

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea



Prof. (Dr.) Rinalini Pathak Kakati¹, Suman Sarmah²

^{1,2}Department Of Business Administration, Gauhati University, Jalukbari, Guwahati - 781014

ABSTRACT: In this study, we examine the determinants of a successful derivative futures contract and explore whether an exhaustive checklist of criteria such as the one proposed by the Securities and Exchange Board of India (SEBI) guarantees the success of a commodity contract. This study has important implications for contract design and new product launches. More market-orientated risk management mechanisms such as hedging via derivatives could allow farmers and producers to manage their risk and efficiently discover true prices. The government's vision to develop a progressive and sustainable commodities market in India is facing a fundamental issue: What makes a futures contract successful? This study attempts to analyse this question. Academics and policymakers have long deliberated on the conditions that make a contract successful. This study revisits those conditions in the context of Indian agricultural futures contracts and assesses the dispositions made by the SEBI's long list of criteria as well as insights from prior studies about the determinants of a successful contract. Tea satisfies almost all the criteria with either first or second rank among the three compared products. Therefore, we can conclude that Tea has the necessary and potential characteristics for introduction in the Commodity Derivative Market of India and progress forward as a successful commodity.

KEYWORDS: Derivative Futures Contract, Successful Contract, SEBI

INTRODUCTION

Commodity futures trading are now a significant commercial activity for any economy due to the increasing number of listed commodity futures contracts around the world and an equally enormous increase in their trading volumes. Due to their low correlation with conventional asset classes like stocks and bonds, commodity futures contracts are an effective instrument for risk management and price discovery, numerous researches have confirmed this finding (Gorton & Rouwenhorst, 2006). The need for farmers' and traders provided the justification for trading agricultural commodities as forward/futures contracts, which dates back to the development of derivative trading. (Weber, 2009). For instance, the Chicago Board of Trade (CBOT), the largest agriculture derivative market in the world, was created by farmers who wanted to control the price risks associated with their growing grain stocks as mentioned by researcher till (2014).

According to the Abhijit Sens's Report of the "Expert Committee to Study the Impact of Futures Trading on Agricultural Commodity Prices" published in 2011, all commodities are not suitable for futures trading. For a commodity to be suitable for Futures Trading it must possess the following characteristics –

- (i) The Commodity should have a large demand and supply chain conditions i.e., volume and marketable surplus should large. In others words, it also means that there needs to have a large and well-defined underlying cash market that lends itself to standardization.
- (ii) Prices should be volatile to necessitate hedging through futures trading.
- (iii) The commodity should be free from substantial control from govt. regulations imposing restriction on the prices, supply and distribution of the commodity.
- (iv) The commodity should be homogeneous in nature or
- (v) Alternately it must be possible to specify a standard grade and to measure deviations from the grade. This condition is necessary for the futures exchanges to deal with standardized contracts.
- (vi) The commodity should be durable and storable. In the absence of this condition arbitrage would not be possible and there would be no relationship between spot and futures market.
- (vii) The Commodity should flow naturally to the market.

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

- (viii) There should be some degree of uncertainty either regarding the supply or the consumption or regarding both supply and consumption.

THE SEBI REGULATIONS ON ELIGIBILITY CRITERIA AND INTRODUCTION OF DERIVATIVE CONTRACTS IN AGRI-COMMODITIES

The Securities and Exchange Board of India (SEBI), in its circular (SEBI/HO/CDMRD/DMP/CIR/P/2017/6) dated 20 January 2017, lists 23 criteria for eligibility, retention, and re-introduction of commodity contracts. The circular categorised these criteria into five parameters: commodity fundamentals, ease of doing business, trade/business, risk management, and benchmark potential. As the nature / properties of one commodity may be different from another, hence all commodities may not be suitable for derivatives trading in a commodity exchange. As such it must be carefully ascertained about the usefulness of launching a futures / derivative contract. Keeping in view about this objective, The Commodity Derivatives Advisory Committee (CDAC) had been constituted in 2017, for advising the SEBI on matters concerning the effective regulation and development of the commodity derivatives market. Based on their findings about the successful introduction of a commodity derivative, the Committee recommended the following points of importance –

- a) The commodities which are to be recommended by the SEBI for notification by the Government or on which the exchange proposes to launch a contract should pass through some test based upon some objective parameters and upon fulfilment of those should be allowed for trading.
- b) It is also very important that the commodities which are allowed for trading should be liquid enough to for smooth trading in the market.

While it may not be practically possible to maintain a definite objective criterion which may be consistently applied across all commodities to be included in the derivatives basket, a broad framework to achieve that objective can certainly be made. Therefore, based on the recommendations of the CDAC and in consultation with various stakeholders of the commodity markets, the following criteria has been laid down for the commodity to be eligible for trading, retention and re-introduction in the commodity markets:

Table 1. The Sebi Regulations on Eligibility Criteria and Introduction of Derivative Contracts In Agri-Commodities

MAIN PARAMETER	SUB PARAMETER
A) COMMODITY FUNDAMENTALS	Size of the Commodity Volume of the Cash Market Homogeneity / Standardization Durability / Storability
B) TRADE FACTORS	Global Imports and Exports Value Chain Participants Geographical Coverage
C) EASE OF DOING BUSINESS	Price Control / Minimum Support Price (MSP) for the commodity Applicability of Other Laws
D) RISK MANAGEMENT	Correlation with the International Markets Seasonality Price Volatility

STATEMENT OF THE OBJECTIVE

This study attempts to probe into the determinants of a successful agriculture derivative contract by using SEBI's list of criteria, with the following objectives:

- (a) To identify the important commodity characteristics in the designing of a successful futures contract for agricultural commodity
- (b) To identify the characteristics of a successful and active agricultural commodity and that of an unsuccessful agricultural commodity and to examine the presence of these major characteristics in the commodity tea which has not yet entered for derivative contract.

LITERATURE REVIEW

The Indian agriculture futures market has been around for more than a century. Only ten years after the first futures trade was completed in the USA, the first cotton futures trade was documented in 1875 at the Bombay Cotton Exchange. Before the Second World War, markets had a high turnover and were liquid (Bhattacharya, 2007). Before the Second World War, traders sold goods such rice, wheat, sugar, oilseed complex (groundnut, groundnut oil, and castor seed), cotton, raw jute, and jute-related items

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

(Bhattacharya, 2007). Due to a lack of basic supplies during the Second World War, suspensions and interventions began. Following independence, futures trading bans persisted, and by 1977, only two commodities—pepper and turmeric—were still eligible for trading (Bhattacharya, 2007).

Since India's independence, a number of government committees have been established, including the Shroff Committee in 1950, the Dantwala Committee in 1956, the Khusro Committee in 1980, the Kabra Committee in 1994, the Habibullah Committee in 2003, and the Abhijit Sen Committee in 2008. These studies examined the function of futures trading in Indian markets, assessed its effect on prices, investigated whether price discovery and price risk management goals had been achieved by the futures market, suggested commodities for which trading should be permitted, examined the regulatory environment, proposed amendments to the current Act, examined the operation of the regulatory bodies, and suggested measures to strengthen the Forward Markets Commission.

All of these studies offered various suggestions for expanding the industry. Some of the recommendations included strengthening the regulatory body, modernising warehouses, improving supply side management, removing weaknesses in the spot market, ensuring convergence of the spot and futures markets, connecting farmers to the futures market, ensuring information availability and accessibility, and promoting transparency in the dissemination of information. Among all of these Committee findings, the Khusro Committee (1980) and Kabra Committee (1994) Committee reports cover the standards for approving commodity futures trading. It is well known that not all commodities are suitable for futures trading. (Silber, 1981, Tashjian, 1995).

The first study to explore the factors leading to the success of futures contracts was Baer and Saxon (1949), according to which a commodity will be successful in futures trading if it fulfils six conditions: (1) the commodity must be homogeneous; (2) the commodity should be susceptible to standardisation; (3) its supply and demand must be high; (4) its supply and demand must be uncertain; (5) its supply must flow naturally to markets, and lastly, (6) the commodity must not be perishable. Black (1986) emphasised four elements that determined the success of a contract: (1) hedging effectiveness as measured by the relative residual risk of own hedging versus cross-hedging; (2) liquidity as measured by the bid-ask spread or average daily traded volume; (3) cash price volatility, and (4) size of the cash market. Sandor (1973) reported that the one criterion which makes a futures contract successful is sufficient cash price variability of the commodity. In the context of agricultural derivatives, Brorsen and Fofana (2001), Pannell, Hailu, Weersink and Burt (2008), and Simmons (2002) found that the activeness of the cash market is a crucial determinant for high-volume trades.

Three main streams make up the expanding amount of knowledge on the factors that influence the success of futures contracts. The first stream is the commodity characteristic approach, which comprises characteristics of commodities that are appropriate for futures trading, such as homogeneity, storability, export potential, and government intervention (Tashjian, 1995; Thompson, 1995). The second stream focuses on the technical features of contracts, i.e., contract specifications including contract size, settlement logic, quality, and standardisation (Black, 1986; Duffie & Jackson, 1989; Lien & Tse, 2006; Tashjian, 1995). This stream is known as the contract design method.

The final stream is the macro approach, which includes macroeconomic influences, exchange-related factors, and characteristics of organisations that are associated with the decision to use futures such as a firm's risk exposure, financial distress cost, and growth opportunities (Carter, 1998; Geczy, Minton & Schrand, 1997; Howton & Perfect, 1998; Koski & Pontiff, 1999; Mian, 1996; Nance, Smith & Smithson, 1993; Tufano, 1996).

According to conventional wisdom, commodities themselves need to have specific qualities in order to succeed (Baer & Saxon, 1949; Black, 1986). Over time, it has become apparent that having only the traits related to a given commodity is insufficient to ensure success and that not having these traits does not necessarily mean failure. This prompted a lookup of more elements pertaining to the spot market and futures market. According to Grey (1966) and Working (1953), the success of contracts is largely dependent on hedger demand, which draws more speculators and makes the contract liquid. As a result, the goal of the research became understanding the market factors that draw hedgers.

METHODOLOGY

The framework for the objective has been conceptualised using the aforementioned literature. In order to assess the present objective, the desirable characteristics needed for introduction of futures trading will be examined for the commodity Tea. The characteristics of two more commodities, Cotton and Jute will also be analysed to examine differences between a successful and an unsuccessful future commodity. The data about the production, consumption, export, import of Cotton and Jute has been taken from the official website of Multi Commodity Exchange, National Commodity and Derivative Exchange, National Jute Board, Jute Commission of India and the Cotton Board of India and also from AGMARKNET. The following paragraphs pertain to discussion regarding the nature and extent of characteristics possessed by tea. Comparison of characteristics possessed by Cotton (successful

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

derivative futures contract) and Jute (an unsuccessful derivative futures contract) have also been discussed to understand how these characteristics affect the derivative market.

In accordance with the Securities Contract Regulation Act, trading in derivatives is permitted for certain commodities, including tea. However, there is no market for commodity derivatives on tea in India. As was previously discussed, the commodity must have specific inherent qualities in order to be acceptable for participation in the derivatives market. An in-depth understanding of the key issues relevant to the objectives of the study is given from a thorough examination of the body of existing literature and the regulatory framework.

RESULTS AND FINDINGS

Comparative Study of The Commodity Characteristics W.R.T Tea, Cotton and Jute

The following paragraphs pertain to discussion regarding the nature and extent of characteristics possessed by tea. Comparison of characteristics possessed by cotton (successful future contract) and jute (an unsuccessful future contract) have also been discussed to understand how these characteristics affect the derivative market.

Main Parameter A, Sub Parameter (i) & (ii) of Table 1	Sub Parameter	Commodity Under Study
Commodity Fundamentals	Size / Volume	TEA

- The vigorous production and consumption of the tea beverage is the main driving force behind the ever growing tea market in India. After China, India is the world's second-largest producer of tea. The country is also a major consumer of the beverage, making up about a fifth of global consumption. The tea market in India is expected to continue to grow at a CAGR of 4.2%. India's tea industry is projected to produce 1.40 million tonnes by 2026.
- Due to the high domestic consumption, the country's exports had relatively moderate annual growth. In India, domestic consumption accounts for around 80% of total output. In 2019-20, India's tea exports reached their greatest level in almost four and a half decades.
- Over three-fourths of the industry in India is located in the northern region, which is the pre-dominant region of tea production in the country. West Bengal and Assam are the two states that produce the most tea in the nation. The beverages of the Assam and Darjeeling varieties are the most well-known worldwide, according to the region of origin.

Main Parameter A, Sub Parameter (i) & (ii) of Table 1	Sub Parameter	Commodity Under Study
Commodity Fundamentals	Size / Volume	COTTON

- Cotton production and trade is widely spread across the world, with more than 80 nations cultivating the crop. However, its production, consumption and trade are dominated by a few nations.
- The world's four largest cotton-producing countries are China, India, USA and Pakistan. They accounted for nearly 79% of the world's production. The other major producers include Brazil and Uzbekistan.
- The top three consumers of cotton are China, India and Pakistan, which together account for two thirds of the world's consumption, which is estimated around 23.3 MMT. Turkey, Brazil and the USA are the other major consumers.
- India's annual production of cotton has been steadily increasing in the recent years supported by a rise in demand, better genetically modified seeds and improved practices.
- India is the world's largest cotton producer. In India, more than 11.7 million hectares of cotton are grown, compared to 31.2 million hectares worldwide. In India, the cotton sector supports the livelihoods of around 60 million people. Since 2012, the rate of growth in cotton production has gone down ; in 2012 production was 28500 (thousands of 480 bales) and in 2022 it was 24500(thousands of 480 bales).
- India's total supply and consumption since 2012 to 2022 is increasing and commodity surplus exists. The average rate of commodity surplus from 2012 to 2021 had been 5.33%.
- After agriculture, the cotton textile industry employs the second-largest number of people in the country. It also supports the livelihoods of an estimated 6.5 million cotton growers and has a sizable export market.
- The Demand, Supply and Surplus of Cotton in the last ten years is summarised in the table below

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

YEAR	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
TOTAL SUPPLY	40306	43470	42185	40958	41240	41600	37400	40750	48800	40216
TOTAL DEMAND	20750	22750	24500	24250	36460	38800	35900	30000	41616	35500
SURPLUS	19556	20720	17685	16708	4780	2800	1500	10750	7184	4716

Main Parameter A, Sub Parameter (i) & (ii) of Table 1	Sub Parameter	Commodity Under Study
Commodity Fundamentals	Size / Volume	JUTE

- The Jute Industry of India is one of the oldest and most well-known industries. In India, the eastern region states like West Bengal, Assam, Bihar, Orissa, and Andhra Pradesh are the principal jute-producing states. However, due to the greater number of mills, West Bengal is where the Indian jute sector is most dependent. Almost 50% of the raw jute production of India comes from West Bengal alone.
- According to a survey released by the Ministry of Textiles in April 2018, India is the world's leading producer of jute products, making up almost 70% of the total production.
- On average, 800,000 hectares of land are typically used for the cultivation of raw jute and mesta.
- Due to the significant local market demand, almost 90% of the total production of jute is often consumed domestically. The production of jute goods from 2022 to 2023 (through July 2022) was 384.1 lakh tonnes, while from 2021 to 2022, it was 1,080 lakh tonnes.

HOMOGENEITY

Homogeneity is defined as the property or state of being same or of the same kind throughout. It is essential for the commodity to have this quality in order to be included in the derivatives market. There must be consistency in order to standardise the lots of commodities. Simply said, a commodity is suitable for trading or introduction in the derivatives market if there is a scope of standardisation or homogeneity.

Main Parameter A, Sub Parameter (iii) of Table 1	Sub Parameter	Commodity Under Study
Commodity Fundamentals	Homogeneity / Standardization	TEA

The plantation and processing system of Tea at various stages greatly affect the quality of tea around the world. Systems for production and processing have an impact on quality. The elements and inputs that contribute to consistent quality are not always known, but the fundamental rules of the climate, the soil, and other agricultural aspects in the growing regions are accountable for affecting the quality of the tea. The tea growers are in charge of the initial phase. The maintenance of the garden's clones, which includes the planting of original seeds for the improved biological characteristics of tea bushes and leaves, determines the quality. Following this are procedures like plucking, pruning, and others that later affect the quality of tea. The secondary aspect that affects the quality of the tea is how the tea leaves are processed in the factories. The tea growers supply the tea leaves to the tea producers. Upon transshipment, the produce is weighed in its whole at the door gate, and a sample (between 45% and 60%) of the same is sorted to determine the quality of the lot's fine leaves. The fine leaves are distinguished from the others by having two leaves and one bud. The lot is valued in accordance with the proportion of the same in the sample that is considered to apply to the full lot.

When marketing tea, the factory-packaged tea granules are delivered to the warehouses, and a sample of each is also delivered to the tea brokers in accordance with the various grades. Brokers are pivotal players in the marketing of produce, particularly for sales at auction. They serve as the mediators for tea buyers and sellers. It is the brokers' job to find the ideal buyer and price for the lot. After thoroughly tasting the produced cup, they create a report on the quality of the tea granules to advance the procedure. The major components that are included in that report are **Leaf Appearance, Infusion and Liquor**

Main Parameter A, Sub Parameter (iii) of Table 1	Sub Parameter	Commodity Under Study
Commodity Fundamentals	Homogeneity / Standardization	COTTON

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

- Cotton is classified according to the staple, grade, and character of each bale—staple refers to the fibre length; grade ranges from coarse to premium
- Five separate groupings of fiber staple lengths are used to classify cotton. India has the benefit of being able to cultivate all the varieties of cotton, including short staple (20 mm and below), medium staple (20.5 to 24.5 mm), long staple (27.5 to 32.0 mm), and extra-long staple cottons (32.5 mm and above).

Main Parameter A, Sub Parameter (iii) of Table 1	Sub Parameter	Commodity Under Study
Commodity Fundamentals	Homogeneity / Standardization	JUTE

- There are two main varieties in jute, white jute (*Corchorus Capsularies*) and dark jute or tossa (*Corchorus Olitorius*) which are grown in India. Extracted fibres from plants are commercially assorted and graded for trading. Raw jute is classified according to quality of jute and its application. The fine quality white raw jute is graded as W1, W2, W3, -- to W8. The Tossa raw jute is graded from TD1, TD2, -- to TD8. Mesta raw jute is grades as Mesta Top, Mesta Mid, and Mesta Bottom etc. White jute is available in 8 grades. Tossa jute is also available in 8 grades.

Main Parameter A, Sub Parameter (iv) of Table 1	Sub Parameter	Commodity Under Study
Commodity Fundamentals	Durability / Storability	TEA

Tea has a unique shelf life. Tea in sealed packages typically has a shelf life of 12 to 36 months. However, the loose-leaf tea is shorter due to its ease of absorption of external odours and moisture. Black tea has a typical shelf life of 18 months when purchased in bulk and 24 months when purchased in bags. Black tea can be kept in tins or aluminium foil bags for roughly 3 years, and in paper bags for 2 years. Green tea has a shorter shelf life than black tea because it has not fully fermented.

Main Parameter A, Sub Parameter (iv) of Table 1	Sub Parameter	Commodity Under Study
Commodity Fundamentals	Durability / Storability	COTTON

The storage time for Cotton in India is generally not more than a year. This stored Cotton can be susceptible to deterioration in Quality, Grade and Colours. Various Factors contribute to the extent of deterioration. Factors like condition and period of storage, the grade of cotton, atmospheric conditions like rainfall, humidity prevalent during the period, ventilation, prevalence of pests in the godowns, etc

Main Parameter A, Sub Parameter (iv) of Table 1	Sub Parameter	Commodity Under Study
Commodity Fundamentals	Durability / Storability	JUTE

The jute plant yields the jute fabric. The fibres have a rough, textured surface and are incredibly strong.

Main Parameter B, Sub Parameter (i) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Global	TEA

- The global market for tea was worth at around 207.1 billion USD in 2020 and is anticipated to grow to 266.7 billion USD by 2025, with a CAGR of 6.6 percent between 2020 and 2025. The rapid increase in world tea production was caused by China, with an output of 2.44 million tonnes, China accounted for 42.6% of global tea production in 2016. More than 35 countries throughout the world cultivate tea. However, only the top seven nations, including India, made about 90% of global tea output. With \$16,362 million in revenue in 2019 and a projected increase to \$26,110 million by 2027 at a CAGR of 9.8% over the forecast period, the green tea category would account for the largest share of the market in terms of revenue. By 2025, it is anticipated that the global tea market will have to grow to more than 318 billion dollars from its estimated worth of over 200 billion dollars in 2020. India, the second-largest producer, had a rise in production of 1.27 million tonnes as a result of favourable weather. (Source - <https://www.alliedmarketresearch.com/tea-market>)

Main Parameter B, Sub Parameter (i) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Global	COTTON

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

Cotton supports the global textile mills market and the global apparel manufacturing market that produces garments for wide use, which were valued at USD748 billion and 786 billion, respectively, in 2019-20. Furthermore, cotton supports a USD 3 trillion global fashion industry, which includes clothes with unique designs from reputed brands, with global clothing exports valued at USD 1.3 trillion in 2019-20. Cotton represents the main source of livelihoods and revenue for up to 1 billion people, out of which 250 million work in cotton processing and 100 million are farmers who cultivate cotton. Approximately 90% of these farmers grow cotton in less than 2 hectares (ha) of land and are located in developing countries, mainly in Central and West Asia, Southeast Asia, and Africa, including in 30 countries that are considered Low Human Development Countries (LHDCs) under the Human Development Index (HDI). Cotton employs close to 7% of the entire labour force in developing countries. Cotton is an export crop, but its processing takes place largely in the main producing countries, such as China and India, to obtain textiles and clothes. Over the past several years, there has been a global shift in trading cotton yarn and human-made fibres, rather than raw cotton, to increase the value addition of domestic textile industries.^{12,49} In 2017, over 30% of raw cotton produced globally—the equivalent of 8.8 million tonnes—was exported and was worth USD13.5 billion.^{9,50} The largest exporting countries in 2017 for cotton (raw cotton, cotton yarn, thread and woven fabrics: HS code 52) were China (USD 15.1 billion), the United States (USD 7.6 billion), and India (USD 4.7 billion), while the largest importing countries in 2017 were China (USD 8.6 billion), Bangladesh (USD 5.3 billion), and Vietnam (USD 4.2 billion).

Main Parameter B, Sub Parameter (i) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Global	JUTE

In 2021-22, the global jute market generated \$2.7B in revenue, an increase of 4.6% from the previous year. With the exception of logistical expenses, retail marketing expenses, and retailer margins, which will be reflected in the ultimate consumer price, this number represents the combined revenues of producers and importers. Over the period from 2007 to 2019, the market value climbed at an average yearly rate of +1.4%; the trend pattern remained constant, with only small changes being noticed during the review period. The market value climbed by 18% year over year in 2011, which was the year with the fastest growth. The worldwide jute market peaked in that year at \$2.9 billion. From 2012 to 2022, the growth of the global jute market remained at a somewhat lower figure.

India (2.1 million tonnes), Bangladesh (1.4 million tonnes), and Pakistan (91 thousand tonnes) consumed the most jute in 2021-22, accounting for 90% of global consumption. Bangladesh witnessed the highest rate of growth in terms of jute consumption among the major consuming nations from 2007 to 2019, whereas the other global leaders saw varying trends in the consumption data. With a combined 79% share of the global market, India (\$1.2B), Bangladesh (\$899M), and Pakistan (\$70M) had the greatest levels of market value in 2021-22. India (2.1 million tonnes) and Bangladesh (1.6 million tonnes) produced the most jute in 2018-19, accounting for 93% of the world's production. Among the key producing nations, Bangladesh experienced the most noticeable rate of development in terms of jute production from 2007 to 2018.

Main Parameter B, Sub Parameter (ii) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Imports & Exports	TEA

- India is one of the top 5 exporters of tea in the world, accounting for 10% of all exports. India's tea exports were worth US\$ 750.63 million in FY 2021–22. Approximately 96% of all tea exports from India are black tea, making it the most popular kind. Regular tea, green tea, herbal tea, masala tea, and lemon tea are further export variants. Tea and Regular Tea (96%) the other varieties of Tea which are exported out from India are – Green Tea, Masala Tea, Herbal Tea and Lemon Tea. Green Tea makes up around 3.5% of the total tea exported from India. India exports tea to more than 25 countries throughout the world.
- India, during the year 2021-22, exported around 201 million Kgs of Tea. The Total exports during the quarter January – April, 2022 was around 65 million kgs and was valued at USD 215 million, which was significantly a 9% increase in the same period in 2021.

Main Parameter B, Sub Parameter (ii) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Imports & Exports	COTTON

- While USA is the largest exporter of cotton, accounting for over one-third of the global trade in raw cotton, China is its largest importer.
- Cotton is essentially grown for its fibre, which is used the world-over in textile manufacturing.

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

- Cotton fibre is one of the most important textile fibres, accounting for around 35% of the total textile fibre used in the world.
- India ranked third in the world in terms of raw cotton exports in 2020, contributing roughly 10.2% of all exports. The exports had a value of US\$6.3 billion in 2020–2021 and US\$9.9 billion from April 2021 to February 2022.
- It represented 2.16 percent of all exports from India in 2020–21 and 2.61 percent from April 2021–February 2022, respectively. According to projections made by the Committee on Cotton Production and Consumption (COCP), India would export 4 million bales of cotton overall in 2021–22.
- By 2025–2026, the Indian government and export development council have established long-term goals for the textile industry, including a rise in productivity from the current level of roughly 450 kg of lint per hectare to at least 800-900 kg.
- India exported cotton to more than 159 nations worldwide in 2021–2022. Exports to Bangladesh, China, and Vietnam together accounted for 60% of all exports from India.

Main Parameter B, Sub Parameter (ii) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Imports & Exports	JUTE

- Over the years, jute and jute products from India have seen tremendous increase in exports. The overall amount of jute exports increased at a CAGR of 9% between 2015–16 and 2020–21. Among the other important jute products exported, yarn exports recorded an increase of 23.1% over the prior year and were valued at Rs. 416.70 crores (US\$ 54 million).

Main Parameter B, Sub Parameter (iii) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Value Chain Participants	TEA

- The distribution of a huge amount of tea in the shortest amount of time and in an organised way is made possible via auction. Each year, public auctions in India account for the sale of more than 80% of bulk packaged tea. Auction takes place amongst five vital stake holders. They are as follows:
 - Auction Organizers – Who Organizes the Auction Process
 - Seller/ Manufacturers- who produce tea,
 - Brokers/ Auctioneer - who value, inspect and auction teas,
 - Buyers - who buy teas.
 - Warehouse keepers – who store Teas

Main Parameter B, Sub Parameter (iii) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Value Chain Participants	JUTE

The major Value Chain Participants of the Jute Industry are as –

- Input suppliers
- Farmers.
- Traders
- Processors/traditional jute goods manufacturers& exporters

Main Parameter B, Sub Parameter (iii) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Value Chain Participants	COTTON

Farmers, cooperatives, government agencies, banks, ginning unit, yarn manufacturers, textiles unit, garments unit are the major stakeholders of the cotton industry.

Main Parameter B, Sub Parameter (iv) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Geographical Coverage	TEA

- Over three-fourths of the industry in India is located in the northern region, which is the pre-dominant region of tea production in the country. West Bengal and Assam are the two states that produce the most tea in the nation. The beverages of the Assam and Darjeeling varieties are the most well-known worldwide, according to the region of origin. About 20% of

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

the tea industry is contributed by the Southern Indian region, with the Nilgiris serving as the primary production hub. Despite having a substantially smaller output than North India, the region's industry is supported by the production of high-end, superior-quality cultivars. India produced 1,344.4 million kg of tea overall in FY 2021–22.

- The tea map of India is broadly classified into two broad geographical areas – Northern and Southern. The northern part of India is the biggest producer of Tea accounting to about 80% of the country's annual tea production in 2021-22. The majority of the tea production of North India predominantly comes from Assam and West Bengal. Assam and West Bengal make up the majority of the output in the northern region of India, which produced 83% of the nation's annual tea in 2022. Tamil Nadu, Kerala, and Karnataka are the top three tea-producing states in India, accounting for the remaining 17% of the country's total tea production.

Main Parameter B, Sub Parameter (iv) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Geographical Coverage	JUTE

- The cultivation of Jute in India is mainly confined to the eastern region states - West Bengal, Bihar, Assam, Tripura, Meghalaya, Orissa and Uttar Pradesh. Nearly 50 percent of total raw jute production in India alone figures in West Bengal. Jute thrives best in damp heat, and the climatic conditions prevalent in **West Bengal in India** are well suited for its cultivation.

Main Parameter B, Sub Parameter (iv) of Table 1	Sub Parameter	Commodity Under Study
Trade Factors	Geographical Coverage	COTTON

- Gujarat produces the most cotton in India's Central Zone (which includes the states of Maharashtra, Madhya Pradesh, and others), accounting for 8.516 million bales of the nation's total production.
- About 70% of Gujarat's cotton is produced in Saurashtra, with farmers in Amreli—the state's largest cotton district—playing a significant part. The largest cotton-producing regions of Maharashtra are the Vidarbha districts of Yavatamal, Buldhana, Akola, Amravati, Nagpur, Washim, and Wardha.
- With Telangana producing the most cotton in the Southern Zone and the third-largest amount nationwide (6.587 million bales), the Southern Zone, which includes states like Andhra Pradesh, Karnataka, and Tamil Nadu, is the second-largest cotton producer in the world (bales of 170 kg each).

EASE OF DOING BUSINESS

The researcher addressed concerns about market controls and practises that might cause the government to take notice/attention and impose limitations. These restrictions on the tea market are looked at in terms of (i) price ceilings, (ii) purchasing at the minimum support price (iii) trading restrictions, and (iv) surplus. The practise of frequently raising price caps and using MSP for procurement would suggest that the market is closely regulated by the government and that any changes or market turbulence will result in meddling on their part. A low surplus and excessive price volatility can both lead to price instability, which can lead to government intervention that influences the future of the derivatives market.

Main Parameter C, Sub Parameter (i) of Table 1	Sub Parameter	Commodity Under Study
Ease of Doing Business	Price Control & Other Laws	TEA

The Government has been implementing the Price Stabilisation Scheme (PSF) and Plantation Crop Insurance Scheme (PCIS) for Tea since 2003 which came to an end on 30.09.2013. Presently no subsidy scheme is available for stabilisation of prices in tea industry for helping small and medium plantation holders. Tea Board provides support for marketing of produce of small and medium plantation holders through auction centres at Guwahati, Kolkata, Siliguri, Jalpaiguri, Cochin, Coimbatore and Coonoor. Tea Board also provides assistance towards meeting additional transport & handling charges incurred for teas exported through ICD Amingaon, marketing of Packaged Teas of Indian Origin (Brand Support) and participation in international fairs and exhibitions. Under the "Tea Development and Promotion Scheme" of the Tea Board during the XII Plan, the unit cost of replantation including the crop loss for the gestation period is included in the subsidy provided to tea growers. The XII Plan scheme includes provisions of subsidy for replantation, replacement planting, rejuvenation pruning, extension planting, irrigation and mechanisation covering an area of approximately 74,400 ha., including the small holdings. An outlay of Rs.482.90 Cr. is earmarked for the purpose. The scheme aims at increasing production, field productivity and quality of Tea.

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

Main Parameter C, Sub Parameter (i) of Table 1	Sub Parameter	Commodity Under Study
Ease of Doing Business	Price Control & Other Laws	COTTON

The prices of Cotton are subject to government regulations from time to time. Cotton imports are exempt from customs tax and the Agricultural Infrastructure Development Cess, according to the Central Board of Indirect Taxes and Customs (CBIC).

MAJOR POLICY CHANGES GOVERNING COTTON TRADE

In order to bring down the price of cotton for the benefit of the general public, the Indian government has decided to waive all customs duties on imports of cotton. The entire textile supply chain, including yarn, fabric, apparel, and made-ups, as well as the textile business and customers, would benefit from this exception. The elimination of the 5% Basic Customs Tax (BCD) and 5% Agricultural Infrastructure and Development Cess (AIDC) on raw cotton has been demanded by the industry. Cotton imports are exempt from customs tax and the Agricultural Infrastructure Development Cess, according to the Central Board of Indirect Taxes and Customs (CBIC). This notice came into effect on April 14, 2022, and it will stay in effect until, but not including, September 30, 2022. The removal of the import tax on raw cotton should help the price of cotton in India.

Source: <https://pib.gov.in/PressRelease>.

Main Parameter C, Sub Parameter (i) of Table 1	Sub Parameter	Commodity Under Study
Ease of Doing Business	Price Control & Other Laws	JUTE

Minimum Support Price for raw jute and mesta is fixed every year to protect the interest of farmers. While fixing prices of different grades, the issue of discouraging production of lower grade jute and encouraging production of higher grades jute are taken into consideration so as to motivate farmers to produce higher grade jute. The Jute Corporation of India (JCI) is the Price Support Agency of the Govt. of India for jute. The minimum support price is fixed by the Govt. on the basis of recommendations of the Commission for Agricultural Costs and Prices (CACP). As per CACP reports, while formulating the agricultural price policy CACP takes into account various factors such as cost of production, overall demand/supply situation, domestic and international prices and effect of minimum support price on general price level.

Main Parameter C, Sub Parameter (i) of Table 1	Sub Parameter	Commodity Under Study
Risk Management	Seasonality	TEA

Tea must be produced in a climate with moderate temperatures and rainfall. Tea leaves do not sprout in the winter season, thus cold temperature is not suitable for them. Due to the lack of fresh leaves, there is no tea production from the middle of December until the beginning of March. During this period, manufacturers turn to refurbishment and equipment repairs, in order to operate for the entire forthcoming year.

The annual supply season of tea is observed to vary over six time periods when the quality element is taken into consideration. As a result, a stronger seasonality in terms of the quality variation in tea may make it necessary to balance out price variations brought on by supply and off-season. The argument for tea futures trading in the Indian market is supported by this seasonality trait.

Main Parameter C, Sub Parameter (i) of Table 1	Sub Parameter	Commodity Under Study
Risk Management	Seasonality	COTTON

There are three zones in India, where Cotton is being grown with different sowing and harvesting periods. The harvesting season for Cotton is generally October to September. The table below shows the harvesting and crop cycle of Cotton among all the three Zones.

Main Parameter C, Sub Parameter (i) of Table 1	Sub Parameter	Commodity Under Study
Risk Management	Seasonality	JUTE

Jute is a rainy season crop, sown between month of March to May, according to rainfall and type of land. It is a 100-120 days crop and is harvested from July to September depending upon timings of sowings.

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

DISCUSSIONS

Comparative Statement of Criteria Examined Under Sebi Guidelines

PARAMETER	COTTON	JUTE	TEA	REMARKS
FUNDAMENTALS				
SIZE & VOLUME	High (LARGEST)	Medium	High (SECOND LARGEST)	Tea ranks first among the three in terms of Volume
HOMOGENEITY	High	High	Low	MANAGEABLE
DURABILITY	Medium	High	High	Tea ranks first among the three in terms of Volume
TRADE				
GLOBAL	Large	Low Presence	Large	Tea ranks first among the three in terms of Global Presence
EX – IM	High (Largest)	High (2 nd Largest)	High (3 rd Largest)	Tea ranks second among the three in terms of Export Volume
VALUE CHAIN	Eight major Stakeholders	Four major Stakeholder	Five major Stakeholder	Tea ranks second among the three in terms of Value Chain
GEOGRAPHICAL COVERAGE	All India Coverage	Eastern Region	All India Coverage except Central Region	Tea ranks second among the three in terms of Geographical Coverage
EASE OF DOING BUSINESS				
PRICE CONTROLS	Subject to Govt. Regulations	MSP, Subject to Govt. Intervention	Free from Govt. Intervention	Tea ranks first among the three in terms of Price Controls
OTHER LAWS	Limited	EMPA, MDPS CSAPM	Limited	Tea ranks first among the three in terms of Limited Laws
RISK MANAGEMENT				
SEASONALITY	Medium	High	Medium	Tea ranks second among the three in terms of Price Controls

The demand for tea has shown a consistent increase in both volume and value on the Indian as well as the global market. It has been noted that both in India and globally, the rise of tea production (measured in volume) is greater than commodity products like Jute and Cotton. It is noted that the CAGR of tea has increased more rapidly across the various time periods of 2001–2016, 2007–2016, and 2012–2016. Thus, it appears that the global markets for commodities like tea and cotton have continued to increase. Both the production volume and supply value of the commodities like tea and cotton, have shown constant rise. Given the magnitude of the cotton cash market and the existence of derivatives, there should be a sizable and sufficient cash market for tea as well.

Thus, from the above Table we can see that Tea satisfies almost all the criteria with either first or second rank among the three compared products. Therefore, we can conclude that Tea has the necessary and potential characteristics for introduction in the Commodity Derivative Market of India and progress forward as a successful commodity.

SCOPE FOR FUTURE RESEARCH

The current study is limited and sets the background for possible areas of research to be explored in future which are laid down hereunder.

- Similar studies on the potentiality of other commodities for entry in the derivatives market may be undertaken.
- Studies may be carried for other countries to investigate the reason behind the absence of derivative market in tea.
- A study on the grading system, new regulations, seasonality concerning the same with respect to the tea market may be undertaken to establish models, thereby helping the key market players to facilitate cross-hedging even.
- Similar studies may be undertaken on the behavioural aspect of various participants involved in the tea value chain system.

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

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ANNEXURES

Tea Production by The Top Tea Producing Countries

COUNTRY	2016	2017	2018	2019	2020	Share of Total Production
CHINA	2404.95	2496.41	2610.39	2799.38	2740.00	43.48%
INDIA	1267.36	1321.76	1338.63	1390.08	1257.53	24%
KENYA	473.01	439.86	493.00	458.85	569.54	7.07%
SRI LANKA	292.57	307.72	304.01	300.13	278.49	5.75%
VIETNAM	180.00	175.00	185.00	190.00	186.00	3.33%
INDONESIA	137.02	134.00	131.00	128.80	126.00	2.42%
OTHERS	838.83	843.64	904.18	882.84	855.25	14.99%
TOTAL	5593.74	5718.39	5966.21	6150.08	6012.81	100%

A Study to Identify the Commodity Characteristics towards A Potential Derivative Contract on Tea

(Figures in M.Kgs)

YEAR	PRODUCTION	IMPORTS	EXPORTS	Available For Domestic Consumption	Estimated Consumption
2016	1267.36	20.97	222.45	1065.88	965
2017	1321.76	21.12	251.91	1090.97	1059
2018	1338.63	24.92	256.06	1107.49	1084
2019	1390.08	15.85	252.15	1153.78	1135
2020	1257.53	23.40	209.72	1071.21	1135

Fig in (M Kgs)

YEAR	2016 - 17	2017 - 18	2018 - 19	2019 - 20	2020 - 21	2021 - 22
TOTAL SUPPLY	1044.46	1089.07	1119.76	1135.01	1106.99	1169.58
TOTAL DEMAND	973	1066	1090	1116	1145	1168
SURPLUS	71.46	23.07	29.76	19.01	-38.01	1.58

Country Wise Share of Total Exports From 2016 - 2020

COUNTRY	2016	2017	2018	2019	2020	Share of Total Exports
KENYA	480.33 (26.54%)	415.72	474.86	496.76	518.92	24%
CHINA	328.69 (18.24%)	355.26	364.71	366.55	348.82	18%
SRI LANKA	280.87 (15.58%)	278.20	271.78	289.59	262.73	15%
INDIA	222.45	251.91	256.06	252.15	207.58	13%
VIETNAM	142.00	140.00	130.00	136.00	130.00	8%
INDONESIA	51.46	54.19	49.03	43.11	45.27	3%
OTHERS	300.70	301.73	316.69	319.51	311.45	17%
TOTAL	1806.50	1797.01	1863.13	1903.67	1824.77	100%

Production And Export Share of Major Producing and Exporting Countries During 2019-20

COUNTRY	PRODUCTION		EXPORT	
	Million Kgs	Global Share	Million Kgs	Global Share
CHINA	2799	45%	367	20%
INDIA	1390	23%	252	13
KENYA	459	7%	497	26%
SRI LANKA	300	5%	290	15%
OTHERS	1202	20%	499	26%
WORLD TOTAL	6150	100	1904	100

MAJOR COTTON PRODUCING STATES OF INDIA (in Lakh Bales of 170 Kg)				
	2018-19	2019-20	2020-21 (‘000 MT)	2021-22
GUJARAT	88	85	1649	1428
MAHARASHTRA	70	77	1360	1359
TELENGANA	35	51	816	644
KARNATAKA	16	19	400	358
MADHYA PRADESH	23	16	306	323
HARYANA	23	24	383	273
RAJASTHAN	28	26	553	445
ALL INDIA	312	339	6120	5501



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