

Colibri Trader



Advanced Trading
Knowledge



General Introduction to Futures

Forward Contracts: A brief history of futures

A cattle owner is raising new cattle but he is afraid that the price of the commodity may fall by the time the cattle grow up. A meat supplier is in the business of processing meat and selling it to his customers. He is afraid the price of cattle will rise in the future and leave him at a loss. Both these parties are at risk from the price of cattle going up or down. They both wish to have a fixed price for the cattle so they can estimate their profits for the period, so they both come together and agree on trading the cattle at a point in the future and at a certain price. The cattle owner has now locked in his profit and knows exactly how much money he will receive for his stock. The meat supplier now also knows the price at which he will buy his next shipment of cattle. Based on this they both can now carry on with their day to day business without worrying about the risk associated with the rise or fall in the price of cattle.

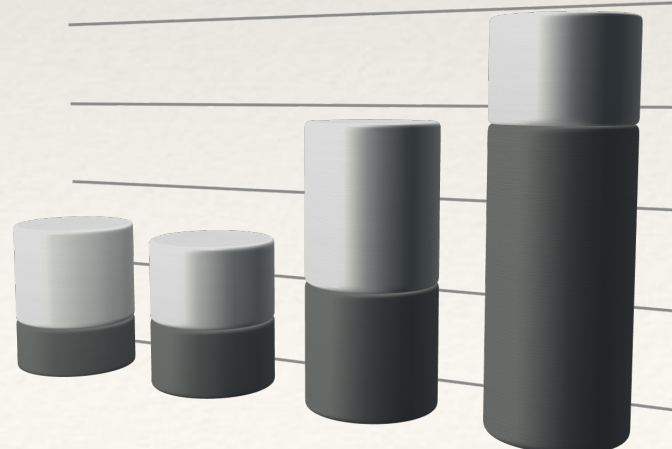
By
Colibri Trader

Forward Contracts: A brief history of futures



Now if the price of cattle rises, the cattle owner will still have to sell his cattle at the agreed price and will lose out on the difference between the current price and the agreed price. The meat supplier on the other hand will benefit since he will pay the agreed price and not the current, higher price. The cattle owners loss is exactly offset by the meat supplier's gain. However if the price of cattle falls, the cattle owner will benefit, since he will sell his cattle at the agreed price which is higher than the current market price, but now the meat

supplier will lose out as he could have purchased his supply of cattle at a cheaper price. This introduces the concept of opportunity cost. The opportunity cost of these two parties entering into business is the chance that they make a profit or a loss from the price of the cattle in the future. Now, if one of the parties cannot or won't commit to their agreement, the deal would be off and the other party would be at a disadvantage. This is the risk of default that both parties take, i.e. when one party cannot or won't honour their agreement.

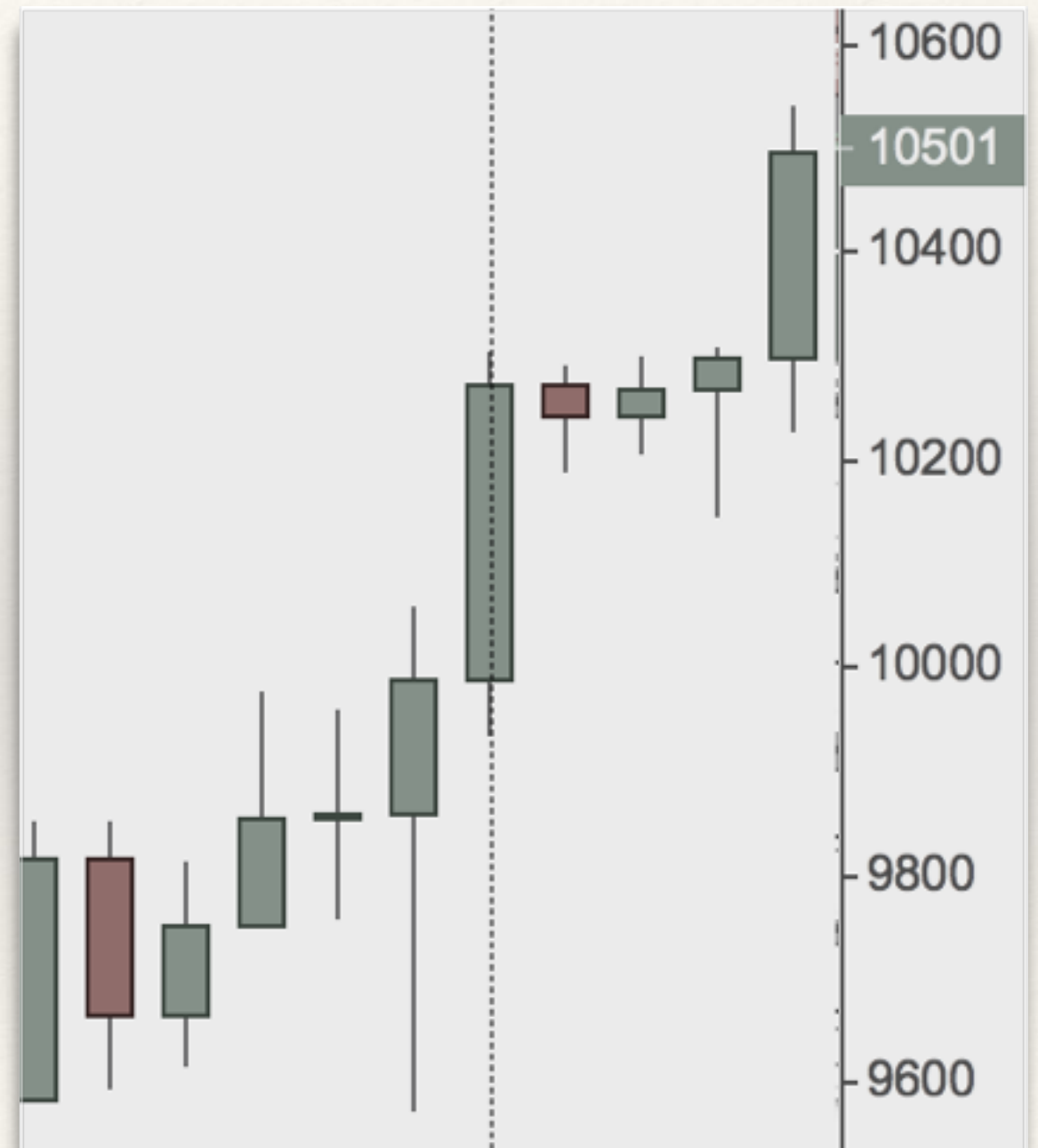


Forward Contracts: A brief history of futures



In summary:

A forward contract is an agreement between two parties to buy and underlying security at a specific price in the future. This agreement is privately negotiated and like the term says it is a contract, therefore both parties will make sure that all ambiguities and terms are explained and clear. This type of agreement does not require a clearing firm.



Futures contracts



❖A futures contract is a standardised version of the forward contract, traded on a futures exchange, to buy or sell a certain underlying instrument at a certain date in the future, at a specified price. The future date is called the delivery date or final settlement date. The pre-set price is called the futures price. The price of the underlying asset on the delivery date is called the settlement price.

❖A futures contract gives the holder the obligation to buy or sell. In other words, both parties of a "futures contract" must fulfil the contract on the settlement date. The seller delivers the commodity to the buyer, or, if it is a cash-settled future, then cash is transferred from the futures trader who sustained a loss to the one who made a profit. To exit the commitment prior to the settlement date, the holder of a futures position has to offset their position by either selling a long position or buying back a short position, effectively closing out the futures position and its contract obligations.

- ❖Futures contracts, or simply futures, are exchange traded derivatives. The exchange's clearinghouse acts as counter-party on all contracts, sets margin requirements, and crucially also provides a mechanism for settlement.
- ❖Essentially what this means is that a future is the same as a forward contract, but the quantity, settlement date, type of product, quality etc. are all specified by the exchange. The clearing house guarantees all the trades and if a party defaults, it is the clearinghouse's obligation to make up for the loss.

Example:

Contract specification for one Corn futures contract traded on CBOT (Chicago Board of Trade)

Size - 5,000 bushels – number of bushels of corn per contract

Tick Size - \$0.025/bushel – minimum price increment the contract can move price by(\$12.5 per contract)

Daily Price Limit - \$0.20/bushel – maximum change in price per day (up or down)

Contract Months - Dec, Mar, May, Jul, Sep – months where contracts expire(settlement months)

Last Trading Day - Seventh business day proceeding the last business day of the delivery month

- ❖As can be seen from the example above, these are the terms a buyer or a seller would agree to when buying or selling one contract of corn on the Chicago Board of Trade.

Differences Between Futures Contracts over Forward Contracts



There are several important differences between futures contracts and forward contracts. These differences are:

- ❖ Futures contracts are standardised, whereas forward contracts are customised
- ❖ Futures contracts require daily marking to market, forward contracts do not require daily marking to market

- ❖ Futures contracts require margin to be maintained; forward contracts do not require margin
- ❖ Futures contracts are traded on exchanges , forward contracts are negotiated over the counter
- ❖ A clearing house guarantees futures contract performance, forward contracts are not guaranteed
- ❖ Futures Contracts do not carry counterparty default risk, forward contracts expose parties to default risk

Advantages and disadvantages of futures contracts



Advantages of futures contracts include:

- ❖ It is a standardised contract
- ❖ It is traded on an exchange and therefore has a high level of availability and liquidity
- ❖ Performance is guaranteed by the clearing house
- ❖ Futures markets are well regulated

Disadvantages of futures contracts include:

- ❖ There is little or no flexibility to customise the contract to meet the parties needs.
- ❖ The contract has to be marked to market, thus affecting the account books.

Commodity Futures

Commodities are agreements to buy and sell virtually anything except, for some reason, onions. The primary commodities that are traded are oil, gold and agricultural products. Since no one really wants to transport all those heavy materials, what is actually traded are commodities futures contracts or options.

The prices of commodities can change on a daily basis. If the price goes up, the buyer of the futures contract makes money, because he gets the product at the lower, agreed-upon price and can now sell it at the higher, market price. If the price goes down, the seller makes money, because he can buy the commodity at the lower market price, and sell it to the buyer at the higher, agreed-upon price.

Of course, if commodities traders had to actually deliver the product, very few people would do it. Instead, they can fulfill the contract by delivering proof that the product is at the warehouse, by paying the cash difference, or by providing another contract at the market price.

The important things to know

Commodity futures, since they are traded on an open market, do a great job of accurately assessing the price of each commodity

Since they are futures contracts, they also forecast the value of the commodity into the future

The most commonly reviewed commodities are oil and gold. Many other agricultural products such as pork bellies and wheat are traded



Currency Futures



- ❖ A currency future, also FX future or foreign exchange future, is a futures contract to exchange one currency for another at a specified date in the future at a price (exchange rate) that is fixed on the purchase date. Typically, one of the currencies is the US dollar. The price of a future is then in terms of US dollars per unit of other currency. This can be different from the standard way of quoting in the spot foreign exchange markets. The trade unit of each contract is then a certain amount of other currency, for instance €125,000. Most contracts have physical delivery, so for those held at the end of the last trading day, actual payments are made in each currency. However, most contracts are closed out before that. Investors can close out the contract at any time prior to the contract's delivery date.



Options



- ❖ Options are financial instruments that convey the right, but not the obligation, to engage in a future transaction on some underlying security, or in a futures contract. In other words, the holder does not have to exercise this right, unlike a forward or future. For example, buying a call option provides the right to buy a specified quantity of a security at a set strike price at some time on or before expiration, while buying a put option provides the right to sell. Upon the option holder's choice to exercise the option, the party who sold, or wrote, the option must fulfill the terms of the contract.

- ❖ **Option contract specifications**

- ❖ Every financial option is a contract between the two counter-parties. Option contracts may be quite complicated; however, at minimum, they usually contain the following specifications:

- ❖ Whether the option holder has the right to buy (a call option) or the right to sell (a put option)
 - ❖ The quantity and class of the underlying asset(s) (e.g. 100 shares of XYZ Co. B stock)
 - ❖ The strike price, also known as the exercise price, which is the price at which the underlying transaction will occur upon exercise
 - ❖ The expiration date, or expiry, which is the last date the option can be exercised
 - ❖ The settlement terms, for instance whether the writer must deliver the actual asset on exercise, or may simply tender the equivalent cash amount



Evolution of Derivatives



You can come up with a hundreds of formulae for derivatives, use them within numerous applications, but in its pure form, derivatives are merely pieces of paper, or in more modern day view, electronic contracts which give you a right or an obligation, or a combination of the two to receive or give something in the future. This can be a stock of a company, a foreign currency, wheat, oil, or to take it to its extreme, an agreement with your neighbour for 2 bags of sugar next week.

A derivative is essentially a contract, which has its value derived as a function of some underlying variables. For a stock, the underlying variable is the stock price, for wheat, the underlying is the price of wheat at a certain time, and for the 2 bags of sugar, it could be the difference between the two sugar prices. The aim of a derivatives practitioner is to understand the dynamics behind the underlying variable and the factors which might influence the value of it in the future.

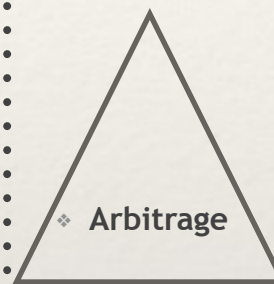
Key Usage of Derivatives



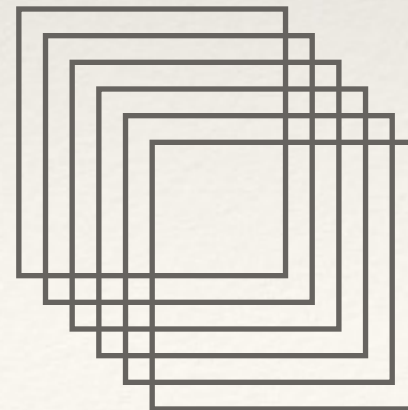
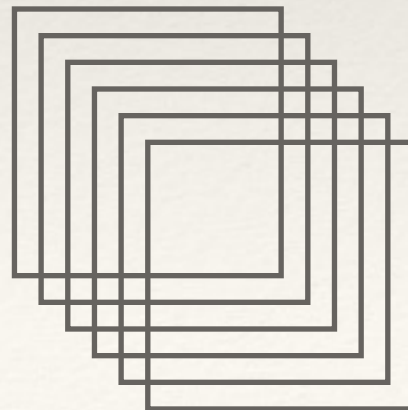
❖ Hedging using derivatives is commonly used by parties who seek to offset their existing risks by entering into a derivatives transaction. The existing risks could be an investment portfolio, price changes in oil for a petroleum mining company or perhaps investments in a foreign country.



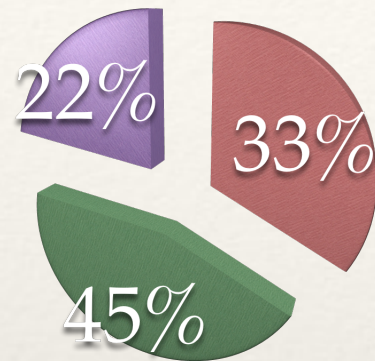
❖ Speculation is more commonly used by hedge funds or traders who aim to generate profits with only a marginal investment, essentially placing a bet on the movement of an asset. Although speculation can produce a high return on investment, the downside risks are equally as prominent as demonstrated by the collapse of Long Term Capital Management in September of 1998. Because of the high degree of leverage one can take in speculative contracts, an adverse change in prices could result in rapidly increasing debt and a portfolio worth millions could fall to almost zero with the space of a few hours.



❖ Opportunities to arbitrage take place throughout the world markets, and derivatives are sometimes used to exploit these. Practitioners working within risk finance or quantitative finance often develop models to price various assets being traded across the markets, and upon finding price discrepancies, one can make use of a specific combination of derivatives in order to make a riskless profit.



Dangers of Derivatives

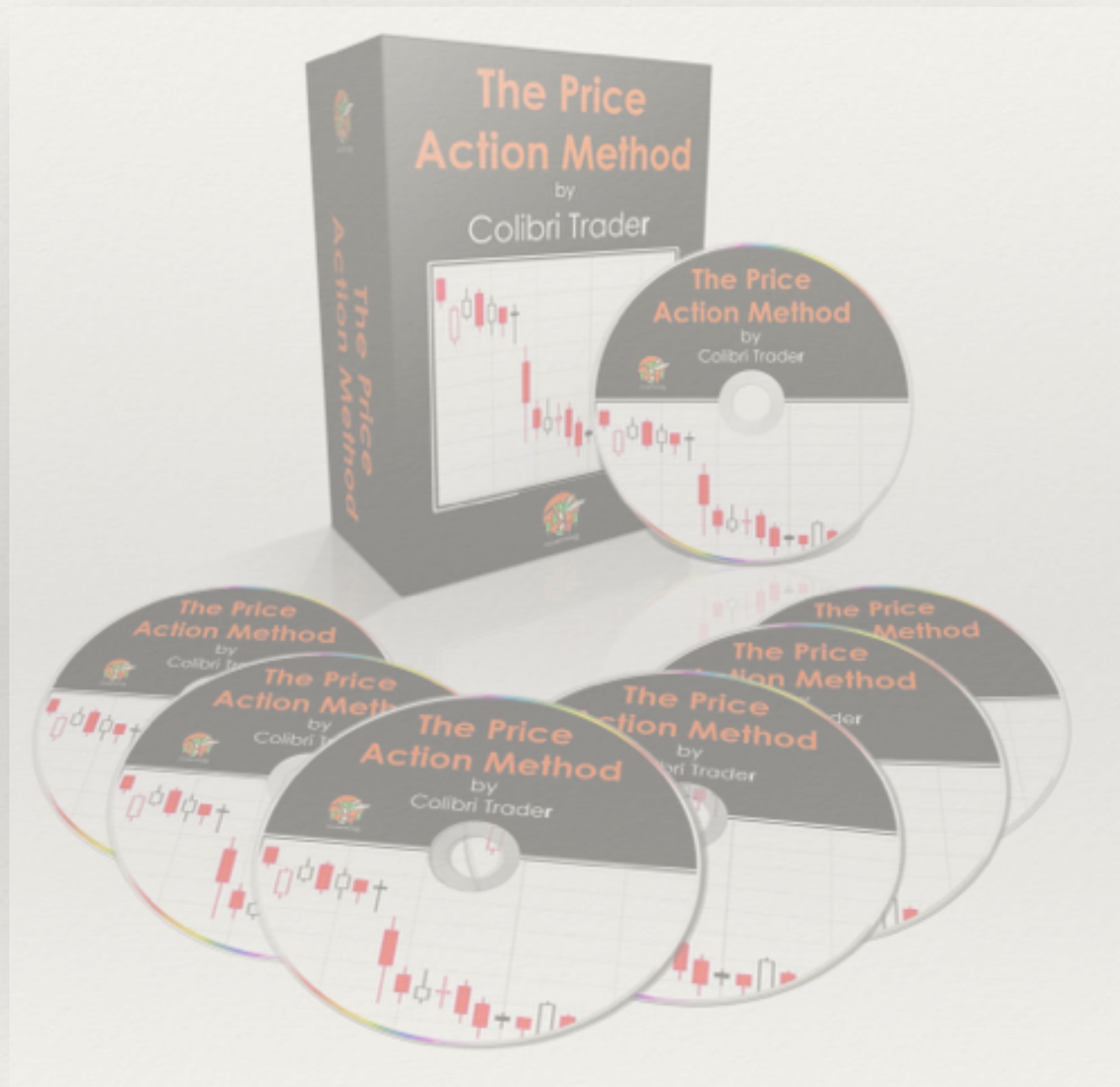


- ❖ Are derivatives dangerous? That's almost like asking if water is dangerous. Derivatives can be dangerous if used incorrectly - as several large companies and individuals have found out in recent history. This in turn, has led to the advancement of risk management; a profession which deals specifically with managing the risks involved with taking positions in these tools. Derivatives are essential to the efficiency of the markets.

- ❖ It is a commonly said fact that derivatives contribute to the 'completeness' of the global markets, and without them, loopholes within the financial industry would exist. At this point, it may be worthy to note that even through numerous financial disasters ala Amaranth, Barings, LTCM, Enron and others related to the mismanagement of derivatives, it is key to consider that it has not been the use of derivatives as a tool which has led to the downfall of these companies - but rather, the misuse and compromise of such instruments.

- ❖ Looking back in time we have seen the evolution of derivatives even way before the invention of the car. Over 2000 years ago, contracts for delivery in the future was commonly used with Greek olive farmers, in the 1600s, Tulip derivatives were used by the Dutch and it was more or less only as Louis Bachelier in 1900 formally introduced futures pricing when people began to take derivatives at more than just face value.

Coming Soon



THE PROFESSIONAL PROP TRADING COURSE- **THE WAY I TRADE**