



## International Journal of Financial Management and Economics

P-ISSN: 2617-9210  
E-ISSN: 2617-9229  
IJFME 2019; 2(1): 73-75  
Received: 25-11-2018  
Accepted: 29-12-2018

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### The role of commodity derivatives and risk management especially in tea

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#### Abstract

It is the most widely consumed drink in the world after water. Botanical name is *Camellia sinensis* and aromatic beverage commonly prepared by pouring hot or boiling water over cured leaves. There are many different types of tea; some, like Darjeeling and Chinese greens. China and India supplied 62% of the world's tea in 2016.

The term herbal tea refers to drinks not made from *Camellia sinensis*: infusions of fruit, leaves, or other parts of the plant, such as steeps of rosehip, chamomile, or rooibos. These are sometimes called tisanes or herbal infusions to prevent confusion with tea made from the tea plant.

**Keywords:** Medicinal drink, government initiative, agricultural commodity, Asian tea

#### Introduction

Tea originated in China where it was used as a medicinal drink. An early credible record of tea drinking dates to the 3rd century AD, in a medical text written by Hua Tuo. It was popularized as a recreational drink during the Chinese Tang dynasty, and tea drinking spread to other East Asian countries. Portuguese priests and merchants introduced it to Europe during the 16th century. During the 17th century, drinking tea became fashionable among Britons, who started large-scale production and commercialization of the plant in India. India is the second largest producer of tea in the world, producing an average 1,325,050 tonnes each year. There are two main types of tea: Black tea and Green tea.

The commercial industry began after Britain was introduced to tea from China. The British East India Company started converting plots of land in their East-Asian colony specifically for the purpose of tea production. India produces large quantities, which is important because they're a nation of over one billion tea drinkers, with over 80% of the tea produced in the nation being consumed within the nation instead of exported.

#### Definition

##### Hedgers

Hedgers are a trader or commodity producer who places a trade in order to protect against price fluctuations in commodities or financial instruments. A hedger may be someone who owns Treasury bonds and is concerned that prices might decline. Hedgers are seen as risk-averse and speculators as risk-lovers

##### Hedging

Hedging is a risk management strategy used in limiting or offsetting probability of loss from fluctuations in the prices of commodities.

##### Speculators

It involves trading a financial instrument involving high risk, in expectation of significant returns. The motive is to take maximum advantage from fluctuations in the market.

##### Arbitrageur

A person who is engages in an activity of arbitrage. An arbitrageur is a type of investor who attempts to profit from market inefficiencies. These inefficiencies can relate to any aspect of the markets, wc.

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## Commodity

A reasonably interchangeable good or material, bought and sold freely as an article of commerce. Commodities include agricultural products, fuels, and metals and are traded in bulk on a commodity exchange or spot market.

## Benefits of trading in commodity futures

### a. Total transparency

An electronic trading platform helps in creating a transparent price discovery mechanism on the commodity futures exchanges without any intervention by sellers or buyers.

### b. Helping farmers

A farmer growing tea is exposed to risk of fall in prices when his harvest comes out. Using futures market, he can sell the tea contract today at the futures platform and lock in the price which could eliminate his risk from price fluctuations.

### c. Managing the risk

Risk management is a major benefit for commodity traders in India. Exchanges have well structured settlement procedures and prudent risk management practices, which reassures an investor.

## Review of literature

Mark (1999) conducted numerous studies in the area of managed futures and showed that commodity futures are a valuable asset class for risk adverse investor.

According to Rubinstein (1992) derivative assets can be used to provide tailor-made patterns of returns, stitched from the fabric of their underlying assets, to suit the needs of particular investors. He points out that derivative asset analysis enjoys an unusual status of a relatively complex tool of economic analysis, faithful to the core of economic theory and widely used to make real-life decisions. For example, most traders on the floor of options exchange use arbitrage based option values, at least as benchmarks, in establishing market prices and in constructing replicating strategies to hedge their options position.

Kabra (1994) has recommended in his report to reintroduce futures, which were banned in 1960 and also to widen its coverage to many more agricultural commodities and silver. Weston (2001) <sup>[16]</sup> found that hedging activity increases the value of the firm. Specifically, they used a sample of firm that faced currency risk directly because of foreign sales or indirectly because of import competition. They found that firms with sales in foreign countries that hedged with currency derivatives had a 4.87 percent higher firm value (hedging premium) than similar firms that did not use derivatives. The study also found evidence that after the firms began hedging, their market value increased. Thus there is evidence that hedging increases the value of the firms and by implication, increases investment.

Sahadevan (2002) <sup>[12]</sup> described the difference between future and spot price is the outcome of inefficient commodity futures market. The reasons for inefficient price risk management are the lack of participation of trading members, low market depth, lack of Government's interference etc.

Srivastava (2005) <sup>[15]</sup> analyzed the significance of trading in price spreads in commodity markets. He suggested that as the commodity markets in India are highly fragmented and

since integration of spot and *futures* is at nascent stage, Indian commodity derivatives trading offer a wide scope for spread trading.

Gary and Greet (2005) <sup>[9]</sup>, who completed a paper on the topic "Facts and Fantasies about commodity *Futures*," focused on the multi-trillion dollar *futures* markets. These involve contracts that commit the buyer and seller to trade a given volume of a commodity at a set price — the future price - on a specific date, typically within three months.

## Objective of the study

1. To study the derivative market.
2. To study the growth and structure of commodity derivatives market in India.
3. To study the operation of the derivatives exchanges.

## Factors that favor futures trading

1. Sign facing price volatility.
2. High degree of storability.
3. Fairly standardized quality.
4. More of an internationalized commodity.

## Conclusion

The plantation sector products namely tea is included in this study. Here the tea is very sensitive to the climatic changes such as drought, heavy rains, and cyclones. The spot and *futures* price analysis of this commodity have a stable long run equilibrium relationship.

The introduction of commodity derivatives is a milestone in the economic history of India. The price discovery and hedging are the important objectives of commodity derivatives. Indian plantation commodity derivatives market seems to perform the price discovery function but it is less efficient in hedging.

The Indian commodity derivatives market and national level exchanges are facing many operational problems such as the financial illiteracy, geographical limitations, timely technological up gradation, low income and less saving habits, high transaction cost etc.

Derivatives will be very successful with the active involvement from the part of all stakeholders. The depth and width of the market can be increased by adequate quality and financial literacy of the people. Thus a stable and vibrant commodity derivatives market will be able to contribute a remarkable growth towards Indian economy.

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