provided significant clarity over its intent along with several incentives to the industry to produce ethanol (and, thus, reduce excess sugar/grain availability). As a result, the industry's capacity rose from 4.2bn litres in 2013 to 13.8bn litres in Dec'23. At the same time, the demand for fuel ethanol went up from 380mn litres (1.6%) to 4.48bn litres (12%) in ESY23, on the back of government push. Given the strong response from the manufacturers and OMCs to its policies, the government advanced its 20% EBP target to 2025 (from 2030 earlier). To achieve the target of 15% EBP in ESY24, OMCs had floated tenders for 8.25bn litres in Oct'23 (1.35bn litres from sugarcane juice/1.3bn litres from B Heavy Molasses and rest from other sources), though that has been revised downwards post the recent government measures. Against this, offers were received for 5.6bn litres (2.7bn litres of sugarcane-based ethanol and c.2.9bn litres of grain-based ethanol).

However, given the uncertain outlook on sugar production and, hence, the cap on diversion, we estimate blending levels to be flat or rise only modestly to 12-12.5% in ESY24, as shortfall in sugar-based ethanol could be partially offset by grain-based ethanol, subject to viability and availability of grain. We do not rule out 20% EBP being delayed by 12-18 months, depending on the monsoon (and, consequently, excess sugar production).

- **Government restriction on B-Heavy/Sugar syrup route to be temporary:** Notwithstanding the government's promotion of fuel ethanol in the past 6-7 years (through higher quantum/price of ethanol variants), it imposed full restriction on any diversion of sugar for B-Heavy/Sugarcane juice/Syrup-based ethanol production. However, recognising the industry grievances (crushing season had started by then), it permitted upto 1.7mnt of sugar diversion. This is likely to impact the overall ethanol blending levels, given B heavy and Sugarcane juice constitute over 75% of total ethanol supplies to OMCs.

We believe the government's caution is warranted given uncertainty on sugar production for SS24 and even for SS25 (given the weak monsoon, we believe there is possibility of a reduction in sugarcane area). Nonetheless, we continue to believe the industry will see a

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structural oversupply scenario over the longer term (except in weak monsoon years) given robust profitability of sugarcane along with other factors such as assured buyer/offtake, ever-rising sugarcane prices and sturdy nature of the crop.

- **Substantial rise in prices for C-Heavy molasses and grain-based ethanol variants:** The government raised the price paid for ethanol produced from C-heavy route by INR 6.87/ltr to INR 56.28 in ESY24. We estimate that this will partially offset the loss of B-Heavy and sugarcane juice-based ethanol volumes (due to the government's restrictions). Moreover, there has been an effective price hike of INR8-15/ltr for damaged foodgrain/maize-based ethanol for ESY24 while prices for B-Heavy/Sugarcane juice-based ethanol is still awaited (we believe it may be unchanged for the current season given the absence of incremental production).

The hike in procurement price from the C-heavy route is aligned with the government's intent to protect sugar production as it incentivises production from low sugar feedstock. Procurement prices from sugar syrup and B-heavy are yet to be announced; further, the industry doesn't expect prices to increase significantly. For ESY23, the ethanol procurement price was INR 65.61/ltr.

- **Domestic sugar prices to remain firm with an upward bias:** Domestic sugar prices rallied 11% during Aug-Nov'23 on account of the off-season and expectations of a downward revision in sugar production estimates (for SS24E). However, they moderated by c.5% in the past 1 month on account of a) restriction on diversion of sugar (capped at 1.7mnt), thus increasing the availability of sugar, and b) seasonality (typically prices cool off during the crushing season as mills liquidate old inventories). We expect domestic sugar prices to remain firm over the next 2 months and gradually firm up post that given a) off-season (mills likely to start closing from mid-feb), and b) summer season (demand goes up in the summer season). Global raw/white sugar prices too moderated 16-22% from recent highs (+10% to 18% YoY) on account of expectation of improvement in supplies from various countries, including India (though India has NIL exports on account of restrictions).
- **Remain positive:** The increase in procurement price strengthens our positive view on the sugar sector (especially efficient companies) as it reflects (sugarcane price/MSP/ethanol prices) the government's intent to ensure survival of the weakest. The government has been reasonably proactive in taking measures to protect interest of the farmers and consumers. Hence, we estimate sugar prices/profitability of sugar mills to be in a healthy band, except in case of a severe shortfall in cane crushing volume. We believe well-managed sugar companies could generate enormous earnings/cash flows in the process.

We are convinced that regulations in the sugar sector are aimed at a) ensuring adequate stock for local consumption, thus avoiding any undesired rally in domestic price, and b) continuity in the ethanol programme. We maintain **BUY** rating on Balrampur Chini (CMP- INR 390; Mar'25TP - INR 500).

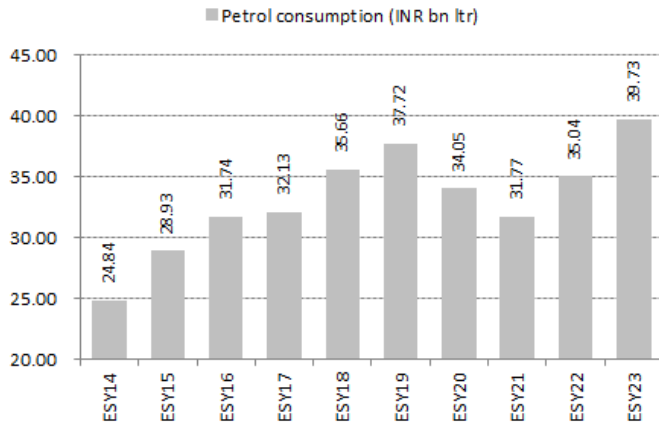
Exhibit 1. Sugar companies- Comps

	CMP	TP	Upside	Rating	MCap (INR bn)	P/E(x)				EV/EBITDA (x)				ROE(%)				FY21-24E CAGR		
						FY23	FY24E	FY25E	FY26E	FY23	FY24E	FY25E	FY26E	FY23	FY24E	FY25E	FY26E	Sales	EBITDA	EPS
Sugar																				
Balrampur Chini (JM)	391	500	28%	BUY	78.94	24.2	19.6	14.7	11.9	15.5	10.8	8.4	7.3	12%	14%	18%	22%	5%	1%	-5%
Bloomberg estimates																				
Shree Renuka	46	NR	NR	NR	98.55	NM	NA	NA	NA	22.4	NA	NA	NA	NA	NA	NA	NA	NA	NM	NM
Triveni	335	NR	NR	NR	73.31	12.1	14.9	11.6	9.5	14.3	11.8	8.9	6.9	28%	16%	20%	22%	8%	10%	26%
Dhampur sugar	263	NR	NR	NR	17.45	11.1	NA	NA	NA	8.2	NA	NA	NA	16%	NA	NA	NA	NA	NM	NM
Dwarikesh sugar	86	NR	NR	NR	16.18	12.3	10.2	9.7	8.2	9.8	7.4	7.6	6.6	21%	19%	17%	20%	4%	11%	20%
DCM Shriram	1,032	NR	NR	NR	160.94	NA	27.4	16.7	13.0	10.0	130.0	90.6	74.3	NA	9%	13%	15%	-49%	-52%	-3%

Source: Bloomberg

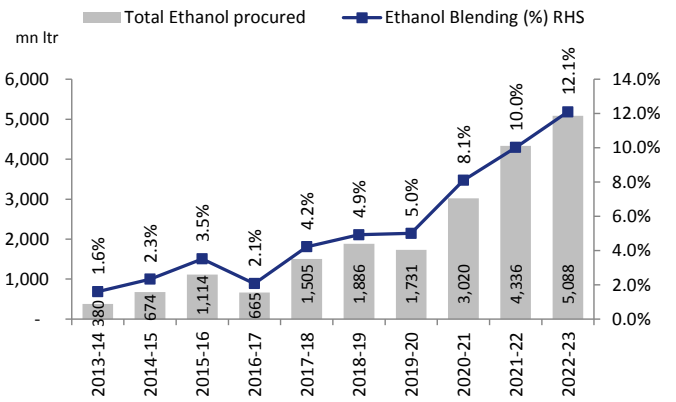
Ethanol story in Charts

Exhibit 2. Petrol consumption (5% CAGR in ESY14-23)



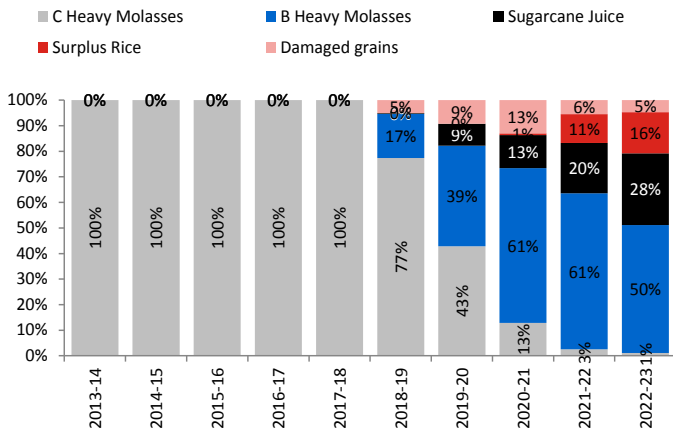
Source: Industry, JM Financial

Exhibit 3. Consistent increase in blending levels, except in the year of shortfall



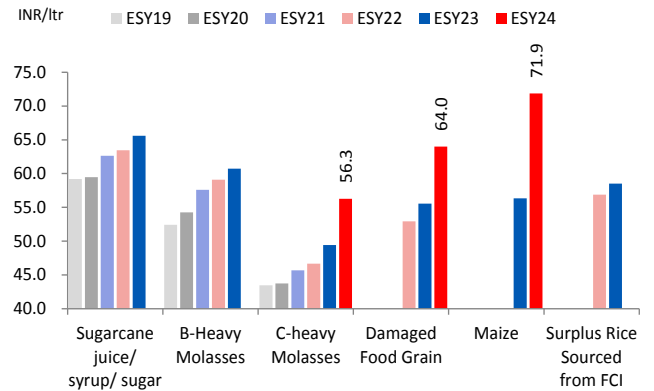
Source: Industry, JM Financial

Exhibit 4. Diversified sources of ethanol (% mix)



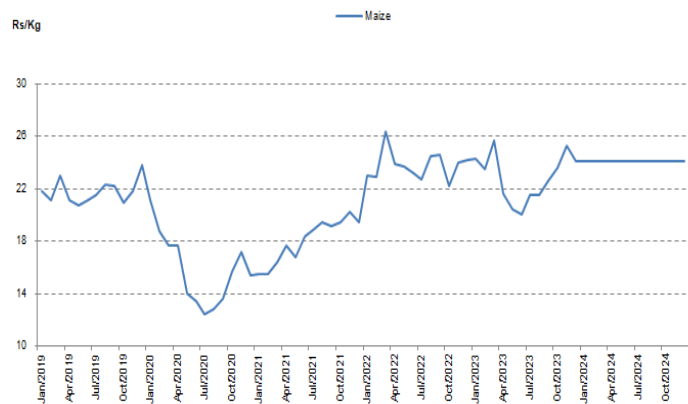
Source: Industry, JM Financial

Exhibit 5. Substantial increase in C-Heavy and grain-based ethanol prices



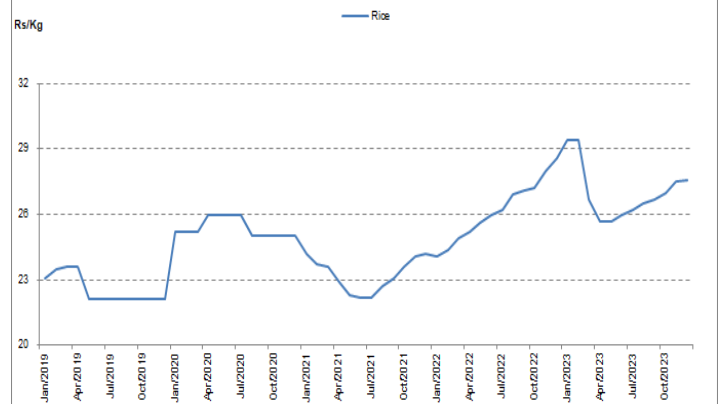
Source: Industry, JM Financial

Exhibit 6. Maize prices



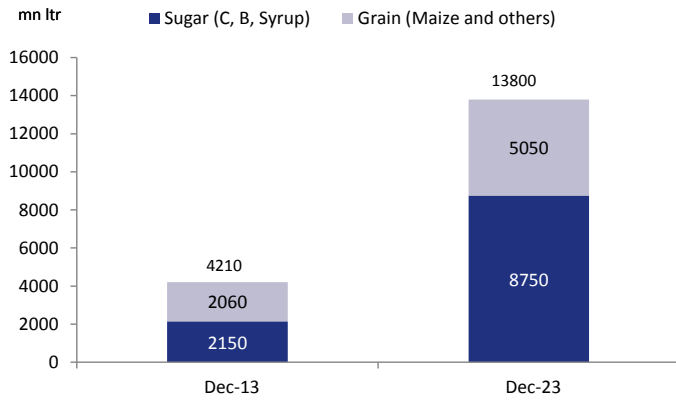
Source: Bloomberg, JM Financial

Exhibit 7. Rice prices



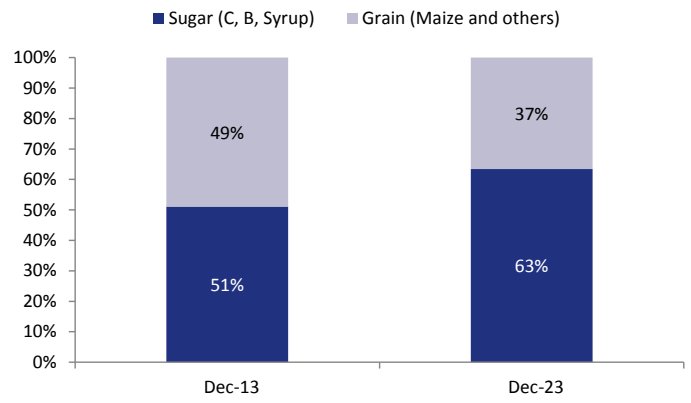
Source: CMIE, JM Financial

Exhibit 8. Significant capacity addition since 2013 (mn ltr)



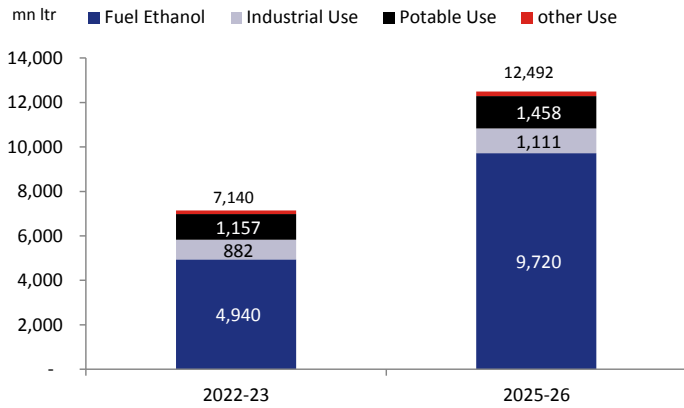
Source: Industry, JM Financial

Exhibit 9. Sugar-based distilleries contribute the most in production



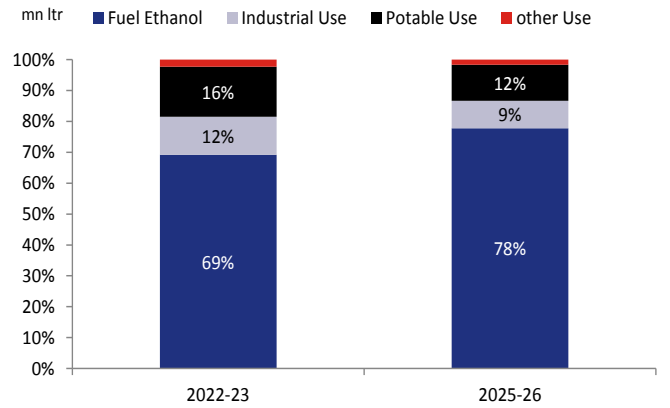
Source: Industry, JM Financial

Exhibit 10. Ethanol will continue to dominate total alcohol consumption



Source: Industry, JM Financial

Exhibit 11. Ethanol to constitute 78% of total demand for alcohol in 2025-26



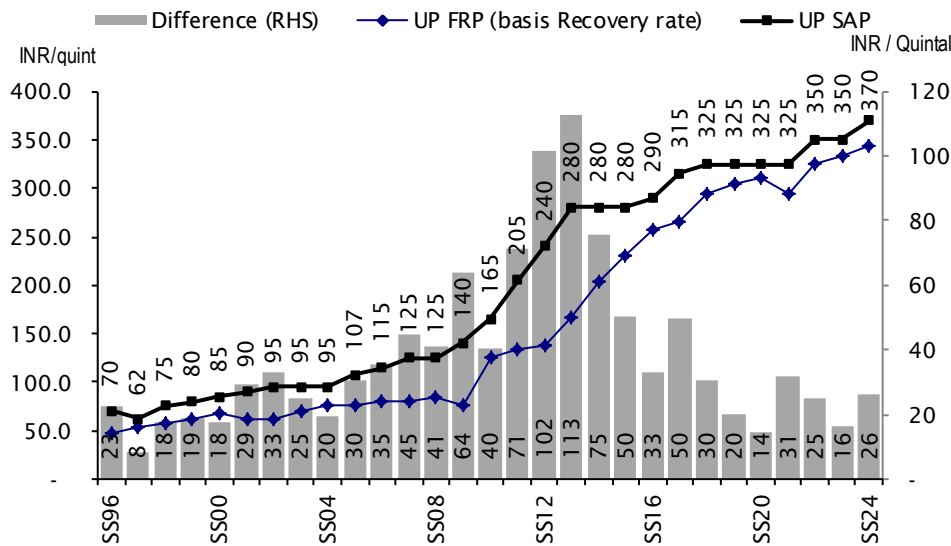
Source: Industry, JM Financial estimates (assuming 20%EBP in 2025-26 for ethanol and 8% CAGR in consumption for other applications)

Exhibit 12. C molasses currently is the most profitable/viable route for manufacturing ethanol

	UoM	C Molasses route	B Molasses route	Sugarcane Juice Route	Grain based (Maize)
Distillery Capacity	KLPD	100	100	100	100
no of days operations	days	330	330	330	330
Production (sales)	litres	33,000,000	33,000,000	33,000,000	33,000,000
Ethanol realisation	INR/tr	56.3	60.7	65.6	56.4
Revenue	INR mn	1,857	2,004	2,165	2,308
Less: RM Cost	INR mn	861	1,342	1,672	1,500
Less: Process cost	INR mn	231	241	231	248
Total cost at EBITDA level	INR mn	1,092	1,583	1,903	1,748
Total cost at EBITDA level	INR/tr	33.1	48.0	57.7	53.0
RM Cost	INR/tr	26.1	40.7	50.7	45.5
Conversion cost		7.0	7.3	7.0	7.5
EBITDA	INR mn	765	421	262	561
EBITDA	%	41.2%	21.0%	12.1%	24.3%
	INR/tr	23.2	12.8	7.9	17.0
Less: Depreciation	INR mn	75	75	75	75
Total Cost (EBIT level)	INR mn	1,167	1,658	1,978	1,823
EBIT	INR mn	690	346	187	486
EBIT margin	%	37.2%	17.3%	8.6%	21.0%
EBIT margin	INR/tr	20.9	10.5	5.7	14.7
Interest	INR mn	76	76	76	76
PAT	INR mn	461	203	84	307
ROE	%	85%	38%	15%	57%
ROCE (post tax)	%	29%	14%	8%	20%
Pay back period	years	3.95	6.51	12.02	4.63
Total capital employed	INR mn	1,800	1,800	1,800	1,800

Source: Industry, JM Financial; assuming market purchase price of INR4500/t for C Heavy and INR12000/t B Heavy Molasses

Exhibit 13. Sugarcane price trend



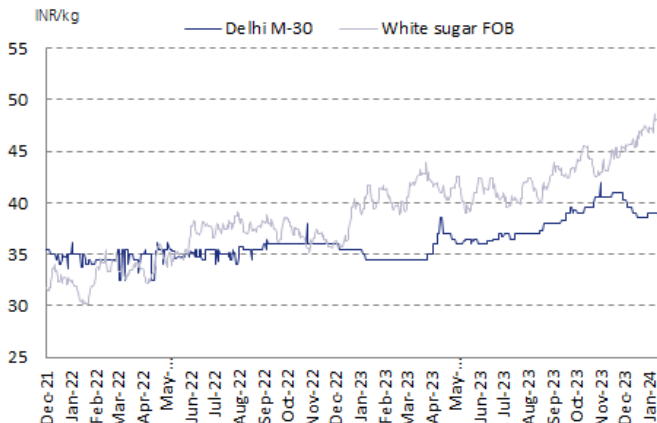
Source: Industry; UP SAP is yet to be announce, for SS24 we estimate to increase by INR 20/ quintal

Exhibit 14. Cumulative sugar production (until 31st Dec'23)

Particulars	Sugar Production (lac tonne)			Mills in Operation		
	Until 31st Dec'23	Until 31st Dec'22	YoY	Until 31st Dec'23	Until 31st Dec'22	Change
Maharashtra	38.2	47.4	-19%	195	201	-6
Uttar Pradesh	34.7	30.8	13%	120	117	3
Karnataka	24.0	26.7	-10%	73	73	0
Gujarat	3.9	3.8	3%	15	16	-1
Tamil Nadu	2.3	2.6	-13%	27	26	1
Others	9.1	10.1	-9%	81	81	0
Total Production	112.1	121.4	-8%	511	514	-3

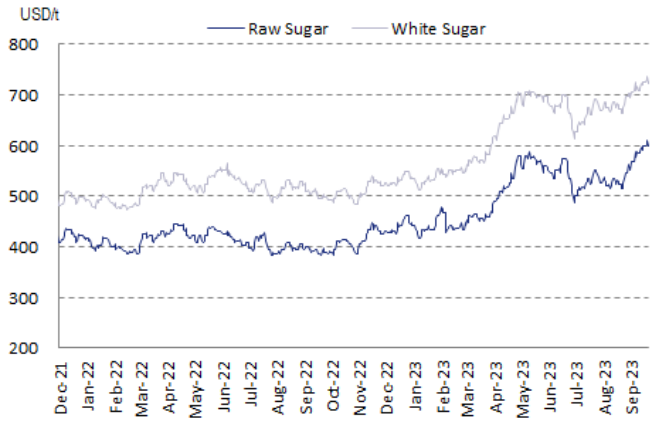
Source: Company, JM Financial

Exhibit 15. Short-term domestic sugar price trend



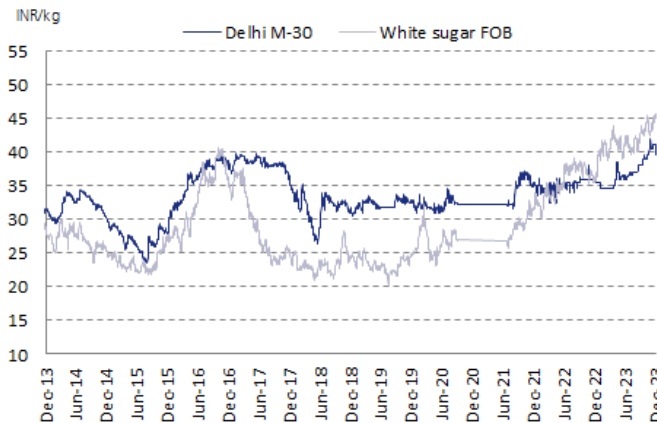
Source: Bloomberg, JM Financial

Exhibit 16. Short-term global sugar price trend



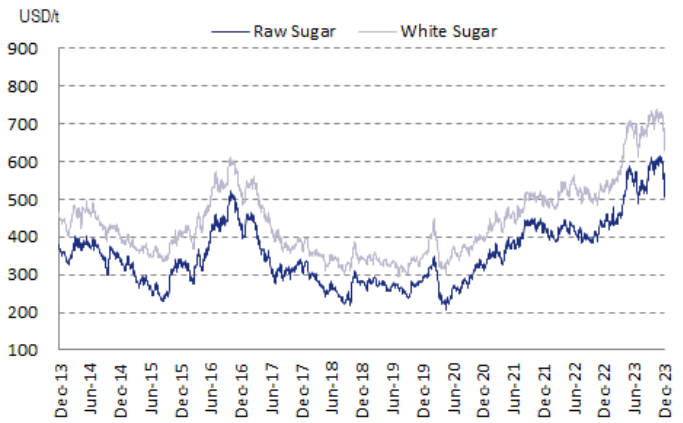
Source: Bloomberg, JM Financial

Exhibit 17. Long-term domestic sugar price trend



Source: Bloomberg, JM Financial

Exhibit 18. Long-term global sugar price trend



Source: Bloomberg, JM Financial

Exhibit 19. Domestic demand-supply scenario

Y/E September; mn tonnes	SS17	SS18	SS19	SS20	SS21	SS22	SS23	SS24E
Opening stock	7.7	3.9	10.5	14.3	10.5	8.4	7.0	6.0
Production	20.3	32.3	33.2	27.4	31.1	36.0	33.1	31.0
YoY growth	-19%	60%	3%	-17%	14%	16%	-8%	-6%
Uttar Pradesh	8.8	12.0	11.8	12.6	11.1	10.2	10.5	11.5
Maharashtra	4.2	10.7	10.7	6.2	10.7	13.8	10.5	9.0
Karnataka	2.1	3.7	4.4	3.5	4.5	6.1	5.6	4.0
Imports	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Local consumption	24.4	25.4	25.5	25.3	26.0	26.5	27.8	28.5
Exports	0.0	0.6	3.8	5.9	7.2	11.2	6.4	0.0
Closing stock	3.9	10.5	14.3	10.5	8.4	6.7	6.0	8.5
Surplus/Deficit	-4.2	6.9	7.7	2.1	5.1	9.5	5.3	2.5
# of months consumption	1.9	4.9	6.7	5.0	3.9	3.0	2.6	3.6

Source: Industry, JM Financial

Exhibit 20. Global demand-supply scenario

Particulars ('000 tons)	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024
Beginning Stocks	44,798	48,756	44,422	42,012	51,574	52,871	47,702	50,354	44,488	38,558
Total Sugar Production (Gross)	177,582	164,972	172,143	194,222	179,158	166,559	180,239	180,348	183,150	183,461
YoY growth	1%	-7%	4%	13%	-8%	-7%	8%	0%	2%	0%
Brazil	35,950	34,650	39,150	38,870	29,500	30,300	42,050	35,450	38,050	41,000
India	30,460	27,385	22,200	34,309	34,300	28,900	33,760	36,880	35,800	36,000
Thailand	10,793	9,743	10,033	14,710	14,581	8,294	7,587	10,157	10,500	9,400
Human Dom Consumption	168,037	168,976	169,148	173,287	172,240	171,427	172,133	173,240	176,374	178,431
YoY growth	1%	1%	0%	2%	-1%	0%	0%	1%	2%	1%
Ending Stocks	48,756	44,422	42,012	51,574	52,871	47,702	50,354	44,488	38,558	33,681
Surplus/(Deficit)	9,545	-4,004	2,995	20,935	6,918	-4,868	8,106	7,108	6,776	18.9%
Inventory as % of consumption	29%	26%	25%	30%	31%	28%	29%	26%	22%	5,030

Source: USDA website; as on 20th Dec'23

APPENDIX I

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Hold	Price expected to move in the range of 10% downside to 10% upside from the current market price for stocks with market capitalisation in excess of INR 200 billion and REITs* and in the range of 10% downside to 15% upside from the current market price for all other stocks, over the next twelve months.
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* REITs refers to Real Estate Investment Trusts.

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