Chapter 1

INTRODUCTION

A commodity futures contract is a legal agreement between two parties where one party agrees to sell and the other party agrees to buy (or undertake a cash settlement) a specific commodity at a future date. Futures exchange facilitates the trading of commodity futures contracts (that are standardized in terms of quality, quantity, and place) and discovery of price (that occurs on the trading floor of the exchange or the electronic trading platform). Trading in commodity futures started during 1860’s in USA (CFTC). Although they account for a very small fraction of the global futures that are traded today, they have drawn the attention of several hedge funds and institutional investors in the last decade.

Commodities are considered as a separate investible asset class by investors. There are a number of differences between commodities and capital assets (stocks and bonds). Commodities are goods of economic value. They can be stored, consumed and transformed into different products (of economic value). Unlike capital assets, they do not provide a stream of capital flows (like dividends from stocks and interest from bonds). Commodities constitute a large number of heterogeneous products with very less correlation among each other. In general, commodities have negative correlation with stocks and bonds and thus provide diversification benefits when stocks and bonds do not perform well (Gorton and Rouwenhorst, 2006).

Investing in commodities through commodity futures is one way to participate in the commodity market. Other ways include - direct investment in physical goods, indirect investment in stocks of natural resource companies, commodity mutual funds and
investment in structured products on commodity futures indices (Fabozzi et al., 2008). Investment via commodity futures enables investors to have direct exposure to commodities without fulfilling logistical and storage requirements connected with a direct purchase. Investors in commodity futures can profit from price movements of the underlying commodity. However, this is only possible if the position is closed before maturity. Although investors can maintain exposure by rolling over the contract - taking position again in the nearest maturity contract, the advantages of futures investments lie especially in the tremendous flexibility and leveraged nature of the futures position due to the low capital requirements (Fabozzi et al., 2008). At the same time, high leverages make investing in commodity futures risky. Profits and losses may be several times the money invested. Furthermore, the futures markets are characterized by a high degree of liquidity and low transaction costs (Shen et al., 2007; Marshall et al., 2008).

Since the beginning of trading of commodity futures on the commodity futures exchanges, the market was captured by two types of traders - hedgers and speculators. Hedgers shed their price risk and speculators willingly accept that price risk to earn profit with price movements. Speculators provide the required liquidity and are considered as an indispensable part of the commodity futures trading community. In 2000, under the Clinton administration in the USA, Commodity Futures Modernization Act (CFMA) was passed. CFMA deregulated the commodities market. Over-the-counter (OTC) derivatives were exempted from the oversight of the Commodity Futures Trading Commission (CFTC) – the regulatory body. This allowed anyone (hedge funds, pension funds, investment banks and other institutional investors) to invest in commodity futures market without being constrained by the position limits. As a result, there has been a huge
increase in trading volumes of commodity futures in the last decade. This marked the beginning of a new era for commodity futures and draws the attention of academicians and policy makers. The research focus shifted towards studying different trading strategies and understanding the diversification benefits observed by speculators who started bringing in more money into the commodity futures markets.

**Indian commodity futures market**

Trading in the Indian commodity futures market started during 1875 (for cotton futures by Bombay Cotton Trade Association) which carried on unhindered for more than fifty years. During World War II trading in commodity futures was prohibited on account of illegal hoarding and speculation. After independence, Government of India enacted Forward Contracts (Regulation) Act (FCRA) in 1952 to regulate the trading in forwards and futures. The Forward Market Commission (FMC) - the regulatory body that oversees the trading in forwards and futures in India - was formed under the provisions of the FCRA. FMC, during 1960s, prohibited trading in all the commodity futures. This ban on trading of commodity futures lasts for around four decades. A number of committees (Khusro Committee, 1980; Kabra Committee, 1994) recommended the reintroduction of commodity futures trading. During 2000 Government of India announced “The National Agricultural Policy”, which advocated for the removal of price controls and development of futures markets. These developments led to the removal of ban on trading of commodity futures and the establishment of a number of commodity futures exchange.

Commodity futures trading in India started in November 2003 on commodity futures exchanges that are separate and distinct from financial derivative exchanges - regulated
by separate laws and regulators (Shah, 2008). The Indian commodity futures market has grown at a rapid pace in the last decade. At present, there are more than twenty regional commodity exchanges and three national commodity exchanges namely, the National Multi Commodity Exchange (NMCE), Multi-Commodity Exchange (MCX) and National Commodity Derivatives Exchange (NCDEX). MCX deals mainly with non-agricultural commodities such as energy, precious metals, base metals, ferrous metals and polymers, whereas NCDEX deals mainly in agricultural commodities such as pulses, grains, oil and oil seeds, spices and non-edible agricultural products (Sahoo and Kumar, 2008). Mumbai based Multi Commodity Exchange (MCX) became the world's third-largest commodity futures exchange on the basis of the number of futures contracts traded (Futures Industry Association, 2012).

The last decade witnessed the growth of commodity futures markets along with the increase in commodity prices. One major focus of academicians and policy makers in the last decade was to study the role of commodity futures in increasing commodity prices. However, there appears to be a very limited role of commodity futures trading on increase in commodity prices. The various dimensions of studies on the Indian commodity futures market include - issues related to the proper functioning of the commodity market (Kabra, 2007), misconceptions about the commodity market (Sabnavis and Jain, 2007; Nath and Lingareddy, 2008), market efficiency (Bose, 2008) and price discovery (Iyer and Pillai, 2010; Inoue, & Hamori, 2014). However, the diversification benefits provided by commodities in a conventional portfolio and the role of commodity futures as an inflation hedge have not been studied in Indian context so far. Present research work attempt to bridge this gap through two research papers.
a) The first paper studies the diversification benefits that could be observed by adding commodity futures to a conventional portfolio of stocks and bonds. This includes strategic asset allocation and tactical asset allocation, comprising a momentum strategy and term structure strategy.

b) The second paper studies the role of commodity futures as an inflation hedge.