Parameters for Performance Review of Commodity for the Financial Year 2019-20

Chana

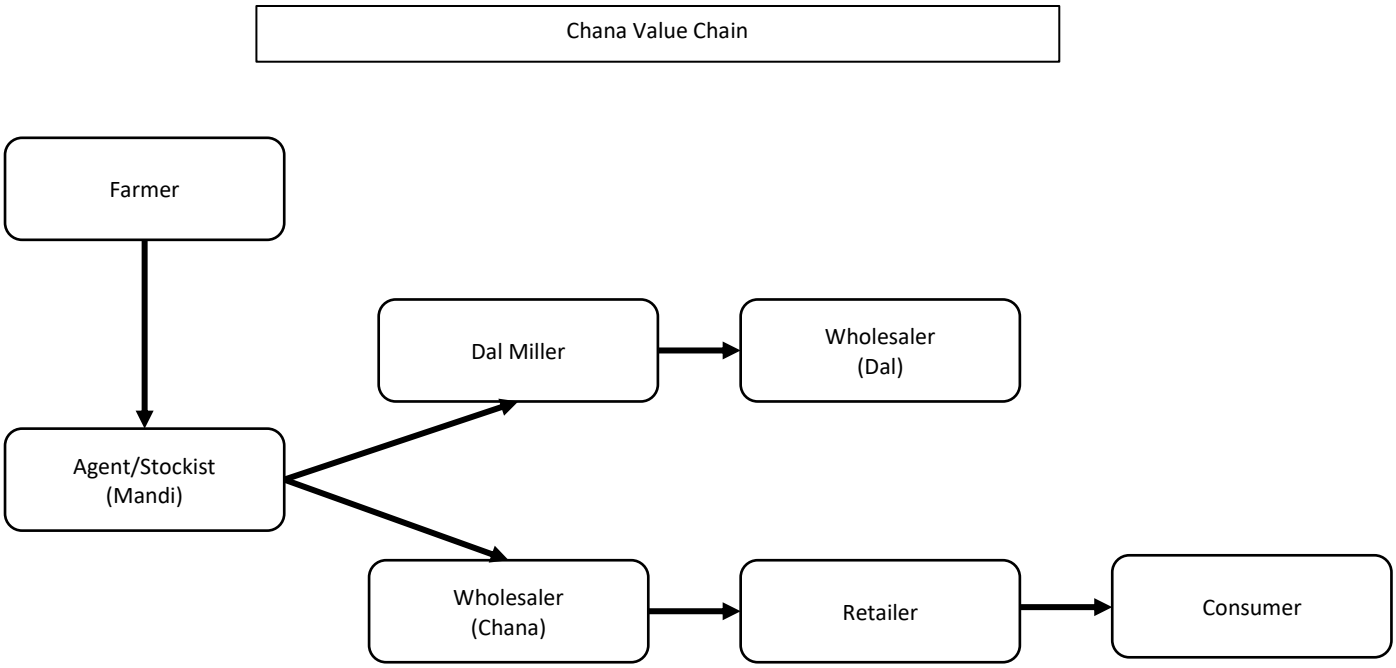
1. Background

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

Bengal gram is called Chickpea or Gram (Cicer aritinum L.) in South Asia and Garbanzo bean in most of the developed world. Bengal gram is a major pulse crop in India, widely grown for centuries and accounts for nearly 40 percent of the total pulse production. India is the largest producer and consumer country in the world.

There are two types of Chana available One is called Bengal Gram and is majorly produced in India, Iran, Ethopia and Mexico. The other variety is Kabuli, also known as safed chana in India. It is mainly cultivated in Mediterranean, Afghanistan, Pakistan, Northern Africa, and Chile.

Value Chain for Chana



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Various varieties of Chana Produced in India

Chickpeas/Chana, also called garbanzo beans (Cicer arientinum), belong to the legume family. Although the common chickpea/chana in the market is tan or beige, there are also yellow, red, dark green or brown varieties. The two main varieties of chickpeas/chana are the large, light-seeded kabuli type, referred to as garbanzo beans, and the small, dark-seeded desi type.

In the contract specification, the underlying commodity (type of chana) is specified. Hence, participants trading the commodity on exchange platform would be able to understand exactly the underlying on what they are trading.

States	Desi Varieties
Andhra Pradesh	Phule G-95311, ICCV-32, Kranti, MNK 1, JG-11
Bihar	KPG-59 (Uday), Pusa-372, KWR-108, Pant G-186
Gujarat	GKG-809, GKG-207, GCP-105, GKP-107, Gujarat Chana-4
Haryana	HK-4, RSG-888 (Anubhav), RSG-931, RSG-963, DCP-92-3, Karnal Chana 1
Karnataka	BDN-103, JG-63, MNK-1, ICCV-37
Madhya Pradesh	Raj Vijay-201, JG-14, JG-226, JG-63, JG-130, JG-322, JG-218, JG-13, JG-11
Maharashtra	AKJ-9303-13, JAKI-9218, BDNG-797 Akash), Digvijay, WCG-10, JG-16
Punjab	GNG-1958, GLK-28127, PBG-5, Pusa-547, GNG-469, Uday, Pusa-362, Rajas
Rajasthan	RSG-974, RSG-902 (Aruna), RSG-896Arpana), RSG-807 (Abha), GNG-1488, GNG 421, Pratap Chana 1
Uttar Pradesh	GNG-1969, CSJ-515, WCG-3 (Vallabh colour Chana), GNG-1581, BDG-72
Uttarakhand	RSG-963 (Adhar), CSG-8962, Phule G 9925-9 (Rajas)
Jharkhand	KWR-108, KPG-59, Pant G114
Chhattisgarh	Pusa 391, Pusa-372, JSC-55, JSC-56, RG 2918 (Vaibhav)
West Bengal	Anuradha, Gujrata Chana-4, Uday
Tamil Nadu	MNK-1, Phule G-95311, JG-11

Source: Seednet GOI, Min. of Agri.

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

Global Chana Scenario		
In Lakh Tonnes	2018	2019
Opening Stocks	N.A	N.A
Production#	171.92	NA
Imports@	15.75	12.61
Total Supply	N.A	N.A
Exports@	16.89	10.6
Domestic Consumption	N.A	N.A
Ending Stocks	N.A	N.A

Source : FAO

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India Chana Scenario		
In Lakh Tonnes	2018-19	2019-20
Opening Stocks	NA	NA
Production	113.8	99.4
Imports	1.86	3.4
Total Supply	NA	NA
Exports	2.29	0.96
Domestic Consumption	NA	NA
Ending Stocks	NA	NA
Source: Ministry Of Agriculture & Ministry Of Commerce		

Top 10 Major producing countries

Top Producing Countries (In Lakh Tonnes)			
Country	2018	Country	2019
India	113.79	India	99.38
Turkey	6.30	Turkey	6.30
Russian Federation	6.20	Russian Federation	5.06
United States of America	5.80	Myanmar	4.99
Myanmar	5.35	Pakistan	4.47
Ethiopia	4.59	Ethiopia	4.35
Mexico	3.52	United States of America	2.83
Pakistan	3.23	Australia	2.81
Canada	3.11	Canada	2.52
Australia	2.05	Mexico	2.03
Source: FAO			

Top 10 Major consuming countries

Not Available

Top 10 Major Exporting countries

Top Exporting Countries (In Lakh Tonnes)		
Country	2018	2019
Australia	4.94	3.13
Canada	0.83	1.3
India	2.57	1.18
Turkey	1.17	1.11
Mexico	1.08	1.05
Russian	1.34	0.99
Argentina	1.26	0.42
USA	0.87	0.36
EU	0.13	0.27
Ukraine	0.05	0.15
Source: FAO		

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Top 10 Major Importing countries

Top Importing Countries (In Lakh Tonnes)			
Country	2018	Country	2019
Pakistan	5.00	Egypt	5.67
Bangladesh	2.33	Pakistan	4.10
India	2.00	India	3.72
United Arab Emirates	1.32	Bangladesh	2.41
Turkey	0.93	Turkey	1.15
Algeria	0.83	United Arab Emirates	1.05
United States of America	0.66	Iraq	0.77
Saudi Arabia	0.64	Algeria	0.75
Iran (Islamic Republic of)	0.52	Saudi Arabia	0.61
UK	0.52	Spain	0.57
Source: FAO			

Top 10 Major producing States in India

Top Producing States India (In Lakh Tonnes)		
States	2017-18	2018-19#
Madhya Pradesh	46.00	46.10
Rajasthan	16.90	17.60
Maharashtra	18.30	10.70
Uttar Pradesh	5.80	7.30
Karnataka	7.80	5.70
Chhattisgarh	3.20	3.30
Andhra Pradesh	5.90	2.40
Gujarat	3.80	2.30
Jharkhand	2.90	2.20
Others	3.30	3.60
All India	113.80	101.30
Source: Agricultural Statistics at Glance 2019 report, Ministry of Agriculture		

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

Every year MSP is set by the central government for Chana/Gram.

Direct procurement by the government agencies and storage in warehouses change in tariff and base prices of externally traded goods has a direct impact on the chana prices.

d) Geopolitical issues in the commodity and its impact on Indian scenario

- Restriction on imports
- Inordinate delay in issue of import permits
- Government's welfare programme (distribution of free ration to vulnerable families)
- Reduction in inventory
- Excess supplies
- Poor demand growth

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2. **Trading related parameter**

a) **Monthly and Annual traded volume**

Month	Traded Volume (In MT)
Apr-19	-
May-19	-
Jun-19	-
Jul-19	-
Aug-19	-
Sep-19	-
Oct-19	9,110
Nov-19	19,610
Dec-19	53,490
Jan-20	920
Feb-20	-
Mar-20	-
Total	**83,130**

b) **Annual traded volume as proportion of total deliverable supply: 0.81%**

- Annual Traded Volume: 83,130 MT
- Deliverable Supply: 1,02,76,000 MT

c) **Annual traded volume as proportion of total annual production: 0.82%**

- Annual Traded Volume = 83,130 MT
- Annual Production 19-20 = 1,00,90,000 MT

d) **Annual average Open interest as proportion of total production: 0.0012%**

- Annual Average OI: 120 MT
- Annual Production: 1,00,90,000 MT

e) **Annual average Open interest as proportion of total deliverable supply: 0.0012%**

- Annual Average OI = 120 MT
- Deliverable Supply: 1,02,76,000 MT

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

Month	Value Traded (In Crores)
Apr-19	-
May-19	-
Jun-19	-
Jul-19	-
Aug-19	-
Sep-19	-
Oct-19	40.61
Nov-19	87.59
Dec-19	237.38
Jan-20	4.12
Feb-20	-
Mar-20	-
Total	**369.70**

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g) Monthly and Annual quantity of delivery

Month	Quantity of Delivery (In MT)
Apr-19	-
May-19	-
Jun-19	-
Jul-19	-
Aug-19	-
Sep-19	-
Oct-19	-
Nov-19	120
Dec-19	-
Jan-20	120
Feb-20	-
Mar-20	-
Total	**240**

h) Monthly and Annual value of delivery

Month	Value of delivery (in Crores)
Apr-19	-
May-19	-
Jun-19	-
Jul-19	-
Aug-19	-
Sep-19	-
Oct-19	-
Nov-19	0.53
Dec-19	-
Jan-20	0.51
Feb-20	-
Mar-20	-
Total	**1.04**

i) Monthly and Annual Average Open Interest (OI)

Months	Average OI (In MT)
Apr-19	-
May-19	-
Jun-19	-
Jul-19	-
Aug-19	-
Sep-19	-
Oct-19	230
Nov-19	120
Dec-19	50
Jan-20	110
Feb-20	-
Mar-20	-

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Annual Average Open Interest (OI) = 120 MT

j) Annual average volume to open interest ratio: 815%

- Average of Traded Volume: 978 MT
- Average of Open Interest: 120 MT

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

- Unique Members: 15
- Unique Clients: 18
-

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

Not Available

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

Not Available

n) Algorithmic trading as percentage of total trading

- 0.26%

o) Delivery defaults

Number of instances = Nil

Quantity involved = Nil

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)

Not Available

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).

Not Available

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

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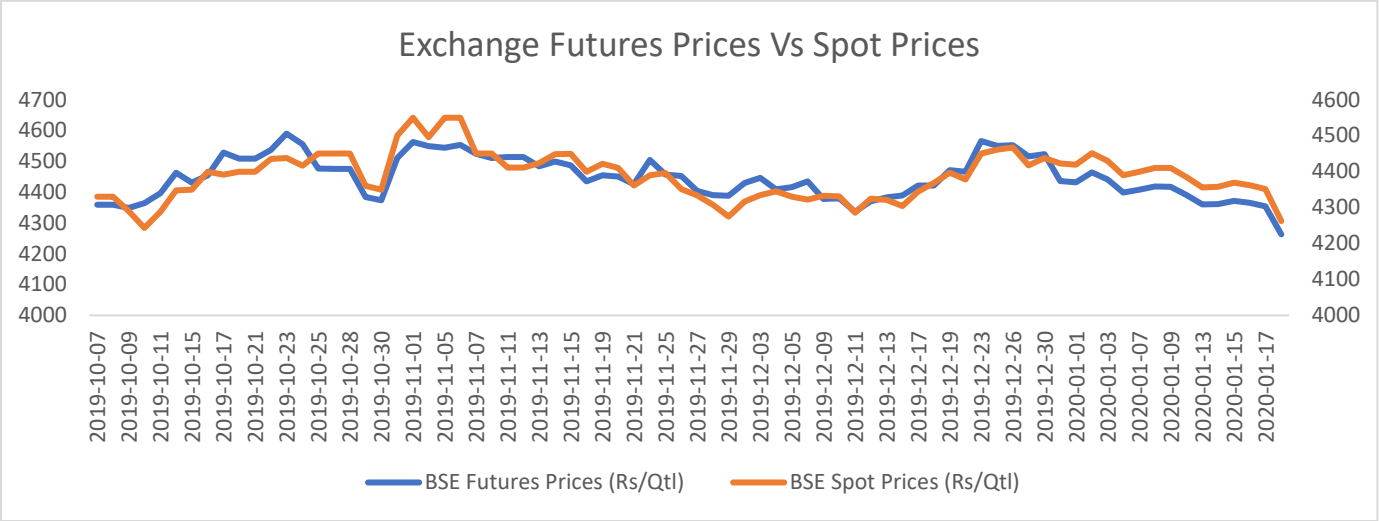


The correlation between Exchange futures and Exchange Spot Prices was 0.8041 for the period October 7,2019 to January 20 ,2020

The standard deviation of Exchange Futures prices was 0.90% for period for the period October 7,2019 to January 20 ,2020

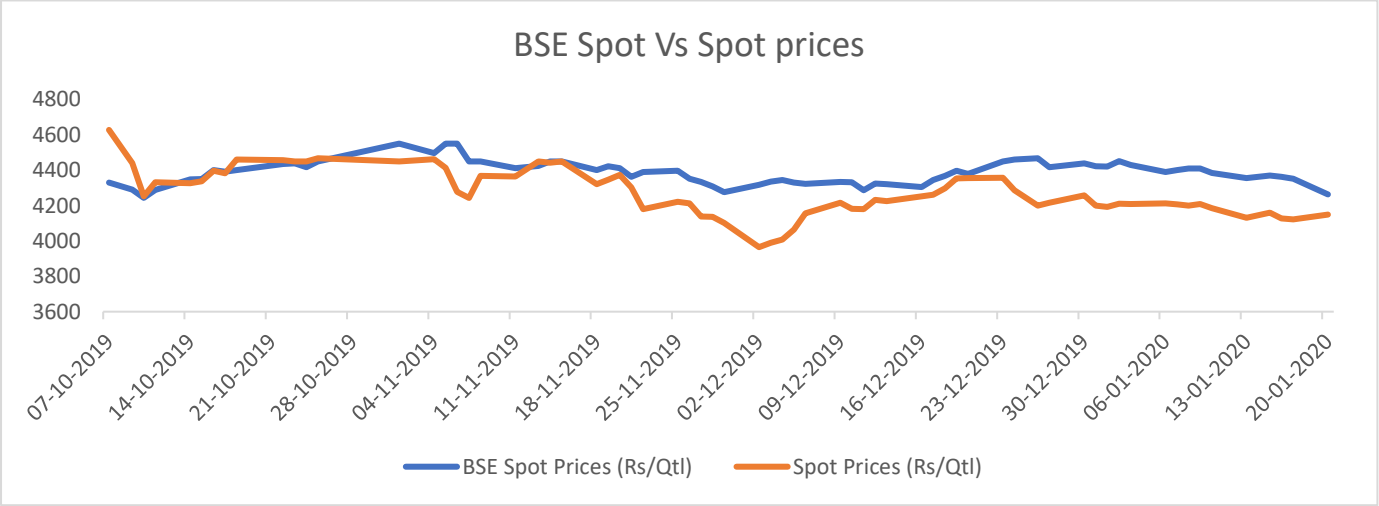
The standard deviation of Exchange Spot prices was 0.87% for period for the period October 7,2019 to January 20 ,2020

The ratio of Standard Deviation for the same period was 1.04

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

Not Available

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.



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

Commodity	Max of Daily Futures Price Volatility %	Min Daily Futures Price Volatility %	Max of Daily Spot Price Volatility %	Min Daily Spot Price Volatility %
Chana	3.13%	-2.09%	3.45%	-2.20%

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

BSE Chana Futures contract was never in backwardation or contango by more than 4% in the period under review

4. Other's 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

Hedge Effectiveness for FY 2019-20

Commodity	Hedge Efficiency
Chana	99.92%

Note: Hedging efficiency is the 'R Square' value of the regression equation between BSE futures prices and BSE polled spot prices during the financial year

Basis Risk for FY 2019-20

Commodity	Unit	Average Return of Basis (Unit)	Standard deviation
Chana	Rs/Qtl	0.28	2.41
Note: Period 07/10/2019 to 20/01/2020			

- ***Note: Basis Risk is computed as the Standard deviation of daily normal return in Basis, which is excess of Spot over Futures price.***

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 Exchange delivery Centers
Rajasthan	Tonk ,Bikaner ,Ganganagar ,Ajmer Baran ,Pali , Hanumangarh ,Dausa Jaipur , Jodhpur , Nagaur Kota	Bikaner-Basis Centre Jaipur -Additional Delivery Centres
Madhya Pradesh	Vidisha ,Raisen ,Ujjain ,Guna ,Sagar Ashoknagar , Katni , Hoshangabad Damoh , Narsinghpur , Dewas ,Harda Jabalpur ,Indore	Indore-Additional Delivery Centre
Maharashtra	Latur ,Amarawati ,Nagpur ,Buldhana Vashim ,Wardha , Akola , Yavatmal Nanded , Sholapur ,Jalgaon	Akola- Additional Delivery Centre

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

Details about physical markets are given 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

Sr. No.	Program Type	Location	Participants
1	Product Meeting	Delhi	30

Note: The contract was discontinued w.e.f Jan 6th, 2020

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

Not Applicable

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