

Module 2

Financial markets



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This module contains details of the different types of CFD that we offer and an explanation of the underlying financial markets that influence their prices. The module also explains the difference between cash and forwards markets and looks at pricing mechanisms, such as how the fair value of a future is calculated.

Financial markets

CFDs are extremely versatile: you can trade just about any financial market as a CFD and, as a result, IG Markets offers you the opportunity to speculate on literally thousands of different financial products from all around the world. Although you gain an incredible diversity of markets, it's also kept fairly simple: all these markets can be traded on one account and the manner in which they work falls into three general methods.

The first of these methods is the way in which we treat share trades, as detailed in Module 1. That is, we charge a percentage commission per trade; there is no minimum deal size, but there is a minimum commission (also known as a minimum 'ticket'); positions are subject to adjustments based on dividends and daily interest (funding). These transactions are 'undated': positions have no expiry date and remain open until closed by you (or closed out in the case of insufficient margin being provided to maintain the position).

The second of these methods applies to spot or cash markets, including FX, cash Stock Indices and Spot Gold and Silver. For these markets, the minimum transaction size is one contract (or one mini-contract if available); we do not charge commission, but instead quote an 'all-in' dealing spread; positions are subject to adjustments based on daily funding and any dividends (if applicable). These transactions are also undated.

The third and final method is for 'Expiry Transactions', which includes all our Forward contracts and our Options contracts. For these products, we quote a dealing spread rather than charging commission, but there are no daily funding adjustments; positions expire at a specified date in the future against an underlying financial market (there is also a specified last dealing time for these positions, after which the transaction will be held to expiry. Positions may, of course, be closed anytime before the last dealing time).

Many people find CFDs to be more accessible and user-friendly for the average retail investor than the underlying financial instruments against which the markets are settled, such as exchange-traded futures. Even so, it is worth taking a look at and gaining an understanding of these original markets.



Stock indices

An index value is created by compiling a number of stock prices into one total value, and expressing the value against a base value from a specific date, thus allowing investors to easily follow the performance of certain groups of stocks (usually a certain number of leading stocks from a given stock market).

All our cash Stock Indices can be nominated to settle against specific cash stock index markets (which can be referred to as the **related expiry market**).

For example, let's say that you have a position in the Australia 200, long two contracts. Your position is undated: the position remains open, being adjusted daily for interest and dividends. To close your position, you can deal at any time at our bid/offer quote by selling two contracts. Alternatively, you can ring one of our dealers and request that your position be allowed to expire at the end of the trading day. If we acquiesce, your position becomes an expiry transaction: it will expire at a specified point against a specific market, namely, the closing price of the ASX 200.

It's worth noting that we are not always able to agree to an expiry request. We will try our best to accommodate any such request, but we are unlikely to be able to if the position is either larger than ten contracts or if the request is made less than two hours before the close of the market against which you would like your position to expire.

The following table shows our more popular Stock Indices and the related expiry markets against which they can be requested to settle:

Name	Related expiry market
Australia 200	S&P/ASX 200
Wall Street	DJIA
US SPX 500	S&P 500
US Tech100	Nasdaq 100
FTSE 100	FTSE 100
Germany 30	DAX
EU Stocks 50	DJ Euro STOXX 50
Hong Kong HS34	Hang Seng
Japan 225	Nikkei 225



Complete lists of the Stock Index CFDs that our investment service covers and their related expiry markets can be found in the Contract Details section of www.igmarkets.com.au.

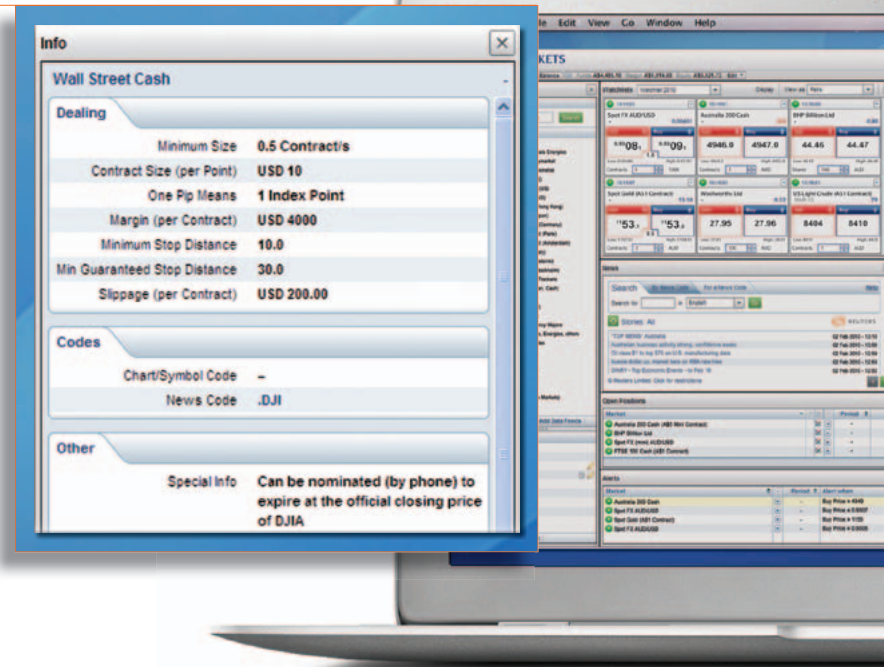
More details on this subject can also be obtained from our PureDeal platform by selecting 'Get Info' from the dropdown menu next to a market's name.

So if you have a position in cash Wall Street, you can request that your trade be settled against the official closing price of the Dow Jones Industrial Average (DJIA). The DJIA is, like all cash stock index prices, not a tradeable instrument in its own right: you cannot buy or sell directly the DJIA itself (although it is possible to buy funds that track the performance of the index).

This is because it is simply a benchmark (produced as a composite of 30 leading stocks on the New York Stock Exchange), designed to indicate how the US stock market is performing. Markets that can be traded, such as Dow Jones futures and S&P futures, will react much faster to economic news than the equivalent cash index.

Underlying cash indices tend to lag behind slightly, particularly when trading is beginning for the day, as they are simply a reflection of the prices of the components that make them up – if half of the components of the Dow Jones have not traded ten minutes after the opening of the trading day, the index is unlikely to reflect the true current situation.

The futures will give a far better picture indication in such a scenario, and for this reason, we use a variety of sources in order to price our Stock Indices. Consequently, the price of our FTSE 100 or Wall Street markets, for example, may often be at a different level to the cash FTSE 100 or DJIA.





We also offer Stock Index Forward contracts which, if held to expiry, settle basis futures contracts which trade on exchanges. Futures contracts have specific rules, laid down by the exchange they trade on, about how the expiry price is calculated.

For example, our March US Tech 100 is a market that settles basis the March Nasdaq100 futures which trade on the Chicago Mercantile Exchange (CME). If you hold your trade to expiry, it will close out basis the Special Opening Quotation that CME use to expire the March Nasdaq futures.

An important point to note is that some Expiry CFDs cannot be dealt on the day on which they expire – in the case of the example of March US Tech 100 above, the last day that you could trade it would be the day before the expiry day. Complete details of last dealing days and expiry rules can be found in the Contract Details section of www.igmarkets.com.au.

The 'Get Info' function in PureDeal provide details on this subject.

An explanation of how futures work in general is given further on in this module.

Shares

Shares are a popular form of investment that most people are familiar with and consequently are one of the most popular types of CFD that we offer. We offer shares from most of the major territories, including Australia, the US, UK, Canada, most of Europe, as well as Singapore and Japan.

Datafeeds

The share prices on PureDeal are actual exchange prices. When you open your account, we automatically grant you free access to delayed ASX shares data.

It is very easy to subscribe to live prices via the Datafeeds section of the My Account area in PureDeal, but this does incur a fee from any exchange to which you subscribe. We will refund this cost if you are sufficiently active in your dealing, however (this is described in more detail in the live prices section below).

For some territories (generally European markets) we are able to provide free live prices from Multilateral Trading Facilities (MTFs). These are trading services that provide an alternative to primary exchanges.

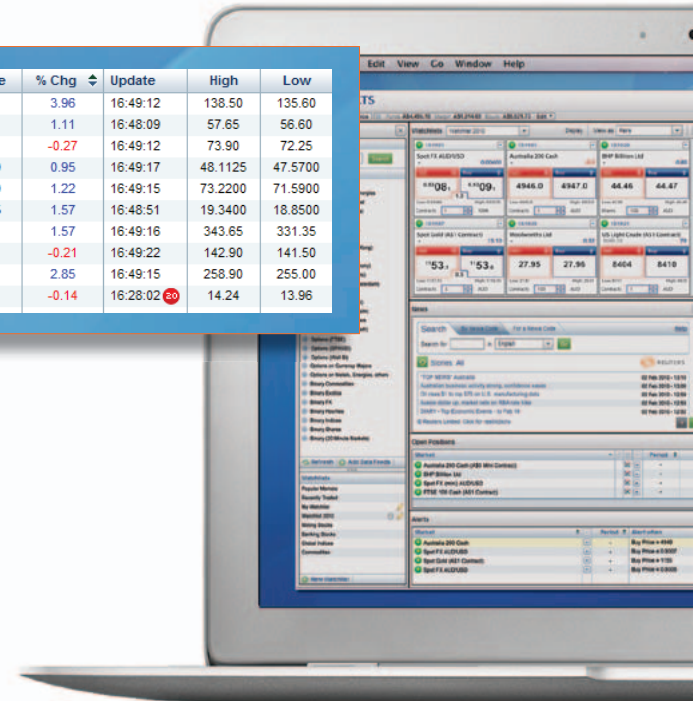
Delayed shares data and Snapshot Dealing

When you are viewing prices, if you see a circular red icon (containing a numeral) next to the time in the 'Update' column, it means that the price is delayed by the number of minutes shown in the red icon.



Market	Period	Sell	Buy	Change	% Chg	Update	High	Low
BT Group Plc	-	148.20	148.30	5.65	3.96	16:49:12	138.50	135.60
Credit Suisse Group	-	56.50	56.50	0.625	1.11	16:48:09	57.65	56.60
Aker Solutions ASA	-	72.90	73.00	-0.20	-0.27	16:49:12	73.90	72.25
Contango Oil & Gas Company	-	47.9300	48.1100	0.4500	0.95	16:49:17	48.1125	47.5700
L'Oreal SA	-	73.2000	73.2300	0.8850	1.22	16:49:15	73.2200	71.5900
Telefonica SA	-	19.2850	19.2900	0.2975	1.57	16:48:51	19.3400	18.8500
Barclays Plc	-	327.45	327.6	5.08	1.57	16:49:16	343.65	331.35
Statoil ASA	-	142.10	142.20	-0.30	-0.21	16:49:22	142.90	141.50
Swatch - B	-	257.90	257.90	7.35	2.85	16:49:15	258.90	255.00
Singapore Airlines Ltd	-	14.06	14.06	-0.02	-0.14	16:28:02	14.24	13.96

For example, of the prices shown in this screenshot, Singapore Airlines is delayed by 20 minutes. It is still possible to deal, even if you have not subscribed to live data, by using our Snapshot Dealing function.





If you open a 'Ticket' from delayed data and enter a deal size, the 'Sell' and 'Buy' buttons do not become active (that is, highlighted red and blue so that you can place a deal) in the same way as for a 'Ticket' that has been opened from live data.

In order to make the 'Sell' and 'Buy' buttons become active, you first need to click on the green 'Start Live Data' button.

Now the buttons become active, the 'Start Live Data' button becomes grey, and the prices you see are real time (you must first enter a deal size before clicking on 'Start Live Data'. The size does not affect the price you see, however).

As the name suggests, with Snapshot Dealing the prices become live only temporarily, long enough to allow you place a deal. How long you have remaining before the data reverts to being delayed is indicated graphically by a number of empty blocks below the 'Sell' button.

Ticket

Singapore Airlines Ltd (-)

DMA OTC

Deal Order To Open

Shares 1000 (Min: 1)

Currency SGD

Sell 13.9000 Buy 13.9200

Start Live Data

Stops and Limits

Stop [] pips away (Min: 0.1)

☐ Guaranteed Stop

Limit [] pips away

☐ Force Open

Margin Requirements

SGD SD 1,392.00

GBP £ 601.64

Security	Price	Other
Singapore Airlines Ltd	13.9000	
Singapore Airlines Ltd	13.9200	
Singapore Airlines Ltd	13.9000	
Singapore Airlines Ltd	13.9200	
Singapore Airlines Ltd	13.9000	
Singapore Airlines Ltd	13.9200	
Singapore Airlines Ltd	13.9000	
Singapore Airlines Ltd	13.9200	
Singapore Airlines Ltd	13.9000	
Singapore Airlines Ltd	13.9200	



As time progresses, the blocks slowly fill. You only have live prices so long as there is an empty block remaining. Whilst the prices are live, you can click on 'Sell' or 'Buy' and place a deal.

If you do not deal before all the blocks are filled, the 'Ticket' slips back into the delayed state, with inactive 'Sell' and 'Buy' buttons, a red delayed icon and a green 'Start Live Data' button.

Selecting live share prices

In order to view live Level 1 data from a primary exchange, you need to launch the 'My Account' window and then select 'Data Feeds'.

From the form, you can select which exchange you would like to receive live prices from.

As a default, you are set up to pay no exchange fees and therefore receive only free price data.

Many European exchanges are set to 'Mix': in the screenshot, for example, LSE and Euronext are both set this way. 'Mix' means that you will receive a mix of MTF data, offering you the best bid/offers available from free data sources.

Exchange	No Fee	Level 1 Fee	Active
Shares - WBAG (Vienna)	<input checked="" type="radio"/> On	EUR 2.00	1
Shares - TSX (Toronto)	<input checked="" type="radio"/> Off	USD 9.50	1
Shares - Euronext (Amsterdam, Brussels, Lisbon, Paris)	<input checked="" type="radio"/> Mix	EUR 1.00	1
Shares - OMX (Copenhagen, Helsinki, Stockholm)	<input checked="" type="radio"/> Mix	EUR 1.00	1
Shares - XETRA (Germany)	<input checked="" type="radio"/> Mix	EUR 15.00	2
Shares - ATHEX (Athens)	<input checked="" type="radio"/> Off	EUR 10.68	1
Shares - ISEQ (Ireland)	<input checked="" type="radio"/> Off	EUR 5.00	1
Shares - MIB (Milan)	<input checked="" type="radio"/> Mix	EUR 0.40	1
Shares - ASX (Australia)	<input checked="" type="radio"/> 20 mins	AUD 137.60	4
Shares - SGX (Singapore)	<input checked="" type="radio"/> 20 mins	SGD 3.00	1
Shares - BME (Madrid)	<input checked="" type="radio"/> Mix	EUR 3.15	1
Shares - Virx (Switzerland)	<input checked="" type="radio"/> Mix	CHF 10.00	1
Shares - IOB (UK)	<input checked="" type="radio"/> 15 mins	GBP 2.00	1
Shares - LSE (UK)	<input checked="" type="radio"/> Mix	GBP 4.00	1
Shares - NASDAQ (US)	<input checked="" type="radio"/> Off	USD 1.00	1
Shares - NYSE (US)	<input checked="" type="radio"/> Off	USD 1.00	1
Shares - JSE (Johannesburg)	<input checked="" type="radio"/> Off	USD 5.50	1

Total monthly fees (before changes above)

AUD 0.00

Change to total monthly fees (based on changes above)

AUD 0.00

Total monthly fees (after changes above)

AUD 0.00

Total to pay now

AUD 0.00

☒ Fees are rebated if Active

Request Feeds



A red cross next to an exchange means that delayed prices and Snapshot Dealing are not available. For these exchanges, therefore, prices are switched off as a default.

In order to select an exchange for live data, you simply need to click in the row for the pertinent exchange in the 'Level 1' column. Displayed in this column is the cost per month that live data incurs.

Exchanges charge in their local currency; we provide a rough equivalent in the base currency of your account of the total charges you have selected, although this is just a guide. Once you click the green 'Request Feeds' button your account is immediately billed for the total fees you have selected, and you will now be able to view live prices for the exchanges for which you have been billed (obviously, your request will be rejected if you do not have sufficient funds available on your account to cover the total fee).

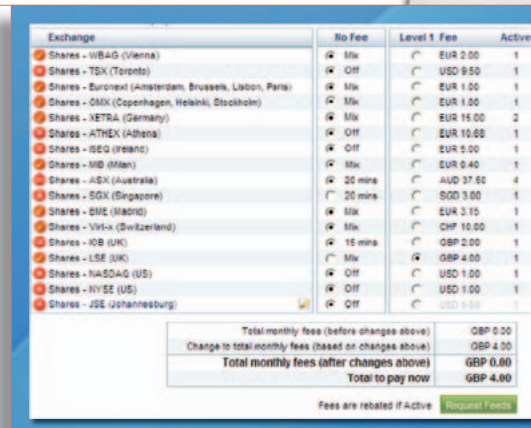
We will rebate you the data fee for exchange at the end of the month, provided you have placed a certain number of deals on shares from that exchange in the month in question. The number of deals you need to place is listed in the 'Active' column. As you can see, for many exchanges you only need to place one deal per month in order to qualify for a rebate (provided you are a non-professional user; the number may be greater for professional users).

Please be aware that fees are levied per calendar month, and are not charged pro-rata according to when you sign up. For example, if you select live data with only two days remaining in the month, you will still be charged the full monthly fee, but receive data for just the two days.

For example, let's say that you are interested in dealing Australian shares that trade on the Australian Stock Exchange (ASX). Going to the DataFeeds control panel, you see that next to 'Shares - ASX (Australia)' there is the red delayed icon, displaying 20. This means that you are currently set up to see Australian share prices that are delayed by 20 minutes. You are able to deal using the Snapshot Dealing function, but decide that you would like to receive live prices.

You therefore click in the 'Level 1' column, clicking next to the 'AUD 37.50', which is the indicated monthly fee for ASX data. You then click 'Request Feeds'. \$37.50 is debited from your account and you can now view live Australian price data.

In the 'Active' column it displays '4' for ASX, meaning that you only need to place four deals (on ASX shares) by the end of the calendar month in order to be considered active and therefore receive a rebate for the fee.



Exchange	No Fee	Level 1 Fee	Active
Shares - WBAG (Vienna)	<input checked="" type="checkbox"/> Mtu	EUR 2.00	1
Shares - TSX (Toronto)	<input checked="" type="checkbox"/> Off	USD 9.50	1
Shares - Euronext (Amsterdam, Brussels, Lisbon, Paris)	<input checked="" type="checkbox"/> Mtu	EUR 1.00	1
Shares - OMX (Copenhagen, Helsinki, Stockholm)	<input checked="" type="checkbox"/> Mtu	EUR 1.00	1
Shares - XETRA (Germany)	<input checked="" type="checkbox"/> Mtu	EUR 15.00	2
Shares - ATHEX (Athens)	<input checked="" type="checkbox"/> Off	EUR 10.00	1
Shares - ISEQ (Ireland)	<input checked="" type="checkbox"/> Off	EUR 5.00	1
Shares - MID (Milan)	<input checked="" type="checkbox"/> Mtu	EUR 0.40	1
Shares - ASX (Australia)	<input checked="" type="checkbox"/> 20 mins	AUD 37.50	4
Shares - SGX (Singapore)	<input checked="" type="checkbox"/> 20 mins	SGD 3.00	1
Shares - BME (Madrid)	<input checked="" type="checkbox"/> Mtu	EUR 3.15	1
Shares - Viri-x (Switzerland)	<input checked="" type="checkbox"/> 15 mins	CHF 10.00	1
Shares - IOB (UK)	<input checked="" type="checkbox"/> Mtu	GBP 2.00	1
Shares - LSE (UK)	<input checked="" type="checkbox"/> Off	GBP 4.00	1
Shares - NASDAQ (US)	<input checked="" type="checkbox"/> Off	USD 1.00	1
Shares - NYSE (US)	<input checked="" type="checkbox"/> Off	USD 1.00	1
Shares - JSE (Johannesburg)	<input checked="" type="checkbox"/> Off	USD 5.00	1

Total monthly fees (before changes above)	GBP 0.00
Change to total monthly fees (based on changes above)	GBP 4.00
Total monthly fees (after changes above)	GBP 0.00
Total to pay now	GBP 4.00

Free are rebated if Active [Request Feeds](#)



Assets	Price	Status
Shares - ASX (Australia)	4946.3	Active
Shares - ASX (Australia)	4947.0	Active
Shares - ASX (Australia)	44.45	Active
Shares - ASX (Australia)	44.47	Active
Shares - ASX (Australia)	44.45	Active
Shares - ASX (Australia)	44.47	Active
Shares - ASX (Australia)	44.45	Active
Shares - ASX (Australia)	44.47	Active
Shares - ASX (Australia)	44.45	Active
Shares - ASX (Australia)	44.47	Active



FX

The FX (Forex) market is the biggest market in the world with a daily turnover approaching \$2000 billion. There is no formal exchange for currency transactions; transactions are instead conducted Over-The-Counter (OTC) and rates at any one time are defined by the Interbank rate (which comprises the FX bid/offers that large international banks are quoting to their counterparties).

Our FX prices offer a simple and easy way to speculate on how one currency will perform against another.

Spot FX

The spot market is the market for immediate currency trades. In the underlying market, transactions are ostensibly made for delivery two business days after the transaction date. In practice, the vast majority of individuals trading FX are speculating, with no plans to take delivery of physical currency. If a speculator holds a position beyond the close of the current business day, the open position is netted off and then re-established for the next day at a new rate.

This new rate is calculated as the closing level of the old position plus or minus an adjustment which is determined by the difference in interest rates between the two pertinent currencies (this process involving closing and re-opening with an adjustment is known as a 'Tomorrow Next Day' – or 'Tom Next' – procedure).

Spot FX is simpler with us: there is no expiry or rollover. Instead your position remains open until you close it. The difference in the exchange rate that occurs whilst your position is open determines how much you make or lose. Whilst your position is open, adjustments are made on a daily basis to replicate the effect of 'Tom Next' calculations.

Example: 'buying' Spot GBP/USD

You think that the British pound is likely to strengthen against the US dollar and accordingly opt to take a long position.

Our quote for GBP/USD is 1.5738/1.5739 and you buy one contract at 1.5739.

One contract is the equivalent of £100,000, which gives you an exposure of US\$10 for every 'pip' movement in the rate (the price you are dealing at means an exchange rate of 1.5739 dollars for every pound; in other words, one pip is 0.0001 dollar per pound and for your £100,000 position this means that one pip is 0.0001\$/£ x £100,000 = \$10). There is no commission to pay, as all our charges for FX are contained in the spread.

While your position is open, your account is adjusted each day to reflect the overnight effect of the interest rate differential between the pound and the dollar (in other words, replicating the charge or credit of a Tom Next procedure, as dictated by the Interbank Market, plus a small charge of around 0.0008%).

You are long sterling and short US dollars (with US interest rates being higher than UK at the time), so that you will be charged interest for being long of the lower-rate currency.

The total daily interest adjustment is 0.36 points. As your position is US\$10 for every pip, this works out as $0.36 \times \text{US\$}10 = \text{US\$}3.60$. This amount is debited from your account.

Two days later GBP/USD is trading at 1.5874/1.5875 and you decide to take your profit. You sell one contract at 1.5874 to close your position.

Your profit on the trade is calculated as follows:

Closing level:	1.5874
Opening level:	1.5739
Difference:	135

Your £100,000 contract meant US\$10 per pip, giving you a profit of $135 \times \text{US\$}10 = \text{US\$}1350$.

To calculate the overall profit, you also have to include the accumulated daily interest adjustments.

Commodities, Energies and Metals

As well as Shares, FX and Stock Indices, we also offer CFDs on an extensive variety of products, including grains, metals, oils, softs and livestock.

The prices of these products can sometimes move wildly because of supply and demand issues. For example, a glut of tropical storms during 2005 caused severe fluctuations in the price of Orange Juice, owing to a reduced crop.

Nearly all our contracts on Commodities, Energies and Metals are Forward contracts (transactions that expire at some set point in the future) and settle basis exchange-traded futures contracts (Spot Gold and Silver are notable exceptions, which are undated contracts and which, therefore, do not expire).

Many of these Forward contracts expire in the month before the named contract month: for example December London Cocoa expires in November. This is so that we do not end up with an obligation to buy or sell the physical underlying for any positions that we have taken in order to hedge our exposure. This is explained further in the section on futures below.

An explanation of futures

Our Forward contracts settle at some future date and are analogous in many ways to underlying futures contracts, albeit with certain differences. The most important similarity between the two is the pricing: futures trade at a different price to the cash price.

The definition of a future is that it is an agreement to buy or sell a standard quantity of a specified asset on a fixed future date at a price agreed today.

Futures that trade on an exchange are traded in standard quantities known as contracts. Our contracts for Commodities, Energies and Metals replicate these contract sizes. You can only trade in whole contracts when dealing on such exchanges; with our products, however, you can deal in whatever size you like, provided it is at least one contract. In other words, you do not have to deal in whole multiples of contracts and can in fact deal in fractions of contracts (when trading online).

We also offer mini-contracts on many of these markets. One mini-contract offers a smaller exposure than one standard contract. For example, one contract of Cotton offers an exposure of US\$5 for every point movement of our quote, whereas one mini-contract of Cotton is half the size at US\$2.50 per point movement.

The reason futures came about in the first place was to allow producers of agricultural products to offset risk.

For example, a corn farmer will have to invest money in order to grow and harvest his crop, paying for such necessities as seeds, labour, fertiliser, etc. Whilst the farmer is outlaying these costs, there is a risk that the price of corn may drop to a level insufficient to cover the outlay at the time that the corn is sold.

Because futures allow a price to be agreed today for a sale at some time in the future, the farmer would be able to utilise futures in order to achieve a sale price for the crop and thereby remove any exposure to variations in the price of corn. With the knowledge of what the sale proceeds will be, the farmer can go ahead and make a sensible business plan.

On the other end of the futures transaction may well be a speculator – someone who thinks the price of corn is going to go up, and is willing to take on the risk that the farmer is seeking to lay off.

The delivery of futures contracts occurs on a fixed date that is known as the delivery day; for most commodities this means that on this date, money is exchanged for goods, and the goods are physically delivered. Many financial futures, such as stock index futures, are cash settled, which means that no asset is actually transferred and instead the difference between the price of the futures and the price of the underlying asset is settled in cash.

All CFD contracts are cash settled. We hedge extensively in the underlying futures markets in order to cover our exposure on the trades that we accept, but obviously do not want to take delivery of platinum or oil, for example. For this reason, trades on Forward markets that settle against futures contracts that have physical delivery are always settled well in advance of the delivery date. This means that a trade on, say, December Silver might expire in November rather than in December.

Commodities, Energies and Metals

(continued)

An essential feature to understand about futures is how they are priced.

If we compared the cash price (also known as the spot price) of gold in early December with the futures price of gold for delivery in February, we might note the prices below:

Spot Gold	\$623 per troy ounce
Feb Gold	\$630 per troy ounce

As you can see, the February Gold price is higher in this example than the cash price. What is the reason behind this? It is an easy, and largely false, assumption to make that the reason underpinning this price difference is that the price of gold is due to rise.

In reality the price of a future is affected by a number of factors that take into account the cost that would be involved in holding the physical to the expiry date (the so-called 'cost of carry') as well as market sentiment.

The 'fair value' is the theoretical price that a future should be trading at given the cost of carry and working from the cash price (it therefore does not take into account such factors as sentiment, squeezes in the market, etc).

If we continue to use gold as an example, consider the circumstances of a jeweller who has been commissioned to design and construct a collection of gold jewellery for a customer's birthday in four months' time. He knows he will require 100 oz of gold – but only in four months hence – in order to make the jewellery. Unless he wants to take a risk with the price of gold (and potentially end up paying more to buy the gold at the time than he has accepted for the commission), he can guarantee the price of the raw material in one of two ways. He can either buy the physical gold now, or buy gold futures for delivery in four months.

If he chooses the former, he will have to outlay the cost straight away. Doing so will require financing, and this will incur costs: either the jeweller will have to take out a loan and pay interest on that sum over the period, or he will have to withdraw the funds from his savings account, thereby sacrificing any interest that he would receive on the credit balance over the period. Additional costs will be incurred in the form of insurance and storage costs for the gold until he sells the jewellery.

Choosing to buy the futures contract will mean that the gold will only have to be paid for in four months' time, thereby requiring no interest, storage or insurance costs. As nothing in life is free, the futures price will take into account these costs (if it is fairly priced). So for gold (and other commodities):

Fair value = current cash price + cost of carry

In an efficient market, the real futures price should trade at the same level as the theoretical fair value of the future. If the futures price diverges too far from the fair value, arbitrageurs will trade the future in the opposite direction to which it has diverged (i.e. selling if the value has risen above the fair value and vice versa), whilst also taking an offsetting trade in the cash market. Because of this arbitrage, the value of futures will always eventually return to the fair value.

The fair value for stock indices is similar to the one described above, except the carrying charges are different. There are no storage costs to consider in the cost of carry and the physical pays out dividends, whereas the future does not. Therefore the cost of carry is interest costs less any dividends.

For stock indices:

Fair value = current cash price + interest costs over the period – dividends over the period

Interest costs = cash price x annual interest rate x days to expiry/365

(The divisor is usually 365 for UK products and 360 for the US and Australia)

So let's look at an example of calculating the fair value of September Wall Street.

Let's say that it is May and the level of Wall Street is 8800 with interest rates at 1.0% per annum and the dividend yield being 2.1% per annum. If there are 120 days until the expiry of the Forward contract, the fair value would be calculated as follows:

Fair value = $8800 + 8800 \times (1.0\% - 2.1\%) \times 120/360$
 = $8800 + 8800 \times -1.1\% \times 1/3$
 = $8800 - 32.3$
 = **8767.7**

Commodities, Energies and Metals

(continued)

Factors such as sentiment (i.e. a bias by traders of the future towards buying or selling) may cause the price of a future to diverge from the fair value in the short-term, thereby making the price either cheap or expensive, in theoretical comparison to the fair value. When this happens in the actual markets, traders looking to exploit this effective mispricing will either sell the futures (if theoretically expensive) or buy them when cheap, whilst simultaneously placing an offsetting trade in the cash market. This activity is known as 'arbitrage' and, if done correctly, is a way of making a risk-free profit.

It is an important activity in the financial markets as the action of arbitrage causes the future price to move back towards its fair value and thereby sustains the crucial relationship between the cash and the futures markets (it's worth noting that most ordinary investors do not have access to the low transactional costs required in order to make arbitrage economically feasible and that even professional traders who do enjoy low costs will not undertake arbitrage unless the futures move sufficiently far from the fair value in order to compensate for exchange fees, market spreads, etc.).



Summary

By now you should:

- Be more familiar with the different financial products that we offer and the underlying markets by which they are influenced
- Understand the concept of futures
- Know how fair value is calculated
- Be aware of arbitrage

Remember that CFDs are a geared product and can result in losses that exceed your initial deposit. Trading CFDs may not be suitable for everyone, so please ensure that you fully understand the risks involved.

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