



# **MMT Technical Committee**

## **Market Model Typology (MMT) Initiative Guide**

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## Document History

Revision	Date	Author/Editor	Revision Comments
1.0	Sept, 2011	MMT Technical Committee	<ul style="list-style-type: none"> <li>• First published draft</li> </ul>
2.0	May, 2012	MMT Technical Committee	<ul style="list-style-type: none"> <li>• Removed section on MMT Governance</li> <li>• Updated definition of 'Technical Trade' in Section 6.1.3 and the Glossary</li> <li>• Minor edits throughout</li> <li>• Updated formatting</li> </ul>
2.1-draft-1		MMT Technical Committee	<ul style="list-style-type: none"> <li>• Updated to reflect v2 of the MMT Matrix</li> </ul>
2.1-draft-2	Feb, 2013	MMT Technical Committee	<ul style="list-style-type: none"> <li>• Updated section 6.1.3 to remove "Technical Trade" from "Trade with Conditions"</li> </ul>
2.2	Nov, 2014	MMT Technical Committee	<ul style="list-style-type: none"> <li>• Updated formatting to reflect FIX TC documentation structure.</li> <li>• Updated to reflect MMT v2.2.</li> <li>• Added a section that explains the changes between MMT versions 1, 2.0, 2.1 and 2.2.</li> <li>• Added a section for market data vendor representation of MMT.</li> </ul>
3.01	May, 2016	MMT Technical Committee	<ul style="list-style-type: none"> <li>• Updated to accommodate non-equity asset classes and the European Securities and Markets Authority (ESMA) trade flags as stipulated in the Regulatory Technical Standards (RTS) 1 and 2 for the Markets in Financial Instruments Directive II (MiFID II).</li> </ul>

# 1 Executive Summary – The MMT Initiative

Founded at the beginning of 2011, the MMT initiative has been developed through the collaborative efforts of regulated markets (exchanges), multilateral trading facilities (MTFs), market data vendors and trade publication arrangements as a means of standardising post-trade data reporting. The goal of MMT is to provide a standard means of describing types of execution ('trade types') coupled with indicators of any applicable pre-trade transparency waivers under the Markets in Financial Instruments Directive (MiFID) European regulations.

Market fragmentation can be seen as a natural by-product of competition, but MMT addresses a need to meet the challenges incumbent with post-trade transparency for MiFID regulated equity and non-equity market data. Though much of this stems from a lack of standards in the over-the-counter (OTC) market, regulated markets and MTFs also need to support a single industry standard that can be applied across all sources of post-trade data.

In early 2014 the ownership of the MMT standard was transferred to FIX Trading Community, a well-established standards organisation. The MMT Steering Group and the MMT Technical Committee are subject to FIX governance rules.

Due to the scale and complexity of coordinating the implementation of standardised trade type descriptions across the industry, as well as the potential regulatory dependencies for changing existing local market standards, MMT was designed to enable standardisation through abstraction, while the native adoption of the standards can proceed in parallel. In many cases, MMT trade flags will complement existing proprietary codes rather than replace them.

The MMT Initiative is open to all industry participants to support the idea of one standard and has been developed by experienced professionals ranging from equity market operators, reporting venues and data vendors. FIX Trading Community is the organisation in charge of the maintenance of MMT standard. The MMT standard itself is however protocol neutral.

It is intended that the implementation of MMT will facilitate the delivery of a European Consolidated Tape Provider (CTP), regardless of whether it is delivered by a single provider or by multiple providers, delivering consistent but competing consolidated tape solutions.

MMT v3.01 has resulted from an adaption to, and inclusion of, the mandatory trade flags as stipulated in the Regulatory Technical Standard (RTS) 1 and 2 from the European Securities and Markets Authority (ESMA), defined as part of the MiFID II regulations coming into force in January 2018. The MMT standard will continue to be adapted according to any subsequent regulatory changes and needs of the financial market data industry.

You can submit questions on MMT relevant topics: [mmt@fixtrading.org](mailto:mmt@fixtrading.org)

## 2 Document Scope

The **MMT Guide** is meant to be used as a support document, together with the **MMT Trade Flag Mapping Guide**, to assist in the completion of the **MMT Questionnaire**. The guide aims to provide clear definitions for the terms used within the MMT Initiative.

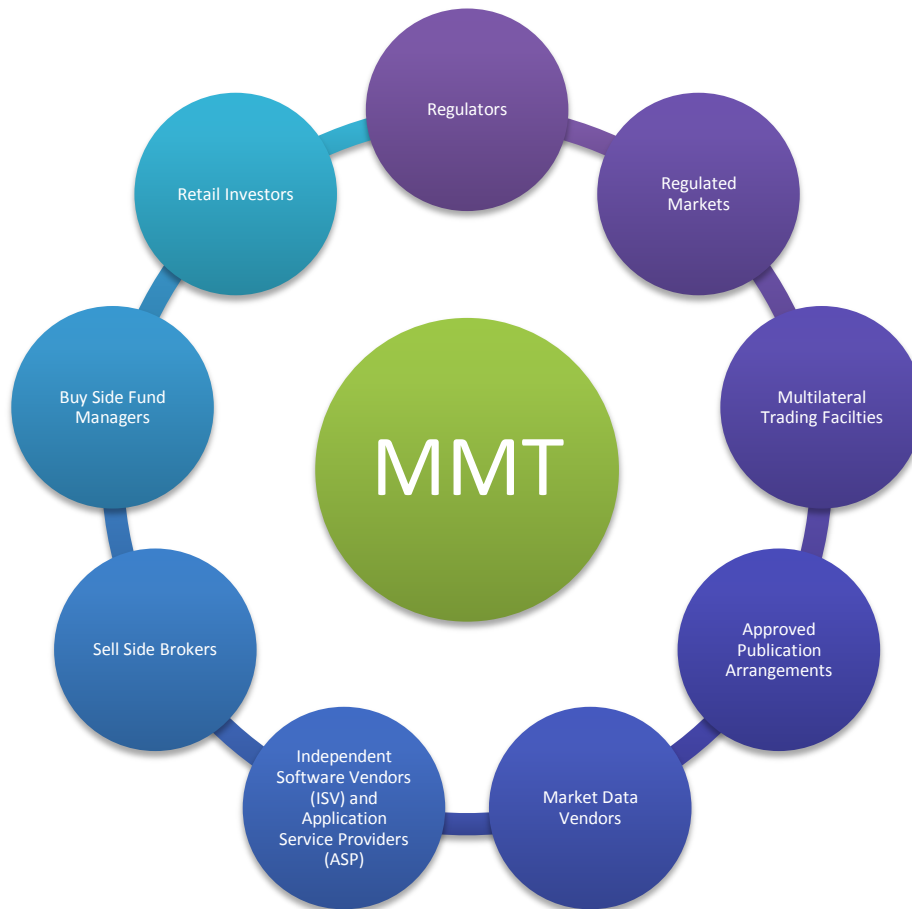
Other MMT related material is available on the FIX Trading Community site at the following link: <http://www.fixtradingcommunity.org/pg/group-types/mmt>

This document has been written to be aligned with the most recent version of MMT – v3.01.

## 3 MMT Stakeholders

The MMT Initiative is open to all market data users across the industry, from data originators (securities exchanges, MTFs, APAs) to end consumers (private investors, fund managers, treasurers, academics), including solution providers such as market data vendors, application service providers (ASPs), independent software vendors (ISVs) and order management system (OMS) providers.

The following group of stakeholders are expected to benefit from the implementation of MMT:



## 4 MMT Implementation

The implementation of MMT can be achieved via two distinct goals. The first would be a mandatory exercise, in order to allow consumers of trade data to translate bespoke trade flags into MMT trade flags. The second would be a preferred but optional exercise, involving the explicit publication of MMT trade flags on the data feed(s).

### 1. MMT Questionnaire and MMT Trade Flag Mapping Guide

The first step for participation in the MMT Initiative is the completion of the **MMT Questionnaire** by each participant, which naturally facilitates inclusion in the matrix.

- a. The **MMT Trade Flag Mapping Guide** is the central document, and is used to store the information provided in the completed questionnaires from MMT participants.
- b. The **MMT Trade Flag Mapping Guide** will be made openly available and can be utilised by parties wishing to apply the mapping from bespoke trade type codes to MMT trade flags within their own data infrastructure.

### 2. Feed-disseminated MMT

Participants of the MMT Initiative who have completed the **MMT Questionnaire** for inclusion in the **MMT Trade Flag Mapping Guide** will be encouraged to additionally implement MMT in their relevant market data feeds, to allow for dissemination of MMT within trade reports published directly to consuming parties. These can complement rather than replace bespoke trade type codes.

For efficiency reasons, it is possible to stipulate that some (or all) of the MMT values may be inferred by data feed recipients according to rules specified in the accompanying data feed specification document. For example, if a specific message would always equate to a specific combination (or subset) of MMT values, then the details of this can be explained in the documentation as an alternative to explicitly publishing those same MMT values in the data feed message itself.

## 5 MMT Documents

The following documents are available:

- **MMT Mapping Matrix**: This documents the data structure and hierarchy of the MMT Initiative in a tabular format. It explains the available combinations of attributes that could be applied to any one trade. The Matrix provides a structured model to assist with the completion of the **MMT Questionnaire**.
- **MMT Guide**: This is a support document to the **MMT Mapping Matrix** and **MMT Questionnaire**, which provides definitions and methodology. It explains the process for participation, provides definitions for the initiative and explains the structure and hierarchy of the **MMT Mapping Matrix**.

- **MMT Questionnaire:** This is the mapping document to be completed by participants. The information reported in the Questionnaire will be included in the **MMT Trade Flag Mapping Guide**.
- **MMT Trade Flag Mapping Guide:** The full mapping table containing information from all completed **MMT Questionnaires**. The Trade Flag Mapping Guide will be made available to all industry participants.
- **MMT FAQ:** A list of the most commonly asked questions and answers.



## 6 The MMT Mapping Matrix

This section explains the structure and hierarchy of the **MMT Mapping Matrix** and provides definitions for the attributes and terms used. A copy of the MMT Mapping Matrix can be found via the following link:

<http://www.fixtradingcommunity.org/pg/group-types/mmt>

### 6.1 Data Structure and Data Hierarchy

MMT is structured into five primary complementary levels that collectively describe the circumstances under which a trade has been executed. Two of these levels are also broken down into sub-levels, to provide a more structured description of the trade. Every trade will carry attributes from each of these levels or sub-levels.

Each MMT value has two protocol-neutral encoding options when explicitly publishing MMT on trade reports. The first option is a single-character code for each level (please be aware that this is not necessarily unique across all levels of MMT), which will allow for more efficient representation of MMT, and the second option is identical but for the ESMA trade flags, which share the same four-character mnemonics as stipulated in Regulatory Technical Standards (RTSs) 1 (equities) and 2 (non-equities).

As the ESMA trade flags are four-characters in length, these may be considered less efficient for publication in trade reports.

There is also a display code for on-screen representation of MMT, which we expect will be preferred over displaying the encoding options in order to make the MMT values more intuitive to the reader.

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
1	<b>MARKET MECHANISM</b>							
	Central Limit Order Book	"1"	"1"	"LB"	n/a	x	x	x
	Quote Driven Market	"2"	"2"	"QB"	n/a	x	x	x
	Dark Order Book	"3"	"3"	"DB"	n/a	x	x	x
	Off Book (including Voice or Messaging Trading)	"4"	"4"	"OB"	n/a	x	x	x
	Periodic Auction	"5"	"5"	"PA"	n/a	x	x	x
	Request for Quotes	"6"	"6"	"RQ"	n/a	x	x	x

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
2	<b>TRADING MODE</b>							
	Undefined Auction	"1"	"1"	"AU"	n/a	x	x	x
	Scheduled Opening Auction	"O"	"O"	"OA"	n/a	x	x	x
	Scheduled Closing Auction	"K"	"K"	"CA"	n/a	x	x	x
	Scheduled Intraday Auction	"I"	"I"	"IA"	n/a	x	x	x
	Unscheduled Auction	"U"	"U"	"UA"	n/a	x	x	x
	Continuous Trading	"2"	"2"	"CT"	n/a	x	x	x
	At Market Close Trading	"3"	"3"	"AC"	n/a	x	x	x
	Out of Main Session Trading	"4"	"4"	"OT"	n/a	x	x	x
	Trade Reporting (On Exchange)	"5"	"5"	"ON"	n/a	x	x	x
	Trade Reporting (Off Exchange)	"6"	"6"	"OF"	n/a	x	x	x
	Trade Reporting (Systematic Internaliser)	"7"	"7"	"SI"	n/a	x	x	x
Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
3.1	<b>TRANSACTION TYPE : TRANSACTION CATEGORY</b>							
	Dark Trade	"D"	"D"	"D"	n/a	x	x	x
	Trade that has Received Price Improvement	"R"	"RPRI"	"RPRI"	"RPRI"	✓	x	✓
	Package Trade (excluding Exchange for Physicals)	"Z"	"TPAC"	"TPAC"	"TPAC"	x	✓	x
	Exchange for Physicals Trade	"Y"	"XFPH"	"XFPH"	"XFPH"	x	✓	x
	None apply (a standard trade for the Market Mechanism and Trading Mode)	"-"	"-"	nothing	n/a	x	x	x

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
3.2	<b>TRANSACTION TYPE : NEGOTIATION INDICATOR OR PRE-TRADE TRANSPARENCY WAIVER</b>							
	Negotiated Trade	"N"	"N"	"N"	n/a	x	x	x
	Negotiated Trade in Liquid Financial Instruments	"1"	"NLIQ"	"NLIQ"	"NLIQ"	✓	x	x
	Negotiated Trade in Illiquid Financial Instruments	"2"	"OILQ"	"OILQ"	"OILQ"	✓	x	x
	Negotiated Trade Subject to Conditions Other Than The Current Market Price	"3"	"PRIC"	"PRIC"	"PRIC"	✓	x	x
	No Negotiated Trade	"_"	"_"	nothing	n/a	x	x	x
	Pre-Trade Transparency Waiver for Illiquid Instrument on an SI (RTS 1 only)	"4"	"ILQD"	"ILQD"	"ILQD"	✓	x	✓
Pre-Trade Transparency Waiver for Above Standard Market Size on an SI (RTS 1 only)	"5"	"SIZE"	"SIZE"	"SIZE"	✓	x	✓	
Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
3.3	<b>TRANSACTION TYPE : AGENCY CROSS TRADE INDICATOR</b>							
	Agency Cross Trade	"X"	"ACTX"	"ACTX"	"ACTX"	✓	✓	x
	No Agency Cross Trade	"_"	"_"	nothing	n/a	x	x	x
Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
3.4	<b>TRANSACTION TYPE : MODIFICATION INDICATOR</b>							
	Trade Cancellation	"C"	"CANC"	"CANC"	"CANC"	✓	✓	x
	Trade Amendment	"A"	"AMND"	"AMND"	"AMND"	✓	✓	x
	New Trade	"_"	"_"	nothing	n/a	x	x	x

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
3.5	<b>TRANSACTION TYPE : BENCHMARK OR REFERENCE PRICE INDICATOR</b>							
	Benchmark Trade	"B"	"BENC"	"BENC"	"BENC"	✓	✓	×
	Reference Price Trade	"S"	"RFPT"	"RFPT"	"RFPT"	✓	×	×
	No Benchmark or Reference Price Trade	"_"	"_"	<i>nothing</i>	n/a	×	×	×
Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
3.6	<b>TRANSACTION TYPE : SPECIAL DIVIDEND INDICATOR</b>							
	Special Dividend Trade	"E"	"SDIV"	"SDIV"	"SDIV"	✓	×	×
	No Special Dividend Trade	"_"	"_"	<i>nothing</i>	n/a	×	×	×
Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
3.7	<b>TRANSACTION TYPE : OFF BOOK AUTOMATED INDICATOR</b>							
	Unspecified or does not apply	"_"	"_"	<i>nothing</i>	n/a	×	×	×
	Off Book Non-Automated	"M"	"M"	"M"	n/a	×	×	×
	Off Book Automated	"Q"	"Q"	"Q"	n/a	×	×	×
Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
3.8	<b>TRANSACTION TYPE : CONTRIBUTION TO PRICE FORMATION OR THE PRICE DISCOVERY PROCESS</b>							
	Plain-Vanilla Trade	"P"	"P"	"P"	n/a	×	×	×
	Non-Price Forming Trade (formerly known as the Technical Trade)	"T"	"NPFT"	"NPFT"	"NPFT"	✓	✓	×
	Trade not Contributing to the Price Discovery Process	"J"	"TNCP"	"TNCP"	"TNCP"	✓	×	×

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
3.9	<b>TRANSACTION TYPE : ALGORITHMIC INDICATOR</b>							
	Algorithmic Trade	"H"	"ALGO"	"ALGO"	"ALGO"	✓	x	x
	No Algorithmic Trade	"_"	"_"	<i>nothing</i>	n/a	x	x	x
Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
4.1	<b>PUBLICATION MODE / POST-TRADE DEFERRAL : REASON</b>							
	Immediate Publication	"_"	"_"	<i>nothing</i>	n/a	x	x	x
	Non-Immediate Publication	"1"	"1"	"NI"	n/a	x	x	x
	Non-Immediate Publication: Deferral for "Large in Scale"	"2"	"LRGS"	"LRGS"	"LRGS"	✓	✓	x
	Non-Immediate Publication: Deferral for "Illiquid Instrument" (RTS 2 only)	"3"	"ILQD"	"ILQD"	"ILQD"	x	✓	x
	Non-Immediate Publication: Deferral for "Size Specific" (RTS 2 only)	"4"	"SIZE"	"SIZE"	"SIZE"	x	✓	x

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
4.2	<b>POST-TRADE DEFERRAL OR ENRICHMENT : TYPE</b>							
	<i>For the original trade:</i>							
	Limited Details Trade	"1"	"LMTF"	"LMTF"	"LMTF"	x	✓	x
	Daily Aggregated Trade	"2"	"DATF"	"DATF"	"DATF"	x	✓	x
	Volume Omission Trade	"3"	"VOLO"	"VOLO"	"VOLO"	x	✓	x
	Four Weeks Aggregation Trade	"4"	"FWAF"	"FWAF"	"FWAF"	x	✓	x
	Indefinite Aggregation Trade	"5"	"IDAF"	"IDAF"	"IDAF"	x	✓	x
	Volume Omission Trade, Eligible for Subsequent Enrichment in Aggregated Form	"6"	"VOLW"	"VOLW"	"VOLW"	x	✓	x
	<i>For the subsequent enrichment trade(s):</i>							
	Full Details of Earlier "Limited Details Trade (LMTF)"	"7"	"FULF"	"FULF"	"FULF"	x	✓	x
	Full Details of Earlier "Daily Aggregated Trade (DATF)"	"8"	"FULA"	"FULA"	"FULA"	x	✓	x
	Full Details of Earlier "Volume Omission Trade (VOLO)"	"9"	"FULV"	"FULV"	"FULV"	x	✓	x
	Full Details of Earlier "Four Weeks Aggregation Trade (FWAF)"	"V"	"FULJ"	"FULJ"	"FULJ"	x	✓	x
	Full Details in Aggregated Form of Earlier "Volume Omission Trade, Eligible for Subsequent Enrichment in Aggregated Form (VOLW)"	"W"	"COAF"	"COAF"	"COAF"	x	✓	x
<i>If neither apply:</i>								
Not Applicable / No Relevant Deferral or Enrichment Type	"-"	"-"	nothing	n/a	x	x	x	
Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Utilisation			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
5	<b>DUPLICATIVE INDICATOR</b>							
	Unique Trade Report	"-"	"-"	nothing	n/a	x	x	x
	Duplicative Trade Report (reported to more than one APA)	"1"	"DUPL"	"DUPL"	"DUPL"	✓	x	x

### 6.1.1 Level 1: Market Mechanism

Level 1 of MMT defines the fundamental functional market mechanism that has facilitated the trade, and it can have one of the following values. They are mutually exclusive.

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
1	<b>MARKET MECHANISM</b>							
	Central Limit Order Book	"1"	"1"	"LB"	n/a	x	x	x
	A trading mechanism where buy and sell orders interact on an electronically maintained order book. The matching mechanism is described under the Trading Mode defined at MMT Level 2.							
	Quote Driven Market	"2"	"2"	"QB"	n/a	x	x	x
	A trading method by which execution prices are largely determined from buy and sell offer quotations issued by market makers or dealers. Most such systems operate a mandatory quotation period during each trading day, during which registered market makers must display their best buy and sell quotations. The market makers are obliged to transact at those quotations if approached to do so.							
	Dark Order Book	"3"	"3"	"DB"	n/a	x	x	x
	A dark order book offers the similar or equivalent capabilities to a Central Limit Order Book, but only orders set to execute at the (mid-point) reference price interact with like orders via a real or virtual dark order trading facility. Orders are completely hidden which grants the traders full anonymity with Price formation derived from an external reference price.							
	Off Book (including Voice or Messaging Trading)	"4"	"4"	"OB"	n/a	x	x	x
Trades that have not been executed on a quote-driven or order-driven book, or via a periodic auction or request for quotes market mechanism, are considered to be 'off book' trades.								
Periodic Auction	"5"	"5"	"PA"	n/a	x	x	x	
A trading mechanism where the auction match is the only method for generating executions. The auction process may operate on a Central Limit Order Book (CLOB) but, outside of the auction call periods, the system does not offer any CLOB features such as continuous trading. This market mechanism should not be used for secu								
Request for Quotes	"6"	"6"	"RQ"	n/a	x	x	x	
A trading mechanism where a quote or quotes are sent in response to a "request for quote" submitted by one or more members or participants. The quote is executable exclusively by the party initiating the request for quote and this execution is triggered by said party accepting the quote or quotes								

## 6.1.2 Level 2: Trading Mode

Level 2 of MMT further differentiates transactions by defining the trading mode under which the trade was executed, and it can have one of the following values. They are mutually exclusive.

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
2	<b>TRADING MODE</b>							
	Undefined Auction	"1"	"1"	"AU"	n/a	x	x	x
	A trade executed at the conclusion of an auction call trading phase, where the type of the auction call (scheduled opening auction, scheduled closing auction, scheduled intraday auction or unscheduled auction) has not - or could not - be specified. Auction calls are relevant to markets that operate a continuous trading phase as a means of facilitating trades (sometimes referred to as immediate execution or an order-driven market). An auction call is effectively a temporary halt to immediate order execution. It provides traders in the market with the ability to influence and respond to the perceived market value of a financial instrument, without risk of any orders that they submit being immediately executed prior to the stated time that the auction call ends. This gives participants the opportunity to amend their orders as they see fit, in a more orderly environment. During the auction call the trading engine will calculate an equilibrium price based on all of the orders that have been entered in to the order book. Orders that are better than or equal to this equilibrium price, including special "at market price" orders for which the price is not specified, will transact at the calculated equilibrium price once the auction call ends.							
	Scheduled Opening Auction	"O"	"O"	"OA"	n/a	x	x	x
	A trade, or an aggregation of trades, executed at the conclusion of a scheduled opening auction call. Reference the definition for "Undefined Auction" above for a general definition of an auction call.							
	Scheduled Closing Auction	"K"	"K"	"CA"	n/a	x	x	x
	A trade, or an aggregation of trades, executed at the conclusion of a scheduled closing auction call. Reference the definition for "Undefined Auction" above for a general definition of an auction call.							
	Scheduled Intraday Auction	"I"	"I"	"IA"	n/a	x	x	x
A trade, or an aggregation of trades, executed at the conclusion of a scheduled intraday auction call. Reference the definition for "Undefined Auction" above for a general definition of an auction call.								
Unscheduled Auction	"U"	"U"	"UA"	n/a	x	x	x	
A trade, or an aggregation of trades, executed at the conclusion of an unscheduled auction call. An unscheduled auction call may be triggered by factors such as a volatility interruption, or to facilitate an orderly resumption of trading following a market halt. Reference the definition for "Undefined Auction" above for a general definition of an auction call.								
Continuous Trading	"2"	"2"	"CT"	n/a	x	x	x	
Refers to a trading phase where orders on an order book are continuously executed in the event that one or more buy and sell orders match.								
At Market Close Trading	"3"	"3"	"AC"	n/a	x	x	x	
A trading phase that follows the conclusion of a continuous trading or closing auction phase, through which parties are only able to transact at the determined closing price for the day. This may be facilitated by an auction, but would be considered distinct from a standard auction trading phase.								



Out of Main Session Trading	"4"	"4"	"OT"	n/a	x	x	x
A trading phase that is permitted by a market outside of the core operating hours such as the continuous, auction and at market close trading phases. Such phases may include pre-market open trade reporting or special after-hours market trading phases.							
Trade Reporting (On Exchange)	"5"	"5"	"ON"	n/a	x	x	x
The process of 'manually' reporting a transaction, as opposed to the automatic trade reporting typical of continuous trading platforms, under the rules or regulations of the market through which the trade is being reported.							
Trade Reporting (Off Exchange)	"6"	"6"	"OF"	n/a	x	x	x
The process of 'manually' reporting a transaction, as opposed to the automatic trade reporting typical of continuous trading platforms, outside of the rules or regulations of the market or trade aggregation service through which the trade is being reported. This category would include over-the-counter (OTC) trades.							
Trade Reporting (Systematic Internaliser)	"7"	"7"	"SI"	n/a	x	x	x
Trades reporting by a Systematic Internaliser (SI), which is a firm that executes orders from its clients against its own book or against orders from other clients. Systematic Internalisers are subject to pre-trade and post-trade transparency requirements under the MiFID regulations.							

### 6.1.3 Level 3: Transaction Type

Level 3 of MMT provides information on the type of the transaction. This consists of nine sub-levels, and it is possible to define one value for each of the available sub-levels 3.1 through 3.9.

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
3.1	<b>TRANSACTION TYPE : TRANSACTION CATEGORY</b>							
	Dark Trade	"D"	"D"	"D"	n/a	x	x	x
	<p>A trade that executes under the reference price waiver and the large in scale waiver.</p> <p>Reference Price Waiver: dark orders execute via a real or virtual Dark Book where only orders marked to execute at the reference price (e.g. mid-point) interact.</p> <p>Large-in-Scale (LIS) Waiver: commonly regarded as the LIS Hidden Order, which may execute against either lit or other LIS hidden orders via (hybrid or integrated) Central Limit Order Book. Where an LIS hidden order executes against a lit order, the transaction should be reported according to the status of the resting order on the order book. If the resting order is hidden then the trade will naturally be reported as a dark trade, because no pre-trade visibility of the interacting orders is given prior to the trade. If the resting order is lit then the execution would not be deemed dark due to the pre-trade visibility given by the resting lit order.</p>							
	Trade that has Received Price Improvement	"R"	"RPRI"	"RPRI"	"RPRI"	✓	x	✓
	Transactions executed on a systematic internaliser with a price improvement in accordance with Article 15(2) of Regulation (EU) No 600/2014.							
	Package Trade (excluding Exchange for Physicals)	"Z"	"TPAC"	"TPAC"	"TPAC"	x	✓	x
	Package transactions which are not exchange for physicals as defined in Article 1.							
Exchange for Physicals Trade	"Y"	"XFPH"	"XFPH"	"XFPH"	x	✓	x	
Exchange for physicals as defined in Article 1.								
None apply (a standard trade for the Market Mechanism and Trading Mode)	"_"	"_"	<i>nothing</i>	n/a	x	x	x	
A trade for which none of the "Dark Trade", "Trade that has Received Price Improvement", "Package Trade" and "Exchange for Physicals Trade" definitions apply.								

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
3.2	<b>TRANSACTION TYPE : NEGOTIATION INDICATOR OR PRE-TRADE TRANSPARENCY WAIVER</b>							
	Negotiated Trade	"N"	"N"	"N"	n/a	x	x	x
	A bilateral negotiated trade that is not subject to pre-trade transparency on the market through which it has been facilitated and/or reported.							
	To be used only where one of the following definitions does not apply for: - "Negotiated Trade in Liquid Financial Instruments"; - "Negotiated Trades in Illiquid Financial Instruments"; and - "Negotiated Trade Subject to Conditions Other Than The Current Market Price".							
	Negotiated Trade in Liquid Financial Instruments	"1"	"NLIQ"	"NLIQ"	"NLIQ"	✓	x	x
	Transactions executed in accordance with Article 4(1)(b)(i) of Regulation (EU) No 600/2014.							
	Negotiated Trade in Illiquid Financial Instruments	"2"	"OILQ"	"OILQ"	"OILQ"	✓	x	x
Transactions executed in accordance with Article 4(1)(b)(ii) of Regulation (EU) No 600/2014.								
Negotiated Trade Subject to Conditions Other Than The Current Market Price	"3"	"PRIC"	"PRIC"	"PRIC"	✓	x	x	
Transactions executed in accordance with Article 4(1)(b)(iii) of Regulation EU) No 600/2014 and as set out in Article 6.								
No Negotiated Trade	"-"	"-"	<i>nothing</i>	n/a	x	x	x	
A trade for which none of the above definitions apply, and therefore does not represent a negotiated transaction per the terms described therein.								

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
3.3	<b>TRANSACTION TYPE : AGENCY CROSS TRADE INDICATOR</b>							
	Agency Cross Trade	"X"	"ACTX"	"ACTX"	"ACTX"	✓	✓	x
	Transactions where an investment firm has brought together clients' orders with the purchase and the sale conducted as one transaction and involving the same volume and price. This represents a deliberate cross and thus excludes coincidental crosses on an order book.							
No Agency Cross Trade	"-"	"-"	<i>nothing</i>	n/a	x	x	x	
A trade that doesn't fall within the definition of an Agency Cross Trade.								

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
3.4	<b>TRANSACTION TYPE : MODIFICATION INDICATOR</b>							
	Trade Cancellation	"C"	"CANC"	"CANC"	"CANC"	✓	✓	x
	A trade report that represents the cancellation of an earlier trade report.							
	Trade Amendment	"A"	"AMND"	"AMND"	"AMND"	✓	✓	x
A trade report that represents the amendment or enrichment (replacement) of an earlier trade report.								
New Trade	"_"	"_"	<i>nothing</i>	n/a	x	x	x	
A new trade report.								

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
3.5	<b>TRANSACTION TYPE : BENCHMARK OR REFERENCE PRICE INDICATOR</b>							
	Benchmark Trade	"B"	"BENC"	"BENC"	"BENC"	✓	✓	x
	A category for Volume Weighted Average Price (VWAP), Time Weighted Average Price (TWAP), Competitive Volume Weighted Average Price (CVWAP) and all other trades where the price is calculated over multiple time instances according to a given benchmark. Such trades may differ in price from the prevailing market price at the time the trade is published.							
	Reference Price Trade	"S"	"RFPT"	"RFPT"	"RFPT"	✓	x	x
Transactions which are executed under systems operating in accordance with Article 4(1)(a) of Regulation (EU) No 600/2014.								
No Benchmark or Reference Price Trade	"_"	"_"	<i>nothing</i>	n/a	x	x	x	
Any trade for which the "Benchmark Trade" or "Reference Price Trade" definition does not apply.								

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
3.6	<b>TRANSACTION TYPE : SPECIAL DIVIDEND INDICATOR</b>							
	Special Dividend Trade	"E"	"SDIV"	"SDIV"	"SDIV"	✓	x	x
	Transactions that are either: - executed during the exdividend period where the dividend or other form of distribution accrues to the buyer instead of the seller; or - executed during the cumdividend period where the dividend or other form of distribution accrues to the seller instead of the buyer.							
	No Special Dividend Trade	"_"	"_"	<i>nothing</i>	n/a	x	x	x
Any trade for which the Special Dividend Trade definition does not apply.								

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
3.7	<b>TRANSACTION TYPE : OFF BOOK AUTOMATED INDICATOR</b>							
	Unspecified or does not apply	"_"	"_"	<i>nothing</i>	n/a	x	x	x
	The trade does not represent an Off Book execution, or the Non-Automated / Automated nature of the transaction has not been specified.							
	Off Book Non-Automated	"M"	"M"	"M"	n/a	x	x	x
The off book trade does not qualify for the Off Book Automated definition, below.								
Off Book Automated	"Q"	"Q"	"Q"	n/a	x	x	x	
A concurrence of two key attributes of the off book trade, both of which must be met: - a computerised process makes the decision to simultaneously match and execute the two sides that comprise the trade; and - at least one side of the trade represents liquidity with which an external client could have interacted.								

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
3.8	<b>TRANSACTION TYPE : ORDINARY/STANDARD TRADES OR TRADES OUTSIDE PRICE FORMATION/DISCOVERY PROCESS</b>							
	Plain-Vanilla Trade	"P"	"P"	"P"	n/a	x	x	x
	An ordinary/standard trade for the specified trading Market Mechanism or Trading Mode.							
	Non-Price Forming Trade (formerly known as the Technical Trade)	"T"	"NPFT"	"NPFT"	"NPFT"	✓	✓	x
RTS 1: Transactions where the exchange of financial instruments is determined by factors other than the current market valuation of the financial instrument as listed under Article 13. RTS 2: All types of transactions listed under Article 11 of this Regulation and which do not contribute to the price formation.								
Trade not Contributing to the Price Discovery Process	"J"	"TNCP"	"TNCP"	"TNCP"	✓	x	x	
Transaction not contributing to the price discovery process for the purposes of Article 23 of Regulation (EU) No 600/2014 and as set out in Article 2.								

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
3.9	<b>TRANSACTION TYPE : ALGORITHMIC INDICATOR</b>							
	Algorithmic Trade	"H"	"ALGO"	"ALGO"	"ALGO"	✓	x	x
	Transactions executed as a result of an investment firm engaging in algorithmic trading as defined in Article 4(1)(39) of Directive 2014/65/EU.							
No Algorithmic Trade	"-"	"-"	<i>nothing</i>	n/a	x	x	x	
Any trade for which the "Algorithmic Trade" definition does not apply.								

### 6.1.4 Level 4: Publication Mode

Level 4 of MMT defines the mode in which the transaction is being published, and it can have one of the following values at each of the sub-levels of 4.1 and 4.2:

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
4.1	<b>PUBLICATION MODE / POST-TRADE DEFERRAL : REASON</b>							
	Immediate Publication	"_"	"_"	<i>nothing</i>	n/a	x	x	x
	A trade that has been reported to the market immediately following execution.							
	Non-Immediate Publication	"1"	"1"	"N"	n/a	x	x	x
	A trade that is not being reported to the market immediately following execution. This would encapsulate 'late' trades that legally should have been reported immediately but had not been owing to a technical or procedural issue, and 'deferred publication' trades that are legally eligible to be subject to deferred publication, for example those derived from large in scale orders.							
	Non-Immediate Publication: Deferral for "Large in Scale"	"2"	"LRGS"	"LRGS"	"LRGS"	✓	✓	x
	RTS 1: Transactions that are large in scale compared with normal market size for which deferred publication is permitted under Article 14. RTS 2: Transactions executed under the post-trade large in scale deferral.							
Non-Immediate Publication: Deferral for "Illiquid Instrument"	"3"	"ILQD"	"ILQD"	"ILQD"	✓	✓	✓	
RTS 1: Transactions in illiquid instruments as determined in accordance with Article s 1 to 9 of Commission Delegated Regulation [MiFIR Level 2] executed on a systematic internaliser. RTS 2: Transactions executed under the deferral for instruments for which there is not a liquid market.								
Non-Immediate Publication: Deferral for "Size Specific"	"4"	"SIZE"	"SIZE"	"SIZE"	✓	✓	✓	
RTS 1: Transactions executed on a systematic internaliser where the size of the incoming order was above the standard market size as determined in accordance with Article 11. RTS 2: Transactions executed under the post-trade size specific to the instrument deferral.								

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
4.2	<b>POST-TRADE DEFERRAL OR ENRICHMENT : TYPE</b>							
	<i>For the original trade:</i>							
	Limited Details Trade	"1"	"LMTF"	"LMTF"	"LMTF"	x	✓	x
	First report with publication of limited details in accordance with Article 11(1)(a)(i).							
	Daily Aggregated Trade	"2"	"DATF"	"DATF"	"DATF"	x	✓	x
	Publication of daily aggregated transaction in accordance with Article 11(1)(a)(ii).							
	Volume Omission Trade	"3"	"VOLO"	"VOLO"	"VOLO"	x	✓	x
	Transaction for which limited details are published in accordance with Article 11(1)(b).							
	Four Weeks Aggregation Trade	"4"	"FWAF"	"FWAF"	"FWAF"	x	✓	x
	Individual transactions which have previously benefited from aggregated publication in accordance with Article 11(1)(c).							
	Indefinite Aggregation Trade	"5"	"IDAF"	"IDAF"	"IDAF"	x	✓	x
	Transactions for which the publication of several transactions in aggregated form for an indefinite period of time has been allowed in accordance with Article 11(1)(d).							
	Volume Omission Trade, Eligible for Subsequent Enrichment in Aggregated Form	"6"	"VOLW"	"VOLW"	"VOLW"	x	✓	x
	Transaction for which limited are published in accordance with Article 11(1)(b) and for which the publication of several transactions in aggregated form for an indefinite period of time will be consecutively allowed in accordance with Article 11(2)(c).							
<i>For the subsequent enrichment trade(s):</i>								
Full Details of Earlier "Limited Details Trade"	"7"	"FULF"	"FULF"	"FULF"	x	✓	x	
Transaction for which limited details have been previously published in accordance with Article 11(1)(a)(i), corresponding to "LMTF" above.								
Full Details of Earlier "Daily Aggregated Trade"	"8"	"FULA"	"FULA"	"FULA"	x	✓	x	
Individual transactions for which aggregated details have been previously published in accordance with Article 11(1)(a)(ii), corresponding to "DATF" above.								
Full Details of Earlier "Volume Omission Trade"	"9"	"FULV"	"FULV"	"FULV"	x	✓	x	
Transaction for which limited details have been previously published in accordance with Article 11(1)(b), corresponding to "VOLO" above.								
Full Details of Earlier "Four Weeks Aggregation Trade"	"V"	"FULJ"	"FULJ"	"FULJ"	x	✓	x	
Transactions for which the publication of several transactions in aggregated form for an indefinite period of time has been allowed in accordance with Article 11(1)(d), corresponding to "FWAF" above.								
Full Details in Aggregated Form of Earlier "Volume Omission Trade, Eligible for Subsequent Enrichment in Aggregated Form"	"W"	"COAF"	"COAF"	"COAF"	x	✓	x	
Transactions for which limited details have been previously published in accordance with Article 11(1)(b) and for which the publication of several transactions in aggregated form for an indefinite period of time has consecutively been allowed in accordance with Article 11(2)(c), corresponding to "VOLW" above.								



	<i>If neither apply:</i>							
	Not Applicable / No Relevant Enrichment Type	"_"	"_"	<i>nothing</i>	n/a	x	x	x
	Not applicable, or none of the defined post-trade enrichment types apply.							

### 6.1.5 Level 5: Duplicative Indicator

Level 5 of MMT defines whether or not the trade has been published to more than one Approved Publication Arrangement (APA), or is otherwise a copy of another published trade report. Level 5 can have one of the following values:

Level	Full Name	Encoding Options		Display Code	MiFID II Equivalencies or Application			
		Efficient	...with ESMA Stipulations		Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	SI Use Only
5	<b>DUPLICATIVE INDICATOR</b>							
	Unique Trade Report	"_"	"_"	<i>nothing</i>	n/a	x	x	x
	Any trade for which the "Duplicative Trade Report" definition does not apply.							
	Duplicative Trade Report (reported to more than one APA)	"1"	"DUPL"	"DUPL"	"DUPL"	✓	x	x
	When a transaction is reported to more than one APA in accordance with Article 17(1) of Commission Delegated Regulation (EU) on [DRSP RTS]							

## 6.2 Fully Embedded ESMA RTS Trade Flags

### 6.2.1 2010 CESR Transaction Types

ESMA/CESR had originally recommended that the following transaction codes be universally applied, as published on 13th October 2010 [ESMA/CESR -10/882]. These formed the basis of MMT versions 1.0, 2.0, 2.1 and 2.1, and MMT thus used the same codes for the equivalent MMT transaction types.

Transaction Code	Explanation	Equivalent MMT Code
<b>B</b>	Benchmark trade	B
<b>X</b>	Agency cross trade ("cross trade")	X
<b>G</b>	Give-up/give-in trade	G
<b>E</b>	Ex/cum dividend trade	E
<b>T</b>	Technical trade	T
<b>D</b>	Dark trade	D
<b>N</b>	Negotiated trade	N
<b>C</b>	Cancellation	C
<b>A</b>	Amendment	A

### 6.2.2 2015/2016 ESMA RTS Trade Flags

The CESR transaction codes have now been superseded by the following trade flags, stipulated by ESMA in Regulatory Technical Standards (RTS) 1 (for equities) and 2 (for non-equities). The flags shown in the first column of the following tables have all been additionally represented as MMT v3 trade flags.

#### 6.2.2.1 RTS 1 for Equities (and Equity-Like Instruments)

Flag	Name	Type of execution or publication venue	Description
<b>BENC</b>	Benchmark transactions flag	RM, MTF APA CTP	Transactions executed in reference to a price that is calculated over multiple time instances according to a given benchmark, such as volume-weighted average price or timeweight average price.
<b>ACTX</b>	Agency cross transactions flag	RM, MTF APA CTP	Transactions where an investment firm has brought together clients' orders with the purchase and the sale conducted as one transaction and involving the same volume and price.
<b>NPFT</b>	Non-price forming transactions flag	RM, MTF CTP	Transactions where the exchange of financial instruments is determined by factors other than the current market valuation of the financial instrument as listed under Article 13.
<b>TNCP</b>	Transactions not contributing to the price discovery process for the purposes of Article 23 of Regulation (EU) No 600/2014 flag	RM, MTF APA CTP	Transaction not contributing to the price discovery process for the purposes of Article 23 of Regulation (EU) No 600/2014 and as set out in Article 2.
<b>SDIV</b>	Special dividend transaction flag	RM, MTF APA CTP	Transactions that are either: executed during the exdividend period where the dividend or other form of distribution accrues to the buyer instead of the seller; or executed during the cumdividend period where the dividend or other form of distribution accrues to the seller instead of the buyer.

<b>LRGS</b>	Post-trade large in scale transaction flag	RM, MTF APA CTP	Transactions that are large in scale compared with normal market size for which deferred publication is permitted under Article 14.
<b>RFPT</b>	Reference price transaction flag	RM, MTF CTP	Transactions which are executed under systems operating in accordance with Article 4(1)(a) of Regulation (EU) No 600/2014.
<b>NLIQ</b>	Negotiated transaction in liquid financial instruments flag	RM, MTF CTP	Transactions executed in accordance with Article 4(1)(b)(i) of Regulation (EU) No 600/2014.
<b>OILQ</b>	Negotiated transaction in illiquid financial instruments flag	RM, MTF CTP	Transactions executed in accordance with Article 4(1)(b)(ii) of Regulation (EU) No 600/2014.
<b>PRIC</b>	Negotiated transaction subject to conditions other than the current market price flag	RM, MTF CTP	Transactions executed in accordance with Article 4(1)(b)(iii) of Regulation (EU) No 600/2014 and as set out in Article 6.
<b>ALGO</b>	Algorithmic transaction flag	RM, MTF CTP	Transactions executed as a result of an investment firm engaging in algorithmic trading as defined in Article 4(1)(39) of Directive 2014/65/EU.
<b>SIZE</b>	Transaction above the standard market size flag	APA CTP	Transactions executed on a systematic internaliser where the size of the incoming order was above the standard market size as determined in accordance with Article 11.
<b>ILQD</b>	Illiquid instrument transaction flag	APA CTP	Transactions in illiquid instruments as determined in accordance with Article s 1 to 9 of Commission Delegated Regulation [MiFIR Level 2] executed on a systematic internaliser
<b>RPRI</b>	Transactions which have received price improvement flag	APA CTP	Transactions executed on a systematic internaliser with a price improvement in accordance with Article 15(2) of Regulation (EU) No 600/2014.
<b>CANC</b>	Cancellation flag	RM, MTF APA CTP	When a previously published transaction is cancelled.
<b>AMND</b>	Amendment flag	RM, MTF APA CTP	When a previously published transaction is amended.
<b>DUPL</b>	Duplicative trade reports flag	APA	When a transaction is reported to more than one APA in accordance with Article 17(1) of Commission Delegated Regulation (EU) on [DRSP RTS]

### 6.2.2.2 RTS 2 for Non-Equities

Flag	Name	Type of execution or publication venue	Description
<b>BENC</b>	Benchmark transactions flag	RM, MTF, OTF APA CTP	All kinds of volume weighted average price transactions and all other trades where the price is calculated over multiple itime instances according to a given benchmark.
<b>ACTX</b>	Agency cross transactions flag	APA CTP	Transactions where an investment firm has brought together two clients' orders with the purchase and the sale conducted as one transaction and involving the same volume and price.
<b>NPFT</b>	Non-price forming transactions flag	RM, MTF, OTF CTP	All types of transactions listed under Article 11 of this Regulation and which do not contribute to the price formation.
<b>LGRS</b>	Post-trade LIS transaction flag	RM, MTF, OTF CTP	Transactions executed under the post-trade large in scale deferral.

<b>ILQD</b>	Illiquid instrument transaction flag	RM, MTF, OTF APA CTP	Transactions executed under the deferral for instruments for which there is not a liquid market.
<b>SIZE</b>	Post-trade SSTI transaction flag	RM, MTF, OTF APA CTP	Transactions executed under the post-trade size specific to the instrument deferral.
<b>TPAC</b>	Package transaction flag	RM, MTF, OTF APA CTP	Package transactions which are not exchange for physicals as defined in Article 1.
<b>XFPH</b>	Exchange for physicals transaction flag	RM, MTF, OTF APA CTP	Exchange for physicals as defined in Article 1
<b>CANC</b>	Cancellation flag	RM, MTF, OTF APA CTP	When a previously published transaction is cancelled.
<b>AMND</b>	Amendment flag	RM, MTF, OTF APA CTP	When a previously published transaction is amended.

Flag	Name	Type of execution or publication venue	Description
<b>LMTF</b>	Limited details flag	RM, MTF, OTF APA CTP	First report with publication of limited details in accordance with Article 11(1)(a)(i).
<b>FULF</b>	Full details flag	RM, MTF, OTF APA CTP	Transaction for which limited details have been previously published in accordance with Article 11(1)(a)(i).

Flag	Name	Type of execution or publication venue	Description
<b>DATF</b>	Daily aggregated transaction flag	RM, MTF, OTF APA CTP	Publication of daily aggregated transaction in accordance with Article 11(1)(a)(ii).
<b>FULA</b>	Full details flag	RM, MTF, OTF APA CTP	Individual transactions for which aggregated details have been previously published in accordance with Article 11(1)(a)(ii).

Flag	Name	Type of execution or publication venue	Description
<b>VOLO</b>	Volume omission flag	RM, MTF, OTF APA CTP	Transaction for which limited details are published in accordance with Article 11(1)(b).
<b>FULV</b>	Full details flag	RM, MTF, OTF APA CTP	Transaction for which limited details have been previously published in accordance with Article 11(1)(b)

Flag	Name	Type of execution or publication venue	Description
<b>FWAF</b>	Four weeks aggregation flag	RM, MTF, OTF APA CTP	Individual transactions which have previously benefited from aggregated publication in accordance with Article 11(1)(c).
<b>FULJ</b>	Full details flag	RM, MTF, OTF APA CTP	Transactions for which the publication of several transactions in aggregated form for an indefinite period of time has been allowed in accordance with Article 11(1)(d).

Flag	Name	Type of execution or publication venue	Description
<b>IDAF</b>	Indefinite aggregation flag	RM, MTF, OTF APA CTP	Transactions for which the publication of several transactions in aggregated form for an indefinite period of time has been allowed in accordance with Article 11(1)(d).

Flag	Name	Type of execution or publication venue	Description
<b>VOLW</b>	Volume omission flag	RM, MTF, OTF APA CTP	Transaction for which limited are published in accordance with Article 11(1)(b) and for which the publication of several transactions in aggregated form for an indefinite period of time will be consecutively allowed in accordance with Article 11(2)(c).
<b>COAF</b>	Consecutive aggregation flag (post volume omission for sovereign debt instruments)	RM, MTF, OTF APA CTP	Transactions for which limited details have been previously published in accordance with Article 11(1)(b) and for which the publication of several transactions in aggregated form for an indefinite period of time has consecutively been allowed in accordance with Article 11(2)(c).

## 7 MMT Syntax and Encoding

### 7.1 General Remarks

Each attribute of MMT Levels 1 to 5 described in [Section 6](#) has been assigned an encoding option as specified in the **MMT Mapping Matrix** columns for “Encoding Options”. There are two encoding options available:

1. An efficient encoding, where each value at each level is represented via a 1-character code; or
2. An identical encoding, but where the 4-character ESMA trade flag codes are used where applicable.

The second option exists where the feed may be the only publication mechanism that will satisfy the MiFID II regulatory requirements. The first option may be preferred for data feeds that are more sensitive to the expedient delivery of market data.

In order to minimise mapping efforts when consolidating messages from various sources, the same **data type** and **value** – as specified for the chosen encoding method – should be used in all feed implementations of the trade flags (irrespective of message format and protocol). However, technical field names/tags may vary from feed to feed (depending on protocol and message format actually used).

### 7.2 Encoding Values

To help facilitate the maintenance of values and encoding, MMT levels 1, 2, 3, 4 and 5 are encoded as alphanumeric characters. These alphanumeric values are not being used as “abbreviations”, i.e. the specific value’s implied meaning cannot necessarily be derived from the value itself. The attributes of these levels are clearly defined in the **MMT Mapping Matrix** document.

Note: The apparent disadvantage of not being self-explanatory is compensated for by the greater stability of codes when rephrasing descriptions or adding new values. There is no need to choose codes which “express” or “abbreviate” a meaning nor can codes suggest a (possibly) wrong meaning.

### 7.3 Mandatory Requirements

It is a mandatory requirement that a **value** be applied to every trade type at every MMT Level. All MMT Levels are specified are “mandatory” in the sense that the field itself will be either:

- present in each and every trade message and show one of the codes listed in the **MMT Mapping Matrix** encoding options; or
- an “always equal to” value at an MMT level or sub-level is documented within the market operator’s data feed specification, so that consumers of the feed know how to infer the appropriate MMT physical field value. Constant values must be documented using the standard template that is downloadable from the FIX website. This template must be appended to the data feed specifications.

#### [MMT - FIX Trading Community](#)

The placeholder ‘-’ (ASCII code 45 decimal; also shown in the MMT Matrix) is used whenever none of the “meaningful” values applies. Thus, the character ‘-’ indicates that the field is

“empty”. This rule provides full clarity without the need to interpret a pattern of present and absent fields.

## 7.4 Completing the MMT Questionnaire

In order to complete the *MMT Questionnaire* the following steps are necessary:

1. Identify the organisation’s own proprietary trade flags.
2. Populate the questionnaire’s proprietary area (under the “Field x” headers) with the proprietary flags.
3. In the MMT Matrix section, use the drop-down menus to choose the appropriate MMT Code Description at each level for the identified proprietary trade flags.
4. When applying an MMT Code Description, the MMT ‘Physical Field’ will be applied in the MMT Code section.
5. When all MMT Code Descriptions have been applied at the MMT Matrix section, ensure that a ‘Physical field’ has been populated for each corresponding level in the MMT Code section. If an MMT Code Description has not been assigned at the MMT Matrix section then an error will be denoted by a ‘#’ in the corresponding level in the MMT Code section.

## 8 Market Data Vendor Representation of MMT

Native MMT codes have been designed to allow efficient processing in trading systems and data feeds. They’re however not intuitive when they get read by a human being on a screen. For this reason data vendors participating to the MMT Technical Committee have agreed on a common set of more intuitive codes making the MMT categorization human readable and easy to consume on display products. There is a one to one mapping with native MMT codes. Details are available on the MMT Initiative mapping Matrix.

### [MMT - FIX Trading Community](#)

For efficient packing on a vendor data feed, a precise concatenation of the physical values at each level may be adopted. The number of levels will depend on the version of MMT, but it is anticipated that all vendors will implement MMT v3.01.

For example, a trade that has the following MMT v3.01 definitions will be encoded as “1O-----PH---“:

- Level 1 MARKET MECHANISM : “1” Central Limit Order Book
- Level 2 TRADING MODE : “O” Scheduled Opening Auction
- Level 3.1 TRANSACTION CATEGORY : “-” None apply (a standard trade for the Market Mechanism and Trading Mode)
- Level 3.2 NEGOTIATED TRANSACTION INDICATOR : “-“ No Negotiated Trade
- Level 3.3 CROSSING TRADE INDICATOR : “-“ No Crossing Trade
- Level 3.4 MODIFICATION INDICATOR : “-“ New Trade
- Level 3.5 BENCHMARK INDICATOR : “-“ No Benchmark Trade
- Level 3.6 EX/CUM DIVIDEND INDICATOR : “-“ No Ex/Cum Dividend Trade
- Level 3.7 OFF BOOK AUTOMATED INDICATOR : “-“ Unspecified or does not apply
- Level 3.8 ORDINARY/STANDARD TRADES OR... : “P” Plain-Vanilla Trade
- Level 3.9 ALGORITHMIC INDICATOR : “H” Algorithmic Trade
- Level 4.1 POST-TRADE DEFERRAL REASON : “-“ Immediate Publication
- Level 4.2 POST-TRADE DEFERRAL OR ENRICH... : “-“ Not Applicable





## 11 Glossary

Term	Explanation	MMT Level
<b>Amendment</b>	A trade report that represents an amendment (replacement) of an earlier trade report.	3: Transaction Type
<b>APA</b>	Approved Publication Arrangement: “a person authorised under the provisions established in Directive [new MiFID] to provide the service of publishing trade reports on behalf of investment firms” Source: <a href="#">EU Commission Proposal COM(2011) 652/4</a>	-
<b>ASP</b>	Application Service Providers	-
<b>At Market Close Trading</b>	A trading phase that follows the conclusion of a continuous trading or closing auction phase, through which parties are only able to transact at the determined closing price for the day.	2: Trading Mode
<b>Auction Trading</b>	A trade executed during an auction trading phase on a lit order book. Auction phases are relevant to markets that operate a continuous trading phase as a means of facilitating trades (sometimes referred to as immediate execution or an order-driven market). An auction is effectively a temporary halt to immediate order execution. It provides traders in the market with the ability to influence and respond to the perceived market value of a financial instrument, without risk of any orders that they submit being immediately executed prior to the stated time that the auction ends. This gives participants the opportunity to amend their orders as they see fit, in a more orderly environment. During the auction phase the trading engine will calculate an equilibrium price based on all of the orders that have been entered in to the order book. Orders that are better than or equal to this equilibrium price, including special “at market price” orders for which the price is not specified, will transact at the calculated equilibrium price once the auction phase ends. Auction calls may be held at scheduled times to facilitate an orderly opening of the market (the opening auction), an orderly closing of the market (the closing auction), or intraday (the intraday auction). They may also be held at unscheduled times (an unscheduled auction) to facilitate an orderly resumption of trading following circumstances such as a volatility interruption or a market halt.	2: Trading Mode
<b>Benchmark</b>	A category for Volume Weighted Average Price (VWAP), Time Weighted Average Price (TWAP), Competitive Volume Weighted Average Price (CVWAP) and all other trades where the price is calculated over multiple time instances according to a given benchmark. Such trades may differ in price from the prevailing market price at the time the trade is published.	3: Transaction Type
<b>Broker Crossing System (BCS)</b>	An internal automated process operated by a broker-dealer that matches buy and sell orders on a discretionary for example intra-spread basis within a pricing methodology referencing an appropriate best bid and offer (BBO).	-
<b>Cancellation</b>	A trade report that represents the cancellation of an earlier trade report.	3: Transaction Type
<b>Central Limit Order Book (CLOB)</b>	A trading method by which transparent (visible) buy and sell orders are placed on to an electronically-maintained order book and prioritised/sorted in order of price and time. Buy and sell orders that match in price are immediately and automatically executed, with the transaction typically also being reported	1: Market Mechanism

Term	Explanation	MMT Level
	immediately.	
<b>Committee of European Securities Regulators (ESMA/CESR)</b>	The predecessor to the European Securities and Markets Association (ESMA). ESMA/CESR ceased to exist effective 1 <sup>st</sup> January 2011.	-
<b>Competitive Volume Weighted Average Price (CVWAP)</b>	Provides the best and worst average price performance by actual market makers.	-
<b>Continuous Trading</b>	Refers to a trading phase where orders on an order book are continuously executed in the event that one or more buy and sell orders match.	2: Trading Mode
<b>Crossing Trade</b>	A trade that results when a broker executes both a buy and a sell for the same security from one client account to another. Incidental crossings that are purely triggered by price/time priority of an order book algorithm are not flagged as such.	3: Transaction Type
<b>Dark Order Book</b>	A dark order book offers the similar or equivalent capabilities to a Central Limit Order Book, but the orders and their attributes are not displayed. This grants traders full anonymity.	1: Market Mechanism
<b>Dark Trade</b>	A trade that executes under the reference price waiver and the large in scale waiver.	3: Transaction Type
<b>European Securities and Markets Authority (ESMA)</b>	Established on 1 <sup>st</sup> January 2011 as a successor to the Committee of European Securities Regulators (ESMA/CESR), ESMA is an independent European Union (EU) authority that contributes to safeguarding the stability of the EU's financial system by ensuring the integrity, transparency, efficiency and orderly functioning of securities markets. <a href="http://www.esma.europa.eu/">http://www.esma.europa.eu/</a>	-
<b>Ex/Cum Dividend</b>	<b>The ex/cum dividend indicator is intended to convey the role of the dividend in explaining why a trade price has occurred outside of the normal market price of the share.</b>  <b>Ex-dividend:</b> A trade that has been executed on or after a prescribed ex-dividend date. The purchaser of the share will not be eligible to receive a due dividend payment on that share. <b>Cum-dividend:</b> A trade that has been executed prior to a prescribed ex-dividend date. The purchaser of the share will be eligible to receive a due dividend payment on that share.	3: Transaction Type
<b>Give-Up/ Give-In Trade</b>	A trade that has resulted from an order having been executed by a broker on behalf of another broker. A give-up (or give-in) trade means that the broker who executed the trade must give-up the commission for executing that trade to the other broker.	3: Transaction Type
<b>Immediate Publication</b>	A trade that has been reported to the market immediately following execution.	4: Publication Mode
<b>LIS</b>	Large In Scale	-
<b>ISV</b>	Independent Software Vendor	
<b>Market Makers</b>	A firm or individual that quotes both a buy and a sell price (two-way quotes) for a financial instrument held in an inventory. Registered market makers are normally obliged to provide transactional two-way quotes during designated mandatory quotation periods.	-

<b>Term</b>	<b>Explanation</b>	<b>MMT Level</b>
<b>Markets in Financial Instruments Directive (MiFID)</b>	A European law that provides harmonised regulation for investment services across the member states of the European Economic Area (EEA), consisting of the Member States of the European Union (EU) plus Iceland, Norway and Liechtenstein.	-
<b>MTF</b>	Multilateral Trading Facility – An alternative trading centre to a traditional regulated market that allows buyers and sellers to transact with one another. An MTF does not have a listing process and it cannot set the regulatory status of a security.	-
<b>Negotiated Trade</b>	A trade conducted in an EU-regulated market security that is not subject to pre-trade transparency on the market through which it is being reported and which is on terms that are no worse than those that could be achieved on the relevant market's order or quote book, (or where the share is not traded continuously, and is on terms that are no worse than those that could be achieved on a relevant venue with continuous trading), after taking into account any relevant trading, settlement and clearing costs. The negotiated trade flag should only be used for trades which occurred under the negotiated trade waiver in Article 18(1)(b) of the MiFID Implementing Regulation.	3: Transaction Type
<b>Non-Immediate Publication</b>	A trade that is not being reported to the market immediately following execution. This would encapsulate 'late' trades that legally should have been reported immediately but had not been owing to a technical or procedural issue, and 'deferred publication' trades that are legally eligible to be subject to deferred publication, for example large in scale orders.	4: Publication Mode
<b>Off-Book</b>	Trades that have not been executed on a quote-driven or order-driven book are considered to be 'off-book' trades.	1: Market Mechanism
<b>Off-Exchange</b>	Trades that are being reported outside of the rules and regulations of a regulated market are considered to be 'off-exchange' trades.	1: Market Mechanism
<b>OMS</b>	Order Management System	
<b>On-Exchange</b>	Trades that are being reported within the rules and regulations of a regulated market are considered to be 'on-exchange' trades.	1: Market Mechanism
<b>Over the Counter (OTC)</b>	Refers to trades transacted over a dealer network instead of a centralised authorised trading platform operated by a regulated market ("exchange") or a multilateral trading facility (MTF).	-
<b>Out of Main Session Trading</b>	A trading phase that is permitted by a market outside of the core operating hours such as the continuous, auction and at market close trading phases. Such phases may include pre-market open trade reporting or special after-hours market trading phases.	2: Trading Mode
<b>Plain Vanilla Trade</b>	An ordinary/standard trade for the specified trading phase or book type.	3: Transaction Type
<b>Quote Driven Book</b>	A trading method by which execution prices are largely determined from buy and sell offer quotations issued by market makers or dealers. Most such systems operate a mandatory quotation period during each trading day, during which registered market makers must display their best buy and sell quotations. The market makers are obliged to transact at those quotations if approached to do so.	1: Market Mechanism
<b>Systematic Internaliser</b>	Trades reported by a Systematic Internaliser, which is a firm that executes orders from its clients against its own book or	2: Trading Mode

<b>Term</b>	<b>Explanation</b>	<b>MMT Level</b>
<b>Trade Reporting</b>	against orders from other clients. Systematic Internalisers are subject to pre-trade and post-trade transparency requirements under the MiFID regulations.	
<b>Technical</b>	Trades that either represented non-addressable liquidity or where the exchange of shares is determined by factors other than the current market valuation of the share. Non-exhaustive examples of such trades include OTC hedges of a derivative; inter-fund transfers; equity hedge trades related to the creation/redemption of ETFs; Exchange for Physical trades.	3: Transaction Type
<b>Time Weighted Average Price (TWAP)</b>	The average price of a financial instrument over a specified time.	-
<b>Trade Flag Mapping Guide</b>	The document that indicates the mappings between a proprietary market data feed's trade type identifiers and the Market Model Typology transaction codes.	-
<b>Trade Reporting</b>	The process of 'manually' reporting a transaction, as opposed to the automatic trade reporting typical of continuous trading platforms.	2: Trading Mode
<b>Trade with Conditions</b>	Trades where the trade price and/or trading process does not reference or correlate with the then current market price. Note that this trade type is provided so as to ensure that MMT is compatible with existing systems, but the trade type need not be used if the "Negotiated Trade", "Technical Trade" or "Benchmark Trade" trade types have been used.	3: Transaction Type
<b>Volume Weighted Average Price (VWAP)</b>	The average price of a financial instrument over a specified time, typically a trading day, taking into account the volume of each of the individual trades when determining the collective average price for those trades.	-