



EXCHANGE FOR PHYSICAL (EFP)

Functional Description v1.3

May 2016

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1. INTRODUCTION

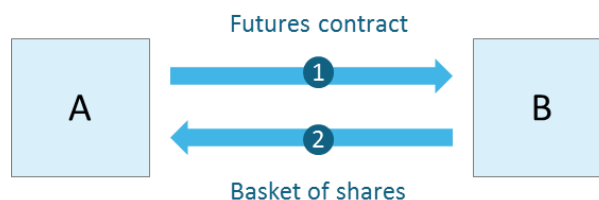
An Exchange for Physical (EFP) is a transaction involving the simultaneous exchange of a futures position for a basket of shares.

The purchase of an EFP results in:

- a long futures position, and simultaneously,
- the sale of the underlying securities.

Likewise the sale of an EFP corresponds to:

- a short futures position, and simultaneously,
- the purchase of the underlying securities.



1 Trade 1: a futures position

2 Trade 2: an underlying cash position

EFPs based on index futures are transactions made on the basis of the difference between the index futures price and the spot price of the index. Currently, the futures leg of these transactions can be reported on Euronext's Basis Trade Facility, with reference to a cash leg.

Euronext's new Exchange for Physical Facility enables members to trade EFPs on the CAC 40® and AEX-Index® by simultaneously exchanging index futures for the corresponding basket of underlying component securities of the index. The new EFP solution will be available for trading in a regulated environment by means of a transparent central order book supported by a liquidity-providing scheme. Trading of EFPs takes place by means of a fully automated straight-through-process, eliminating operational burdens and facilitating post-trade reporting obligations. In addition, it reduces execution risk thanks to the guarantee of the central counterparty.

1.1 RELATED DOCUMENTS

Cash Market documentation:

- Euronext Cash Markets - XDP Specification

Derivatives Market documentation:

- Euronext Derivatives XDP FTP Specification
- Euronext Derivatives Common Customer Gateway (CCG) Interface Specification - FIX Protocol
- Euronext Derivatives Common Customer Gateway (CCG) Interface Specification - Binary Protocol

1.2 DOCUMENT HISTORY

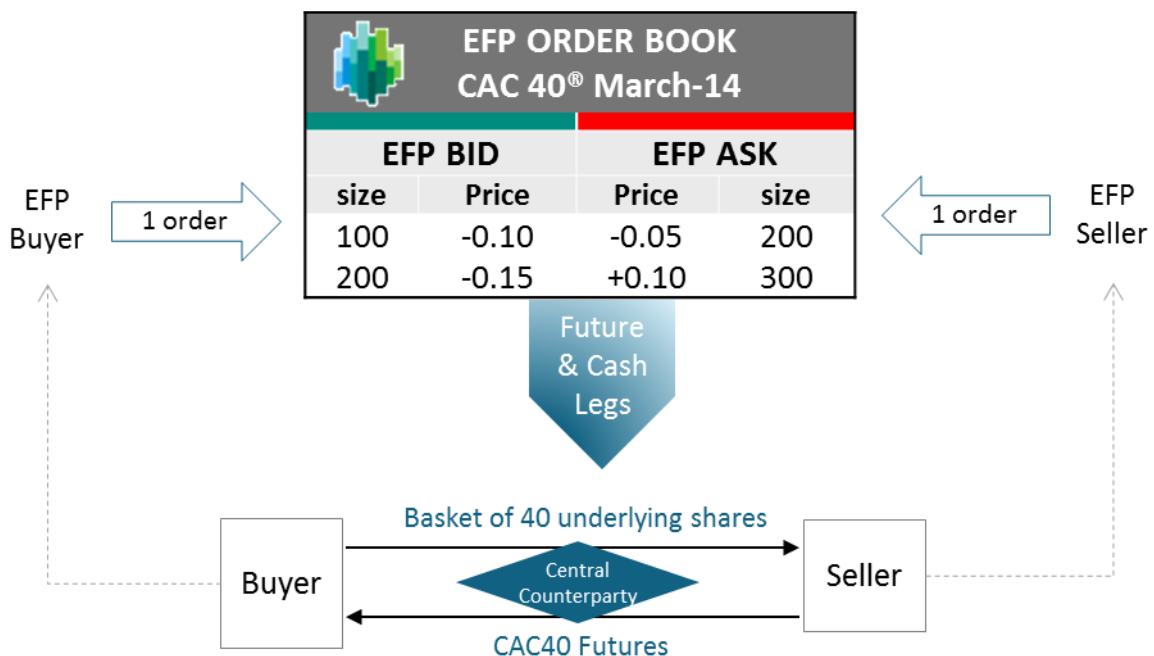
DOCUMENT VERSION	DATE	CHANGE DESCRIPTION
1.0	30 April 2014	Creation of the document
1.1	28 October 2014	Update including the weekly futures integration in the EFP scope, as well as technical precision
1.2	25 February 2015	Contract specification updated

2. FUNCTIONAL DESCRIPTION

2.1 EFP MECHANISM OVERVIEW

The Exchange For Physicals (EFP) on Equity Index developed by Euronext is a trading strategy that allows the user, via a single trade, to simultaneously exchange the index future for the basket of underlying shares in accordance with their index weighting. The EFP order book is dedicated to the EFP strategy and execution of orders within the EFP. The order book generates two transaction legs, namely:

- one trade for the index future, and
- one trade per cash underlying share.



2.2 EFP MECHANISM DESCRIPTION

2.2.1 General information regarding the EFP Facility

Euronext members will be able to enter an EFP order directly on the Euronext UTP Derivatives Central Order Book dedicated to the new EFP strategy AMR (Automated Market Reference).

The availability of the EFP order book is as follows:

- Trading of each expiry cycle, monthly and weekly, of the EFP starts on the second day of introduction of the Index Futures contract. The EFP strategy has the same expiry cycle as the Index Future contract.
- Trading hours for EFP trading are 09:00 to 18:30 CET, except on the futures expiry day when trading closes at 16:00 CET (thereby matching the trading hours of the Index Futures).
- Note that only the Guaranteed Cross Trades facility is available for the EFP.

2.2.2 Order entry

Euronext members will be able to enter an EFP order directly on the Euronext UTP Derivatives Central Order Book using the standard order entry message:

- FIX protocol: **New Single Order (D)** and **Execution Report (8)**
- Binary protocol: **New Single Order (D)**, **Order Ack (a)** and **Execution Report (8)**

The order information must include:

- The price of the strategy:

The EFP Price must be expressed in index points and is the difference between the index futures price and the index spot price.

This price can be either positive, negative or equal to zero.

Note that the tick size of the EFP strategy can be different to that of the related index future.

- The quantity of the EFP:

The quantity is expressed in units and corresponds to the quantity of the EFP to be traded, and will be equal to the quantity of the future leg. It is expressed in the same units as the index future quantity.

In order to be accepted, the size of the EFP strategy order must fulfil two size conditions, namely:

- A minimum order size: below this pre-specified size, the order entry is rejected
- A minimum incremental size: above the minimum required order size, the size of the order must be a multiple of the incremental size, otherwise, the entry of the new order is rejected.

Example: The minimum order size is 250 and the incremental size is 50. Order sizes of 250, 300, 350, etc. are accepted. However, all orders with sizes below 250 are rejected. Additionally, order sizes of 251, 252, 253..., are also rejected as they are not multiples of 50.

2.2.3 Matching process and transaction notification

The execution of an order within the EFP order book generates two transaction legs, namely:

- one trade leg for the index future, and
- one trade leg for the basket of cash underlying shares that belong to the index.

Matching process:

- Determination of the Traded Price and Quantity of the Index Future Leg:

The price attributed to the future leg of the EFP trade is equal to the last traded price of the related index future.

The quantity attributed to the future leg equals the executed size of the EFP order.

- Determination of the Traded Price of each cash index constituent that belong to the index:

The price of each underlying cash leg is determined by a pre-specified algorithm that is based on each share's last traded price. It attributes an equal percentage price deviation to each share.

The algorithm applies a two-step process to each cash leg:

1. Allocation of a quantity based on the share's daily index weight
2. Allocation of a price centred around the share's last traded price

Trade Matching notice:

For each order execution within the EFP order book, the Euronext UTP Derivatives Matching Engine generates an Execution Report to both counterparties to the EFP trade. The Execution Report message is the same as for other equity index futures.

In particular, for each EFP trade, a series of two Execution Reports are generated:

1. The Execution Report of the strategy which includes:
 - The executed EFP size and EFP price.
 - The allocated index future quantity (= EFP quantity) and the allocated index future price (= Last Traded Price (LTP) of the Index Future).
 - The Implied Index price (= Future LTP – Executed EFP Price) and the quantity (= EFP quantity) of the basket of cash underlying shares
2. An Execution Report for each index constituent share ('component security') that includes the allocated price and quantity of each share (determined by Euronext's pre-specified algorithm *cf. supra*).

Trade publication

For each order execution within the EFP order book, three types of trade are published in real time:

1. EFP trade publication: The publication contains the Quantity Traded and the Trade Price of the EFP trade on the EFP order book.
2. Index future trade publication: contains the Quantity Traded and Traded Price of the index future on the index future's order book. The trade is marked with **UpdateType = '29'** and a dedicated **StrategyCode= 'm'** to identify the index future trade results from an EFP trade.
3. Underlying share trade publication: For each share, the existing **TCS 242** message is published over the existing XDP channels (**102/105**). This message contains information based on the individual cash trade legs and a new TCS operation type for **Exchange For Physical (Y)**. Volumes from index cash constituent trades resulting from an EFP trade are aggregated and published with the volume trades on the Regulated Market.

Clearing

For each order execution within the EFP order book, the resulting Index Future trade as well as trades on every individual index constituent are sent to LCH.Clearnet SA for clearing purposes in real time.

2.3 EXAMPLE OF THE EFP MECHANISM

Pre-Trade The Central Order Book for the EFP CAC 40® March 2014 Index Future allows to trade in a **transparent, continuous and anonymous environment**.

Trade The equilibrium in the order book generates an EFP trade for: **1 000 EFPs at a price of -9.00**
 The EFP trade is broken down into two trade legs:

- 1 Derivative leg: 1 000 futures at 3486.00
- 40 Underlying cash legs: total notional value of €34,950,000

Post-Trade The trade legs are:

- notified privately to the counterparties
- published through the usual market data feeds with an “EFP” indicator
- Sent to regulators for transaction reporting
- Sent to the clearing & settlement

* Spot price = Future Price – EFP Price
 3495 = 3486.00 – (-9)

EFP BOOK CAC 40® Mar-14			
Last Future Price: 3486.00			
EFP BID		EFP ASK	
size	EFP Bid	EFP Ask	size
1 000	-9.00	-9.00	2 000
2 000	-9.05	-8.95	3 000

EFP trade of 1 000 at -9.00

1 000 futures at 3486.00

40 underlyings for a notional value of 34,950K€*

Market Data Publisher & Transaction Reporting

TRADE RECAP CAC 40® Mar-14 Future			
Time	Price	Size	Cond.
10:18:00	3486.00	1 000	EFP
10:17:59	3486.00	250	COB
10:17:58	3486.15	350	COB
...

TRADE RECAP Underlying cash legs					
	Share	Time	Price (€)	Size	Cond.
1	SANOFI	10:18:00	68.2301	62 852	EFP
2	TOTAL	10:18:00	38.2554	112 036	EFP
3	BNP PARIBAS	10:18:00	41.865	41 825	EFP
...
40	ALCATEL	10:18:00	0.819	116 332	EFP

3. CONTRACT SPECIFICATIONS

CAC 40® AND AEX-INDEX® EXCHANGE FOR PHYSICAL

	CAC 40® EFP	AEX-Index® EFP
DERIVATIVES LEG	CAC 40® index futures	AEX-Index® index futures
DERIVATIVES MARKET	Euronext Paris	Euronext Amsterdam
CASH LEG	Basket of CAC 40® component securities in accordance with their index weighting	Basket of AEX-Index® component securities in accordance with their index weighting
CASH MARKET	Euronext Cash Markets	Euronext Cash Markets
TRADING UNIT	Index points representing the difference between the index futures and the corresponding basket of constituent securities	Index points representing the difference between the index futures and the corresponding basket of constituent securities
TICK SIZE	0.10	0.01
TICK VALUE	€4,000 (0.10 at €10 per index point for index at 4000)	€740 (0.01 at €200 per index point for index at 370)
DELIVERY	CAC 40® index futures contracts and the weighted basket of constituent securities of an equivalent nominal value	AEX-Index® futures contracts and the weighted basket of constituent securities of an equivalent nominal value
TRADING HOURS	09:00 - 18:30 CET	09:00 - 18:30 CET
MINIMUM ORDER SIZE	250 lots, with increments of 50 lots	100 lots, with increments of 25 lots
MINIMUM TRADE SIZE	50 lots	25 lots
LAST DAY OF TRADING	Trading ceases at 16:00 CET on Friday of the delivery expiry (weekly or monthly). In the event that the Friday of such weekly/monthly expiry is not a business day, the Last Trading Day will be the last business day preceding the Friday of such expiry.	Trading ceases at 16:00 CET on Friday of the delivery expiry (weekly or monthly). In the event that the Friday of such weekly/monthly expiry is not a business day, the Last Trading Day will be the last business day preceding the Friday of such expiry.
TRADING PLATFORM	Universal Trading Platform	Universal Trading Platform
CLEARING ORGANIZATION	LCH.CLEARNET SA Futures contracts are cleared intraday, cash trades are settled at T+2	LCH.CLEARNET SA Futures contracts are cleared intraday, cash trades are settled at T+2
WHOLESALE SERVICE	Guaranteed Cross Facility	Guaranteed Cross Facility
WHOLESALE SERVICE THRESHOLD	500	200

NOTE: THESE SPECIFICATIONS ARE SUBJECT TO MODIFICATION.

4. SUMMARY OF EVOLUTIONS

4.1 DERIVATIVES MARKETS – FIX AND BINARY

EFPs are considered as a new strategy. There is no change to CCG messages but a specific scenario is introduced for Exchange for Physical trades.

EFP Strategy Trade notification

Following a trade, UTP will send a Strategy Trade notification on the EFP, including the price and the quantity of the EFP strategy as well as the allocated prices and quantities for the Index Future leg and for the basket of cash underlying shares.

Execution Reports on the cash constituent legs

In addition to the EFP Strategy Trade notification, users will receive a series of Execution Reports for each cash constituent leg of the basket. The Execution Report will include the allocated price and quantity of each cash constituent leg. The '**LastRptRequested**' field within the message will be filled to notify the client applications whether the Execution Report is the last message (**LastRptRequested = 'Y'**) sent as a result of the EFP trade or if there are other messages expected. (**LastRptRequested = 'N'**).

Note that in case of partial matching of the EFP order, the Execution Reports for each cash leg will be filled as follows:

- **Ordstatus = 2** and relative **Text = Filled**
- **Remaining Quantity = 0**

4.2 MARKET DATA

Cash Markets:

- Exchange for Physical cash constituent legs are identified in the current **TCS Trade Message (242)** for the Cash Markets using a new dedicated flag, '**Y**'.

Derivatives Markets:

- The new strategy code '**m**' (= Exchange for Physical) is provided in both the Euronext Derivatives Market standing data files in the <SecSubTypes **SubTyp**> field, and in the XDP **Strategy Standing Data (732)** message in the '**StrategyCode**' field.
- The Euronext Derivatives XDP FTP Specification has been updated to reflect this additional strategy code. No changes to the Euronext Derivatives XDP Client Specifications are required.