

# FTSE 100 INDEX FUTURES AND OPTIONS CONTRACTS

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## Exchange Delivery Settlement Price

The Exchange Delivery Settlement Price ('EDSP') of FTSE 100 Index Futures and Options Contracts with a standard third Friday expiry day is derived from the Expiry Value level calculated by FTSE Group from an intraday auction in each of the FTSE 100 Shares conducted by the London Stock Exchange plc ("LSE"). The auction begins at 10:10:00<sup>1</sup> on the expiry day. The Expiry Value of the Index is rounded to the nearest minimum price movement (0.5 Index points) to derive the EDSP.

## How does the intraday auction process work?

The intraday auction process is designed to ensure that at expiry potentially substantial trading activity in the underlying shares (particularly due to the unwinding of derivative hedge positions) is channelled into a mechanism where there is opportunity for aggregate supply and demand to be matched efficiently and which seeks to limit any potential disruption to price formation.

At 10:10:00 on the third Friday, an auction for each of the shares within the Index commences. Unless there are extensions, the auction for each share lasts between 5 and 5½ minutes and these are concluded more or less simultaneously and each share will trade at the single price that executes the most volume. If there is insufficient liquidity or the system determines that the outcome of an auction would generate a trade price for a share more than a set percentage from its last traded price<sup>2</sup>, then that share will be placed into a Price Monitoring or Market Order extension. This can further extend the process for that particular share for up to another 13½ minutes, so that all the auctions will be completed by 10:29:00 at the latest. At this point the share will trade at the price where most volume can be executed, irrespective of whether or not the price is within the set percentage that triggers a Price Monitoring extension. The result of the auction process will be the calculation of an index figure that reflects the traded prices of the shares in each auction.

## What are the risks of holding futures and options positions into expiry?

The outcome of the expiry process determines the final settlement price i.e. the EDSP of the futures and options contracts. Market users should always consider the risks of holding a position into an expiry, irrespective of the mechanism used to determine the final settlement price. For example, in the case of options, an option that appears to be out-of-the-money ahead of the expiry can end up in-the-money, or vice-versa. The chances of this happening are clearly higher the closer the exercise price is to the Index figure at the start of the expiry process. Furthermore, trading activity on the LSE during the auction process is likely to be affected by the activity of particular market participants who are seeking to obtain price convergence at the EDSP between offsetting stock and future positions. Those market participants might typically seek to achieve this by unwinding their stock positions during the auction process at prices which they anticipate will contribute to the index figure which will, in turn, be used to determine the final EDSP. A consequence of this concentrated activity might be that the final EDSP differs from the index figure immediately prior to the commencement of the auction process. It is therefore important to consider the risks of holding positions into the expiry. In particular, users should consider their exposure to potentially unfavourable price movements in the expiry and whether to take steps to neutralise such exposure; for example, taking into account that there may be relatively limited liquidity provision, whether to roll or close positions prior to expiry.

<sup>1</sup> All times are London time.

<sup>2</sup> The price movement tolerance range is set at 1% for those securities with a current weighting greater than 75% of the FTSE 100 Index and 3% for the remainder.

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### How do I monitor the Expiry Index during the auction?

Various quote vendors display the activity of each individual share in the auction. This information is available from the same sources as normal share trading activity. In addition, FTSE Group calculates a special index from market open on the expiry day until the conclusion of the auction that makes it possible to view the indicative Expiry Value level during the auction period (the "Expiry Index"). The Expiry Index effectively indicates the level at which the Expiry Value would be set should the auction cease at that particular moment without further extensions. This indicative index will often display significant fluctuations, particularly at the start of the auction, as basket orders begin to be submitted.

Quote vendor codes for the Expiry Index include:

BLOOMBERG CODE	TELERATE CODE	REUTERS CODE
UKXSP	gb;ftse.sp	.FTSES P

Note: Both the Expiry Value and the Index are calculated from market open on the expiry day. However, at 10:10:00, the FTSE 100 Index level will remain unchanged during the auction until one or more of the constituent shares are released from the auction and continuous trading resumes. Whilst the Expiry Index is calculated during the auction, it will naturally start to diverge from the 'static' FTSE 100 Index. Importantly, the final Expiry Value of the Index which is subsequently rounded for the EDSP, is not published as one of the FTSE 100 Index levels calculated from continuous trading on the LSE. Instead, the official FTSE 100 Expiry Value calculation is flagged separately and consequently is not usually displayed by vendors in their normal FTSE 100 Index data sets. This is because the prices which are used to calculate the Expiry Value may not be determined simultaneously and may therefore give a false indication of the level of the Index at the point of publication.

### How are flexible FTSE 100 Index Option contracts affected?

For flexible FTSE 100 Index Option contracts (FLX) which have a different expiry day to the FTSE 100 Index Option (ESX), the EDSP will be the end of day (currently 16:30:00) official closing level of the Index, subject to rounding, as determined by FTSE Group. This index figure is derived from the closing auctions of each share in the Index.

### Further Information

#### Equity Derivatives

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