



## TenStep Supplemental Paper

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### Futures Contracts

A futures contract is an agreement between a seller and a buyer that requires the seller to deliver to the buyer a specified quantity of a security, commodity or currency at a fixed time in the future at a price agreed to at the time of entering the contract.

Futures contracts are traded in designated futures markets, unlike forward contracts, which are executed over-the-counter. The terms of the futures contract are standardized to keep the transaction cost to the bare minimum.

The oldest futures exchange is the Chicago Board of Trade. The CBOT was once limited to agricultural futures. With the increased volatility in the financial markets, CBOT, along with other futures exchanges, has started creating markets in financial futures.

#### Why Futures?

Futures contracts are bought and sold for many reasons. Individuals deal in futures contracts to speculate about the future price of the asset or commodity underlying the futures contract. Corporations enter into futures contract to eliminate the risk exposure occurring due to changes in the price of the commodity. Fund managers use futures as a more economic way of achieving their portfolio goals.

Speculators deal in futures contracts to benefit from the price fluctuations in the underlying asset or commodity, while hedgers seek to protect themselves against price changes in commodities in which they have an interest.

#### Characteristics of Futures:

- **Organized exchanges.** Futures contracts are traded in organized exchanges with a designated physical location for futures trading. This provides instant liquidity, as futures contracts can be sold and bought anytime (like in a stock market).
- **Standardization.** The futures contracts are standardized in the sense that the price, the quantity and the date of maturity are fixed by the exchange in which they are traded.
- **Clearinghouse.** The clearinghouse acts as a middleman between the contracting parties. As soon as the deal is struck between X and Y, two contracts are entered into. One is between X and the clearinghouse, and the other is between Y and the clearinghouse. The clearinghouse acts as a buyer for every seller and a seller for every buyer. It guarantees the performance of the contracts.
- **Margins.** Only members of the respective exchanges can enter into futures contracts. They are required to deposit margin money with the clearinghouse. The amount of this margin money is generally between 2.5% and 10% of the value of the contract, but can vary.
- **Marking to market.** At the end of each trading session, all outstanding contracts are appraised at the settlement price of that trading session. This is known as marking to

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market. This means that some participants would make a loss while others would stand to gain. The exchange adjusts this by debiting the margin accounts of those members who made a loss and crediting the accounts of those members who have gained.

- **Actual delivery is rare.** In most futures markets, actual delivery takes place in less than one percent of the contracts traded. Futures are used as a device to hedge against price risk and as a way of betting against price movements rather than as a means of physical acquisition of the underlying asset. To achieve this, most contracts entered into are nullified by a matching contract in the opposite direction before the maturity of the first.

For example, consider a food manufacturer that needs to buy additional corn from his supplier in three months. However, he feels that the price of corn is going to increase by the time he needs the corn in three months. Because of fierce competition, he needs to hold his price constant. He wants to make sure that he pays \$3.55 per bushel. Therefore, to lock in the \$3.55 per bushel price, he buys a contract for three months out at \$3.55 per bushel. If three months later the price of corn has risen to \$3.69 per bushel, he will pay his supplier \$3.69. However, the 14-cent increase has been offset by the 14-cent increase in his futures contract.

On the other hand, if the price of corn declines by an amount of 10 cents per bushel to \$3.45 per bushel, the decline in the futures contract will be offset by the lesser amount the manufacturer has to pay his supplier. Regardless of what happens in the spot market, the manufacturer has locked in a set price for the corn he needs to purchase in the future.

### Types of Futures

Futures may be broadly classified into commodity and financial futures. A commodity future is a futures contract in a commodity like cocoa, aluminum, etc. A financial future is a futures contract in a financial instrument like a Treasury Bill, currency or stock index.

#### 1. Commodity futures

- **Agricultural.** This includes cocoa, coffee, orange juice, rice, sugar, etc. For each of these commodities, there are different contract months available. Contract months generally revolve around the harvest cycle. More actively traded commodities usually have more contract months available.
- **Metallurgical.** The group of metallurgical commodities includes the metals and the petroleums. The metals group includes gold, silver, copper, palladium, and platinum. The petroleum group includes crude oil, gasoline, heating oil, and propane. Different contract months, grades, amounts, and types of these contracts are available

#### 2. Financial futures

- **Interest Bearing Assets.** This group of futures contracts includes Treasury Bills, Treasury Bonds, Treasury Notes, Municipal Bonds, and Eurodollar Deposits. The



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entire yield curve is represented, and it is possible to trade these instruments with tremendous flexibility as to maturity. In fact, it is also possible to trade contracts with the same maturity but different expected interest rate differentials. In addition, foreign exchanges also trade debt instruments.

- **Indexes.** Today, there are futures on most major indexes - the S&P 500, New York Stock Exchange Composite, New York Stock Exchange Utilities Index, Commodities Research Bureau (CRB), Russell 2000, S&P 400 Midcap, Value Line, and the FT-Se 100 Index (London). Stock index futures are settled in cash. There is no actual delivery of a good. The only possibility for the trader to settle his positions is to buy or sell an offsetting position or in cash at expiration. Recently, the National Stock Exchange has launched derivative futures called S&P CNX Nifty.
- **Foreign Currencies.** In the 1970's, when freely floating exchange rates were established, it became possible to trade foreign currencies. Most major foreign currencies are traded. The principal currencies traded are the Canadian dollar, Japanese yen, British pound, and the Euro. The forward market in currencies is much larger than the foreign exchange futures market. Almost every month, a new type of contract appears to meet the needs of a continuously growing corporate and institutional market.