Is Homogeneity a Hurdle for Introducing Tea Futures in India?

Rajat Bhattacharjee[1] & Dr. Santosh Kumar Mahapatra[2]

ABSTRACT

Commodity derivatives market plays a significant role in the economy through price discovery and risk management mechanism. A wide number of agricultural commodities have secured place in the derivatives market, despite the inherent issues of homogeneity or standardisation in terms of quality whereas derivative trading in tea is yet to start in the exchanges. A commodity to be eligible for trading in exchange needs to fulfil certain conditions, and standardisation or homogeneity is one of such pre-requisites for the futures trading. However, coffee being a substitute of tea has found its place in the derivatives market. This paper attempts to examine the feasibility of tea futures on the grounds of homogeneity. For this purpose, different grades of tea are studied in relation with coffee. Also the quality specifications of coffee futures are taken into consideration. The observations of the study indicate the fulfilment of homogeneity based criteria for tea and thereby make it conducive for the trading of tea futures.

Keywords: **Coffee, Commodity derivatives, Futures, Homogeneity, Tea.**

Introduction

Commodity derivatives have played an important role in the economy of India by extending the mechanism of price discovery and price-risk management. Various reforms have been made for the growth and development of this market over the years which include introduction of futures and options in the Indian market.

At present, there are five exchanges in India offering commodity derivative contracts. These are: Multi Commodity Exchange of India Ltd. (MCX), National Commodity Derivatives Exchange Limited (NCDEX), Indian Commodity Exchange Limited (ICX), National Stock Exchanges of India Ltd. (NSE) and Bombay Stock Exchange Ltd. (BSE). NSE and BSE offer derivative contracts in both equity and commodity segments whereas the others offer derivative contracts in commodity segment only. MCX offers contracts in bullion, base metals, energy and agricultural products. NCDEX offers trading primarily

1. Assistant Professor, Royal School of Commerce, Royal Global University, Guwahati-781035 Assam (India) Email: rajat.bhattacharjee2005@gmail.com
2. Associate Professor,Department of Commerce, Gauhati University Guwahati-781014 Assam (India) Email: skm27gu@gmail.com

in agriculture products whereas ICX offers derivative contracts in agri-products including plantation and non-agri products (diamond and steel). The total turnover in the commodity derivatives market in India was ₹ 60,22,530 crores in the financial year 2017-18 (SEBI Annual Report, 2017-18) which signifies the importance of derivative market. The commodities found in the Indian derivative markets are shown in Table 1. There are a good number of commodities being traded in the Indian derivatives market. However, the inclusion of newer commodities in the derivatives market would certainly extend the benefits to the various stakeholders. In this context 'tea' is one of the products having all potential and inclusion of which may extend the benefits to various stake holders. India is one of the largest producers and consumers of black tea in the world with a substantial share of 23 per cent of the world tea production and yet tea has not entered the derivatives market so far. However, coffee has established itself in the derivatives market in India irrespective of the fact that it is similar to tea in many commercial aspects.

Table 1: Trading Commodities in Indian Derivative Market

MCX	NCDEX	ICEX	NSE	BSE
• Metal • Bullion • Fibre • Energy • Spices • Plantations • Pulses • Petrochemicals • Cereals	• Cereals and pulses • Fibres • Oil and oil seeds • Spices • Plantation products • Gold • Silver • Steel • Copper • Crude Oil • Brent Crude Oil • Polyvinyl chloride	• Gold • Silver • Copper • Lead • Crude oil • Natural gas • Mustard • Soyabean • Soyabean oil • Jute • Menthe oil • Iron	• Gold • Silver • Brent	• Turmeric • Guar seed • Almond • Cotton • Gold • Silver

Source: Official websites of the respective exchanges.

A review of the existing literature on commodity derivatives have revealed the focus areas of research which mainly revolve around – studying the *evolution, growth and performance* of such markets; exploring the *relationship between spot and futures price*; highlighting the importance of *behaviour in decision making* concerned with trading in commodity exchange; investigating the *feasibility of introduction of new commodities* in the derivatives market. Brorsen & Fofana (2001), Shim (2006), Hosseini-Yekami, Zibaci & Allen (2009), Zhang (2012) and Qehaja (2014) have concentrated on the various *factors influencing the success or failure* of futures contracts, especially in case of agricultural commodities in countries other than India. But very little work is found on tea and it remains one such genre which has been barely explored and more so, in the Indian context. Damodoran (2000) had examined the feasibility of tea-futures and suggested for the introduction of tea-futures, but the recommendations could not be materialised. Bhattacharjee & Mahapatra (2020) in their work have

raised the question and examined the feasibility of tea futures in India at the backdrop of another popular beverage – coffee which has a remarkable presence in the derivatives market, both at national and international level. They found a considerable market demand and supply along with adequate price volatility for introducing tea in the futures market.

Raipuria (2001), in the study *Report on the Group of Forwards and Futures Markets,* has identified certain essential pre-requisites, to consider suitability of a commodity for futures trade – one of them being homogeneity. The commodity should be homogenous or alternatively it must be possible to specify a standard grade and to measure deviations from that grade. This condition is necessary for the futures exchange to deal in standardized contracts.

Homogeneity means the quality or state of being all the same or all of the same kind. It is a vital feature to be present in the commodity to be incorporated in the derivatives market. In order to standardize the lots of commodity there must be a uniformity or similarity in the quality of the commodity on which derivative trading is to be made. Simply stated, the existence of a scope of *standardization or homogeneity* makes a commodity fit for being traded or introduced in the derivatives market.

The concept of *Quality* is very subjective and differs from person to person. Therefore, to determine a standard as the benchmark for quality of anything and a commodity in particular is not an easy task. Launching of a derivative product is largely dependent on the possibility or scope of standardisation of the product. The production of agricultural commodities is dependent on numerous factors inclusive of both controllable and uncontrollable factors. There are many differing views as to what constitutes 'quality'. But it can be said that the quality of a parcel of coffee comes from a combination of the botanical variety, topographical conditions, weather conditions, and the care taken during growing, harvesting, storage, export preparation and transport. Botanical variety and topographical conditions are constant and therefore dominate the basic or inherent character of a coffee. Weather conditions are variable and cannot be influenced, resulting in fluctuating quality from one season to another (International Trade Centre, 2011).

Thus, in order to establish the quality or a standard of quality certain parameters need to be ascertained. These parameters would facilitate the assessment of a standard quality which in turn incorporates homogeneity or uniformity to the derivative contracts on the commodity to be dealt with.

Objevtive og the Study

The introduction of commodities in the derivatives market needs the fulfilment of certain characteristics by the commodity. One of the vital features is homogeneity which provides scope for standardization of the commodity. The objective of this paper is to examine whether there is a possibility of establishing homogeneity or some uniformity/standard in the quality of tea which may pave the way of introducing tea in the commodity futures market.

Methodology

Absence of homogeneity poses a challenge to the introduction of tea futures in the market. As there are no futures on tea, the homogeneity aspect can be examined by a detailed study of various types of tea and correlating to some similar commodity where future trading already prevails. Coffee is a world beverage which is a good substitute to tea and has a close resemblance to tea in many aspects. The present study puts special emphasis on the parameter - *homogeneity or scope of standardisation* of tea

vis-a-vis coffee which has a place in the derivatives market. In doing so, quality has been considered for the standardisation purpose. The current research work relies mostly on secondary data collected from various reports and published journals. However, the primary sources also include interview/ conversation with few officials of the tea manufacturing concerns. The various secondary data sources used for the study are: (i) Coffee Board of India and (ii) Indian Tea Association. The present work is exploratory and descriptive in nature. The study is exploratory in the sense that it tries to examine the homogeneity aspect of tea, which is one of the essential conditions for the introduction of tea futures. This study being novel one, inferences are drawn through discussions based on logical reasoning.

Observations and Discussion

The task of examining the quality is a difficult one because of wide variation in case of any agricultural commodity either by species or by type of processing. The concept of quality is also very subjective. The various grades contain specifications for the particular commodity which usually represent its distinguishing quality. The product may be having several classifications and the price of the product will differ on the basis of its product gradation. A particular grade of product should also have demand and large volume of trading. It is essential to have an understanding of tea processing so as to gain idea on the quality of tea.

Quality of Tea

The quality of tea is largely influenced by the plantation and processing system at different stages. Production and processing systems influence quality. The components and inputs that make up consistent quality are not certain at all the times, yet the basic norms in climate, soil and other agricultural factors in the growing areas are responsible in influencing the quality of the tea. The *initial stage* rests with the tea growers. The quality depends on the clone of the garden and their maintenance which includes plantation of original seeds for the upgraded biological factors of tea bushes and leaves. This is followed by the practices of plucking, pruning and others which influence the quality of tea at a later stage. Processing of the tea leaves in the factories is the secondary factor that contributes to the quality of the tea. The tea factories procure the tea leaves from the tea growers. On transhipment of the same, the total volume of the produce is weighed at the door gate and a sample (45% - 60%) of the same is sorted in order to assess the fine leaves from the lot. Fine leaves are those having two leaves and a single bud while the rest consists of single leaves. The proportion of the same in the sample is assumed for the entire lot and the lot is priced accordingly.

The moisture content of tea leaves plays a significant role for determining and maintaining quality of final tea. The first step in the processing of tea leaves is known as *withering*. This process entails drying of the leaves and reducing the moisture content. This may be done either through natural process by drying out in the sunlight or exposing the leaves to gases in troughs. Here the tea leaves are subject to around 70 percent withering which implies reducing the moisture content by 30 percent and retaining 70 percent of the moisture. The single leaf (also known as *baanji* in colloquial term) along with the hard leaf is also put to withering. Usually, the hard leaves are separated but if the hard leaves somehow pass through production, it results in the presence of black matter in the final produce which is not a good fit. Once the withering is completed, the withered leaves are passed to the machinery for a treatment known as Cut-Tear-Curl (CTC) to turn into tea granules. In this process, most of the extraneous matters present in the tea leaves are removed.

The *next stage* involves the fermentation process. In this stage, the tea granules are chemically treated with water and oxygen leading to the black colour of tea. The objective of this oxidization is to standardize the moisture content. This process exudes the bloom (lustre) and briskness (harshness) of the tea granules. The shiner the produce, the better is the quality.

The lot is then passed into the dryer whereby the moisture content is further standardized to a range of 2.7% to 3.1%. Once this is done, the tea granules are then further processed for sorting and grading. Here, the tea granules are sorted on the basis of their size and extraction of the fibre present in the lot. Based on their size, the granules are sorted into different grades namely, Pekoe (P), Flower Pekoe (FP), Broken Pekoe Souchong (BPS), Broken Orange Pekoe Large (BOPL), Broken Orange Pekoe (BOP), Broken Orange Pekoe Small (BOPSM), Broken Pekoe (BP), Broken Pekoe Small (BPS), Pekoe Fannings (PF), Orange Fannings (OF), Broken Orange Pekoe Fanning (BOPF) and Dust. All these grades are further divided into *primary* and *secondary* – the former has basically clean and sharp cut granules with very little or no fibre content and fetches a higher price while the latter has greater fibre content with comparatively less price than the former. The produce is then packed as per the various grades and put for private sale or auction sale.

Grades of Tea

Tea has its variety consisting of Black Tea (Orthodox and CTC) and Green Tea and others. India is a major producer of Black CTC Tea. After the processing, Black Tea is segregated and is graded accordingly. The Tea Board recognizes the following standardised grades of Orthodox and CTC Tea as enlisted out in Table 2.

Table 2: Grades of Tea

CTC		
Broken Leaf	***Fanning***	***Dust***
FP	OF	Pekoe Dust
BPS	PF	Dust
Pekoe	BOPF	Churamoni Dust
BOPL		Golden Dust
BOP		Super Red Dust
BOPS		Fine Dust
BP		Super Fine Dust
BPS		

ORTHODOX	
Whole Leaf	***Broken***
Flowery Pekoe	Broken Orange Pekoe 1
Fine Tippy Golden Flowery Orange Pekoe	Golden Flowery Broken Orange Pekoe
Tippy Golden Flowery Orange Pekoe	Broken Orange Pekoe Soucheng
Tippy Golden Flowery Orange Pekoe 1	Golden Broken Orange Pekoe
Golden Flowery Orange Pekoe	Flowery Broken Orange Pekoe
Flowery Orange Pekoe	Broken Orange Pekoe
Orange Pekoe	
Fanning	***Dust***
Golden Orange Fanning	Orthodox Churamani Dust
Flowery Orange Fanning	Orthodox Pekoe Dust
Broken Orange Pekoe Fanning	Broken Orange Pekoe Dust
	Broken Orange Pekoe Fine Dust
	Fine Dust
	Dust A
	Special Dust
	Golden Dust
	Orthodox Dust

Source: Indian Tea Association, www.indiatea.org

Table 3: Summary of Tea Grades

Tea Grades / Sub-grades	*Orthodox*	*CTC*	*Total*
Whole leaf	7	-	7
Broken	6	8	14
Fannings	3	3	6
Dust	9	7	16
Total	*25*	*18*	*43*

Source: Indian Tea Association, www.indiatea.org

With a total of 43 varieties of sub-grades of tea based on the processing system as reflected in Table 3, the question of establishing homogeneity on the basis of quality becomes a little difficult. For this purpose, we shall be comparing the variants/grades prevailing in case of coffee at a later stage.

While marketing tea, the packed tea granules from the factories are sent to the warehouses and a sample of the same, according to the various grades are also sent to the tea brokers. The brokers play a vital role in marketing of the produce especially for sale through auction. They are the intermediaries between the buyers and sellers of tea. The brokers are responsible for fetching the right buyer and price for the lot. In order to further the process, they make an evaluation report on the quality of the tea granules after proper tasting of the cup prepared. This report contains the following elements:-

(i) Appearance – The following aspects are carefully considered here:

a. Size and colour of raw tea

b. Fibre content

c. Bloom or glow or shine or lustre

(ii) Infusion – This pertains to the remains of tea grains after boiling. The purpose of this is to check the appearance or colour of the tea granules which speaks about the fermentation process. A dull or dark colour of the remains reflects a negative quality.

(iii) Liquor – This entails the taste of the tea cup prepared i.e., liquid tea. The following aspects are observed hereunder:

a. Briskness – harshness in taste

b. Strength – capacity to hold the briskness

c. Cup colour – shiny colour of the liquid tea after pouring milk.

The broker mentions all these features of the tea produce regarding the various grades separately and based on such factors estimates the value or price that it should fetch. Based on the report, the broker sends lots to the various buyers and tries to fetch as much value for the lots which is revealed in the auction process. This makes the role of the brokers very pivotal for determining the quality of the tea and its commercialization. Damodaran (2000) had also suggested a framework for the issue on homogeneity in his Report to the Tea Board of India '*…a framework for commodity based futures contracts in tea could work out by segregating more than 50 grades on which such contracts could be traded. The tea brokers would be the key to shaping up the quality regulation mechanism'.*

Coffee Quality and Grades

Coffee includes 500 genera and over 6,000 species but only two of them are currently of real economic importance- *Arabica* and *Robusta*. Coffee Arabica, referred to in trade as Arabica accounts for 60-70 per cent of the world coffee production while Coffee Robusta accounts for 30 – 40 per cent of the world coffee production. Two other species are also traded, but to a very limited extent – *Coffea liberica* and *Coffea excelsa*.

The above classification of coffee is based on the bean size. The grades of coffee are made on the basis of the size of the coffee beans. The theory behind classification based on bean size is that coffees of the highest altitudes are more dense and larger in size than those produced at lower altitudes. Similarly coffees develop more slowly at higher altitudes and often have the best flavour profiles. The size and size distribution of beans also has an impact on the optimization of roasting conditions. Each producing country has developed its own classification and grade charts, often used to set minimum standards for export.

Quality doesn't only mean exceptionally good looking (visually perfect) bold beans. Small beans coffee can also show excellent quality. Conversely, visually perfect bold beans could in fact hide very unpleasant cup characteristics. In reality, there exists a market for everything- from expensive top quality to qualities at the other end of the spectrum. There is room in the marketplace for just about anyone who honours their contractual obligations and who adequately satisfies the market's quality expectations for the type of coffee they produce.

The coffee is generally classified on the basis of their economic importance into two viz., Arabica and Robusta, but it has quite a few variants under the two mentioned classifications and is graded as shown in Table 4.

Table 4: Grades of Coffee

Commercial Grade	
Arabica	*Robusta*
(i) Washed Arabica Plantation	*(i) Washed Robusta Parchment*
Grade Designations –	Grade Designations –
Plantation PB	Robusta Parchment PB
Plantation A	Robusta Parchment AB
Plantation B	Robusta Parchment C
Plantation C	Robusta Parchment Blacks/Browns
Plantation Blacks	Robusta Parchment Bits
Plantation Bits	Robusta Parchment Bulk
Plantation Bulk	
(ii) Unwashed Arabica–Arabica Cherry	*(ii) Unwashed Robusta Cherry*
Grade Designations –	Grade Designations –
Arabica Cherry PB	Robusta Cherry PB
Arabica Cherry AB	Robusta Cherry AB
Arabica Cherry C	Robusta Cherry C
Arabica Cherry Blacks/Browns	Robusta Cherry Blacks/Browns
Arabica Cherry Bits	Robusta Cherry Bits
Arabica Cherry Bulk	Robusta Cherry Bulk
	Robusta Cherry Clean Bulk

Contd...

Premium Grade	
Arabica	*Robusta*
(i) Washed Arabica – Plantation Grade Designation – Plantation AA Plantation PB Bold *(ii) Unwashed Arabica – Arabica Cherry* Grade Designation – Arabian Cherry AA Arabian Cherry A Arabian Cherry PB Bold	*(i) Washed Robusta Parchment* Grade Designation – Robusta Parchment A Robusta Parchment PB Bold *(ii) Unwashed Robusta Cherry* Grade Designation – Robusta Cherry AA Robusta Cherry A Robusta Cherry PB Bold
Speciality Coffee	
Arabica	*Robusta*
(i) Mysore Nuggets Extra Bold (Arabica Plantation Washed) *(ii) Monsooned Malabar-Arabica Coffees* Monsooned Malabar AAA Monsooned Malabar AA Monsooned Malabar A Monsooned Malabar Arabica Triage	(i) Robusta Kaapi Royale (ii) *Monsooned Malabar Robusta Coffees* Monsooned Malabar Robusta RR Monsooned Malabar Robusta Triage
Miscellaneous Grades	
(i) Liberia Bulk (ii) Excelsia Bulk	

Source: Coffee Board of India, www.indiacoffee.org

A summary with regard to the variants of coffee has been presented in Table 5, which shows that there are 44 varieties of coffee in the Indian market with 23 grades in Arabica and 21 varieties in Robusta. The size-based classification of coffee beans has enabled to assess the homogeneity of the product and thereby making it conducive for the introduction of coffee futures. The presence of a number of sub-grades in each of the two broader grades of coffee – Arabica and Robusta – reflects the diversity in quality of coffee.

Table 5: Summary of Coffee Grades

Coffee Grades / Sub-grades	*Arabica*			*Robusta*		
	Washed	*Unwashed*	*Total*	*Washed*	*Unwashed*	*Total*
Commercial grade	7	6	13	6	7	13
Premium grade	2	3	5	2	3	5
Speciality grade	-	-	4+1=5	-	-	1+2=3
Total			*23*			*21*

Source: Coffee Board of India, www.indiacoffee.org

The Homogeneity Criterion

The summary of the foregone discussion is presented in Table 6 and it is observed that the number of broad classifications and the basis of such classification in both tea and coffee are similar. Tea is broadly classified into two categories – *CTC & Orthodox,* based on the size of the granules, which are further grouped into *Primary and Secondary* with due regard to the fibre content and clean cut of the granules. In a similar manner, Arabica & Robusta are two broad categories of coffee based on the size of the beans, and are further grouped into *Washed* and *Unwashed* on the basis of the method of processing involved. In both the cases, the classification owes its origin to the processing system involved. Again, it is found that tea has been segregated into 43 grades while there are 44 different grades of coffee; each with different quality specifications. The presence of 43 varieties of tea based on the processing system may pose a challenge to establish homogeneity of tea and thus it may not be feasible for introduction of tea futures. As per our observations made with regard to coffee, a similar constraint in coffee has been successfully resolved. And considering the number of varieties prevalent in coffee which stands around 44 - more or less similar to the number of tea varieties/grades, coffee futures have been doing well in derivative market. Further, coffee in itself is not a standardised commodity. The quality differs from lot to lot but these are clearly recognized and valued. Inter-governmental Group on Tea (2012) pointed out

that *'...coffee sector participants have become used to thinking of their product in relation to a somewhat abstract 'standard contract' rather than existing in isolation.'* A similar mechanism could be adopted for tea also to be considered for the introduction of *tea futures*. It is evident from the discussion that there is not much divergence in case of tea and coffee with respect to quality specification and regulation. Hence, it can be said that the issues involved in terms of quality are more or less similar for both the commodities. If the future trading in coffee has been performing successfully with so many variants, we may conclude that a good number of tea variants may not be the hurdle to introduce *tea futures*.

Table 6: Comparative Statement on Homogeneity

Issues on Quality	*Tea*	*Coffee*
Broad classification	CTC & Orthodox	Arabica & Robusta
Sub-classification	43 grades	44 grades
Basis of classification	Size of Tea Granules Primary & Secondary	Size of Coffee Beans Washed & Unwashed

In augmentation, a case of coffee futures introduced in the NCDEX is undertaken in order to draw a reference to the quality specifications based on which trading of coffee futures was initiated. In spite of the varying grades in quality of coffee, the introduction of coffee futures has been facilitated with certain specifications.

The contract grade for delivery of Arabica Coffee futures contracts made under NCDEX Regulations shall be Plantation A or B Arabica Coffee conforming to the quality specification as follows:

Quality Specification of Plantation A

(i) A minimum of 90% by weight of the coffee shall stand on a sieve with round holes of 6.65 mm (screen no. 17)

(ii) A maximum of 1.5% by weight of the coffee may pass through a sieve with round holes of 6.00 mm (screen no. 15)

(iii) The coffee may contain 'Pea Berry' subject to a maximum of 2% by weight.

(iv) The coffee may contain a 'triage' subject to a maximum of 2% by weight.

(v) Black beans should not exceed 0.25% by weight.

(vi) Maximum permissible moisture 11.0%

(vii) Should be totally free from foreign and extraneous matter.

Quality Specification of Plantation B

(i) A minimum of 7.5% by weight of the coffee shall stand on a sieve with round holes of 6.0 mm (screen no. 15)

(ii) A maximum of 1.5% by weight of the coffee may pass through a sieve with round holes of 5.50 mm (screen no. 14)

(iii) The coffee may contain 'Pea Berry' subject to a maximum of 2% by weight.

(iv) The coffee may contain a 'triage' subject to a maximum of 3% by weight.

(v) Black beans should not exceed 0.25% by weight.

(vi) Maximum permissible moisture 11.0%

(vii)Should be totally free from foreign and extraneous matter.

The contract grade for delivery of Robusta Coffee futures contracts made under NCDEX Regulations shall be Robusta Cherry Clean Bulk or Robusta Cherry AB conforming to the quality specification as follows:

Quality Specification of Clean Cherry Bulk

(i) A minimum of 98.5% by weight of the coffee shall stand on a sieve with round holes of 5.0 mm (screen no. 13)

(ii) A minimum of 50% by weight of the coffee may pass through a sieve with round holes of 6.00 mm (screen no. 15)

(iii) The coffee may contain 'Pea Berry' subject to a maximum of 25% by weight.

(iv) A maximum of 0.5% by weight of the coffee might be blacks and browns.

(v) The coffee may contain a 'triage' subject to a maximum of 3% by weight.

(vi) Maximum permissible moisture 12.0%

(vii)Extraneous matter and mould not to exceed 0.2% by weight.

Quality Specification of Cherry AB

(i) A minimum of 90% by weight of the coffee shall stand on a sieve with round holes of 6.0 mm (screen no. 15)

(ii) A minimum of 25% by weight of the coffee may pass through a sieve with round holes of 6.65 mm (screen no. 17)

(iii) A maximum of 1.5% by weight of the coffee may pass through a sieve with round holes of 5.50 mm (screen no. 14)

(iv) The coffee may contain 'Pea Berry' subject to a maximum of 2% by weight.

(v) A maximum of 0.5% by weight of the coffee might be blacks and browns.

(vi) The coffee may contain a 'triage' subject to a maximum of 1.0% by weight.

(vii)Maximum permissible moisture 12.0%

(viii)Extraneous matter and mould not to exceed 0.2% by weight.

It is essential to ensure standardization of commodity or develop delivery standards before offering a commodity for derivatives trading. However, wide quality variations in farm produce within a state and even wider variations across states become a challenge for putting up common quality parameters for a commodity before the same has been offered for futures trading. Under such circumstances, there may not be a reliance on offering standardized contracts alone, and may also consider offering trading of customized

contracts. Plantation A or B of Arabica coffee and Cherry Clean Bulk or Cherry AB of Robusta coffee was launched with further specifications pertaining to quality for futures trading in NCDEX.

As in the case of coffee, conforming tea to certain specifications, in similar fashion, with adherence to its processing and tasting in terms of appearance, infusion, liquor and specifying the criteria could be made possible for the introduction of tea futures. Instead of specifying all the grades, a limited number of grades of tea futures could be traded in the derivatives market as is the case with coffee futures traded in NCDEX. The role of the tea brokers would be very vital in this regard.

Furthermore, the Committee on Commodity Problems (2012) in its Report had suggested an alternative framework comprising of developing an index based futures contract where the index could be an auction average price for a defined category of tea. The advantage of this would be total transparency of the asset price at closing and absence of any disputes regarding quality issues. The only thing critical for the success of this futures market is the selection of the correct index.

Conclusion

Though many agricultural commodities are traded in the Indian derivatives market, some of the important products have not entered this market. Tea is such a product which does not have a place in the commodity exchanges in India so far. Coffee being a similar kind of product has a strong position in the derivative market at national and international level. The quality aspect of agricultural crops makes agri-derivatives somewhat complex and believed to be a deterrent factor in introduction of 'tea futures'. The question of homogeneity is always a persisting issue when it comes to launching derivatives on agricultural commodities. Both coffee and tea have quite a large number of grades and sub-grades with different quality specifications. However, there are similarities on the classifications, sub-classification and the basis of classification as evident from our observation in the study. The huge number of grades did not hinder the introduction of coffee futures. As coffee is getting traded in NCDEX with certain parameters of quality specifications, the quality specifications of tea could also be assessed and made suitable for introduction of '*tea futures'*.

In conclusion it can be said that there is scope of standardisation on tea and the problem of homogeneity is less likely to be a hurdle for introduction of tea futures in India. However, further investigation is necessary on development of standard specifications for tea as well as fulfilment of other requisites like durability or storability, market coverage, value chain, price control/regulations and correlation with the international market.

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