

# **Euronext Auction Volume Discovery (AVD)**

**Equities Webinar | October 2025**



**EURONEXT**



# Agenda: Euronext Auction Volume Discovery (AVD)



## Euronext AVD Overview and Value Proposition

- **Corrine O'Donnell** – Senior Equity Sales Manager, UK & Ireland
- **Roberto Bonalumi** – Head of Business Development, Equities



## Euronext AVD Technical Specifications

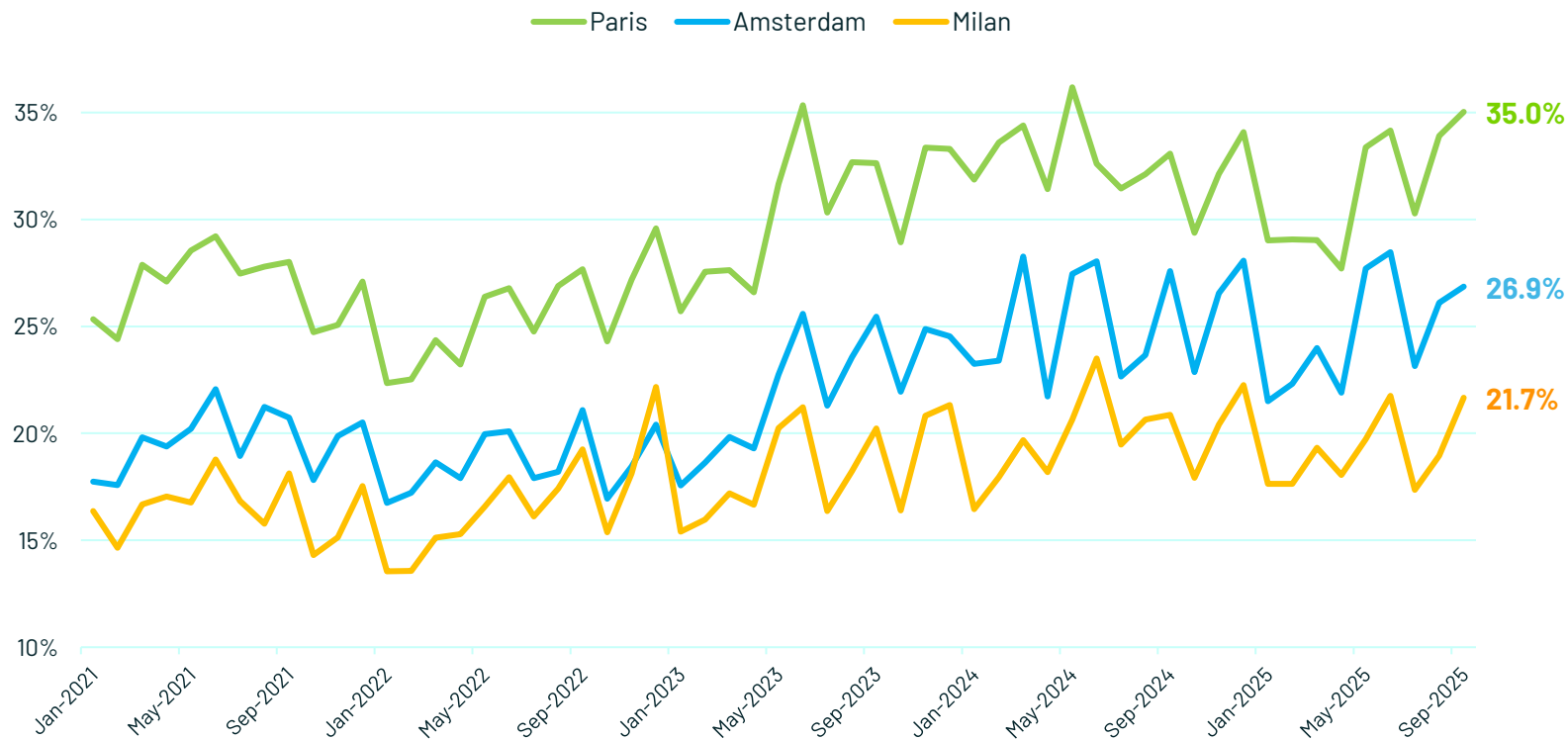
- **Flavio Ravotto** – Head of Technical Account Management



## Roadmap of AVD go-live and Q&A Session

- **Vincent Boquillon** – Head of Equity Trading

# Long-term growth of the Closing Auction weight: 20% to 35% of on-book volumes



# Euronext Auction Volume Discovery (AVD): go-live on 8<sup>th</sup> December 2025



Send AVD orders during the whole trading day.



Hidden: no dissemination of the order details before or after execution.



Execute at Auction uncrossing price: AVD order vs Auction Imbalance, and AVD order vs AVD order.



Without price impact: AVD orders do not participate to the auction price determination process.

**Manage “participation caps” more efficiently**



**Unlock the liquidity pool of Auction Imbalance at the Opening and Closing**

**Trade blocks at the Auction price without information leakage nor price impact**

# How large is the Auction Imbalance at the Close?

Closing Auction Imbalance average **daily notional (€million)** in 2025 YTD:

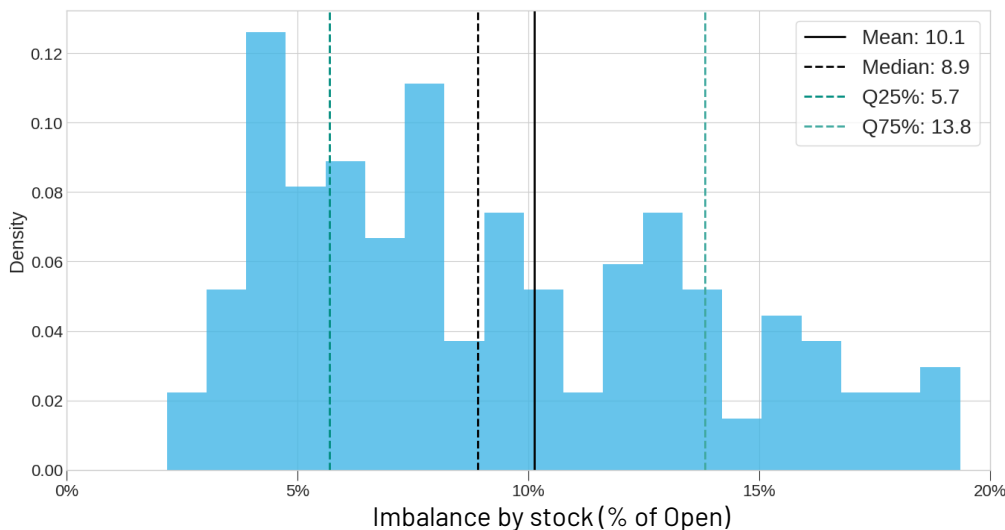
	Standard Days		Index Rebalancing Days	
	Imbalance Buy	Imbalance Sell	Imbalance Buy	Imbalance Sell
Paris	€ 221.7 m	€ 25.9 m	€ 483.9 m	€ 58.8 m
Milan	€ 11.5 m	€ 13.1 m	€ 26.3 m	€ 28.2 m
Amsterdam	€ 9.2 m	€ 9.2 m	€ 32.2 m	€ 22.1 m
Oslo	€ 6.0 m	€ 5.8 m	€ 10.6 m	€ 11.6 m
Brussels	€ 3.6 m	€ 3.5 m	€ 8.4 m	€ 11.7 m
Lisbon	€ 1.0 m	€ 1.1 m	€ 2.4 m	€ 1.4 m
Dublin	€ 1.5 m	€ 2.0 m	€ 4.0 m	€ 11.6 m
<b>Euronext daily average</b>	<b>€ 315.1 m</b>		<b>€ 713.2 m</b>	

# How large is the Auction Imbalance at the Opening?

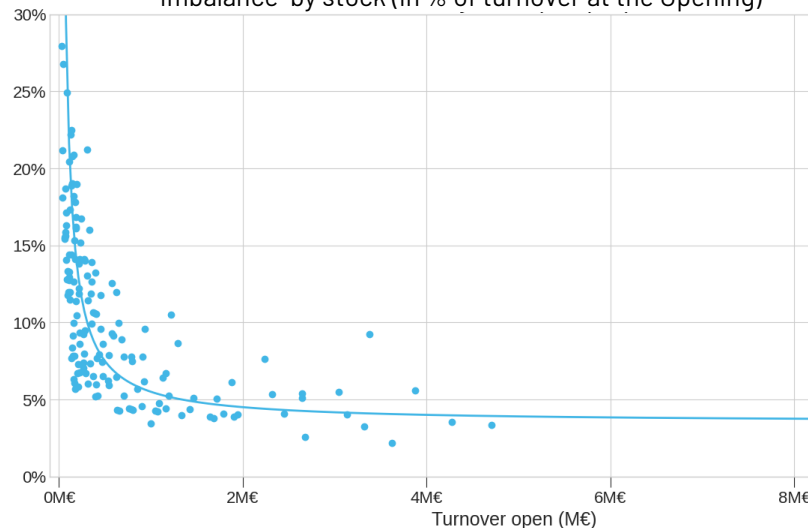
Auction imbalance accounts for **10.1% of Opening turnover** on average

Auction imbalance is relatively **larger for less liquid stocks**

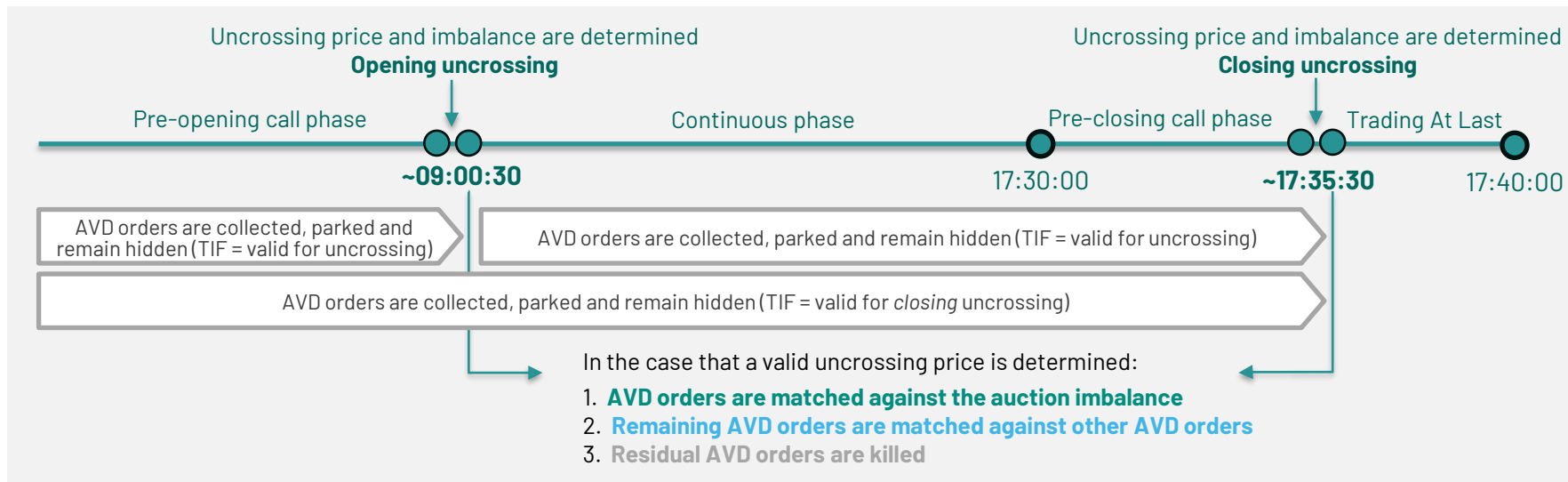
Distribution of imbalance by stock (in % of turnover at the Opening)



Imbalance by stock (in % of turnover at the Opening)



# How does Euronext AVD work?



## 1. Execution AVD vs. Auction imbalance

## Two liquidity events:

## 2. Execution AVD vs. AVD

No AVD orders moving into Trade At Last

# Euronext AVD technical overview

- New **order type** (“Auction Volume Discovery”)
- Matching following **opening and closing auction** only (not for intraday auctions)
- As **market / limit order** (with limit price representing a cap/floor for execution)
- Availability of **MAQ** (minimum quantity for execution, against one or more orders)<sup>1</sup>
- Compatible with Euronext **IMS** (Internal Matching System)
- Valid for the **current trading day** only
- AVD Orders will **not be moved into continuous trading and not moved into TAL**

## Two liquidity events:

### Execution AVD vs. Auction Imbalance

- Imbalance remains sorted by price-time
- **AVD Orders are sorted by original size-time**
- AVD Orders will aggress the imbalance<sup>2</sup>
- Unexecuted COB orders are moved into continuous (if any, and unless valid for auction only)

### Execution AVD vs. AVD

- Unexecuted AVD Orders are sorted by original size-time (on each side of the book)
- The larger order by original size is picked
- This order will aggress the opposite side<sup>3</sup>
- Process iterated till no matching is possible
- **Unexecuted AVD Orders are cancelled**

# AVD Orders: Technical details for Order entry

**New “Order type”:** new value available in new order and order modification messages **in the following existing field:**

- SBE “Order Type” => new value: “14” (Auction Volume Discovery)
- FIX “OrdType” (Tag 40) => new value: “N” (Auction Volume Discovery)

**Time-In-force parameters** (no new value):

- SBE “Time In Force”: 2 = “Valid for Uncrossing” or 7 = “Valid for Closing Uncrossing”
- FIX “TimeInForce” (Tag 59): B = “Good for auction (GFA)” or 7 = “At the Close”

This implies that AVD Orders cannot be matched following any intraday auction (scheduled or unscheduled)<sup>2</sup>

- Also, an AVD Order will be valid for the current trading day only (TIFs “GTD”, “GTC” are not available)

**“Market” vs. “Limit”:** an AVD Order can be submitted **with or without**<sup>1</sup> a value in the following existing fields:

- SBE “Order Price”
- FIX “Price” (Tag 44)

If a price is specified, the AVD order behaves like a Limit Order; otherwise, like a Market Order

**MAQ available** (min. quantity for execution, against one or more orders). **To be specified in existing field at order entry:**

- SBE “Minimum Order Quantity”
- FIX “MinQty” (Tag 110)

## How to identify trades from AVD orders in private trade confirmation messages?

	Auction Uncrossing trade	AVD vs Imbalance trade	AVD vs AVD trade	TAL trade
“Trade Type”	“1” = “Conventional Trade”	“105”: “AVD Trade”		“1” = “Conventional Trade”
“Trade Qualifier” (bit 0: “Uncrossing trade”)	“1” = “Uncrossing Trade”			“0” = “Not an uncrossing Trade”
“Execution Phase”	“2” = “Uncrossing Phase”			“3” = “Trading at Last Phase”
“Trade Qualifier” (bit 2/3: “Passive/ Aggressive”)	Not aggressive not passive: <ul style="list-style-type: none"><li>● Bit 2: “0”</li><li>● Bit 3: “0”</li></ul>	For the Imbalance side (always passive): <ul style="list-style-type: none"><li>● Bit 2/3 = 1/0</li></ul> For the AVD Order side (always aggressive): <ul style="list-style-type: none"><li>● Bit 2/3: 0/1</li></ul>	On a case-by-case basis as each AVD Order can be an aggressor (see previous slide)	Aggressive or passive, depending on the originating order

# How to identify trades from AVD orders in market data messages<sup>1</sup>?

	Auction Uncrossing trade	AVD vs. Imbalance trade	AVD vs AVD trade	TAL trade
“Trade Type”	“1” = “Conventional Trade”	“105”: “AVD Trade”		“1” = “Conventional Trade”
“Trade Qualifier” (bit 0: “Uncrossing trade”)	“1” = “Uncrossing Trade”			“0” = “Not an uncrossing Trade”
“Transaction Type”	“1” = “Plain vanilla trade”			
“Transparency indicator”	“0” = “Lit / Regular trade”			
“MMT Market Mechanism”	“1”: “Central Limit Order Book”			
“MMT Trading Mode”	“0”: “Scheduled opening auction”, or “K”: “Scheduled closing auction”			“3”: “At market close trading”
“MMT Transaction Category”	“-”: “Standard trade”			



# Roadmap of Euronext Auction Volume Discovery (AVD) go-live



## Technical Specifications are available

- Contact [Equities@euronext.com](mailto:Equities@euronext.com) to receive the full documentation



## Test Environment opens on 5<sup>th</sup> November 2025

- Contact [Clients-Services@euronext.com](mailto:Clients-Services@euronext.com) for EUA onboarding



## Go-live on 8<sup>th</sup> December 2025 across all Euronext markets

- Are you planning to benefit from AVD orders on Day 1 ?



# **Appendix**

## AVD orders will be available on all the following Segment MICs:

Listing place	Operating MIC	Segment MIC	Segment name
<b>Amsterdam</b>	XAMS	<a href="#">XAMS</a>	EURONEXT - EURONEXT AMSTERDAM
<b>Brussels</b>	XBRU	<a href="#">XBRU</a>	EURONEXT - EURONEXT BRUSSELS
		<a href="#">ALXB</a>	EURONEXT GROWTH BRUSSELS
		<a href="#">MLXB</a>	EURONEXT ACCESS BRUSSELS
		<a href="#">VPXB</a>	EURONEXT - VENTES PUBLIQUES BRUSSELS
<b>Dublin</b>	XDUB	<a href="#">XMSM</a>	EURONEXT DUBLIN
		<a href="#">XESM</a>	EURONEXT GROWTH DUBLIN
		<a href="#">XACD</a>	EURONEXT ACCESS DUBLIN
<b>Lisbon</b>	XLIS	<a href="#">XLIS</a>	EURONEXT - EURONEXT LISBON
		<a href="#">ALXL</a>	EURONEXT GROWTH LISBON
		<a href="#">ENXL</a>	EURONEXT ACCESS LISBON
<b>Milan</b>	XMIL	<a href="#">MTAA</a>	EURONEXT MILAN
<b>Oslo</b>	XOSL	<a href="#">XOSL</a>	OSLO BORS
		<a href="#">MERK</a>	EURONEXT GROWTH - OSLO
		<a href="#">XOAS</a>	EURONEXT EXPAND OSLO
<b>Paris</b>	XPAR	<a href="#">XPAR</a>	EURONEXT - EURONEXT PARIS
		<a href="#">ALXP</a>	EURONEXT GROWTH PARIS
		<a href="#">XMLI</a>	EURONEXT ACCESS PARIS

# AVD orders: Key controls at order entry and/or order modification

- AVD Orders must be **enabled** for the **Optiq segment** and the related **Trading Group**<sup>1</sup>
- The **size of AVD orders** is controlled at order entry / order modification, against the existing **“Max Order Quantity Call”** and **“Max Order Amount Call”** parameters, same as for regular orders with TIF = “VFU” or “VFCU”<sup>2</sup>
  - in case no price is specified, the order amount is computed using the available DRCP. Otherwise, using its limit price
  - in case size controls are not passed on order modification, the order modification request is rejected (same as for VFU/VFCU orders)
- **Tick size** as well as **Minimum Size** controls for AVD orders are the same as for any other order type
- **No Price Control** against OPCC (Order Price Control Collars) is performed on AVD Orders, as they will be always executed at the Uncrossing Price, that was already previously validated
- AVD orders cannot be inserted:
  - with **Order Side = “Cross”** (SBE “Order Side” // FIX “Side” (Tag 54))<sup>3</sup>
  - with **Self-Trade Prevention activated** (bit 0, 1 or 7 of SBE “Execution Instruction” // FIX “ExecInst” (Tag 18) equal to “1”)<sup>4</sup>
  - with any **Exchange Market Model different from “Cash and Derivative Central Order Book”** (SBE “EMM” // FIX Tag 20020 = 1)<sup>5</sup>

Note: the bitmap “DarkExecutionInstruction” is ignored for an AVD Order (no order rejection; the AVD order cannot participate in the Mid-Point book, and will be managed in the COB instead)
- Order characteristics that cannot be modified for inserted AVD orders (not exhaustive):
  - **Order Type** (must remain an AVD order); **Order Side**; **Minimum Order Quantity** (as of today for other order types: field not present in Cancel Replace (06) // FIX OrderCancelReplaceRequest (G) message)

(1) If not, order is rejected with a new Error code 2637 “AVD Order feature is disabled”, or 2110 “Order Type forbidden for the current OptiqSegment/EMM/MarketModel combination”; (2) Error codes 1030 “Order quantity cannot be greater than Max order quantity” or 1028 “Max amount reached”; (3) Error code 1035 “Inconsistent Order Type for Cross”; (4) Error code 2638 “STP not authorized for order type AVD”; (5) Error code 2110 “Order Type forbidden for the current OptiqSegment/EMM/MarketModel combination”.

## AVD orders: Other technical details for order management (1/2)

- AVD Orders can be submitted **when other COB orders can be normally submitted, with the exception of the Trading-At-Last (TAL) Phase**, i.e. when the system is in:
  - "Book State" = 3 (Call)
  - "Book State" = 5 (Continuous), with the exception of TAL Phase<sup>1</sup>
  - "Book State" = 2 (Closed) and "Trading Period" = 1 (Opening)
  - "Book State" = 9 (Reserved)<sup>2</sup>
- AVD Orders are **also accepted**:
  - in case EMS set the Book State to the following values, unless Order Entry is prohibited on decision by EMS, i.e. when:
    - "Book State" = 6 (Halted)
    - "Book State" = 8 (Suspended)<sup>3</sup>
    - "Book State" = 4 (Uncrossing). If received in this phase, AVD Orders are accepted and queued to be processed at the end of Uncrossing
- AVD Orders are **rejected** when they are submitted:
  - during the TAL phase<sup>3</sup>
  - when "Book State" = 1 (Inaccessible)<sup>4</sup>
  - when "Book State" = 2 (Closed) with "Trading Period" = 3 (Closing)<sup>4</sup>
- At **reception / modification**, AVDs are **acknowledged** with "Ack Type" = 0 ("New Order") / 1 ("Replace Ack")<sup>5</sup>
- **Once triggered**, AVD Orders are acknowledged with a new Ack Type = 27 ("AVD Triggered Ack") and a new "Ack Phase" = 9 ("Uncrossing Phase")<sup>6</sup>

## AVD orders: Other technical details for order management (2/2)

- AVD Orders can be **cancelled by participants** via both:
  - SBE “Cancel Request” (12) // FIX “OrderCancelRequest” (F) message
  - SBE “Mass Cancel” (13) // FIX “OrderMassCancelRequest” (q) message
- AVD Orders will also be **cancelled by the Matching Engine** when:
  - the **AVD Order Price is incompatible with the related Uncrossing Price**; in this case; a Kill (05)(FIX 8) message is sent to the member with Kill Reason = “46” (AVD Order Cancelled due to incompatibility with Uncrossing Price)
  - an **AVD Order remains with unexecuted quantity**, after processing all AVD Orders against the imbalance and against the other AVD orders (so, no other matching can happen); in this case, a Kill (05)(FIX 8) message is sent to the member with Kill Reason = “2” (Order Expired)
  - an AVD Order reaches the **Closing Phase** at the end of the trading day schedule; in this case a Kill (05)(FIX 8) message is sent to the member with Kill Reason = “5” (Done For Day)<sup>1</sup>
  - the **“Cancel on Disconnect”** (CoD) mechanism is triggered (in the assumption that the CoD option has been specified for the order in the SBE “Execution Instruction” field // FIX “ExecInst” (Tag 18), bit 3). In this case a Kill (05)(FIX 8) message is sent to the member with Kill Reason = “11” (Order Cancelled due to Cancel on Disconnect Mechanism)



## AVD orders in Market Data (MDG): technical details

- Since an AVD Order, when triggered, is immediately executed and killed for any residual quantity, **no pre-trade data** is disseminated for an AVD order. This means that the MarketUpdate (1004) and OrderUpdate (1002) messages **are NOT sent to the market** when an AVD Order is:
  - entered
  - modified
  - cancelled, or
  - triggered for execution
- When an **AVD Order is executed against a COB order** (part of the uncrossing 'imbalance'):
  - a **MarketUpdate (1001)** and a **FullTradeInformation (10014)** message are sent to the market with information on the **executed trade**
  - an OrderUpdate (1002) message is sent to the market with updated details of the executed **COB order**
  - a MarketUpdate (1001) message is sent to the market to update the Limits, due to the execution of the **COB order**
  - a **Statistics (1009)** message is sent each time there is a gap between the current statistics and the previous one
- When an **AVD Order is executed against another AVD Order**:
  - a **MarketUpdate (1001)** and a **FullTradeInformation (10014)** message are sent to the market with information on the **executed trade**
  - a **Statistics (1009)** message is sent each time there is a gap between the current statistics and the previous one



## AVD orders in Market Data (MDG): impact on statistics

- When a trade is done with at least one AVD Order involved in the matching (“AVD vs COB” Trade, or “AVD vs AVD” Trade), the following **Statistics** (“Stats Update Type”) are updated and disseminated:
  - “21” : On Book Auction Cumulative Quantity
  - “23” : On and Off Book Cumulative Quantity
  - “16” : Trade Count

Due to the execution workflow and characteristics of the AVD Orders, **no other statistic needs to be updated** (Last Trade Price, Variation Last Price, Daily High, Daily Low, On Book Continuous Cumulative Quantity etc.)



[www.euronext.com](http://www.euronext.com)