

Functioning of HPC OTF

Hybrid / electronic system via HPC UK eTrading platform

HPC Investment Services Limited (“HPC IS”) - Hybrid / Electronic OTF

OTF MIC code **HPSX**

MIC code of the OTF Hybrid / Electronic segment: **HPSO**

Monday to Friday

8:00-18:00 (London Time)

Preamble: The description below refers to the HPC UK eTrading electronic platform. Instruments considered are:

- Interest rate and currency derivatives
- Swaptions
- Inflation derivatives
- Bonds

HPC UK eTrading platform is a system that offers continuous and periodic auction trading as defined within the Annex 1 of RTS 2. The default mode for such platform is Continuous Auction. Please refer to the Product Instruction document regarding the implementation of HPC UK eTrading per instrument type.

Client order reception

Orders are received directly by placing them into the system, by the client themselves (electronic mode) or by the OTF Operator (hybrid mode), on behalf of the client.

During trading days, as defined above, the HPC UK eTrading may receive:

- simple orders specifying the instrument, direction (buy or sell), size and price;
- specific orders detailing precise execution indications;
- complex orders detailing a strategy such as a combination of one or more instruments;
- or more general considerations:
 - o indication of interest which may include several alternative instruments;
 - o order defined entirely in terms of risk;
 - o order conditioned by an event (for example, the course that a reference instrument reaches that level);
 - o specific modality of execution (for example, all or nothing, price from an upcoming trading session, etc.);
 - o specific rules of execution, inter alia.

HPC UK eTrading, given the parametrisation of conventions (written or not) and market techniques is able to complete the information if necessary to work the order. For example, the system can:

- translate the concept of "market size" into an effective quantity when a consensus exists (for example, standard sizes of interest rate options);
- judge whether an order is still valid given the price fluctuations of other instruments;
- determine the appropriate sensitivity ratios for the nominal of a strategy;
- determine the exercise price of an option expressed in relation to the currency, inter alia.

In any case, when it is made available to them, clients can record their orders directly in the OTF (electronic trading). Alternatively, clients can also transmit them to OTF Operators (hybrid negotiation):

- by voice through the recorded phone lines;
- electronically initiated via Bloomberg IB Chat.

Pre-trade obligation

Main process

- Hybrid process - Orders entered by the OTF Operator on behalf of the client

In order to comply with its pre-trade transparency obligation, imposed by Article 8 of the MIFIR Regulation, the OTF Operator enters each order, relating to an eligible financial instrument, in the OTF platform. This platform is linked to internal systems dedicated to pre-trade transparency obligations.

- Electronic process - Orders entered directly into the platform by the client's operator

In order to comply with the pre-trade transparency obligation imposed by Article 8 of the MIFIR Regulation, orders entered by OTF clients' will be routed to internal systems dedicated to pre-trade transparency obligations.

Regardless of the process used, orders are made publicly available (unless exempted) and shared with clients through a publication in a dedicated section of our website.

For this purpose, "an order or indication of actionable interest" means a range of prices (bid or offer), which meets a client formal trading interest. "Formal" means that the client has confirmed, with the OTF Operator, on a registered line or using an IB chat, his willingness to trade.

The following pre-trade transparency waivers for the executable orders and actionable indications of interest (subject to regulatory approval), are considered by HPC IS:

- The exemption for large orders from normal market size (LIS)

The LIS methodology is applied according to the principles and calculations defined in Article 13 (2, b, i) and Table 2.3 (Annex III) of RTS 2 and the transparency thresholds published by ESMA. HPC SA defines in real time the executable orders and actionable indications of interest that are subject to a waiver, based on the LIS transparency thresholds.

Matching orders

Continuous auction trading:

In hybrid and electronic mode, the matching of orders is done by the platform's algorithm.

In order to fulfil its task of execution in a context of imperfect liquidity, the OTF algorithm must carry out a fine management of the information. The OTF's algorithm will take into account the size of the order when it is executed: it will make sure to execute the highest proportion of the order in priority and a partial execution will not be done below a certain appropriate threshold. Accordingly, he will be able to carry out any type of volume arrangement in order to optimise execution (e.g.: a purchase order in relation to two sale orders or meeting a minimum volume).

These reasonings are all programmed into the matching algorithm.

Depending on market practices and the discretion of the OTF Operator, the OTF algorithm will be set to dismember a strategy or not, depending on the orders available, to optimise the liquidity of the Market.

In addition, from a facilitation point of view, the OTF Operator may set the OTF algorithm to propose strategies or orders that he considers compatible with the needs of one or more clients, in particular to enable agents to meet around common instruments.

The OTF algorithm organises the matching between the bid and ask price on eligible financial instruments or strategies.

The client notes that the OTF algorithm may need to find several counterparties to adapt a transaction. The OTF Operator exercises his discretion to favour order matching. As such, in the case there are better execution conditions outside the OTF, the OTF operator on behalf of the client or the client itself may retract partially or totally the order for executing it outside the OTF (as OTC transaction or within another venue).

Periodic auction trading:

In the HPC UK eTrading platform, the OTF Operator, depending on the instruments he processes and/or the needs of his clients, may organise a periodic auction, as defined in the Annex to RTS 2 (Annex 1) in order to optimise liquidity.

When the OTF Operator sets up and organises an Electronic Auction Trading Session on the Platform, matching Orders are executed by the Platform's algorithm. There may be multiple Periodic Auction Trading Sessions on any Trading Day.

Post-trade transparency

Following matching of opposite orders, the resulting transaction is executed and the OTF Operator makes the transaction public under the conditions of the deferred or non-deferred publication schedule. This publication will be made in a dedicated section of our website.

Following the same logic as the pre-trade transparency principles set out above, the following post-trade transparency waivers (subject to regulatory approval), are considered by HPC:

- The exemption for large orders from normal market size (LIS)
- The exemption for illiquid instruments

The OTF is linked to internal systems to meet post-trade transparency requirements. The publication is displayed in a dedicated section of our website.

Order cancellation

The fact that an order is placed in the OTF is not a trading guarantee in itself. The Operator of the OTF will make reasonable efforts so the orders are executed.

Unless the Client elects otherwise, unmatched orders will be automatically cancelled at the termination of the auction they were placed in (continuous or periodic), or at the end of the Trading Day.

The OTF Operator is authorised to cancel unmatched orders on behalf of a client, either with the authorisation of the client or on a discretionary basis, in accordance with the OTF rules.

The OTF Operator reserves the right to require the parties to cancel any transaction executed on the OTF, if he considers that:

- the Trade was a result of an OTF system error;
- the Trade appears to be deceptive or fraudulent;
- such cancellation is necessary to preserve the integrity of the market and maintain fair and orderly trading;
- the Trade is contrary to applicable law.

Trade Error

In case of Trade error, the OTF Operator may cancel trades in the following circumstances:

- by mutual agreement of the counterparties to a transaction;
- when the OTF Operator reasonably considers that a transaction is clearly erroneous.

Confirmation of execution

Once orders are matched within the system, execution is pre-confirmed by voice, Bloomberg message or any other accepted protocol to the counterparties of each party to the transaction (hybrid mode) otherwise, an electronic notification is sent to the client (electronic mode).

Settlement

For Name Give Up Transactions, each Client is responsible for the settlement of all transactions it executes on the OTF and each Client must ensure that it has the ability, including legal and regulatory capacity, to settle such transactions accordingly. The Operator is not responsible or liable for the settlement of the transactions executed by a Client on the OTF. However, the operator shall provide or make available to each customer the details of each transaction that the customer performs on the OTF, in order to facilitate the prompt settlement of such transactions by the customer.

Transactions involving swaps and options on swaps are future confirmed to participants using Markitwire. For transactions in cleared derivatives, the clearing house HPC IS has registered its venue with will receive the trade feeds on Cleared Derivatives Trades.

For HPC UK eTrading platform transactions involving HPC IS own account (matched principal trading), the latter takes part to the transactions. Clients do not know each other and trade simultaneously with HPC IS. Both trading and settlement are qualified "blind". Matched principal transactions are settled by HPC IS through its settlement agent. HPC IS shall provide or make available to each Client the details of the transaction in order to facilitate the prompt settlement of these transactions.

Note on hybrid / electronic auctions

In the HPC UK eTrading platform, trading activities, depending on the instruments and/or client's needs, are performed using continuous or periodic auction mode as defined in the Annex to RTS 2 (Annex 1). Auctions are carried out according to different types of modalities, which are described below.

Before initiating auctions, the OTF Operator specifies the terms and conditions of such auctions.

General principles

- o **Market hours:** The auctions take place during the OTF's opening hours as specified in its General Regulations.
- o **Trading modes:**

	Continuous	Periodic
Hybrid trading system	- Variable Price Auction	- Fixed Price Auction - Variable Price Auction
Electronic trading system	- Variable Price Auction	- Fixed Price Auction - Variable Price Auction

I - Hybrid/Electronic trading system Continuous auctions:

Opening & closing

The opening and closing of the continuous auction, included in the market opening hours, is at the discretion of the OTF Operator, who may decide to close the session if he considers that the conditions are not met for the proper functioning of the OTF¹.

The continuous auction session may co-exist with a possible periodic auction session.

Price formation:

A price is offered to clients in real time, on a purely indicative basis, for each of the instruments available for auction. This price proposal, by the OTF operator, represents, at the time of the launch of the session, his vision of the market level that optimises the probability of trading, commonly known as the "mid-market".

Communication of orders:

Orders are entered into the platform for an instrument or instrument strategy, **either by the client (electronic mode) or by the OTF Operator for his client after receiving the order by voice or electronic message (hybrid mode).** **All orders placed into the platform on continuous auction mode can interact.**

When the OTF Operator receives the order by voice (or by electronic message), he applies his discretion (subject to explicit instructions from the client), for best execution purposes, to place the order in the OTF or process it in OTC.

When the order is placed in the OTF and, in order to ensure the proper functioning of the system and with consideration for best execution, the OTF Operator will exercise his discretion to remove an order from the OTF platform, remove all orders from the same client from the platform, or close the session.

Modification and deactivation of orders:

Clients are responsible for tracking and modifying their orders, whether they have placed the order themselves or via the OTF Operator. They can simply deactivate their orders individually or in their entirety or modify them individually.

On the other hand, the OTF Operator may deactivate an order at his discretion if he considers that the client no longer has the material capacity to modify or deactivate it himself (disconnection or absence of the client).

Visibility of orders during the session

All participants have access to all price, direction and size information regarding the best bid and offer for each instrument. There is no order book depth. Each client also has visibility on his own orders and those of his team.

¹ The continuous auction trading mode is the default negotiation mode in the hybrid/electronic OTF. However, and depending on circumstances, the OTF could be closed. In such situation, a notification is provided to clients.

Matching orders

Matches are made by the system, without human intervention.

All participants and the OTF Operator receive a continuous notification of the transactions processed for each of the instruments available on the platform. The last transaction on each instruments or strategies is visible on the platform (date/time, price, size).

Only the two parties to a transaction and the OTF Operator know the names of the parties involved in each transaction.

Regulatory transparency

Orders and transactions are published in real time via regulatory transparency tools in compliance with authorised derogations (waivers and deferrals).

Confirmation of transactions

The parties to a transaction are invited to validate their transaction in order to trigger the sending of an electronic confirmation. Confirmation is only sent when both parties have validated the transaction. The parties are committed as soon as they are matched. Non-validation does not break their commitments. This validation simply avoids triggering a confirmation process in the event of a breach of contract by mutual consent (error of one party accepting the cancellation by the other) within five minutes of the matching.

Suspense Auctions within the Continuous Auction after a trade

Straight after the Continuous Auction transaction has been matched, parties involved in the transaction are invited to increase their respective size of the transaction by increasing the size of their respective order. This step of the workflow is called the Suspense Auction. The Suspense Auction lasts between 20 seconds and 60 seconds depending on markets. The system will match the larger size possible. The remaining unmatched size will be placed in the Spot Auction with a second to none priority.

Spot Auctions within the Continuous Auction after a trade

Immediately following this first suspense auction, a spot auction takes place for a duration of 30 to 60 seconds (depending on markets), still on the instrument or strategy of the trade. This time the trade is visible to all participants. All OTF participants can engage in this auction similarly to a periodic auction, detailed below.

II - Hybrid/Electronic trading system Periodic auctions

Periodic auctions are characterised by:

- Their duration
- The Instruments processed

Thus, the launch of a periodic auction is determined by the OTF Operator according to the instruments he trades and the conditions prevailing at the time the decision to launch a periodic auction is taken.

Opening of the session:

At any time during market opening hours, on his own initiative or at the request of one or more client, the OTF Operator may decide to launch a periodic auction session. Prior to launching the periodic auction, OTF clients receive an electronic or voice notification of the imminent session.

Duration of the session:

Once started, a countdown timer indicates the remaining session time. The operator may decide, at his discretion, to extend the session. Participants receive a notification of the extension of the auction session and the countdown is updated

Price formation

A price is offered to clients for each of the instruments available at the auction. This price proposal, by the operator OTF, represents his vision, at the time of the launch of the session, of the market level optimising the probability of trading, commonly known as the "mid-market". **For the Variable price Auction, this price may vary** during the session depending on the orders communicated to the system (see below)

Communication of orders

Depending on the markets and according to the "Product Instructions", Orders placed in the platform on an instrument or instrument strategy:

- **either by the client (electronic mode),**
- **or by the OTF Operator for his client (hybrid/electronic mode),**

and carry the characteristics of a complete order, the price being fixed: direction (buy or sell), size and possibly price in the case of a variable price auction. Indeed, in this case, **the client can either place an order at the proposed price or set a different price.** If the price is more aggressive than the proposed price, then the latter becomes the proposed price. If the price is less aggressive than the proposed price, then the proposed price remains unchanged.

Visibility of orders during the session

OTF Operators only have access to orders they have placed on behalf of their clients. They do not have access to orders that have been directly placed by their clients (electronic mode).

Other participants do not have access to information regarding the direction or size. There is no order book. Depending on market practices, and at the discretion of the OTF Operator, they either have no information or only an indication of the presence of an order at the price offered on an instrument (or strategy) without indication of direction or size.

For a variable price auction, the system however distinguishes, where applicable, aggressive orders (that have modified the proposed price) from other orders.

Matching orders

Matches are made by the system, without human intervention and without distinction of the way the orders have been placed (hybrid or electronic).

A notification of the transactions processed for each of the instruments available for auction is sent over time to all participants including the OTF Operator. Only the two parties to a transaction and the OTF Operator know the names of the parties involved in each transaction.

Regulatory transparency

Orders and transactions are published in real time via regulatory transparency tools in compliance with authorised derogations (waivers and deferrals).

Confirmation of transactions

The parties to a transaction are invited to validate their transaction to trigger the sending of an electronic confirmation. Confirmation is only sent when both parties have validated the transaction. The parties are committed as soon as they are matched. Non-validation does not break their commitments. This validation simply avoids triggering a confirmation process in the event of a breach of contract by mutual consent (error of one party accepting the cancellation by the other) within five minutes of the end of the session.

II – b – Electronic Trading System

- Periodic electronic auctions at a fixed price:

Opening of the session:

At any time during market opening hours, on his own initiative or at the request of one or more client, the OTF Operator may decide to initiate a periodic auction session. Prior to the launch of the auction, OTF customers receive an electronic or voice notification of the imminent session.

Duration of the session:

Once started, a countdown timer indicates the remaining session time. The operator may decide, at his discretion, to extend the session. Participants receive a notification of the extension of the auction session and the countdown is updated.

Price formation

A price is offered to clients for each instrument. This price proposal, by the operator OTF, represents his vision, at the time of the launch of the session, of the market level optimising the probability of trading, commonly known as the "market environment".

Communication of orders

Orders entered into the platform on an instrument or instrument strategy **exclusively by the client**, complete the characteristics of a complete order, the price being fixed: direction (buy or sell), size and possibly price. Indeed, **the client can either place an order at the proposed price or set a different price**. If the price is more aggressive than the proposed price then the latter becomes the proposed price. If the price is less aggressive than the proposed price then the proposed price remains unchanged.

Visibility of orders during the session

Neither the other participants nor the OTF Operator have access to any information regarding direction or size. There is no order book. Depending on market practices, and at the discretion of the OTF Operator, they either have no information or only an indication of the presence of an order at the price offered on an instrument (or strategy) without indication of direction or size. However, the system distinguishes, where applicable, aggressive orders (that have changed the proposed price) from other orders.

Matching orders

Matches are made by the system, without human intervention

A notification of the transactions processed for each of the instruments available for auction is sent over time to all participants including the OTF Operator. Only the two parties to a transaction and the OTF Operator know the names of the parties involved in each transaction

Regulatory transparency

Orders and transactions are published in real time via regulatory transparency tools in compliance with authorised derogations (waivers and deferrals).

Confirmation of transactions

The parties to a transaction are invited to validate their transaction to trigger the sending of an electronic confirmation. Confirmation is only sent when both parties have validated the transaction. The parties are committed as soon as they are matched. Non-validation does not break their commitments. This validation simply avoids triggering a confirmation process in the event of a breach of contract by mutual consent (error of one party accepting the cancellation by the other) within five minutes of the end of the session.

III- Transitions between continuous and periodic

According to the HPC UK eTrading platform, depending on the circumstances, the OTF Operator may simultaneously offer continuous or periodic auctions. Orders placed for continuous auction could not interact with orders placed for periodic auction. Prices offered within a periodic auction take into account, when launching the periodic auction, the state of the market and specifically the level of prices available within the continuous auction. In that case, prices for the orders available in the continuous auction when launching the periodic auction will always anchor said auction. In case of a trade in the continuous auction, a potential planned periodic auction would be postponed so that the suspense and spot auction can take place before the periodic auction is launched.