

Document title

## **Saturn APA ARM Services**

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### **Functional Overview**

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## About This Document

This document describes the Euronext Global Reporting Solution concerning the Euronext APA/ARM Services as well as the transaction modalities for Euronext Members not subject to MIFIR and the Cleared OTC Trade Facility. The objective is to give an overview of the services and functionalities. For more detailed information Market participants have to refer to the related documentation described below.

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## Document Audience

This document is intended for our clients, Euronext Members & Non-Members.

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## Related Documentation

- <https://www.euronext.com/fr/trading-services/euronexts-apa-arm-services-under-mifid-ii>
  - Saturn Web Services specifications
  - Euronext APA Optiq MDG Client specifications
  - Euronext Global Reporting Solution – Saturn User Interface
- <https://www.euronext.com/fr/trading-services/cleared-otc-trade-facility>
  - OTC Cleared Trade Facility

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## History of Last Document Changes

The following lists the changes related to this version. The full document history is available [here](#).

REVISION NO.	DATE	CHANGE DESCRIPTION
5.351.0	28 Oct 2024	<ul style="list-style-type: none"><li>■ Added <a href="#">Section 5.4.2 Non-Optiq historical transactions reporting (Upload File only)</a> : new functionality offered by the application, which allows non Optiq historical transactions reporting.</li></ul>

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## Contact

For further information relating to this document as well as the Euronext Global Reporting Services, please contact your relationship manager at [ccc@euronext.com](mailto:ccc@euronext.com).

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## 1. EXISTING SITUATION

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### 1.1 MIFID I EURONEXT CASH OFFER

With MIFID I in 2007, a global Cash offer was built allowing Euronext members and non-members to fulfil their main new reporting obligations:

- Post-trade transparency, also called “Trade reporting”,
- Reporting to the relevant market authority, also called “Transaction reporting”.

In addition to this offer, a clearing/settlement facility was also made available for our members on Euronext’s instruments through a dedicated Trade Confirmation System (TCS) operation type “OTC Trade” (K).

The services are based on Euronext’s TCS system for all the relevant flows, except for Euronext’s transactions performed on its markets, regulated or MTFs, that are directly managed from the UTP cash trading system.

The referential scope currently covers all Euronext’s products as well as the main European shares and ETFs. Transactions reporting is performed for the following NCAs: AMF, AFM, FSMA and CMVM.

For Euronext members, the following access methods are possible:

- Through SFTI® using the FIX or Binary protocols for TCS ■

Through the Web:

- GUI: TCS-WEB
- Web Services: eTCS (Soap protocol)

Only the services through the Web are made available to non-Euronext members.

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### 1.2 MIFID I EURONEXT DERIVATIVES OFFER

Since derivatives products were not in the scope of MIFID I, nothing was implemented.

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## 2. INTRODUCTION

As part of the implementation of MiFID II regulation, European investment firms must report their daily transactions to the regulator they depend on and make public the details of each trade executed outside of a trading venue. Systematic Internalisers (SI) have to make public their quotes to fulfill their pretransparency obligations.

Euronext has developed a suite of Transaction and Publication services as an APA and ARM through a new global reporting solution called **Saturn** to allow market participants in Europe to comply with the new regulation.

This solution is available to Euronext's members and non-members. The instruments scope covers the ESMA referential and for publication purposes open to instruments without ISIN code.

**This solution will replace** the current services from 3 January 2018 which are based on the Trade Confirmation System (TCS) for Off Book Off Exchange activity. Note that the **eTCS** solution will be decommissioned as well.

Euronext's APA / ARM Services through Saturn will cover the following services:

- Transaction Reporting on Euronext's Markets
  - All trading activity performed on Euronext's Trading Venues conducted directly by Euronext's members
- Transaction Reporting : ARM
  - All trading activity performed in Europe except on Euronext's Trading Venues (for members and non-members)
- Trade Reporting : APA post-trade publication
  - OTC and Systematic Internalisers (SI) trades
- Trade Reporting : APA pre-trade publication
  - SI Quotes

Euronext's Members will be able to benefit from the Cleared OTC Trade Facility that will be supported by Saturn. Use of this facility with APA or ARM reports is also possible submitted to subscription to APA or ARM services.

This facility will be removed from the TCS System which won't support anymore OTC reporting facilities.

For Transaction Reporting, Euronext aims to report to the following Market Authorities:

- AFM, AMF, ATVP, CBI, CONSOB, CMVM, CNMV, CSSF, FCA, FSMA and any other Market Authorities if required by market participants.

The APA/ARM sections of this document comply with the UK DRSP regulatory framework governance.

For further information about subscription to these services, please contact your relationship manager at [ccc@euronext.com](mailto:ccc@euronext.com).

### 3. SATURN SOLUTION OVERVIEW

All the services described below are managed and monitored by a new, unique and dedicated tool named Saturn.

The Saturn tool is a Web Based solution with a strong authentication system that includes:

- A GUI WEB interface, with access via RSA SecureID® (Cards/Tokens/Soft Tokens)
- WEB API REST with Login/Password attribution and 2FA (two-factor authentication). For API Access, Security Certificates are provided.

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#### 3.1 A SINGLE ENTRY POINT FOR SEVERAL REPORTING SERVICES

The Saturn solution supports several types of services, mainly focused on Reporting purposes.

The services supported by Saturn are the following:

- **Transaction Reporting services** as an ARM and a Trading Venue
- Reporting facility for Euronext members **not subject to MIFIR**
- **Publication** as an APA
- Cleared OTC Trade Facility
- Commodities position limit reporting
- Short and Long Code management for Euronext & BDL Market Members

For each of the services mentioned above, dedicated and separate documents are available on MiFID II section of the Euronext website.

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#### 3.2 GUI OVERVIEW FOR APA/ARM

The Saturn tool includes a GUI WEB interface, with access via RSA SecureID® (Cards/Tokens/Soft Tokens). The following key features are available on the GUI:

- Monitoring and management of all reporting activity;
  - Management of the different User Profiles;
  - Chinese walls between Business Units;
  - Configurable dashboard per user for an easiest way to check trade reports, feedbacks from regulators, statistics;
  - Online history of trades (30 days ) and Online statistics (one year) ;
  - Easy correction through the GUI, incl. possibility to manually resubmit;
  - Manual upload facility with CSV file or DAT file depending on the services;
  - *Instruments Referential data consultation, (to be implemented Q1 2018);*
  - *Audit trail; Email alerts ( to be implemented Q1 2018).*
- 
- For more information about the Saturn GUI, please refer to “Euronext Global Reporting Solution – Saturn Interface User Guide” document.

SATURN SOLUTION OVERVIEW

### 3.3 SATURN WEB API REST OVERVIEW FOR APA/ARM

The WEB API REST can be accessed with a Login and a password attribution and a 2FA (two-factor authentication).

- HTTPs secure access over the Internet – no infrastructure required
- Message format: REST;
- Transport mechanism: HTTPS;
- Flexible integration thanks to new Web API REST format supporting multiple formats (JSON, XML & CSV for upload facility). FIX format will be available in Q1 2018, subject to client demands.

Summary of the main functions:

- Possibility to submit, amend and cancel reports;
  - Euronext real time feedbacks availability and NCAs feedbacks provided on request; ■
- Chinese walls between business activity based “Business Unit” features.

List of the Operation types:

Operation Type	Description
<i>RetrieveStatistics</i>	<i>Query returning trade reporting statistics to the client<sup>1</sup></i>
<i>RetrieveLEIReferentialData</i>	<i>Query returning LEI Referential Data</i> <i>Erreur ! Signet non défini.</i>
<i>RetrieveMICReferentialData</i>	<i>Query returning MIC Referential Data</i> <i>Erreur ! Signet non défini.</i>
<i>RetrieveInstrumentsReferentialData</i>	<i>Query returning part of the Instruments Referential Data</i> <i>Erreur ! Signet non défini.</i>
SubmitTrades	Submit Trade(s) to the Saturn system for transaction reporting and/or APA purpose
RetrieveTradesDetails	Query returning trade(s) details including trade statuses (Euronext or regulatory feedbacks statuses) related to Transaction Reporting, APA, or both
SubmitAPAQuotes	Submit SI Quote(s) to the Saturn system for APA Pre-Trade transparency purpose -
RetrieveAPAQuotesDetails	Query returning SI Quote(s) details related to APA Pre-Trade transparency Publication -

- For a full description, please refer to the dedicated ‘Saturn Web Services Specifications’ document, available on the MIFID II section on the Euronext website:

– <https://www.euronext.com/fr/trading-services/euronexts-apa-arm-services-under-mifid-ii>

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<sup>1</sup> This will be implemented in Q1 2018. More details will be provided in due course.



## 4. APA / ARM COMMON FEATURES

The transaction and publication services included in Saturn are supported by a common approach in multiple areas.

- On boarding and support: a single entry point for each step and related to:
  - Question on the offer: your relationship manager  
[ccc@euronext.com](mailto:ccc@euronext.com).
  - Onboarding Process : Euronext Membership Department  
[euronextmembership@euronext.com](mailto:euronextmembership@euronext.com)
  - Support and conformance testing : EMS Customer Technical Support Group (CTSG)  
[ctsg@euronext.com](mailto:ctsg@euronext.com)
  - Monitoring and support when up and running
    - Euronext Market Services team will monitor the whole reporting and publication activity and will be the single-entry point for any support from 06:30 to 22:00.
  
- Access: Saturn Solution as described above.
  - Note that whatever the service subscribed will be, there will be no supplementary access required.
  - This principle is applicable for all services supported by Saturn, for example :
    - All Euronext members have to report their short / long code mapping to Saturn.
    - As a consequence and depending on their internal organisation, it will be up to the members if supplementary access are necessary or not.
  
- “Chinese walls” between Business units:
  - In order to ensure a strict separation in terms of contribution and monitoring, a dedicated feature is made available, when the flows inside a single Entity need to be split.
  - Based on this, different users groups can be set up with dedicated profiles and access rights to the data.
  - Currently three main profiles are defined for Saturn:
    - Admin profile: allows to manage Users account (GUI and API) as well as certificates. No view on the Business data.
    - Supervisor profile: a dedicated profile allowing monitoring and intervening, depending on the rights, in all the Business Units flows.
    - Saturn Users profile: the access is granted only if it is set up in the Business data flow the user he is linked to.
  
- Reporting on behalf facility :

For both transaction reporting and publication, Saturn offers the facility to manage the possibility for investment firm to “outsource” the transaction reporting or publication activity to a third party.
  
- Saturn Messages / files:
  - A single entry message / file (CSV) supporting these services to submit, amend or cancel trades
  - A single Ack message
  - The exceptions being for APA SI quotes where a dedicated Quotes message is available.

**■ Controls in place:**

- All the controls are performed as soon as the reports are submitted to Saturn;
- The acknowledgements and explicit errors (if any) are made available in a real time basis, based on the number of reports to be processed;
- Trade report “rejections” are limited to some key cases (please see detail below);
- The “failed” status allows an easier correction through the “amend” function;
- A “Bypass” feature allows to bypass a check that created a failed status (referential checks).

**■ Mandatory data:**

Whatever the way reports are submitted, and whatever the services a participant subscribes to, there is a core of mandatory data to submit trade reports. Any missing field for a trade submission will lead to a submission rejection. These key data are described in dedicated “Saturn Web Services specifications”.

Once these fields are provided, users must add additional fields to the transaction for Transaction Reporting or/and Publication and/or clearing purposes. The Saturn integration of a trade can be done through one single submission or several, but the key data has to be provided for any submission.

**■ Monitoring, statistics and storage:**

- Monitoring of the trades reports “life” and history are available in Saturn during 30 days
- Statistics are available during one year
- The trades report will be stored during five (5) years in a dedicated Euronext database

**■ Common Instruments scope:**

- ESMA referential

*Euronext Transactions Reporting Offer*

## 5. EURONEXT TRANSACTIONS REPORTING OFFER

Investment firms must report their daily transactions to the regulator they depend on:

- Either by themselves and directly to the relevant NCA;
- Or through an Approved Reporting Mechanism (ARM);
- Or through a Trading Venue, if the service is offered and only for the Trading Venue trading activity.

As a Trading Venue and as an ARM, Euronext’s system will enable investment firms to fulfil their Transaction Reporting obligations.

## 5.1 TRANSACTION REPORTING SUMMARY

The transaction reporting covers two main areas:

- Transaction Reporting on Euronext Trading venues:  
*For Euronext members only.*
  - All trading activity performed on the Euronext Trading Venues, regulated markets and MTFs:
    - *Note that on a regulatory point of view, only transactions done on Euronext Paris markets will be considered as reported by a trading venue*
  - On book trading performed on Cash and Derivatives trading engines
  - Off book trading but On-Exchange performed on AtomX for derivatives and on TCS for cash products
- Transaction Reporting (ARM):
  - All trading activity performed in OTC, SI, RM, MTFs or OTFs except on the Euronext Trading Venues.
- Transaction Reporting on instruments with a basket underlying:
  - Note that transaction reporting for trades performed on instruments with a basket underlying will not be part of the scope for the launch in January 2018.

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## 5.2 TRANSACTION REPORTS SUBMISSION / AMEND OR CANCELTION

Trade reports submission i.e. "NEW", modification i.e. "AMEND" or cancelation i.e. "CANCEL" can be done either through:

- The Saturn GUI :
  - Manually
  - Or using the upload facility (CSV) - The Saturn WEB API REST: ○ Using the different available formats : JSON, XML (FIX: Q1 2018, subject to client demands ) ○ Or using the upload facility (CSV)

All actions performed on a trade report will be recorded in the "Trade detail" up to 30 days. All these actions are as well logged in a dedicated audit trail. "Failed" reports are stored without limitation, up to the correction.

Keys items regarding submission, modification and cancelation are described below.

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### 5.2.1 Transaction reports submission

#### ■ Transaction reporting options to submit reports:

For Euronext members, there are two ways to perform the reporting of transactions:

##### – Transaction reporting using the “NEW” action:

Members using this function are expected to provide all the data required in order to pass successfully the Saturn check module, and reports sent to the relevant NCA.

Euronext members wishing to use this feature rather than the “AMEND” one (see below) for activities performed on Euronext trading Venues are informed that trading data will not be taken into account.

##### – Transaction reporting using the “AMEND” action:

The Saturn solution collects on a real time basis all the trades performed on Euronext trading venues, Cash and Derivatives, ON and OFF Book. As a consequence trades coming from Cash and Derivatives Trading Engines, TCS for Off Book trades and AtomX are present in SATURN for reconciliation and transaction reporting purposes.

Note that Derivatives Strategies are **not** included in this reconciliation process. Euronext Members will have to provide reports as “NEW” for each of the legs to be reported.

For Euronext members reporting activity on Euronext Trading venues, the “amend” function must be used, and the “Trade ID” is the key for the reconciliation. Using this function members will be able to complete the missing required data.

Note that this way of reporting will be used by Euronext members that are not subject to MIFIR.

Euronext **strongly recommend to its Members to use the “AMEND” function** when reporting activity on Euronext Trading venues.

For Non Euronext members, the reporting will be done through the “NEW” action and all the necessary data to pass successfully the Saturn check module are required.

*Note:* whatever the option chosen, “CREATE” or “AMEND”, Saturn will consider these reports as new and identify them as “NEWT” in the XML file for NCA.

#### ■ Joints accounts - point of attention:

There is no limitation for the number of “Joint Accounts” using the JSON or XML formats to be reported to the regulator when there are more than one client.

However and regarding the format of the CSV file, this upload facility will support only two “Joint accounts”.

---

### 5.2.2 Transaction reports cancelation

The cancel function can be performed on a trade report whatever its status, except if still cancelled or rejected by the NCA.

- For a trade report not yet submitted to the NCA, the cancellation will be effective immediately in Saturn, and logged in “trade detail” of the trade report, up to 30 days. This cancellation will not be sent to the NCA.
- For a trade report submitted to the NCA, the cancellation will be effective immediately in Saturn, and logged in “trade detail” of trade report, up to 30 days. This cancellation will be sent to the NCA based on the standard kinematic in place for Euronext and the relevant NCA. The report status provided to the NCA will be “CANC”.
- Note that report cancellation will be technically possible up to 30 days.

---

### 5.2.3 Transaction reports amendment

The amend function can be performed on a trade report whatever its status, except if already cancelled.

The below only focuses on the “amend” where the purpose is to correct or complete missing data, but not as defined in section 5.2.1 to submit a report.

- Amend a trade following a “failed” status following the submission in Saturn  
If the Amend is successfully processed by Saturn, the modification will immediately be effective , and logged in “trade detail” of the trade report, up to 30 days. Report will be sent to NCA as a normal trade report, with “NEWT” report status in the XML file.
- Amend a trade following a “Rejected” status following NCA feed Back.
  - If the Amend is successfully processed by Saturn, the modification will immediately be effective , and the trade will be resent to NCA following the kinematic in place, as a normal trade report and with “NEWT” report status.
- Amend a trade following a “Accepted” status following NCA feed Back.
  - If the Amend is successfully processed by Saturn, the modification will immediately be effective, and the trade will be resent to NCA. Feedbacks following a trade submission

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## 5.3 FEEDBACKS FROM SATURN AND FEEDBACKS FROM REULATORS

There are two types of feedbacks:

- Feedback from Saturn following submission of the reports
- Feedback from the relevant Market Authority

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### 5.3.1 Feedbacks from Saturn

- All feedbacks from Saturn are made available after submission. For each action, i.e New, Amend, Cancel, an acknowledgment is provided.

This acknowledgment includes the Saturn status, listed below, all also easily identified in the GUI. In case of error(s), the report is given a “Failed” status, the associated error code(s) is (are)also provided in the Ack message. Please refer to Annexe 1 for the full list of error codes.

Euronext Status	Description
CHECKED & READY	Saturn data reconciliation and Transaction Reporting file’s creation have been successfully performed (Saturn checks are ok). Transaction Reporting is ready to be sent to Regulator
ISIN WARNING	Saturn checks have been successfully performed. However ISIN code is not found in SATURN Referential. Transaction Reporting is ready to be sent to Regulator.
CANCELLED	Transaction Reporting cancelled by a user. If transaction not sent to regulator, this transaction will not be sent. If previously sent, cancelation will be sent to Regulator.
FAILED	Saturn data reconciliation and Transaction Reporting file’s creation can’t be performed due to missing or incorrect data received. User action is needed. Reporting will not be done for the transaction.
SENT	Transaction Reporting sent. Awaiting Regulator’s feedback.

- In the case where Saturn data reconciliation and Transaction Reporting file’s creation cannot be performed due to missing or incorrect data received, the acknowledgment will be sent back with the relevant error, in order for the Market participant to amend or complete the trade report.

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### 5.3.2 Feedbacks from Market Authority

- Feedback kinematic coming from the NCAs will depend on each NCA.  
Whenever the feedbacks are provided, except between 10:00 PM CET and 06:30 AM CET, they are immediately included in Saturn, available through API “Get” and easily identified in the GUI.

NCA status	Description
ACCEPTED	Transaction Reporting has been approved by the Regulator
REJECTED	Transaction Reporting has been rejected by the Regulator
PENDING	Transaction Reporting is pending as ISIN is still not present in referential.

- In case of a rejection, based on the information provided by the NCA, market participants will be able to identify and correct the report.
  - Based on regulators feedback, market participants will be able to define (optional) simple alerts, sent by email, to inform of the result of the NCA process. *(to be implemented in Q1 2018)*
-

## 5.4 CONTROLS IN PLACE

In order to prevent mistakes, and reduce the potential NCA rejections, the Saturn solution includes a “Check Module”.

There will be no Euronext “rejection” according to these checks, except in very specific cases, as described in the Saturn Web Services specifications.

Trade reports will be in a “failed” mode to enable correction by Market participant. A report with “failed” status will not be sent to the Regulator. The controls applied are mainly the following<sup>1</sup>:

- Referential:

- ESMA referential for instruments;
- MIC, LEI, Currencies;

Note that for referential checks, a bypass option will be available in case of “failed” status.

The bypass option is not a default option and can only be used after a “failed” status. Check on existing ISIN will not lead to a “failed” but a “Warning” status.

- ESMA rules:

- As defined in the ESMA guidelines and RTS 22;

- Others as price check where applicable or consistency check.

- For price check, a bypass option per report is possible, following a “failed” status only.

List of controls and associated error codes are described in *Annex 1 – ARM & APA controls and Error Codes*.

---

### 5.4.1 Pending allocation and aggregated transactions reporting

Non-MiFID members are reminded that, in case of Transaction Reporting referring to a transaction derived from an order with Client ID populated as ‘**PNAL**’(Pending Allocation) or ‘**AGGR**’(Aggregated)<sup>2</sup> at order entry, the member is requested to report the off-venue disaggregated transactions to **Euronext**.

In these cases, the following rules must be applied:

**a- in the Transaction Reporting for the aggregated market-side transaction:**

when the Non-MiFID Member Firm is buying (selling) under “AOTC” trading capacity:

- The “**Buyer(Seller) Identification Code**” must be always populated with value “**INTC**”;
- The “**Short Selling Indicator**” must always be reported as blank.

**b- in the Transaction Reporting for the disaggregated client transaction:**

- The field “**Venue**” must be always set to “**XOFF**”;
- The field “**Trade Unique Identifier**” must contain the aggregate market-side Transaction Unique Identifier, concatenated with “\_” and with a unique sequence number;
- The field “**Disaggregated Trade Indicator**” must be always set to “**1**”.

The fields “**Trade Unique Identifier**” and “**Disaggregated Trade Indicator**” are **mandatory** for the disaggregated client transaction reporting.

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<sup>1</sup> Non-exhaustive list

<sup>2</sup> **AGGR/PNAL transactions** will be used in the document to identify these transactions.

Column Name	Column Description	Column Values	Column Type
<b>Trade Unique Identifier</b>	Contains the aggregated trade TUI, concatenated with “_” and with a unique sequence number.	Ex: YUIBVC_1 ERXCDY_1	Alphanumeric-19
<b>Disaggregated Trade Indicator</b>	Indicates if the reported transaction is a disaggregated trade and refers to an aggregated trade.	0 – No 1 – Yes	Boolean

The “Trade Unique Identifier” must be reported as per below:

***TUI\_[SequenceNumber]***

Where:

- ***TUI*** refers to the **aggregated trade’s Trade Unique Identifier**;
- ***SequenceNumber*** is a number from **0 to 99 999 999**, set by the member in order to differentiate the different disaggregated trades reported. **This value cannot be amended by the member once set.**

#### 5.4.1 Fields Reconciliation

**Saturn** system allows members to report **individual allocation(s) transactions**, which are linked to **Aggregated(AGGR) or Pending Allocations(PNAL) transactions** executed on **Optiq Trading System**.

It will perform consistency checks between the aggregated market-side transaction and the disaggregated client transaction on the following fields. In case aggregated and disaggregated reports do not match, the non-MIFID member will be notified of a reconciliation error:

RTS22 Field Number	Field Name
5	Investment Firm covered by Directive 2014/65/EU
28	Trading Date Time
30	Quantity
Internal Saturn Field	Quantity Notation
31	Quantity currency
33	Price
Internal Saturn Field	Price Notation
34	Price currency
36	Venue <sup>3</sup>
40	Complex Trade Component ID
41	Instrument Identification Code
61	Waiver indicator

#### 5.4.2 Quantity Reconciliation

In case of Transaction Reporting referring to **pending allocation** and **aggregated transactions**, the sum of the volume on the disaggregated, off-venue client legs must equal the volume on market-side, aggregated of transaction. This control will be in addition to the “Check Module” already in place.

<sup>3</sup> Venue must be equal to XOFF.



The disaggregated transactions being reported will be set to a specific status, called “**Pending Total Quantity**” until all transactions are correctly reported.

### 5.4.3 Disaggregated Transactions Reports Rejection

**Saturn** application will automatically **reject** disaggregated transactions reporting that are:

- Referring to an **unknown**, or **cancelled AGGR/PNAL transaction**;
- Referring to an **Euronext transaction which is not an AGGR/PNAL transaction**;
- Referring to an AGGR/PNAL transaction **but with a wrong Trading Date Time**.

### 5.4.4 Disaggregated Transactions Reports Failure

**Saturn** application will automatically set disaggregated transactions reporting in a **failure status** if:

- RTS22 validation rules criteria’s are not met;
- Venue is different from **XOFF**;
- Any mismatch is detected between the disaggregated transactions and the AGGR/PNAL transaction for the fields listed [here](#).

### 5.4.4 Disaggregated Transactions Reports Quantity Check

**Saturn** application will automatically set disaggregated transactions reporting in a “**Pending Total Quantity**” status if:

- RTS22 validation rules criteria’s are met;
- Venue is equal to **XOFF**;
- No mismatch is detected between the disaggregated transactions and the AGGR/PNAL transaction for the fields listed [here](#);
- And the total disaggregated transactions quantity **does not** match AGGR/PNAL transaction’s quantity.

This status will be displayed as following in the Interface:

HISTORY	TRANSACTION REFERENCE NUMBER	ORIGIN	STATUS	DATE	QUANTITY	SIDE	SECURITY ID
	164VDDA282	S		2023-10-19 13:11:01	5000	B	NLENX039485
	164VDDA281	S			5000	B	NLENX039485
	MG20230000000910000000	S			150	B	PTEDP0AM000
	TRADEREF0015744D68DD	S			5000	P	DE000A1H350

[4041] Pending total disaggregated transactions quantity for aggregated market-side transaction

### 5.4.4 Disaggregated Transactions Reports Validation

**Saturn** application will automatically set disaggregated transactions reporting in a “**Checked & Ready**” status if:

- RTS22 validation rules criteria’s are met;
- Venue is equal to **XOFF**;
- No mismatch is detected between the disaggregated transactions and the AGGR/PNAL transaction for the fields listed [here](#);
- And the total disaggregated transactions quantity **does match** AGGR/PNAL transaction’s quantity.

**Saturn** will automatically detect if any other disaggregated transactions are declared and will be able to switch them from a “**Pending Total Quantity**” status to a “**Checked & Ready**” status.

### 5.4.5 Disaggregated Transactions Reports Modifications

Disaggregated transactions modification, if correctly done, will be set to “**Pending Total Quantity**” status by **Saturn** application in order to perform the quantity consistency check with the **AGGR/PNAL** transaction.

If the **sum of the volume on disaggregated transactions is not equal to the volume on the AGGR/PNAL transaction**, the disaggregated transactions will remain in “**Pending Total Quantity**” status. (the **related disaggregated transactions** will also be set to a “**Pending Total Quantity**” status)

### 5.4.5 Disaggregated Transactions Reports Cancellations

Disaggregated transactions cancellation can occur in two situations:

- If **Euronext Market Services** cancel the **AGGR/PNAL** transaction, **Saturn** application will **automatically** cancel all the linked disaggregated transactions). If they were already sent to the regulator, they will be resent.
- If the member did a mistake and cancels the disaggregated transactions. In that case, the member must enter a correct disaggregated transaction to successfully perform a **quantity consistency check** with the **AGGR/PNAL** transaction.

If the cancellation breaks the **quantity consistency between disaggregated transactions and the AGGR/PNAL transaction** (meaning the total disaggregated transactions quantity does not match AGGR/PNAL transaction’s quantity), the **related disaggregated transactions** will also be set to a “**Pending Total Quantity**” status.

### 5.4.2 Non-Optiq historical transactions reporting (Upload File only)

Non-MiFID members can use Saturn as their transactions reporting tool for **non-Optiq historical transactions reporting**, which were executed on a trading venue that **didn’t belong to Euronext at the trading date**. Since more and more trading venues are now part of Euronext marketplaces, a specific workflow must be followed by members which would like to report such transactions:

- 1- These transactions can be inserted into Saturn only **via the Upload File function**;
- 2- These transactions are reported as **ARM transactions**;
- 3- Members shall use below **Action** values:
  - **5- New non-Optiq transaction**;
  - **6- Amend non-Optiq transaction**;
  - **7- Cancel non-Optiq Transaction**.
- 4- Other fields shall contain the same relevant transaction information (price, quantity, trading date time,...) as any other reported transaction in Saturn.

If the transaction **validates all the RTS22 validation rules criteria’s**, a transaction status “**Pending EMS validation for non-Optiq transaction**” will be displayed to the members:

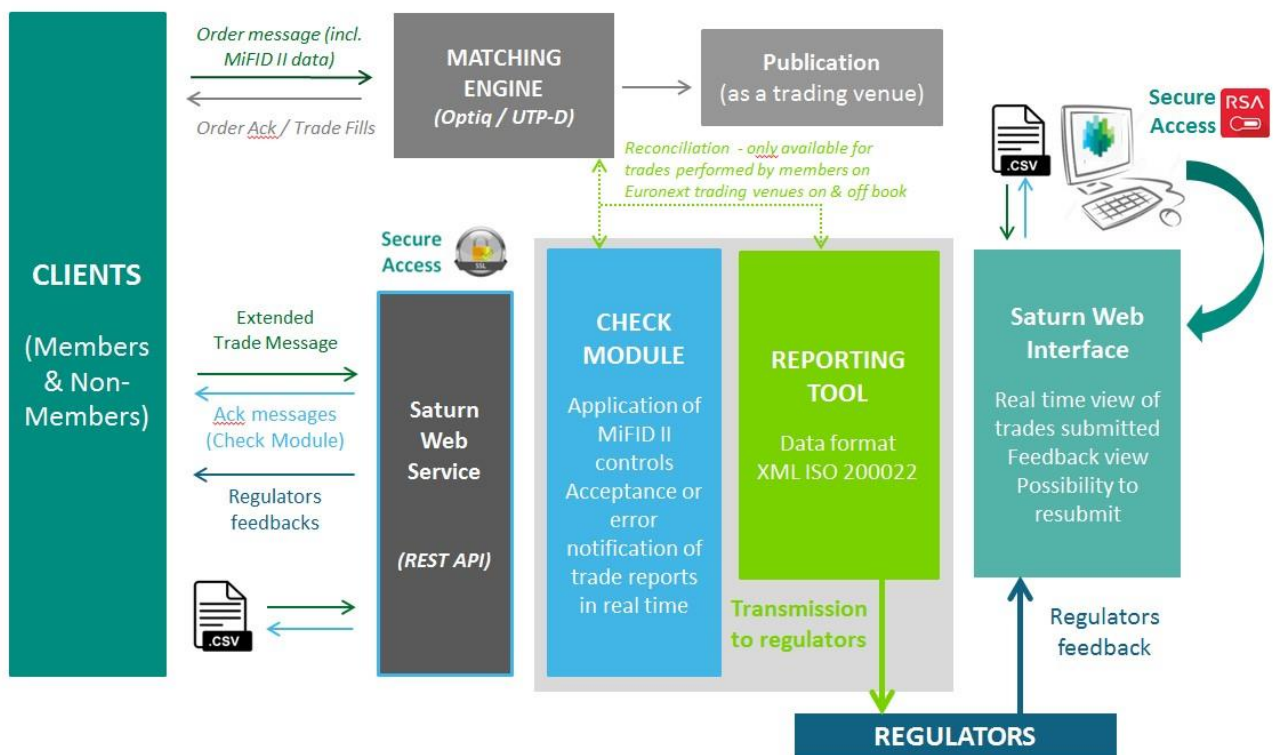
HISTO...	TRANSACTION REFERENCE NUMBER	ORIGIN	STATUS	DATE	QUANTITY	SIDE	SECUR
<input checked="" type="checkbox"/>	VQQ3LUMFBCZR65483X9023FIWEDL17RBQ9PSW8PJW6	S	▶▶		588	B	DEO
<input type="checkbox"/>	164VDDA282	S	▶▶	2023-10-19 12:11:01	5000	B	NLE

[4042] Pending Euronext Market Surveillance validation for non-Optiq transaction.

Euronext Market Services will have then 2 choices: **validate** or **reject** the transaction.

- If Euronext Market Services **validates the transaction**, the transaction will be put in “**Checked & Ready**” status and reported to the regulator.
- If Euronext Market Services **rejects the transaction**, the transaction will be put in “**Failed**” status with an error message that can be displayed. The member will have the possibility **to correct it through a new Upload File submission**.

### 5.5 TRANSACTION REPORTING FLOW OVERVIEW



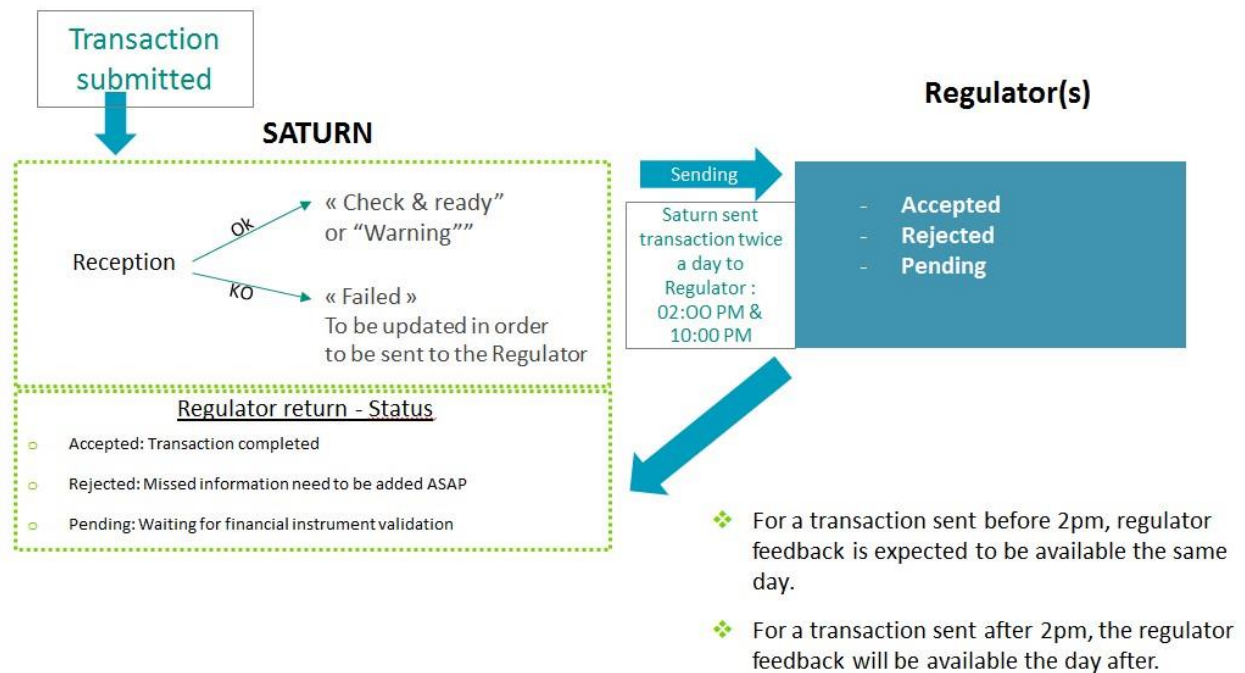
### 5.6 TRANSACTION REPORTING PROCESS OVERVIEW

Transactions reports received from Market Participants and that passed successfully the Saturn controls will be updated with a Status “Check & Ready”.

Depending on when these reports were provided, they will be sent to the regulators either at 02:00 PM CET or 10:00 PM CET.

In order to ensure that transaction reports are provided to regulators by the required time, , for a trade performed a D, the report must be submitted at the latest at D+1 at 01:59 PM CET.

## TRANSACTION REPORTING PROCESS



## 6. EURONEXT APA OVERVIEW

Using the new Euronext’s APA solution based on Saturn, Euronext’s members and non-members will be able to manage their own publication activity related to their Post Trade Reporting obligation for OTC and SI and Pre Trade transparency obligation for SI quotes.

For more information please refer to the dedicated documentations:

- Euronext APA Optiq MDG Client specifications; - Saturn Web Services specifications.

### 6.1 APA POST TRADE

The scope of the instruments is the scope of the ESMA Referential data. For post-trade, the scope covers both OTC and SI trading.

Deferred publication is possible but remains optional when applicable.

Publication will be done using the MMT standard approach, which is MIFID II compliant.

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### 6.1.1 Trade submission

To submit a trade report for publication purposes, the same message than the transaction reporting has to be used.

Core Data, as defined above, needs to be included, as well as the dedicated data for publication purpose.

As for the transaction reporting, except for limited wrong or inexistent data, the trade will never be rejected but registered with a “failed” status, waiting for a correction.

When entering a trade report, some keys indicators are requested:

- Duplicate Trade report: ○ In case Investment firms provide trade report to another APA, they should indicate it in the report.
  - In that case, the report will be identified in market data with the relevant “DUPL” flag.
- Deferred Publication indicator:
  - If requested, the trade report will be submitted to several checks and criteria in order to determine if the trade is eligible or not to the deferred publication.
  - If yes, it will be published at the relevant timing and will be identified as well with the relevant flag.
- Bypass indicator:
  - In order to prevent mistake or erroneous data, prices check will be implemented and triggered when the trade report is submitted
  - If not in the threshold set up, the trade report will be registered with a “failed status”
    - Either it was a mistake and the trade is corrected accordingly (Amend) and resubmitted;
    - Or the market / trading conditions are not in phase and Investment firms can bypass this control to ensure an immediate or deferred publication.
- Efficient MMT indicator.
  - To be provided when Saturn is not able to deduce it.

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### 6.1.2 Trade Acknowledgment

The trade acknowledgment will be the same as for the transaction reporting.

In all the cases, the acknowledgment will be made available immediately to the market participant with the relevant trade ID. Successful Acks will also contain for the deferred trades the time and date where the trade report will be published.

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### 6.1.3 Controls in place

As mentioned above several controls will be put in place based on:

- Consistency checks (flags for instance);
- ESMA referential;
- MIC;
- LEI;
- Currency;
- Prices;
- Notional Amount (**RTS2 only**)

For non-equity instruments, **Notional Amount** field must be reported and shall be consistent with the value provided in the field Price. It shall be expressed in the transaction's currency (when applicable).

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### 6.1.4 Market data publication

For the Euronext's APA solution, a dedicated publication process has been designed with a dedicated channel to which data vendors can easily connect.

The MMT standard typology will be used for the publication.

Regarding the huge expected volume in terms of referential instruments, a new dedicated kinematic will be put in place:

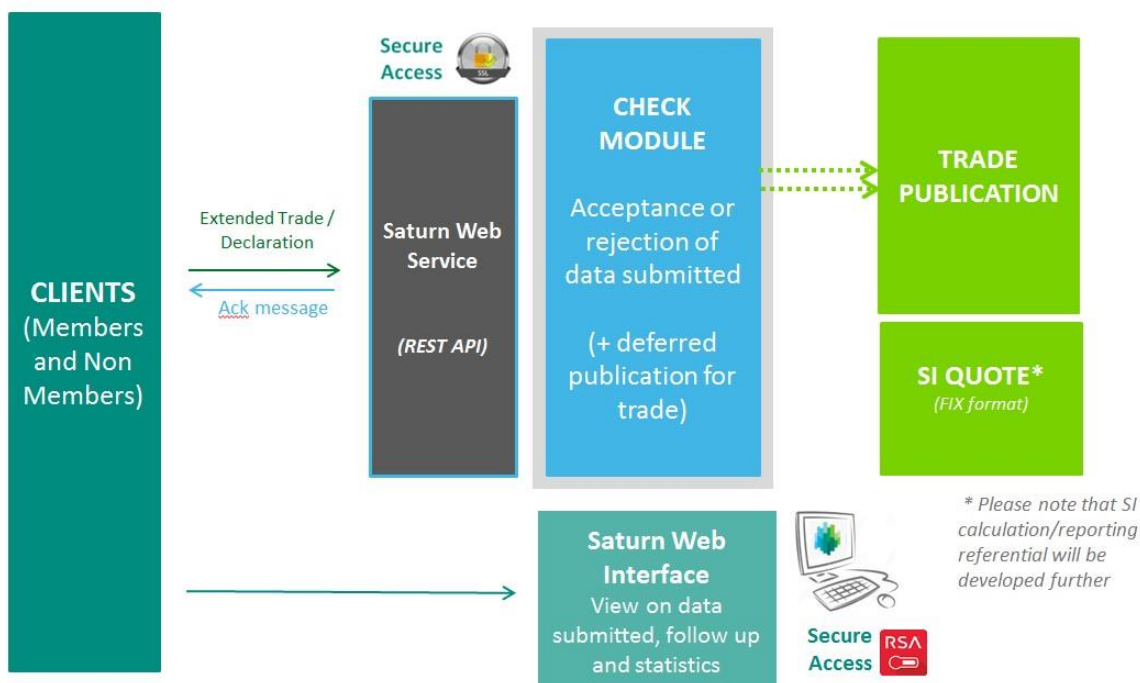
- Before each first trade report, *APA Full Trade Information (1028)*, sent during the day on a dedicated instrument, a new referential message, *APA Standing Data (1027)*, will be issued in order to provide the market the relevant Instrument information;
- This referential message will be issued only before the first trade report, and will not be re-sent during the day;
- No action is required from the Market participant regarding the referential message when the ISIN code is recognised;
  - In case where the trade to be published is on an unknown instrument, key characteristics are required by the participant in order to be published. Data to be provided are defined in the Saturn Web Services specifications.

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### 6.1.5 Publication flow overview

See below an overview of the publication flow for Trades and SI Quotes.

## TRADE PUBLICATION SERVICE (APA)



### 6.2 APA PRE TRADE PUBLICATION FOR SI QUOTES

A Systematic Internaliser (SI) has pre-trade publication obligations for its quotes in liquid and illiquid instruments on regular and continuous basis during normal trading hours.

- SI quotes for liquid instruments must be public as soon as available and with the agreement of SI client;
- For SI quotes for illiquid instruments, the quotes must be available and provided on request.

Note that at that stage, Saturn only covers Quotes to be made public for liquid instruments.

For more information please refer to:

- Saturn Web Services specifications, for the entry of the Quotes;
- Euronext APA Optiq MDG Client specifications, for the publication of the Quotes.

For this purpose:

- A dedicated new entry message is available as described in the Saturn Web Services specifications, chapter 5. Submit APA Quotes.
- As well as a dedicated market data message, *APA Quotes (1026)*.
- Sending an SI quote:
  - For SI Quotes the same principle as for trade publication applies:
    - Before each first quote sent during the day on a dedicated instrument, a referential message will be issued in order to provide the market the relevant Instrument information;



- This referential message will be issued only before the first quote, and will not be sent again during the day.
  - No action is required from the Market participant regarding the referential message that will take the information either from Saturn referential, or directly and in specific cases in the Quote message sent by the Market participant (ref case where non ISIN below).
- Controls in place:
  - As for transactions and publication service, several controls have been implemented based on: ESMA referential, MIC, LEI, Currency but also on prices where applicable. – Consistency checks are applied as well.
- SI quotes management:
  - An SI quote will be available up to its cancelation.
    - An SI quote is either a Bid or an Offer
    - And as a consequence always the Best Bid or Best Offer. – The following actions are possible: □ Creation of a Bid or an Offer; □ Cancel a Bid or an Offer.
  - Each trading day, clients, must clear all quotes from the previous day. Clearing quote can be done on End Of Day or Start Of Day message.
- Acknowledgment:
  - Once a quote is submitted to Saturn and processed, an acknowledgment is made available immediately with the relevant status.
- Publication in Market data:
  - A dedicated channel will be used to support the Quotes publication (ref Euronext APA Optiq MDG Client specifications, Chapter 2. Market Data Channels).
  - The data expected to be published, per LEI are the following:
    - Instrument ID
    - Instrument ID;
    - Currency;
    - MIC;
    - LEI
      - Quote Update Type (ref above)
      - Price;
      - Quantity.



- Quotes without ISIN:
  - Quotes without ISIN are covered as well
  - Referential information needs to be provided by market participants in the Quote message.
  - A unique identifier will be provided by the Saturn solution for publication purposes.
  - Referential information provided will be included in the “referential message” sent to market data.
    - Full referential data requested in that case is described in the Saturn Web Services specifications, Submit Quotes section.

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## 7. OTC TRADES FACILITY FOR EURONEXT MEMBERS

All current facilities related to the OTC publication and reporting will be removed from the TCS System that will not support any more these ones, namely:

- OTC Trade “K”
- Transaction Reporting “L”
- Trade Publication “M”
- Reporting and Publication “N”

All of them will be included in the Saturn solution, but on different formats, including the dedicated OTC Trade type “K” that benefits from a clearing facility.

For Euronext Members having access to these services, clearing facilities will be available.

For more information about this facility supported by Saturn, please refer to the dedicated:

- “OTC Cleared Trade Facility” documentation; - And “Saturn Web Services specifications”.

### ■ Main principle related to current TCS operation type OTC Trade type “K” will applied:

- For Euronext members;
  - Acting on Euronext Instruments;
  - In the same currency of the Euronext Instrument;
  - Either Cross or confirmed by the counterpart which need as well to be a Euronext Member; –
- With possibility to define the guarantee option and Settlement delay.

### ■ In term of messages:

- Declaration will be sent through the same message used for Reporting and Publication purposes;
- Acknowledgement will be received from the same message used for Reporting and publication purposes;
- It is not necessary to subscribe to APA or ARM to use this feature;
- In case of subscription to these services it is possible to send a single report that simultaneously supports publication, reporting and clearing. This can be done through API Rest or through the GUI.

## 8. ANNEX 1 – ARM AND APA CONTROLS AND ERROR CODES

### Introduction

This Appendix lists the errors codes following checks performed by Saturn following a report submission.

The list below will be available as well in the Saturn Web Services specifications and must be used as a reference for development. Specifications are available in the back ground information tab *on the Euronext website* <https://www.euronext.com/fr/mifid-ii>

Note: Errors related to OTC Cleared Trade Facility are included in the dedicated specification available on the Euronext website: <https://www.euronext.com/fr/trading-services/cleared-otc-trade-facility> The checks include:

- All the rules as defined in the guidelines from ESMA; -
- Dedicated Saturn checks.

Errors codes defined below are the Saturn error codes. In exceptional circumstances, where the report is in “failed status” and the client use the Bypass functionality, the status of the trade report will be updated when processed by the regulator with relevant error codes as defined in the guidelines.

*Fields Interdependency control will be added in a new version of this document shortly.*

### List of Saturn errors codes and corresponding ESMA error codes when applicable:

Type of Error	Error Code	Description of the error	ESMA Error code
1-Missing or Invalid	1000	You do not have access. Thank you to subscribe for APA or ARM or Both.	Saturn check
	1001	[Field] Missing value	CON-350 CON-370 CON-380 CON-441 CON-452 CON-480 CON-500 CON-510 CON-530 CON-540 CON-550 CON-570 CON-580
	1002	[Field] Please do not fill, unexpected value	CON-030 CON-453 CON-481 CON-501 CON-511 CON-531 CON-542 CON-551 CON-571 CON-610
	1003	[Field] Value should be 0	CON-251
	1004	Price notation is incorrect	CON-330
	1005	[Field] Invalid format	XML schema

<b>2- Referential Data Error</b>	2001	[Field] Wrong LEI code	CON-060
	2002	[Field] Wrong MIC code	CON-072 CON-162 CON-360
	2003	[Field] Wrong Country code	CON-080 CON-070 CON-600
	2004	[Field] Wrong Currency code	XML schema
	2005	[Field] Wrong ISIN code	CON-411
	2006	Wrong ISIN code for "Instrument ID" ; If not available please fill [Full name], [Classification Type], [Price Multiplier]	Saturn check

<b>3- Multiple choice Error</b>	3001	Wrong side! Should be 1(Buy) or 2(Sell) or 3(Cross)	Saturn check
	3002	Wrong Trading capacity ! Should be one of 1 (DEAL), 2 (MTCH) or 3 (AOTC)	XML schema
	3003	[Field] Wrong Boolean value! Should be 1(true) or 0(false)	XML schema
	3004	Wrong Trade report ! Should be 1 (NEW) or 2 (AMEND) or 3 (CANCEL)	XML schema
	3005	Wrong ARM APA indicator ! Should be 1 (Transaction Reporting) or 2 (APA) or 3 (Both Transaction Reporting and APA) or 4 (OTC trade) for APA ARM indicator	Saturn check
	3006	Wrong MIFID Price Notation ! Should be 'MONE' (Monetary value) or 'PERC' (Percentage) or 'YIEL' (Yield) or 'BAPO' (Basis points) or 'PNDG' (No price Pending) or 'NOAP' (Not Applicable)	XML schema
	3007	Wrong Waiver indicator! Should be one of 0 (LRGS), 1(OILQ), 2(NLIQ), 3(PRIC), 4(ILQD), 5(RFPT), 6(SIZE) or NONE	XML schema
	3008	Wrong Short Selling Indicator! Should be one of 0 (SESH), 1(SSEX), 2(SELL), 3(UNDI),	XML schema
	3009	Wrong OTC Post Trader indicator! Should be one of 0 (BENC), 1(ACTX), 2(LRGS), 3(ILQD), 4(SIZE), 7(SDIV), 8(RPRI), 9(DUPL), 10(TNCP), 11(TPAC), 12(XFPH) or NONE	XML schema
	3010	Wrong value! Should be 1(Increase) or 2 (Decrease) for "Derivative Notional increase Decrease"	XML schema
	3011	[Field] Wrong National ID code	CON-074 CON-123 CON-164 CON-213 CON-574 CON-591
	3012	Wrong Algo code for "Investment within firm"	XML schema
	3013	Wrong combination of flags for Waiver indicator! 1(RFPT), 2(NLIQ), 3(OILQ), 4(PRIC) are mutually exclusive	Saturn check

	3014	Wrong Emission Allowance Type! Should be one of , 1(EUAE), 2 (CERE), 3 (ERUE), 4(EUAA), 5(OTHR)	Saturn check
	3015	[Field] Wrong National id Type. Should be one of 1(NIDN), 2 (CCPT) , 3(CONCAT)	XML schema
	3016	[Field] Wrong Execution Within Firm Type! Should be one of 1 (National ID), 2 (Code of the algorithm), 3 (Nore)'	Saturn check
	3017	Investment Decision Within Firm Type! Should be one of 1 (National ID), 2 (Code of the algorithm)'	Saturn check
	3018	Wrong Client Identification Type! Should be one of 1 (LEI), 2 (MIC), 3 (NATIONAL_ID), 4 (INTC)'	Saturn check
	3019	Wrong Client Decision Maker Type! Should be one of 1 (LEI), 2 (NATIONAL_ID)'	Saturn check
	3020	[Field] Wrong Firm ID'	Saturn check

<b>4- Inconsistent value</b>			CON-310 CON-340 CON-390 CON-440 CON-451 CON-520
	4001	[Field] Currency code not allowed	CON-281
	4002	[Field] Date is too far in the past	CON-431 CON-502 CON-541 CON-552 CON-560
	4003	[Field 1] does not match with [Field 2]	CON-290
	4004	When Trading Capacity = 'DEAL' either Buyer or Seller or both should be identical with the executing entity ID.	CON-573 CON-590
	4005	[Field] National identification code does not include valid country code	CON-073 CON-122 CON-163 CON-212
	4006	[Field] The CONCAT code is incorrect	CON-280
	4007	[Field] is in the future	CON-411 CON-471
	4008	[Field] Transactions will be reported but Pending ESMA validation	CON-412 CON-472
	4009	[Field] Instrument is not valid in reference data on transaction date	CON-450
4010	Notional currency 2 was populated but Notional currency 1 is missing.		

<b>5- Existing trade Error</b>	5001	The NEW transaction contains an existing Trade Ref in Saturn	CON-023
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	5002	The Trade Ref sent does not match any existing Saturn trade Ref	CON-024
	5003	Transaction Rejected - The Transaction reference Number has already been cancelled in Saturn	CON-025

## Document History

REVISION NO.	DATE	CHANGE DESCRIPTION
1.0	22 Feb 2017	<ul style="list-style-type: none"> <li>Initial version</li> </ul>
2.0	30 Jun 2017	<ul style="list-style-type: none"> <li>Removal of EOG part</li> </ul>
3.0	27 Nov 2017	<ul style="list-style-type: none"> <li>Inclusion of ARM &amp; APA check rules and error codes.</li> <li>APA quotes description</li> </ul>
3.1	05 Oct 2021	<ul style="list-style-type: none"> <li>In 2. Introduction: Added a reference on UK DRSP regulatory framework governing.</li> </ul>
3.2	08 Sep 2022	<ul style="list-style-type: none"> <li>Section <a href="#">6.1 Controls in place</a> : added a mention on Notional Currency field which is used in the RTS2.</li> </ul>
5.36.0	27 May 2024	<ul style="list-style-type: none"> <li>Section <a href="#">5.4.1 Pending allocation and aggregated transactions reporting</a> : new functionality offered by the application, which allows disaggregated transactions reporting.</li> </ul>
5.351.0	28 Oct 2024	<ul style="list-style-type: none"> <li>Added <a href="#">Section 5.4.2 Non-Optiq historical transactions reporting (Upload File only)</a> : new functionality offered by the application, which allows non Optiq historical transactions reporting.</li> </ul>