MCX
METAL & ENERGY
Trade with Trust



KAPAS

PERFORMANCE REVIEW
2020-2021

FOREWORD TO THE KAPAS PERFORMANCE REVIEW

The Kapas Performance Report (PR) is the outcome of the SEBI circular SEBI/HO/CDMRD/DNPMP/CIR/P/2020/21 dated February 04, 2020 directing all recognized Stock Exchanges offering commodity derivatives segment to create a 'Performance review of the commodity derivatives contracts'. The PR, based on SEBI directive, has to be uploaded on the Exchange website by June 30, 2021 after consultation with the respective Product Advisory Committee (PAC).

Following the above directive the Agri - Product Management Team (PMT) at the Exchange has created PRs for all the listed Agri products. These have since been prepared in consultation with the respective Commodity/Commodity Complex PACs.

The Kapas Performance Report highlights the important aspects of the trade like the domestic supply statistics. There is also extensive information on the volume, turnover and open interest of Kapas on the Exchange, along with the price correlations with spot market and hedging efficiency to help the market participants get an empirical understanding of the performance of the Kapas contract on the Exchange.

Acknowledgement

We have been ably guided by the MCX Cotton Complex PAC members in improving the content of the report and we are extremely thankful to them. We hope to keep improvising the report going forward.

1. **Background**
    a. **Brief about the commodity such as sample picture, lifecycle and various varieties/grade of the commodity found in India**

Brief about Kapas

Kapas (seed for Cotton) is un-ginned fibrous substance extracted from the cotton boll/plant which covers the seeds. Typically, raw cotton contains 34% Fiber and 63.5% seed by weight and remaining 2.5% wastage. Lint obtained from Kapas is manly used for production of Cotton. The seed extracted from kapas is crushed to extract oil and the by product which is left after crushing is Cotton seed oil cake generally used as cattle feed. Kapas is raw material of lint cotton.

Shankar Kapas is majorly grown in Gujarat. Shankar Kapas has an annual production of about 45 lakh MT against India average Kapas production of 180 lakh MT. Cotton is one of the most important textile fibers. Cotton is a heavily traded agricultural commodity with a number of countries involved in exporting or importing cotton.

In India, a central nodal agency, Cotton Corporation of India (CCI) is the procuring agency for cotton and carries out procurement of Kapas (seed cotton) through open auction in competition with other traders and mills, conducted by the APMCs, in the notified market yards. It has been estimated that about 80 per cent of the marketed surplus of Kapas and lint is handled by the private marketing channels and the remaining 20 per cent by the institutional marketing channels including co-operatives and Cotton Corporation of India.

Sample picture



Life cycle

Cotton is grown in India in three zones with different sowing and harvesting periods during the season from October-September.

In India, farmers generally store Kapas for more than a year. This stored Kapas can deteriorate in color and quality. The marketing season of Kapas is throughout the year in India.

North zone	Central zone	South zone
Punjab, Haryana Rajasthan	Gujarat, Maharashtra, Madhya Pradesh	Telangana, Andhra Pradesh, Tamil Nadu, Karnataka
Sowing		
April, May	June, July	July, August, September

Harvesting		
September, October	October, November, December	December, January, February

Various varieties/grades

A few names of local varieties available in India are Shankar 6, V-797, Kalyan, Bengal Deshi etc.

b. Commodity fundamentals and balance sheet as per the following format (to be prepared based on publicly available information on best effort basis):

Kapas fundamentals:

- Weather condition in cotton producing areas especially at sowing, flowering and harvesting stage
- Demand of lint from textile industry
- Demand for Cotton seed from crushing industry
- Demand for Cotton Seed Oil Cake from farmers, dairy and feed industry
- Price movement in Cotton bales & Cotton seed
- Tariff & Non-tariff barriers including taxes, quota, etc.
- Production and inventory of Cotton both international and Indian

Table - Balance sheet

Global Scenario (‘000 MT)	**2019-20**	**2020-21**
N.A.		

Balance sheet		
Indian Scenario (‘000 MT)	**2019-20**	**2020-21**
N.A.		

Top 10 Major producing countries (‘000 MT)	**2019-20**	**2020-21**
N.A.		

Top 10 Major consuming countries (‘000 MT)	**2019-20**	**2020-21**
N.A.		

Top 10 Major exporting countries (‘000 MT)	**2019-20**	**2020-21**
N.A.		

Top 10 Major importing countries (‘000 MT)	**2019-20**	**2020-21**
N.A.		

Top 10 Major producing states in ('000 MT	2019-20	2020-21
N.A.		

N.A. - Not available

Kapas (raw cotton) generally trades in loose form and is delivered in trucks. Physical market of Kapas is unorganised in India. There is no authentic data source of Kapas in India. Based on Cotton production the reverse calculation is as below,

Kapas (MT)		
2020-21	Cotton 34%	Kapas 100%
Production	6120000	18000000

c. Major changes in the polices governing trade in the spot markets of the commodity

There is no major change in polices governing trade in the spot market of Kapas.

d. Geo political issues in the commodity and its impact on Indian scenario.

There is no major geo-political issues and its impact on Indian scenario of Kapas.

2. Trading related parameter

a. Monthly and Annual traded volume (quantity in appropriate units)

Month	Traded Quantity (MT)
APR'20	2348
MAY'20	1688
JUN'20	5424
JUL'20	6428
AUG'20	4480
SEPT'20	5808
OCT'20	5860
NOV'20	4264
DEC'20	3476
JAN'21	2896
FEB'21	2736
MAR'21	1684
2020-21	**47092**

b. Annual traded volume as proportion of total deliverable supply (quantity in appropriate units)

	Annual traded volume (MT)	Deliverable Supply (MT)
2020-21	47092	18000000
Annual traded volume as proportion of deliverable supply	0.26%	

c. Annual traded volume as proportion of total annual production (quantity in appropriate units)

	Annual traded volume (MT)	Deliverable Supply (MT)
2020-21	47092	18000000
Annual traded volume as proportion of deliverable supply	0.26%	

d. Annual average Open interest as proportion of total production

	Annual average OI (MT)	Production (MT)
2020-21	360	18000000
Annual average OI as proportion of production	0.002%	

e. Annual average Open interest as proportion of total deliverable supply

	Annual average OI (MT)	Production (MT)
2020-21	360	18000000
Annual average OI as proportion of production	0.002%	

f. Monthly and Annual value of trade (in Rs. Crores)

Month	Volume (Rs.cr)
APR'20	11.29
MAY'20	8.32

JUN'20	27.60
JUL'20	31.44
AUG'20	22.63
SEPT'20	29.94
OCT'20	31.92
NOV'20	24.73
DEC'20	20.61
JAN'21	17.49
FEB'21	16.79
MAR'21	10.56
2020-21	**253.31**

g. Monthly and Annual quantity of delivery (in appropriate units)

No deliveries took place in Kapas since the launch of the contract.

h. Monthly and Annual value of delivery (Rs. Crores)

No deliveries took place in Kapas since the launch of the contract.

i. Monthly and Annual Average Open Interest (OI) (in appropriate units)

Month	Average OI (MT)
APR'20	451.11
MAY'20	39.81
JUN'20	222.55
JUL'20	570.78
AUG'20	473.71
SEPT'20	377.45
OCT'20	448.38
NOV'20	497.64
DEC'20	548.00
JAN'21	289.40
FEB'21	257.60
MAR'21	140.35
2020-21	**360.08**

j. Annual average volume to open interest ratio

	Average traded volume (MT)	Average OI (MT)

2020-21	185	360
Annual average volume to open interest ratio	51.29%	

k. Total number of unique members and clients who have traded during the financial year

Unique Members	Unique Client
128	510

l. Ratio of open interest by FPOs/farmers/Hedge/VCP positions to total open interest (Annual average as well as maximum daily value)

Average based weekly data						Maximum Open Interest	
Avg Open Interest based weekly data	**Unit**	**FPOs/ Farmers/ VCPs/ Hedgers**		**% FPOs/ Farmers/ VCPs/ Hedgers**		**FPOs/ Farmers/ VCPs/ Hedgers**	
		Long	**Short**	**Long**	**Short**	**Long**	**Short**
278,222.22	KGS	62,666.67	38,666.67	16.24	7.55	1,40,000	1,96,000

Note: Details are provided based on weekly disclosure on the Exchange website for the period April 2020 to May 2020 in line with SEBI circular no SEBI/HO/CDMRD/DNPMP/CIR/P/2019/08 Dated January 04, 2019 Based on the data provided by the members from time to time pertaining to Farmers/ FPOs, VCPs/ Hedgers for the period April 2020 to May 2020

m. Number of unique FPOs / farmers and VCPs/hedgers who traded in the financial year

Farmers/FPOs	Value Chain Participants (VCPs)
0	23

Based on the classification provided by the members as on March 31, 2021 for clients traded during FY 2020-21.

n. Algorithmic trading as percentage of total trading

2020-21	Algorithmic trading as % of total trading
Kapas	15.19%

o. Delivery defaults

- o Number of instances – Nil
- o Quantity involved – Nil
- o Value involved – Nil

3. Price movements

a. Comparison, correlation and ratio of standard deviation of Exchange futures price vis-à-vis international futures price (wherever relevant comparable are available).

Kapas futures are only available in India.

b. Comparison, correlation and ratio of standard deviation of Exchange futures price vis-à-vis international spot price (wherever relevant comparable are available) and domestic spot price (exchange polled price).

Kapas futures are only available in India.

c. Correlation between exchange futures & domestic spot prices along with ratio of standard deviation.

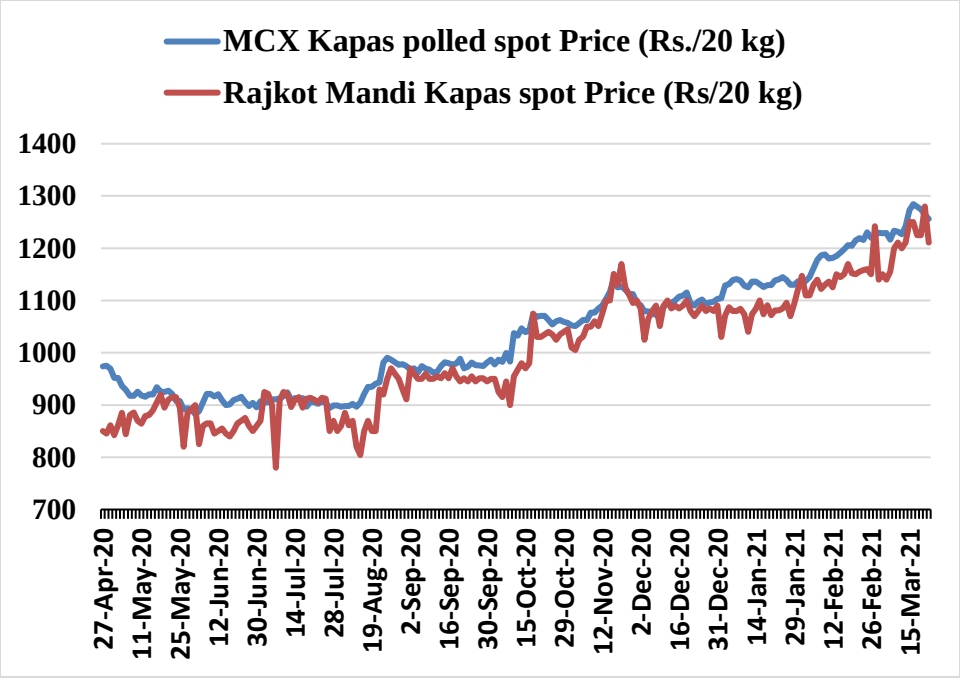
Correlation between MCX Kapas futures prices and spot prices in 2020-21	**97.00**
Standard deviation of MCX Kapas futures prices in 2020-21	0.90
Standard deviation of MCX Kapas spot prices in 2020-21	0.88
Ratio of Standard deviation of MCX Kapas futures prices to spot prices in 2020-21	1.02

d. Correlation between international futures & international spot prices along with ratio of standard deviation (wherever relevant comparable are available).

Kapas futures are only available in India.

e. Comparison of Exchange polled price and mandi price (in case of agricultural commodities) / other relevant price (in case non-agricultural commodities) at basis centre.

Comparison



f. Maximum & Minimum value of daily futures price volatility and spot price volatility along with disclosure of methodology adopted for computing the volatility.

	Maximum Daily Volatility	Minimum Daily Volatility
Future price	2.94%	0%
Spot price	5.39%	0%

Methodology adopted for computing volatility -
Volatility in any particular trading day is calculated by the formula given below-
Volatility = LN (Price/Previous day's price)*100

g. Number of times the futures contract was in backwardation/contango by more than 4% for the near month contract in the period under review

Five (5) times the futures contract was in backwardation/contango by more than 4% for the near month contract.

4. Others parameters

a. Qualitative and quantitative measure for Hedge effectiveness ratio and basis Risk (Volatility of Basis) along with disclosure of methodology adopted for such calculations

Qualitative measure for Hedge effectiveness ratio:

Methodology: Critical terms match method has been adopted for the analysis.

Change in 'average last three days price' of expiry month futures from its 'average three days price at beginning of the month' compared with corresponding average price of the spot.

Month	Kapas Futures	Kapas Spot
APR'20*	-22.83	Not Available
MAY'20	-18.33	-49.83
JUN'20	-18.5	6.5
JUL'20	-30.5	-7.67
AUG'20	60.67	80
SEPT'20	4.33	6.17
OCT'20	81.5	75.83
NOV'20	79.17	62.17
DEC'20	-0.67	10.5
JAN'21	-12.17	11.67
FEB'21	54	86.33
MAR'21	-26.83	27.33
Average**	15.7	28.09
Effectiveness		**55.89%**

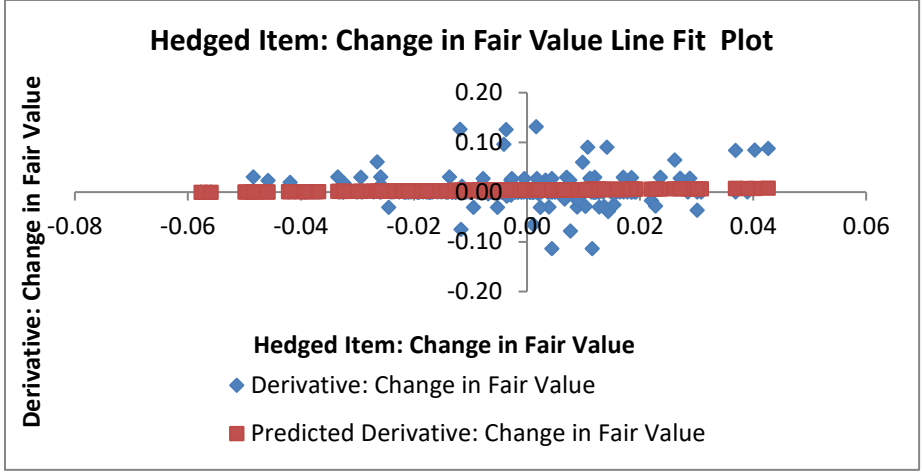
Note: Only April contract was active * Spot price till 27th April was not available due to lockdown.
** Average from May 2020 to March 2021.

Quantitative measure for Hedge effectiveness ratio:

Methodology:

Weekly change in fair value of expected cash flow of hedging instrument (Kapas-futures) regressed against expected cash flow of hedged item (Kapas-Spot) to determine line of best fit and then goodness fit of the line was assessed i.e. correlation between Kapas-futures and Kapas-Spot was determined through statistical slope of the line and coefficient of correlation of the regression (R-squared). Near month futures considered for the analysis. Near month futures rolled over to next month at last three days average price of near month and next month.

Findings:



Regression Statistics	
Multiple R	0.055706
R Square	0.003103
Adjusted R Square	-0.00116
Standard Error	0.027624
Observations	236

Hedged Item: Change in Fair Value	
Slope	0.083304

Hedge is generally considered to be highly effective if slope parameter is between -0.80 and -1.25, and R-squared parameter is equal to or greater than 0.80.

In this case, data insufficient to measure effective criteria.
Note: Data from 1st April 2020 to 27th April 2020 not considered due to unavailability of spot price amid the pandemic related lockdown.

Basis Risk (Volatility of Basis)

Methodology:

Basis = Spot price of the underlying – Near month futures price of the underlying

Volatility of basis: Standard deviation of basis

Findings

Average futures price (near month): Rs 1046
Average spot price: Rs 1033
Average basis: Rs -12.48
Volatility of basis: 2.84%

b. Details about major physical markets of the commodity vis-à-vis market reach in terms of availability of delivery centers (information to be provided state-wise and UT-wise).

Name of State	Name of the physical markets	Market Reach of basis delivery center
Gujarat	Keshod, Bardoli, JetpurPavi, Gondal, Balasienor, Rajkot, Babra, Amreli, Sabarkantha, Visnagar, Vijapur, Halvad, Unai, Manavadar, Bevla, Mansa, Mandvi, Kutch.	Rajkot
Maharashtra	Nagpur, Narkhed, Nanded, Yavatmal, Hinganghat, Wardha, Pulgaon, Akola, Amaravati, Murtizapur, Aurangabad, Jalna, Sillod, Dhule, Jalgaon	No delivery centre
Punjab	Bhatinda, Ferojpur, Sangur, Muktsar, Faridkot, Mansa	No delivery centre
Haryana	Hisar, Fatehabad, Sirsa, Bhiwani, Rohtak, Panipat, Jind, Kaithal, Gurgoan	No delivery centre
Telangana	Adilabad, Warangal, Nirmal,	No delivery centre
Andhra Pradesh	Guntur, Khammam	No delivery centre
Karnataka	Bailhogal, Bellary, Bijapur, Gadaj, Haliyal, Hubli, Kottur, Jamkhand, Raichur, Ranebennur, Savadatti, Shimoga, Yellapur	No delivery centre
Madhya Pradesh	Badwani, Betul, Chindwara, Dhar, Dewas, Harda, Jhabua, Khandwa, Khargone, Ratlam, Shajapur	No delivery centre
Rajasthan	Hanumangarh, Pili Banga, Sriganga– nagar, Palampur, Sangriya, Suratgarh, Sri Vijayanagar, Shadulshakar, Rawatsar, Kherthal, Bijaynagar, Rajsighnagar.	No delivery centre
Tamil Nadu	Cuddallore, Villupuram, Vellore, Thiruvannamalai, Salem, Dharamapuri, Coimbatore, Erode, Tiruchilapalli, Thanjavur, Pudukottai, Dindigul, Madurai, Theni, Virudhanagar, Tirunelveli	No delivery centre
Orissa	Ganjam, Roygoda, Karaput, Kalahandi, Navaranpur, Bolangir, Dhenkenal,	No delivery centre

Source: Trade estimate.

c. Details about major physical markets of the commodity and average Open Interest for each month generated from those regions.

Physical markets of Kapas are already mentioned above. Region-wise open interest is not available.

d. **Details, such as number and target audience, of stakeholders' awareness programs carried out by the exchange.**

Overall, the PMT – Agri team conducted 57 programs in the Agri segment and the target participants were primarily the physical participants, especially, the Farmers and Farmer Producing Organisations (FPOs) associated with the commodities listed on the MCX platform.

e. Steps taken / to be undertaken to improve hedging effectiveness of the contracts as well as to improve the performance of illiquid contracts.

The exchange strives to ensure that the contract remains a healthy replica of the physical market. We do one-on-one meetings and Product Advisory Committee (PAC) meetings with the physical market participants to make modifications in the contract to make it more lucrative for physical participants to participate in the contract.

5. Any other information to be disclosed as deemed important by the exchange or as suggested by the PAC.

No other information to be disclosed.

Disclaimer:

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