MiFID II / MiFIR and ATHEX

Explanations, Technical Compliance and Services offering from ATHEX to Members and clients

May 2017

Version 1.0

Agenda

➢ MiFID II / MiFIR – Introduction

➢ Order Record Keeping Service – **ORK@ATHEX**

➢ Transactions Reporting Service – **ARM@ATHEX**

➢ Tick Sizes under MiFID II / MiFIR at ATHEX

➢ Pre-trade Transparency & Waivers at ATHEX

➢ OTC Trade Reporting Service – **APA@ATHEX**

➢ Reference Data Service – **RDS@ATHEX**

➢ Clock Synchronization

➢ Organizational Requirements and ATHEX
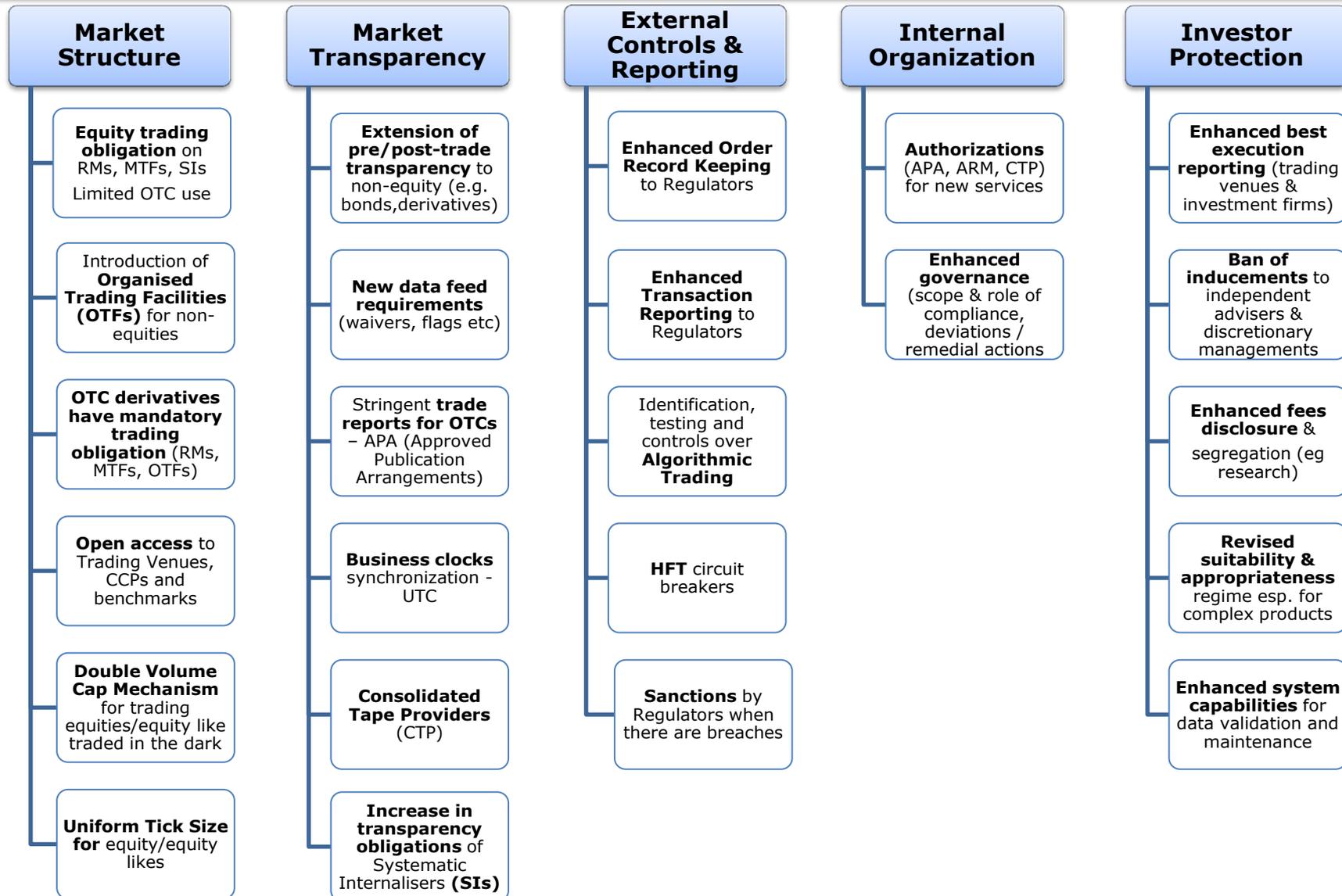
➢ FIRDS

➢ MiFID II / MiFIR and OASIS

MiFID II / MiFIR

Introduction

From MiFID to MiFID II / MiFIR
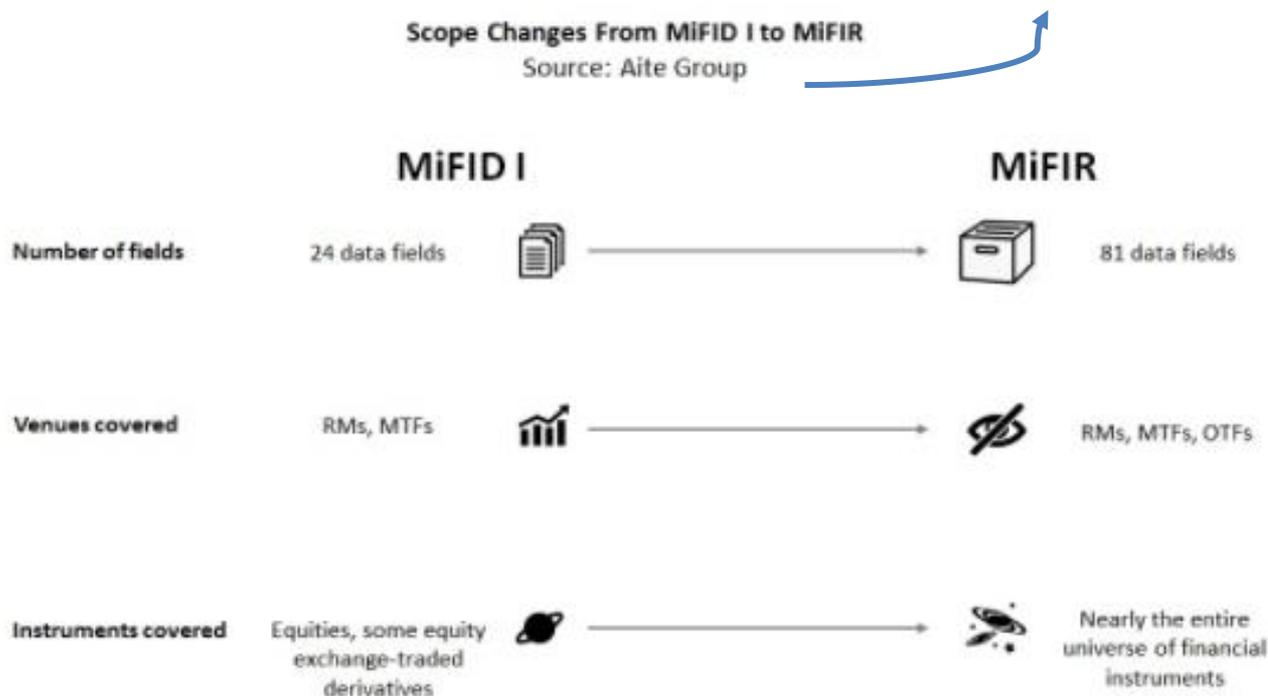
Main areas where shortcomings of MiFID are addressed

Market Structure	Market Transparency	External Controls & Reporting	Internal Organization	Investor Protection
Equity trading obligation on RMs, MTFs, SIs — Limited OTC use	**Extension of pre/post-trade transparency** to non-equity (e.g. bonds, derivatives)	**Enhanced Order Record Keeping** to Regulators	**Authorizations** (APA, ARM, CTP) for new services	**Enhanced best execution reporting** (trading venues & investment firms)
Introduction of **Organised Trading Facilities (OTFs)** for non-equities	**New data feed requirements** (waivers, flags etc)	**Enhanced Transaction Reporting** to Regulators	**Enhanced governance** (scope & role of compliance, deviations / remedial actions)	**Ban of inducements** to independent advisers & discretionary managements
OTC derivatives have mandatory trading obligation (RMs, MTFs, OTFs)	Stringent **trade reports for OTCs** – APA (Approved Publication Arrangements)	Identification, testing and controls over **Algorithmic Trading**		**Enhanced fees disclosure** & segregation (eg research)
Open access to Trading Venues, CCPs and benchmarks	**Business clocks** synchronization - UTC	**HFT** circuit breakers		**Revised suitability & appropriateness** regime esp. for complex products
Double Volume Cap Mechanism for trading equities/equity like traded in the dark	**Consolidated Tape Providers** (CTP)	**Sanctions** by Regulators when there are breaches		**Enhanced system capabilities** for data validation and maintenance
Uniform Tick Size for equity/equity likes	**Increase in transparency obligations** of Systematic Internalisers **(SIs)**			

From MiFID to MiFID II / MiFIR
What does it mean for Members and clients

➢ **Increased requirements as :**

- ▪ It applies *to nearly all financial instruments* (excluding Securities Financing Transactions – SFTs)

- ▪ It requires a *large number of new data fields* for orders and transactions, *new formats* for such fields and *new reporting requirements* (e.g. ISO 20022 / XML)

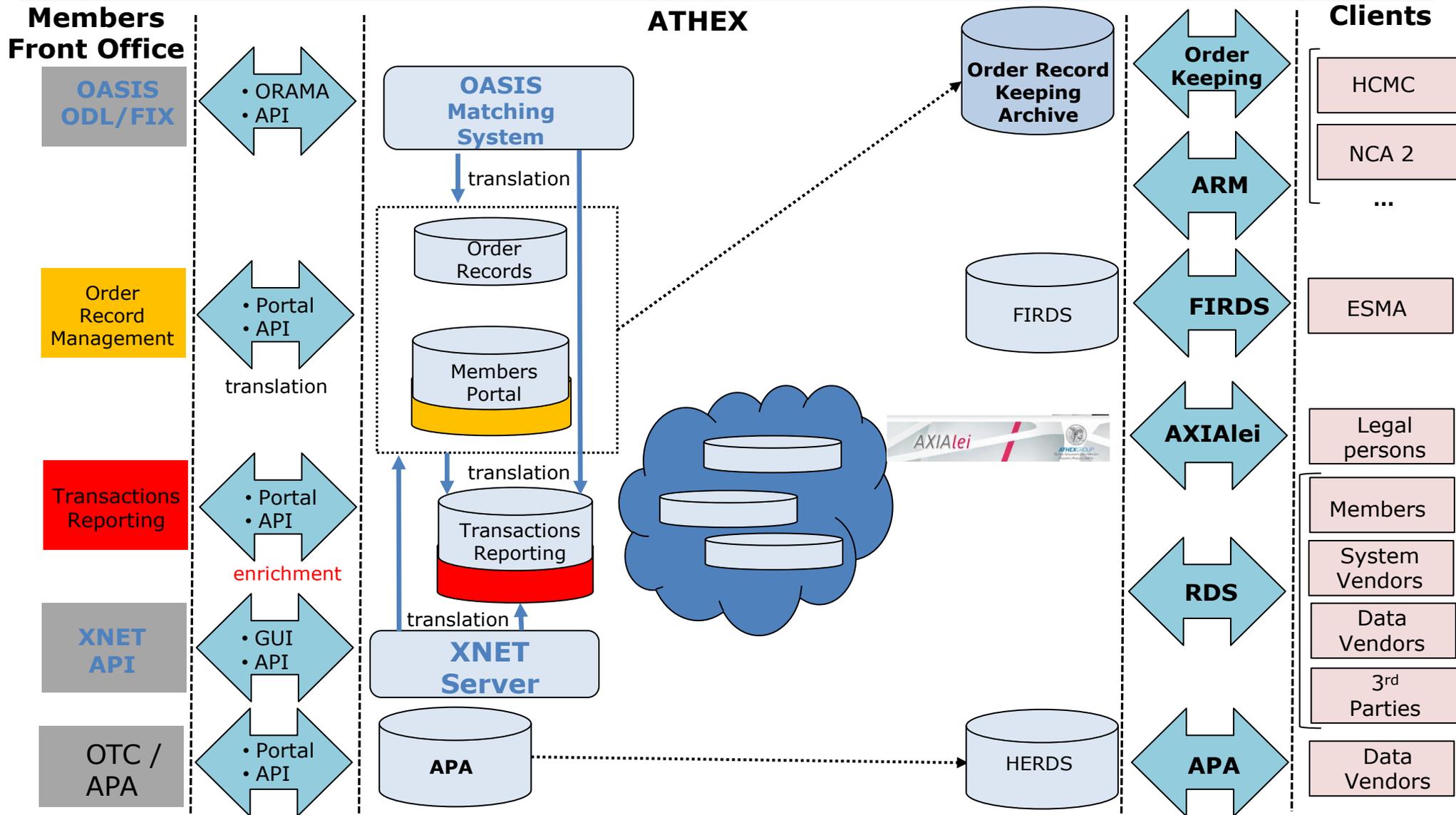- ▪ It applies to *all trading venues* (Regulated Markets, MTFs, OTFs)

Scope Changes From MiFID I to MiFIR
Source: Aite Group

	MiFID I				MiFIR
Number of fields	24 data fields		→		81 data fields
Venues covered	RMs, MTFs		→		RMs, MTFs, OTFs
Instruments covered	Equities, some equity exchange-traded derivatives		→		Nearly the entire universe of financial instruments

From MiFID to MiFID II / MiFIR

7 New Services to be offered by ATHEX

1. Order Record Keeping – **ORK@ATHEX**
   - Service to Members for construction, translation, management and maintenance of full order records at ATHEX
   - Members Portal
2. Transactions Reporting Service – **ARM@ATHEX**
   - Service to Members and clients allowing the collection, enrichment, translation, validation, management and reporting of transactions to NCAs on behalf of Investment Firms.
   - Service to cover transactions in ATHEX and transactions through XNET
   - Service to cover Members and clients transactions in other trading venues, directly or indirectly
3. OTC Trade Reporting – **APA@ATHEX**
   - Provision of the facility to report OTC trades of Members and clients to data vendors
4. LEI provision through ATHEX – **AxiaLEI**
   - Service providing Legal Entity Identifiers to legal persons
5. Financial Instruments Reference Data Systems - **FIRDS reporting**
   - Reference, transparency and double volume cap data provision to ESMA / HCMC
6. **Reference Data Service (RDS)**
   - Provision of reference data to Members, System Vendors, Data Vendors and 3rd parties
7. **Best Execution assistance**
   - Provision of transaction information to Members to assist their best execution reporting (RTS 28)

MiFID II/MiFIR - Services provided by ATHEX

Order, Trade and Data Feed Systems – Workflow Overview

Members Front Office | **ATHEX** | **Clients**

- OASIS ODL/FIX
  - ORAMA
  - API

- OASIS Matching System → translation

- Order Record Management
  - Portal
  - API

  translation

- Order Records
- Members Portal

translation

- Transactions Reporting
  - Portal
  - API

  enrichment

- Transactions Reporting

translation

- XNET API
  - GUI
  - API

- XNET Server

translation

- OTC / APA
  - Portal
  - API

- APA

- Order Record Keeping Archive
- FIRDS
- AXIAlei
- HERDS

- Order Keeping
- ARM
- FIRDS
- AXIAlei
- RDS
- APA

- HCMC
- NCA 2
- ...
- ESMA
- Legal persons
- Members
- System Vendors
- Data Vendors
- 3rd Parties
- Data Vendors

Order Record Keeping

MiFID II/MiFIR requirements and ATHEX services offering

Order Record Keeping
MiFID II/ MiFIR requirements and ATHEX

➢ MiFIR requirements

- Art. 25 of MiFIR requires
  - *Investment firms* to *keep* at the disposal of the competent authority, for *five years*, the relevant data relating to **all orders and all transactions** in financial instruments which they have carried out.
  - *Trading venues* will be required to *collect and maintain* for at *least five years* the relevant data relating to **all orders** in financial instruments which are advertised through their systems.
- RTS 24 and its Appendix describe in detail
  - the *51 fields required along with technical specifications* for order keeping

➢ As a result Trading Venues will need detailed orders information available only from Members, as for example

- Client ID
- Investment Decision ID
- Executing ID

➢ ATHEX intends to provide an efficient, safe and secure **Order Keeping service** ORK@ATHEX

ORK@ATHEX
The full Order Keeping service of ATHEX

- Data generation from OASIS
  - ATHEX will make use of *its systems* to populate most of the required order fields of its Members (*internal translation*)
  - Use of static and dynamic LEI databases for information to be updated and kept in orders
- Minimization of new fields for orders in both the API (FIX, ODL) and the GUI (ORAMA)
  - ATHEX will *minimize* the number of *new fields* for the required information to be supplied from its Members *through the orders*
- Keep latency low
  - ATHEX will make use of *short codes* and *flags* for the new order fields *to keep latency low*
- Members Portal
  - ATHEX will provide a dedicated *Members Portal* for safe and secure access and mapping of short codes to the long codes provided by the Members (*external translation*)
  - Update from Members can happen within the day
- No orders rejection through pre-validation
  - *No logical validation of the short codes* will take place and therefore no orders rejection
- Full order information back to the Members
  - In real-time, enhanced execution reports
  - At the end of day, files

ORK@ATHEX

Workflow description of the new service

Members Front Office

ATHEX

Clients

OASIS ODL/FIX

- ORAMA
- API

OASIS Matching System

translation

Order Records

Members Portal

Order Record Management

- Portal
- API

translation

Order Record Keeping Archive

Order Keeping

HCMC
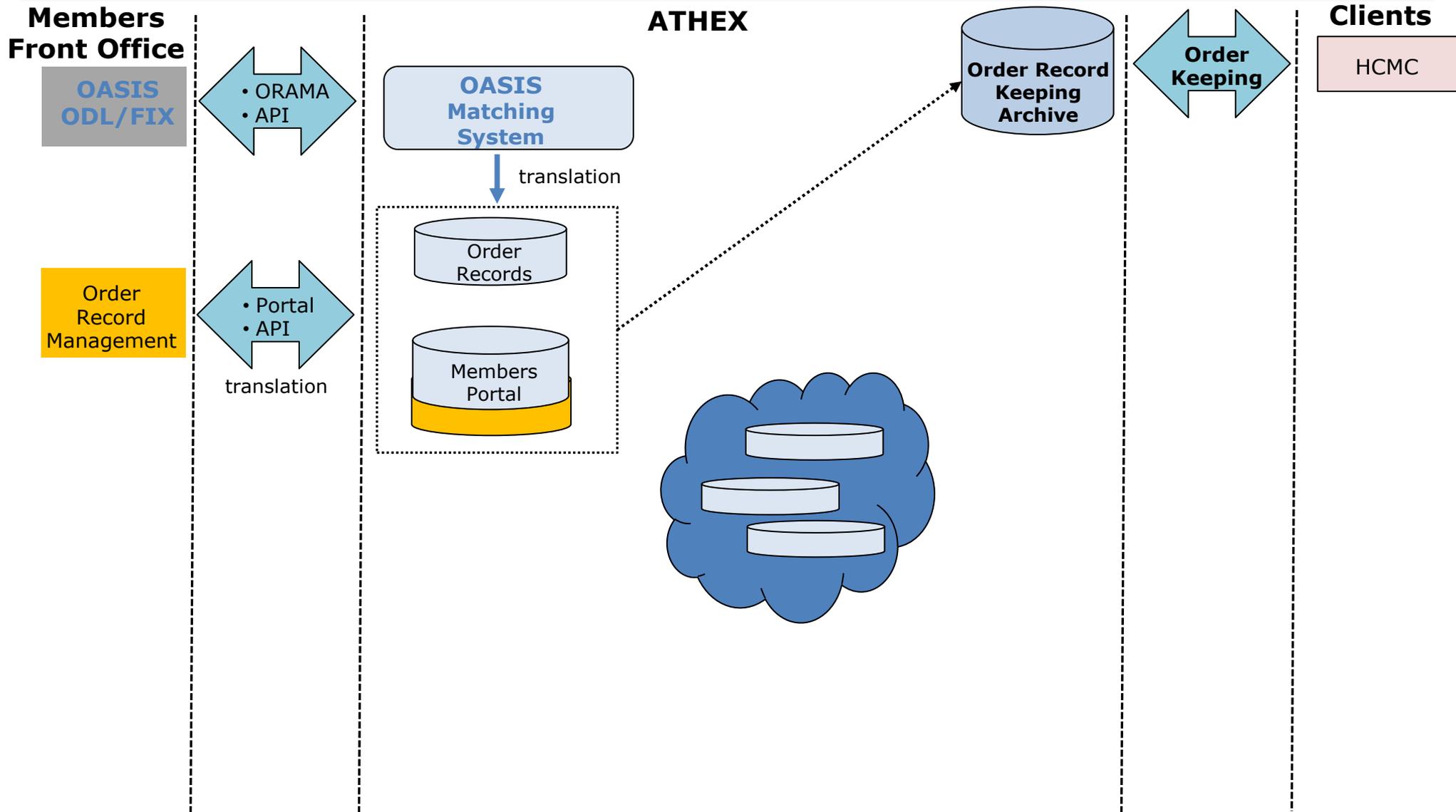
Order Record Keeping
Enhanced orders - New fields required by ATHEX for orders

1. **Client Identification code – Client ID** { Short Code } *RTS 24 Annex- field 3*
   - The (direct) client on behalf of which the Member insert the order
   - Long Code {LEI / NATIONAL_ID}

2. **Investment Decision within the firm – Investment ID** { Short Code } *RTS 24 Annex- field 4*
   - Person or algorithm within firm responsible for the investment decision related to particular order
   - Long Code {NATIONAL_ID / Algorithm}

3. **Execution within the firm – Executing ID** { Short Code } *RTS 24 Annex- field 5*
   - Person or algorithm within firm responsible for the execution of the particular order
   - Long Code {NATIONAL_ID / Algorithm}

4. **Trading Capacity** for the Member entering the order *RTS 24 Annex- field 7*
   - '**DEAL**' - Dealing on own account, '**MTCH**' - Matched principal, '**AOTC**' - Any other capacity

5. **Non-Executing Broker** { Short Code } *RTS 24 Annex- field 3*
   - This field is filled when a Member routes orders through another Member - Technical intermediary ID changed to non-executing broker LEI

6. **Liquidity provision activity** { True or False } *RTS 24 Annex- field 8*
   - Indicates whether an order is submitted to a trading venue as part of a market making strategy pursuant to Articles 17 and 48 of Directive 2014/65/EU

7. **Direct Electronic Access** { True or False } *RTS 24 Annex- field 2*

8. **ALGO flag** { True or False } to be able to fulfil requirements of *RTS 1*
   - Defines whether order entered is a result of investment firm engaging in algorithmic trading

Order Record Keeping
Information regarding persons

➤ **Physical persons and the CONCAT**

- Short code will be inserted in the order

- Long code will updated by Members through the Members portal

- The long code (CONCAT will be defined

  - through the use of *ISO 3166-1 alpha-2 (2 letter country code)* for the nationality of the person

  - the *date of birth* of the person in the format YYYYMMDD

  - the *five first characters* of the *first name*

  - the *five first characters* of the *surname*

➤ **Legal persons and LEI requirement**

- Short code will be inserted in the order

- Long code will updated by Members through the Members portal

- *Legal Entity Identifiers (LEI)* will be used for the Long code

- LEI is a 20-character, alpha-numeric code, to uniquely identify legally distinct entities that engage in financial transactions and needs to be *renewed every year*

- *LEI will be requested* from all *issuers, Members and their clients* operating on ATHEX

- ***LEIs for legal persons can be issued by ATHEX*** through the AXIAlei service

Transactions Reporting

Requirements under MiFID II / MiFIR and service offering by ATHEX

Transactions Reporting
Expanded reporting regime under MiFID II / MiFIR

➢ The **main references** for transaction reporting :

▪ **MiFIR article 26** of MiFIR

▪ **RTS 22** (Transactions Reporting)

▪ **Guidance**: "Guidelines transaction reporting, order record keeping and clock synchronization under MiFID II"

➢ **Scope** of Transaction reporting regime has been **expanded** to include financial instruments

- admitted to trading/traded in a trading venues (Regulated Markets, MTFs, OTFs)
- for which a *request for admission to trading* has been made
- where the *underlying* financial instrument is *traded on a trading venue* and
- where the *underlying* instrument is an *index or a basket composed* of financial instruments *traded* on a trading venue.

➢ **Transaction Reporting applies** to investment firms that execute transactions in financial instruments, across

▪ equities,

▪ ETFs,

▪ fixed income, and

▪ derivatives

Transactions Reporting
What MiFID II / MiFIR requires from Investment Firms (1/2)

➢ **Who** must report

- ▪ Investment Firms which **execute transactions** in financial instruments shall report complete and accurate details of such transactions to their competent authority by the next working day

➢ What does **execute transaction** means

- ▪ An investment firm **executes** a transaction (with regard to Transaction reporting) where it performs the **following MiFID activities** (art.3, RTS 22)
  - *reception and transmission of orders,*
  - *execution* of orders on behalf of clients or dealing on *own account,*
  - *makes the investment decision* in accordance with a *discretionary mandate given by a client,* or
  - *transfers financial instruments to or from accounts,* provided that in each case such services or activities have **resulted** in a transaction.

➢ The "general concept" : **market side** and **client side** transactions reporting

Transactions Reporting
What MiFID II / MiFIR requires from Investment Firms (2/2)

➢ In order to avoid non-reporting or double reporting by investment firms that transmit orders to each other, investment firm that **intends to transmit** the order should **agree with firm receiving** the order whether

- the *receiving firm will report all the details* of the resulting transaction **or**
- the *receiving firm will transmit the order onwards to another investment firm*.

▪ **in the absence of an agreement**

- *each investment firm must submit its own transaction* report containing the details pertaining to the transaction that each investment firm is reporting.

Therefore:

➢ Firms will need to **carefully examine**

▪ **how** transactions came into existence,

▪ what **trading capacity** the investment firm was acting in and

▪ **how many reports** it will, as a result, have to make.

Transactions Reporting
Trading Capacity – Definitions

DEAL	Dealing on own account	Trading **against proprietary capital** resulting in the conclusion of transactions in one or more financial instruments.
MTCH	Matched principal	A transaction where the facilitator **interposes itself between the buyer and the seller** to the transaction in such a way that it is **never exposed to market risk** throughout the execution of the transaction • with **both sides executed simultaneously**, and • where the transaction is concluded at a price where the facilitator makes **no profit or loss**, other than a previously disclosed commission, fee or charge for the transaction.
AOTC	Any other trading capacity	

Transactions Reporting
Trading Capacity – Some examples

➢ ESMA have published Level 3 guidance for transaction reporting. Some examples:

- ▪ **AOTC**, though defined as 'any other trading capacity', includes trading in an *agency capacity*.

- ▪ **DEA** (Direct Electronic Access) activity should be *reported as AOTC or MTCH*.

- ▪ **Both DEAL and MTCH** may be used for *executing client orders*, with the main difference relating to transaction reporting:

  - • **DEAL** permits the *aggregation* of executions and *average pricing over an order*. This is because
    - ✓ the **broker** will need to produce a *single client-side* transaction report and
    - ✓ the **client** will need to produce an *equivalent market-side* transaction report.

  - • **MTCH** requires that details of *each* individual execution be made available to the client. This is because
    - ✓ the **broker** will need to produce client-side transaction reports *for each execution* and so
    - ✓ the **client** will need to produce equivalent market-side transaction reports *for each execution.*

Transactions Reporting
Expanded regime under MiFID II / MiFIR

➢ Complexity of reporting has also increased

  ▪ *Number of data fields* are now increasing from 24 to *65*

  ▪ New *Format*

  ▪ New *business logic f*or reporting

➢ Examples of new, important fields :

  ▪ *Investment firm executing* a transaction must be identified   (art.5 RTS 22)

  ▪ *Natural persons* are required to be clearly identified   (art.6 RTS 22)

  ▪ *Specific details* of the *identity of the client* and identifier are required   (art.7 RTS 22)

  ▪ *Persons or algorithms* responsible for the *investment decisions* must be identified   (art.8 RTS 22)

  ▪ *Persons or algorithms* responsible for *execution of a transaction* must be identified (art.9 RTS 22)

  ▪ If an *applicable waiver* is invoked this must be identified   (art.9,10 RTS 22)

  ▪ *Short sales* must be identified   (art.11 RTS 22)

Transactions Reporting
Transactions Reporting requirements – The 65 fields of RTS 22

Γενικά Πεδία (General Fields)

1. Report status
2. Transaction Reference Number / M
3. Trading Venue transaction identification code / M
4. Executing Entity identification code / M
5. Investment Firm covered by Directive 2014/65/EU M
6. Submitting Entity identification code

Στοιχεία Αγοραστή (Buyer)

7	Buyer identification code	M
8	Country of the branch for the buyer	M
9	Buyer - first name(s)	M
10	Buyer - surname(s)	M
11	Buyer - date of birth	M

Στοιχεία Πωλητή (Seller)

16	Seller identification code	M
17	Country of the branch for the seller	M
18	Seller - first name(s)	M
19	Seller - surname(s)	M
20	Seller - date of birth	M

Στοιχεία Ιθύνωντος Αγοραστή (Buyer Decision Maker)

12	Buyer Decision Maker code	M
13	Buy decision maker - First Name(s)	M
14	Buy decision maker – Surname(s)	M
15	Buy decision maker - Date of birth	M

Στοιχεία Ιθύνωντος Πωλητή (Seller Decision Maker)

21	Seller Decision Maker code	M
22	Seller decision maker - First Name(s)	M
23	Seller decision maker – Surname(s)	M
24	Seller decision maker - Date of birth	M

Πληροφορίες Μετάδοσης (Transmission Details)

25	Transmission of order indicator	M
26	Transmitting firm identification code for the buyer	M
27	Transmitting firm identification code for the seller	M

Πληροφορίες Συναλλαγής (Transaction Details)

28	Trading date time	M
29	Trading capacity	M
30	Quantity	/ M
31	Quantity currency	/ M
32	Derivative notional increase/decrease	/ M
33	Price	/ M
34	Price Currency	/ M
35	Net amount	/ M
36	Venue	/ M
37	Country of the branch membership	M
38	Up-front payment	/ M
39	Up-front payment currency	/ M
40	Complex trade component id	/ M

Πληροφορίες για το Χρηματοπιστωτικό Μέσο (Instrument Details)

41	Instrument identification code	/ M
42	Instrument full name	/ M
43	Instrument classification	/ M
44	Notional currency 1	/ M
45	Notional currency 2	/ M
46	Price multiplier	/ M
47	Underlying instrument code	/ M
48	Underlying index name	/ M
49	Term of the underlying index	/ M
50	Option type	/ M
51	Strike price	/ M
52	Strike price currency	/ M
53	Option exercise style	/ M
54	Maturity date	/ M
55	Expiry date	/ M
56	Delivery type	/ M

Ιθύνων Απόφασης Επένδυσης και Εκτέλεσης (Investment Decision Maker and Executor)

57	Investment Decision within firm	M
58	Country of the branch responsible for decision maker	M
59	Execution within the firm	M
60	Country of the branch supervising the execution	M

Ειδικά πεδία πληροφόρησης (Indicators / Flags)

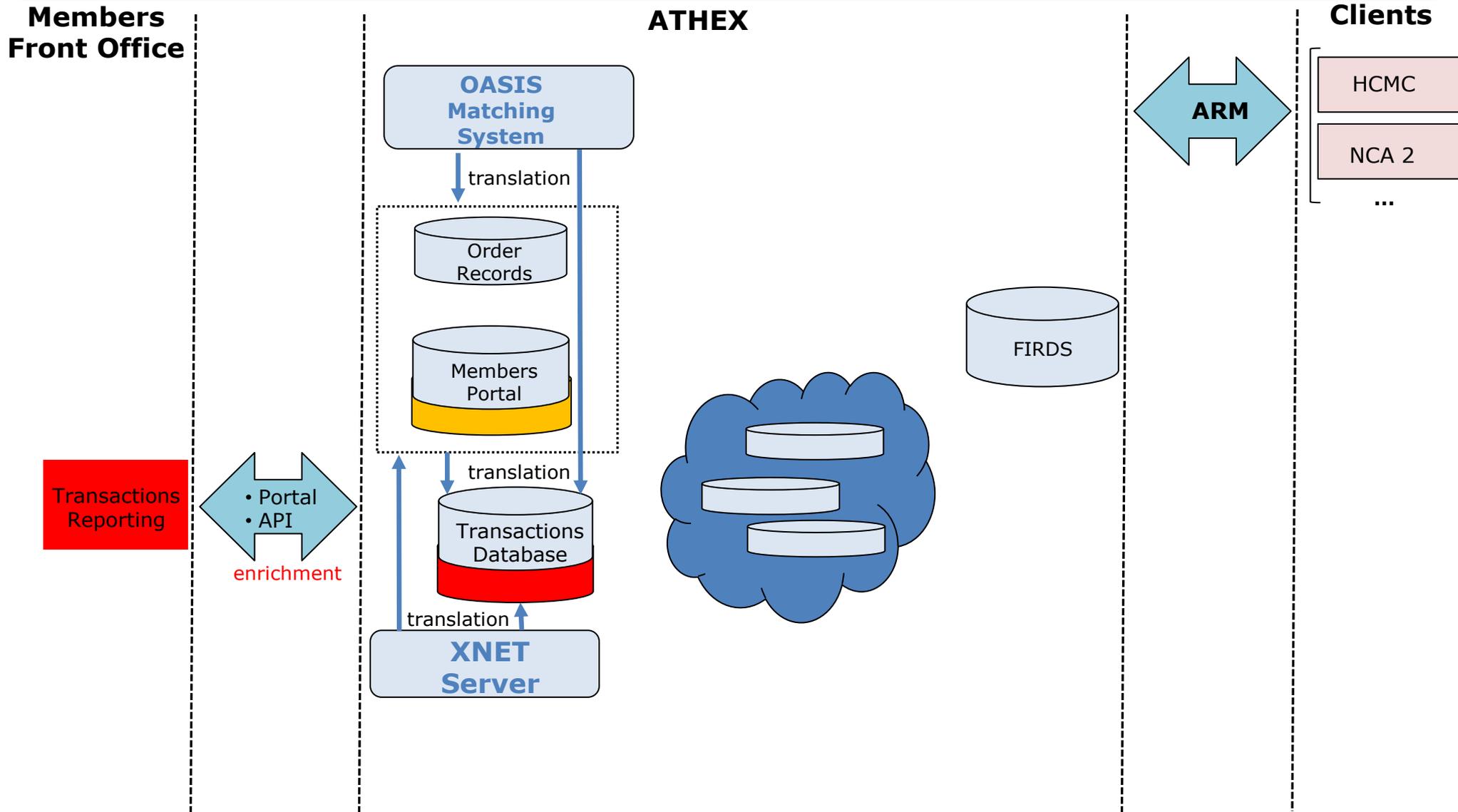|		
61	Waiver indicator	/ M
62	Short selling indicator	/ M
63	OTC post-trade indicator	/ M
64	Commodity derivative indicator	/ M
65	Securities Financing Transaction indicator	/ M

ARM@ATHEX
The Transactions Reporting service of ATHEX
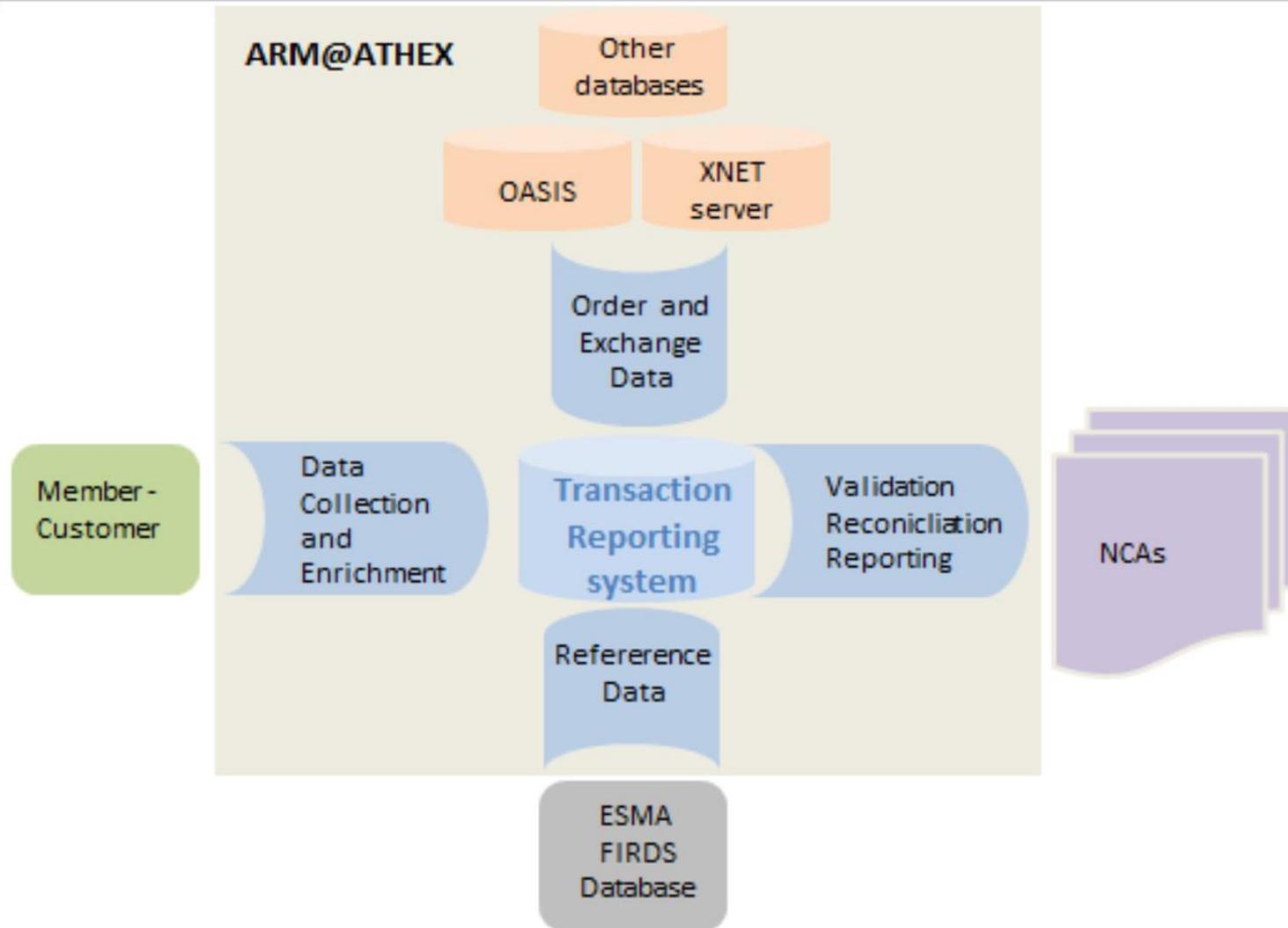
ARM@ATHEX

Workflow and description of the new service

Members Front Office

ATHEX

Clients

OASIS Matching System

↓ translation

Order Records

Members Portal

translation

Transactions Reporting

• Portal
• API

enrichment

Transactions Database

translation

XNET Server

FIRDS

ARM

HCMC

NCA 2

...

ARM@ATHEX
Why ATHEX

➤ **Experience and know-how** in transactions reporting
- Regulatory reporting over a long time period
- TRS of MiFID implementation for HCMC
- Reporting for MiFID on behalf of investment Firms
- Experience with the setup of the FIRDS reporting
- ISO 20022 / XML experience

➤ **One-stop** shop
- Members portal in ATHEX can be used for all markets that our client is active
- Information from order record keeping in ATHEX
- Translation of information available from OASIS and XNET
- Validation of information from FIRDS and other data sources
- APA service for MiFID II OTC trade reporting also available
- Reference Data Services also available
- SFTR reporting will be also available for borrowing and lending products of ATHEX in 2018

➤ **Competitive** pricing
- Low implementation cost

➤ **Obligatory use** of ATHEX for Transaction Reporting **for Non-MiFID Members**
- Members located outside European Economic Area (EEA)
- Members falling in the exemption in MiFID Article 2

Tick Sizes

The new requirements under MiFID II / MiFIR

Tick Sizes

How are they defined by MiFID II / MiFIR

➢ In order to ensure the orderly functioning of the markets from the risk of an ever-decreasing tick size for certain financial instruments, MiFID II implements for them a **mandatory tick size regime across all Trading Venues**.

➢ In accordance to art. 49 of MiFID II and RTS 11, ESMA requires **mandatory tick size** for

- **Shares** – based on a two-entry Table
- **Depository receipts** – based on a two-entry Table
- **Equity ETFs** – based on the last column of a two-entry Table (highest liquidity band)

➢ The minimum tick size for each instrument will be determined as a *function of price and liquidity* according to the Table in the Annex to RTS 11, except for ETFs which have all been included in the most liquid category and for which the tick size will solely be a function of price

➢ In this Table:

- Each column corresponds to different liquidity bands - for each financial instrument the liquidity band is calculated from the *range of average daily number of transactions in the most relevant market* in terms of liquidity for that instrument (during the previous financial year)
- Each row corresponds to a price range corresponding to the price of the order
- The tick size is determined by the column of each instrument for the different price ranges

Tick Sizes
For equities, depository receipts, equity ETFs

➢ In accordance **to ANNEX of RTS 11, ATHEX** will be using

- The *following Table for equities and depository receipts*
- The highest liquidity band (right column) for *equity ETFs*

Price ranges	Liquidity bands					
	0 ≤ Average daily number of transactions < 10	10 ≤ Average daily number of transactions < 80	80 ≤ Average daily number of transactions < 600	600 ≤ Average daily number of transactions < 2000	2000 ≤ Average daily number of transactions < 9000	9000 ≤ Average daily number of transactions
0 ≤ price < 0.1	0.0005	0.0002	0.0001	0.0001	0.0001	0.0001
0.1 ≤ price < 0.2	0.001	0.0005	0.0002	0.0001	0.0001	0.0001
0.2 ≤ price < 0.5	0.002	0.001	0.0005	0.0002	0.0001	0.0001
0.5 ≤ price < 1	0.005	0.002	0.001	0.0005	0.0002	0.0001
1 ≤ price < 2	0.01	0.005	0.002	0.001	0.0005	0.0002
2 ≤ price < 5	0.02	0.01	0.005	0.002	0.001	0.0005
5 ≤ price < 10	0.05	0.02	0.01	0.005	0.002	0.001
10 ≤ price < 20	0.1	0.05	0.02	0.01	0.005	0.002
20 ≤ price < 50	0.2	0.1	0.05	0.02	0.01	0.005
50 ≤ price < 100	0.5	0.2	0.1	0.05	0.02	0.01
100 ≤ price < 200	1	0.5	0.2	0.1	0.05	0.02
200 ≤ price < 500	2	1	0.5	0.2	0.1	0.05
500 ≤ price < 1000	5	2	1	0.5	0.2	0.1
1000 ≤ price < 2000	10	5	2	1	0.5	0.2
2000 ≤ price < 5000	20	10	5	2	1	0.5
5000 ≤ price < 10000	50	20	10	5	2	1
10000 ≤ price < 20000	100	50	20	10	5	2
20000 ≤ price < 50000	200	100	50	20	10	5
50000 ≤ price	500	200	100	50	20	10

Pre-trade Transparency

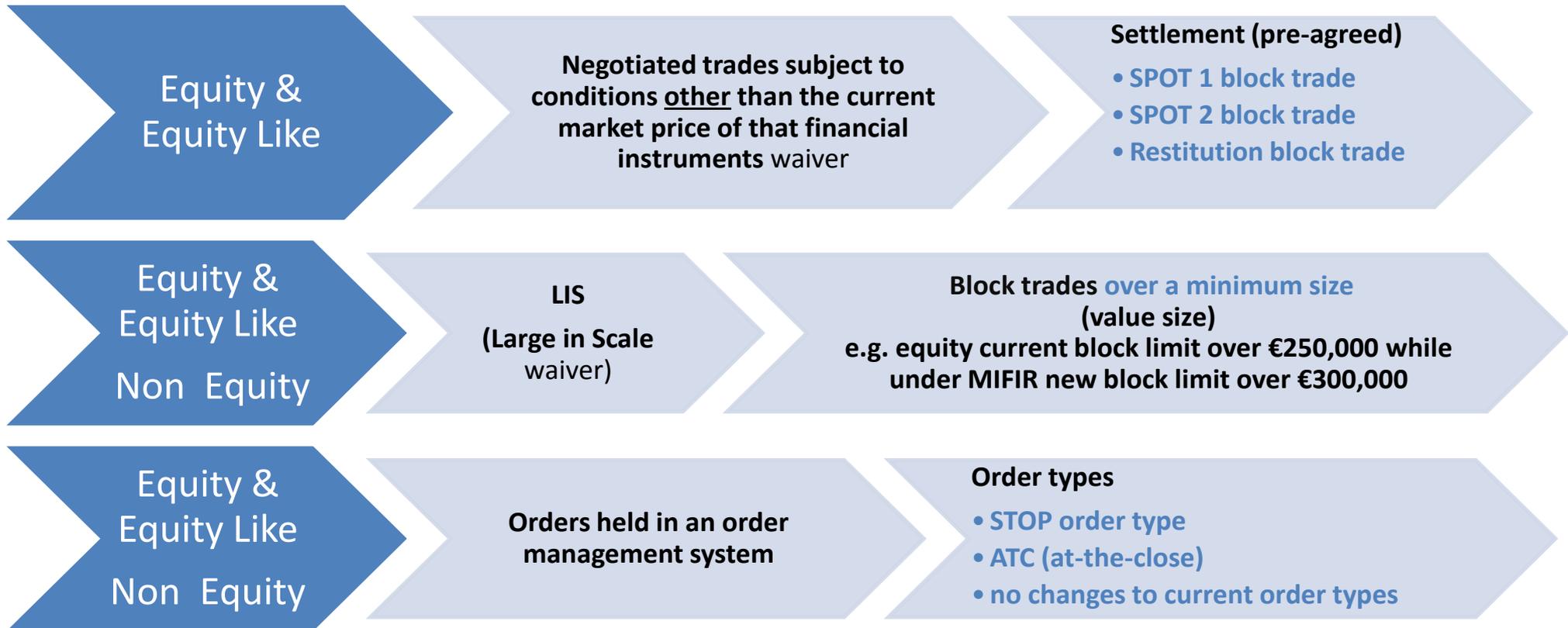Waivers submitted by ATHEX

Pre-trade Transparency

A synopsis

➤ Under MiFID transparency obligations applied only to *equities*

➤ Under MIFID II / MiFIR transparency obligations are *extended* to cover new products
  - *Equity & Equity Like products* e.g.
    - depositary receipts
    - exchange traded funds
  - *Non Equity products* e.g.
    - bonds
    - securitised derivatives (warrants)
    - equity derivatives

➤ *All trading venues* (RMs, MTFs and OTFs) are required to publish bid-ask spreads and show the depth (at least BBO 5) by specifying the size of outstanding unmatched orders

➤ Waivers of this obligation is possible according to instrument type
  - **Equity & Equity Like** (shares, depositary receipts, exchange traded funds)
  - **Non Equity** (bonds, securitised derivatives (warrants), equity derivatives}.

➤ *ATHEX* has submitted a number of pre-trade transparency waiver applications to ESMA via HCMC and will adapt systems accordingly upon approval.

Pre-trade Transparency
ATHEX submitted waivers

Equity & Equity Like

Negotiated trades subject to conditions _other_ than the current market price of that financial instruments waiver

Settlement (pre-agreed)
- SPOT 1 block trade
- SPOT 2 block trade
- Restitution block trade

Equity & Equity Like

Non Equity

LIS (Large in Scale waiver)

Block trades over a minimum size (value size)
e.g. equity current block limit over €250,000 while under MIFIR new block limit over €300,000

Equity & Equity Like

Non Equity

Orders held in an order management system

Order types
- STOP order type
- ATC (at-the-close)
- no changes to current order types

APA @ ATHEX

The new service of ATHEX for OTC trades reporting

Approved Publication Arrangement
What does it entail

➤ What is an Approved Publication Arrangement (APA)

- It allows *trade details* to be made *public* in the required timeframe, with publication
  - either as close to instantaneous as possible or
  - deferred publication

➤ Who should report trades

- Any investment firm trading on *cash or derivatives assets classes* via *Regulated Markets or MTFs, SIs or OTC.*

- Systematic Internalisers (SI), that deal on own account by executing client orders outside of a trading venue without operating a multilateral system, have a pre-trade transparency obligation. They have to make public their pre-trade quotes.

➤ The ATHEX service

- The service is available *to both Members and non-Members* of ATHEX.

- It allows trade details to be made *public* in the required timeframe

- *Effective dissemination* to all data vendors which are already ATHEX clients

APA @ ATHEX

Service Workflow Description

Members Front Office | **ATHEX** | **Clients**

OTC / APA

• Portal
• API

APA

HERDS

APA

Data Vendors
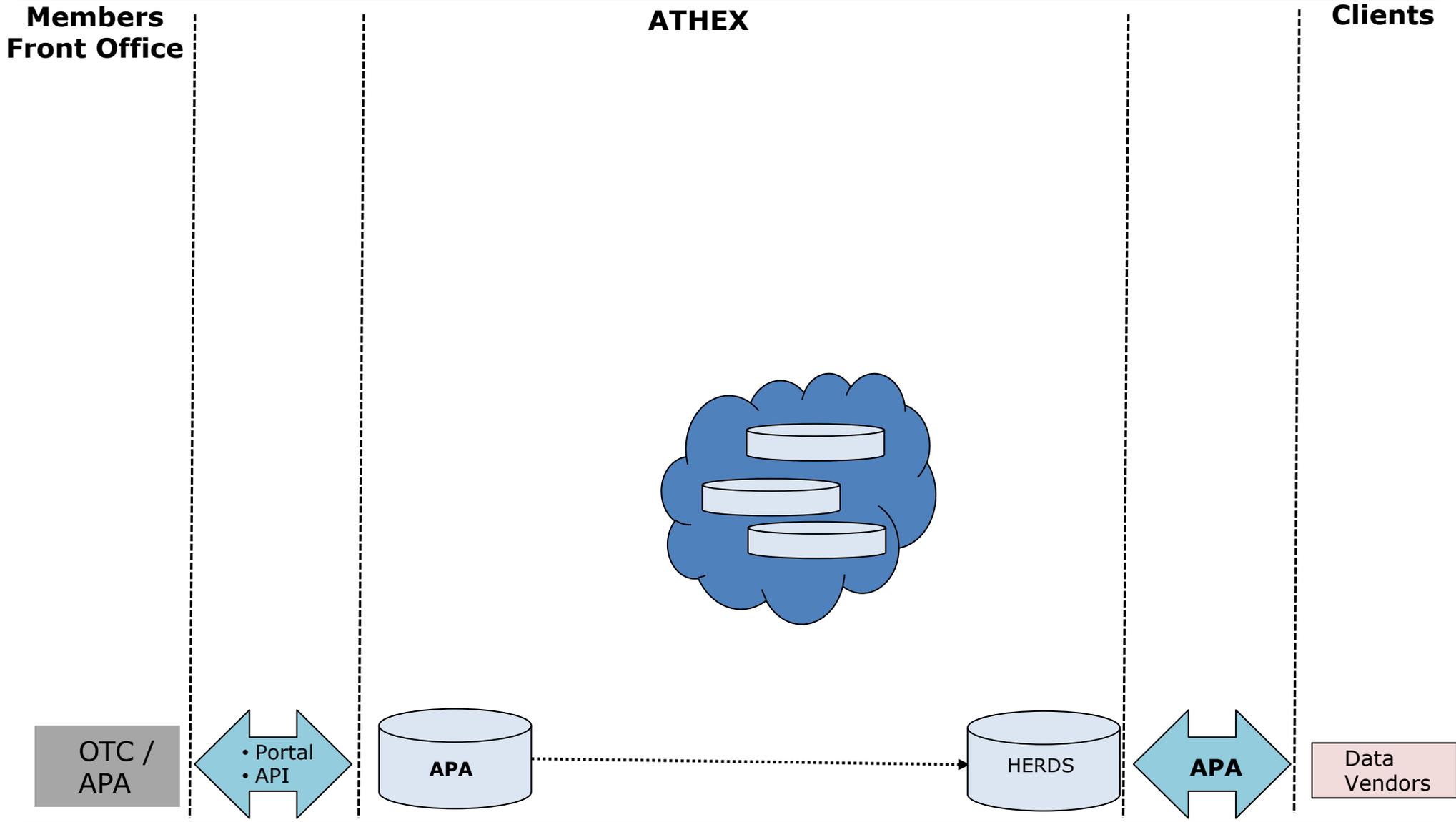
RDS@ATHEX

Reference Data Services provided by ATHEX

RDS@ATHEX
The new service

➢ The number of fields and information needed for financial instruments is increasing as a result of MiFID II/MiFIR

➢ Different parties need valid fields of information at the start of the day to set up their systems, processes and to proceed in an orderly manner in their daily operations. Example of such parties include:

  ▪ ATHEX Members

  ▪ System Vendors

  ▪ Data Feed Vendors

  ▪ Other Investment Firms, their clients and 3rd parties

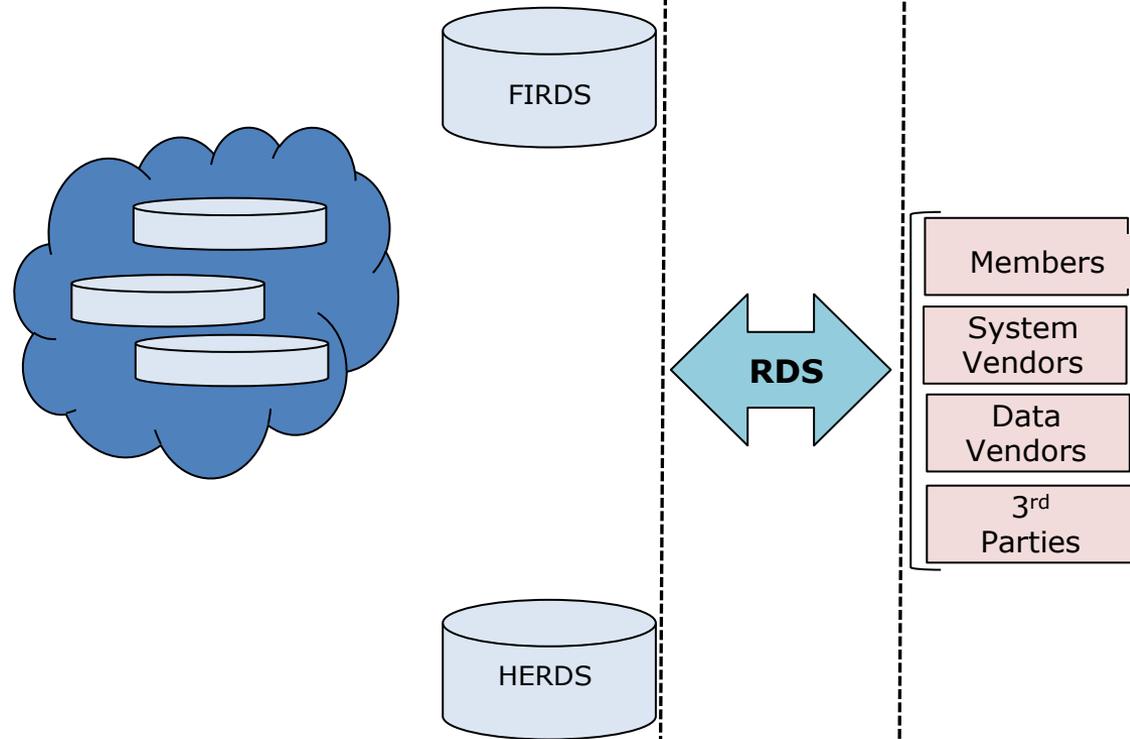➢ ATHEX is planning to create different streams of reference data information for such clients

RDS@ATHEX

Workflow

FIRDS

Members

System
Vendors

RDS

Data
Vendors

3rd
Parties

HERDS

Clock Synchronization

Clock Synchronization

Clock Synchronization
MiFID II / MiFIR requirements and ATHEX

➢ Why clock synchronization

  ▪ *All Trading Venues* and their *Member*s will need to *synchronize their business clocks* used to timestamp reportable events with the Coordinated Universal Time (UTC) for homogeneity reasons.

  ▪ This will support the competent authorities to better monitor the trading activity for market abuse, which is the main driver for the enhanced reporting requirements of MiFID II.

  ▪ **RTS 25** specifies accuracy according to international standards.

➢ Trading Venues shall ensure their clocks adhere to a level of accuracy determined to the gateway to gateway latency of their trading systems

➢ Currently **ATHEX** (due mainly to pre-trade controls prior to matching) measures latency >1ms

  ▪ ATHEX will *include in its technical specs 1μs granularity* but will not make full use of it

  ▪ Dates and Times formatted for ESMA reporting are defined with a 27-byte character string following ISO 8601: YYYY-MM-DDThh:mm:ss.dddddZ

  ▪ According to RTS 25 ATHEX will be required to achieve
    • Maximum divergence from UTC : 1ms or better
    • Granularity of the timestamp : 1ms or better

➢ **Members of ATHEX** will have to ensure the following accuracy for their business clocks

  ▪ Other order book trading activity : max divergence (accuracy) and granularity of 1ms or better

  ▪ Activity on concluding negotiated transactions : max divergence (accuracy) and granularity of 1s or better

Organizational Requirements

Main Issues in accordance to MiFID II / MiFIR

Algorithms
Identification, declaration, flagging and conformance

➢ Algorithms **Identification, declaration and flagging** (RTS 22, RTS 24)

- ▪ *Trading venues* are required to be able to *identify* by means of *flagging from members* :
  - orders generated by algorithmic trading,
  - the different algorithms used for the creation of orders and
  - the relevant persons initiating those orders.
- ▪ For *ATHEX the identification of Algorithms and related fields* are described in the Order Record Keeping sections
- ▪ Algo ID codes for algorithms developed by Members and/or their System Vendors can only be declared once the algo has been fully tested by the member.

➢ Algorithms **Conformance**

- ▪ Investment Firms are required to *certify* their algorithmic trading systems, trading algorithms and algorithmic trading strategies and any changes to them *before* using them on any trading venue
- ▪ Testing may be completed on the testing facility of the venue or by any other appropriate means
  - *ATHEX currently provides a* UAT environment *which mirrors* the production system as a *testing system* for Members
  - Auto orders / transaction generators are *currently parametrized* in a way to accommodate the specific needs of every testing session .
  - ATHEX will *NOT* execute conformance testing of Members algorithms
  - Upon self-certification of their trading algorithms, *Members will update the information required via the Members portal*
  - *Orders* generated by *trading algorithms* are *identified* in ATHEX according to the Order Keeping section fields and technical description

Order-to-Trade Ratio
Definitions and requirements

➢ **Definitions**

  ▪ RTS 9 - Article 1

➢ **Order to Trade Ratio**

  ▪ MIFID II requires trading venues to calculate the ratio of unexecuted orders to transactions (in volume terms & in number terms) in order to prevent disorderly trading conditions .

➢ ATHEX will be *calculating the Order-to-Trade ratios* as required by ESMA

  ▪ For *each Member*

  ▪ At the end of *each trading day*

  ▪ For *each financial instrument* traded under an electronic continuous auction order book or a quote-driven or a hybrid trading system

  ▪ Using *both methodologies*

    • Volume terms {(total volume of orders/total volume of transactions) -1}
    • Number terms {(total number of orders/total number of transactions) -1}

➢ ESMA considers the calculation of this ratio to ensure that **no excess volatility occurs**

Execution Quality Requirements
How is ATHEX planning to assist its Members

➢ **MiFID II / MiFID Requirements**
- **Trading venues** and **investment firms** are required to report **detailed data on execution quality**

➢ **Trading Venues** (MiFID II 27 (3) &(10)(a) and RTS 27) **– ATHEX**
- Obligation of trading venues to publish quarterly Best Execution Reports
    - For *each trading day*
    - For *each trading venue* they operate, and
    - For *each financial instrument*
- Reports must include information *on price*, *costs*, *likelihood of execution*, *best prices and depth* of the order book etc.
- Reports must be *published on website free of charge*

➢ **Investment firms** must demonstrate **(RTS 28)**
- They have taken all reasonable steps to obtain the best possible result for their clients, taking into account price, costs, speed, likelihood of execution and settlement, size and other relevant considerations
- Requires investment firms to publicize their top 5 execution venues for each asset class
- Requires firms to demonstrate that orders are executed using their defined best execution policy (or in accordance with their defined best execution policy

➢ **Additional assistance from ATHEX to Members**
- *Best Bid Price and Quantity, Best Offer Price and Quantity at the time of Transaction execution*
- *Returned to Members* via Execution Reports and end-of-day Transaction files

Volatility Interrupters
Already in place by ATHEX

➤ **Requirements**

- The Volatility Interrupt is a special mechanism that is applied during continuous trading, in order to prevent large deviations of execution prices in a short period of time.

➤ *ATHEX already provides today*

- *Volatility interrupters* by using static and dynamic ranges per instrument, as well as

- *Absolute daily price fluctuation limits*

- We do assessment of all parameters for the above implementation and if we observe a need we proceed to necessary adjustments (last change January 2017)

➤ *Support members* monitoring DEA or algorithmic orders *triggering circuit breakers*

- ATHEX currently informs through Execution Reports (real-time) the member regarding the non-execution of the order due to Volatility Interrupter triggering

Other main Organizational Requirements
Other provision of data from ATHEX to Members (1/3)

➢ **Passive / Aggressive flags**

- ATHEX shall return passive or aggressive indicator back on execution confirmation through
  - the Execution Report
  - The end-of-day transactions files
- At the same time the relevant RTS fields will be populated accordingly

➢ Providing market participants with the **Waiver ID on executions**

- ATHEX shall return relevant to ATHEX Waiver ID back on execution confirmation through
  - the *Execution Report*
  - the *end-of-day transactions files*
- At the same time the relevant RTS fields will be populated accordingly
- Detailed information on waivers will be provided after HCMC/ESMA reply (July 2017)

➢ Providing market participants with **event time and precision/format**

- ATHEX shall return UTC short time format back on execution confirmation (meaning no date but only time)

Other main Organizational Requirements
Other provision of data from ATHEX to Members (2/3)

➤ **Trading Venues organisational requirements of facilities**

Trading venues must have in place effective systems, procedures and arrangements to ensure

➤ its trading systems are resilient,
➤ have sufficient capacity to deal with peak order and message volumes,
➤ are able to ensure orderly trading under conditions of severe market stress,
➤ are fully tested to ensure such conditions are met and are subject to effective continuity arrangements to ensure continuity of its services if there is any failure of its trading systems.

In that aspect ATHEX will impose measures to prevent disorderly trading conditions, such as the following controls:

(a) *price collars*, which automatically block orders that do not meet pre-set price parameters on an order-by-order basis;

(b) *maximum order value*, which automatically prevents orders with uncommonly large order values from entering the order book by reference to notional values per financial instrument;

(c) *maximum order volume*, which automatically prevents orders with an uncommonly large order size from entering the order book.

Other main Organizational Requirements
Other provision of data from ATHEX to Members (2/2)

➢ **Due diligence and risk assessment**

- ■ **ATHEX**

  - • follows ISO for business continuity (ATHEXGroup has deployed an integrated Business Continuity Management System – BCMS- according to the ISO22301:2012 International Standard and has been certified from Lloyd's RQA)
  - • is currently working for implementing the ISO in security (ISO 27001).

- ■ Regarding its **Members due diligence**

  - • ATHEX has in place a process since 2016
  - • ATHEX has standardised annually the electronic process (e.g. secure access to our ticketing system / service desk for the compliance officer of the Members)

FIRDS

Financial Instruments Reference Data Systems and ATHEX

FIRDS

Summary information regarding FIRDS

➢ **Financial Instruments Reference Data Systems (FIRDS) in summary**:

- A *new data collection infrastructure* developed by ESMA and national competent authorities (NCAs)

- Covers a *wide range* of listed on Trading Venues financial instruments (Articles 26 and 27 of MiFIR)

- Brought into the scope of Regulation (EU) No 600/2014 [MiFIR] to link data feeds between ESMA, NCAs and trading venues across the Union.

- Reports required by : *Trading venues* (Regulated Markets, MTFs, OTFs) and *Systematic Internalisers*

- The vast majority of the new IT-systems underpinning FIRDS will need to be built from scratch, based on new parameters and requirements
  - Reference data : *41 fields* in the FIRDS
  - *Extensive use of ISOs* for the different field formats
  - Reporting of reference data to ESMA
    - ✓ by 21.00 of trading day if instrument admitted to trade or trades or has quotes before 18.00 on that day
    - ✓ on the next day, if not

FIRDS

FIRDS and related ATHEX services

➤ **Regarding FIRDS**

- ▪ ATHEX will provide *FIRDS reports* to ESMA / HCMC using *XML/ISO 20022 methodology*

ATHEX

Instrument reference data	Transparency data	Double volume cap data	Transaction reporting
to be reported by: • Trading venues; and • Systemic internalisers	to be reported by: • Trading venues; • Approved Publication Arrangements; and • Consolidated tape providers	to be reported by: • Trading venues; and • Consolidated tape providers (upon request)	to be reported by: • Investment firms
Start date: Jul 2017	Start date: September 2017		Start date: 3 January 2018
Reported to: ESMA	Reported to: ESMA		Reported to: NCAs

FIRDS
FIRDS and related ATHEX services

➤ **Regarding ISINS and FISNs**

- ATHEXCSD is National Numbering Agency for Greece (ANNA member)

- ISIN codes are already allocated through the admission to trading process and no change is anticipated in that process

- ATHEX *will be producing and using ISINs for* **all listed derivatives**

- ATHEX *will be producing and using* Instrument short name *FISN code for all listed financial instruments*

- The ISIN and FISN codes will be communicated in our market Data Feed, the Reference Data and to the required reporting to ESMA.

- ATHEX will be *using ESMA's FIRDS database* for validation of its reference data to be used for other services

From MiFID to MiFID II / MiFIR

ATHEX plan to Go Live from now

APRIL 2017
- AFME Questionnaire sent by ATHEX
- Initial feedback from fora and Members

MAY 2017
- Presentation to Members, System Vendors, Data Vendors and Clients
- Technical Specifications
- Further feedback

JUNE 2017
- Finalization of technical specifications
- Further discussions with Members, System Vendors, Data Vendors and Clients
- Presentation on waivers, MM arrangements etc

SEP/OCT 2017
- Testing Environment available for Testing

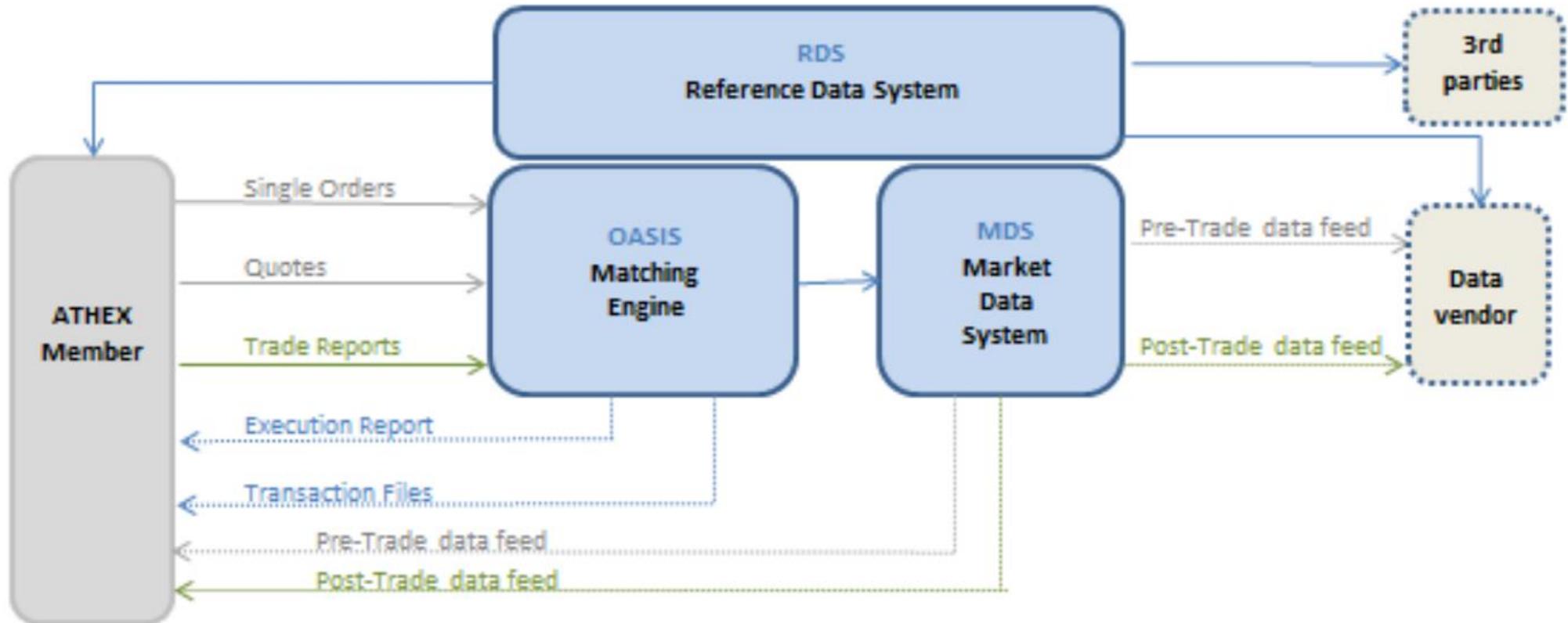**January 3rd 2018**

GO LIVE

MiFID II / MiFIR και OASIS

The enhanced fields and services

Orders, Trades and Data Feed requirements
Overall workflow and description

➤ **"Enhanced"** will refer to additional fields to be used as opposed to those used today

Enhanced Instrument Reference Data System – RDS
New Fields

➢ **MiFID II / MiFIR requirements**

1. **Instrument identification code** {ISIN}
2. **Underlying Instrument identification code** {ISIN}
3. **CFI Code** {ISO 10962}
4. **Venue of Execution**
5. **Transactions to be cleared** (for derivatives only) (true/false}
6. **Issuer or Operator of Venue Identifier** {LEI} {Static LEI}
7. **Price currency**
8. **Price notation**
9. **Notional currency**
10. **Strike price currency**

➢ **Other Business requirements**

   ▪ Will be included in the specifications

Enhanced Orders
New Fields

1. **Direct Electronic Access** {true/false}

2. **Client Identification** {short code => LEI/National ID}

3. **Investment decision within firm identification** {short code => NATIONAL_ID/Algorithms}

4. **Execution within firm identification** {short code => NATIONAL_ID/Algorithms}

5. **Non-executing broker identification** {short code => LEI}

6. **Trading capacity** (DEAL, MTCH, AOTC)

7. **Liquidity provision** flag {true/false}

8. **ALGO** transaction flag {true/false} (with regard to execution from investment firm)

Enhanced Quotes
New Fields

1. **Direct Electronic Access** {true/false}   (practically in case of sponsored access)

2. **Client Identification** {short code => LEI/National ID} (practically in case of sponsored access)

3. **Investment decision within firm identification** {short code => NATIONAL_ID/Algorithms}

4. **Execution within firm identification** {short code => NATIONAL_ID/Algorithms}

5. **Non-executing broker identification** {short code => LEI}

Enhanced Trade Reports
New Fields

1. **Direct electronic access** {true/false}

2. **Client Identification** {short code => LEI/National ID}

3. **Investment decision within firm identification** {short code => NATIONAL_ID/Algorithms}

4. **Execution within firm identification** {short code => NATIONAL_ID/Algorithms}

5. **Non-executing broker identification** {short code => LEI}

6. **Trading capacity** (DEAL, MTCH, AOTC)

7. **ALGO** transaction flag {true/false} (with regard to execution from investment firm)

8. **DUPL** flag {true/false}

9. **SDIV** flag {true/false}

Enhanced Execution Reports
New Fields

1. **Date and time of execution** {YYY-MM-DDTHH:MM:SS.DDDDDDZ}

2. **Direct electronic access** {true/false}

3. **Client Identification** {short code}

4. **Investment decision within firm identification** {short code}

5. **Execution within firm identification** {short code}

6. **Non-executing broker identification** {short code}

7. **Trading capacity** (DEAL, MTCH, AOTC)

8. **Liquidity provision flag** (true/false)

9. **ALGO** flag {true/false}

10. **DUPL** flag {true/false}

11. **SDIV** flag {true/false}

12. **Waiver Indicators** {LRGS, RFTP, NLIQ, OILQ, PRIC}

13. **Best bid price** at time of execution

14. **Best bid quantity** at time of execution

15. **Best offer price** at time of execution

16. **Best offer quantity** at time of execution

Enhanced Transaction Files
New Fields

➢ These are the files that Members receive at the end-of-day through the portal

➢ These files will have the same information as the execution reports

➢ For remote members additional information is added(e.g. settlement day)

Enhanced Data Dissemination – Post-trade feed
New Fields

1. **Date and time** {YYY-MM-DDTHH:MM:SS.DDDDDDZ}

2. **Publication Date & Time** {YYY-MM-DDTHH:MM:SS.DDDDDDZ}

3. **Notional amount**

4. **Waiver Indicators** {LRGS, RFTP, NLIQ, OILQ, PRIC}

5. **ALGO flag** {true/false}

6. **CANC flag** {true/false}

7. **SDIV flag** {true/false}

8. **TPAC flag** {true/false}

Appendix

Direct Electronic Access – MiFID II/MiFIR

➢ '**direct electronic access**' means an arrangement where a member or participant or client of a trading venue **permits a person** to use its **trading code** so the person can electronically transmit orders relating to a financial instrument directly to the trading venue and

- direct market access (DMA)

  - includes arrangements which involve the use by a person of the infrastructure of the member or participant or client, or any connecting system provided by the member or participant or client, to transmit the orders

- sponsored access

  - arrangements where such an infrastructure is not used by a person

APPENDIX

RTS 24 – Order Record Keeping

RTS 24 - ORDER RECORD KEEPING

Total Number of Fields	51
Fields Not Applicable to ATHEX	6
Relevant Fields for ATHEX Markets	45

Description	# of fields
Number of Fields from Enhanced Orders (from the Member)	7
Number of Fields "translated" by ATHEX systems	51
Fields N/A for ATHEX	6

APPENDIX

RTS 22 – Transaction Reporting and RTS 28 assistance

RTS 22 - TRANSACTION REPORTING

Total Number of Fields	65
Fields N/A to Trading Venues	26
Relevant Fields for ATHEX Markets	39

Description	# of fields
Number of fields from enhanced orders (entered by Member)	7
Number of Fields "translated" by ATHEX systems	21
Number of Fields "enriched" by the Member	26
Number of Fields added by ARM@ATHEX	2
Number of Fields enriched by Member in OTC Derivatives only	15
Additional Fields to assist "Best Execution" reporting of Member (RTS 28)	4

Support

MiFIDII@athexgroup.gr