Maintaining orderly markets

Circuit breakers explained
Circuit breakers were first introduced in the US following the Black Monday stock market crash in 1987 as a means of managing extreme volatility and preserving orderly trading conditions. Not all circuit breakers work the same way. In the US, market-wide circuit breakers enforce a trading pause for all stocks for 15 minutes. London Stock Exchange’s price monitoring functionality is constantly evolving to respond to clients’ changing needs and instead, employs a security-by-security price monitoring mechanism.

Managing volatility
Order books can be subject to rapid price movements. When volatility hits markets, or individual stocks suffer important price moves, London Stock Exchange operates price monitoring functionality, also known as circuit breakers. Circuit breakers are tools that temporarily halt trading activity or delay an auction execution if certain price movement tolerances would be breached. Following the halt, the affected security will be placed into auction allowing a price to be formed in an orderly fashion.

An auction is a period where no automatic execution takes place in order to concentrate available liquidity. The goal is to find the most popular price, rather than the highest or lowest price. This helps remove volatility from the market by slowing down trading. By bringing together a large number of market participants, auctions help determine a price for a stock that can be perceived as a fair valuation at a given point in time.

Watch our animation to learn more about auctions.
Why automatic trading is halted

**STATIC PRICE MONITORING**
The price of the security throughout the day has moved ±X% (static price monitoring threshold) from the opening auction uncrossing price.

*In the case of the largest FTSE 100 stocks = 8% and is relatively common*

Should the uncrossing price of the opening auction be ±5% away from the previous day’s closing auction, another 5-minute auction will take place.

**DYNAMIC PRICE MONITORING**
If the price of a potential execution is more than a defined percentage above or below the applicable reference price(s) then no executions at that price will occur. Instead, automatic execution will be temporarily suspended and an auction triggered to allow the security’s price to re-form in an orderly fashion and then be returned to regular trading as above.

*In the case of the largest FTSE 100 stocks = 3% and is relatively uncommon*

This figure shows how a dynamic reference price will generate a suspension according to the price of the incoming order.
Details of market configuration can be found within the Millennium Exchange Business Parameters document.

— Columns O–V of the Trading Service Breakdown tab outline the number and duration of Price Monitoring Extensions and Market Order Extensions in relation to the various auction types

— Columns AF and AI–AL of the Sector Breakdown tab provides the price tolerance parameters which cause the auctions to enter into Price Monitoring Extensions, and also the tolerances during the continuous phase which, if breached, will cause an Automatic Execution Suspension (AESP) often referred to as a circuit breaker.

For more information on the operation of order book auctions please see sections 7.2 to 7.4 of MIT – Guide to trading system.

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CASE STUDY

SETS securities at the open

— A 5% or more move (Open Auction PMP%) in the indicative uncrossing price from the previous Close would trigger a maximum of one 5-minute Price Monitoring Extension (PME)

— Also, a Market Order imbalance (e.g. market orders on one side exceed the sum of Limit + Market orders on the other) would separately trigger a maximum of one 2-minute Market Order Extension (MOE)

— Note that each auction and extension is followed by a random period of up to 30 seconds.

Post the open, SETS volatility suspension (AESP) parameters vary based on the London Stock Exchange Market Sector assignment (by London Stock Exchange) of the security.

— For the most liquid stocks in the FTSE 100 stocks (e.g. London Stock Exchange sector FE10):
  – An 8% (Static Price Monitoring %) move from the last auction uncross (e.g. previous close, opening or other intra-day auction price) would cause a Static Limit volatility auction with 5-minute duration, with a maximum of one Market Order extension with 2-minute duration
  – Any single order which moves market 3% (Dynamic Price Monitoring %) from last order book traded price would cause a volatility auction of 5-minute duration, with a maximum of one market order extension

— For the next most liquid stocks in the FTSE 100 (e.g. London Stock Exchange sector FS10), the Static Price Monitoring % is 10%, and the Dynamic Price Monitoring % is 5%

— FTSE 100 securities have tighter dynamic thresholds for intraday, closing and EDSP auctions than regular trading (1% for FE10 and 3% FS10).