



# Global Technical Committee

## MIFID II RTS 27 Gap Analysis

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## Table of Contents

<a href="#">1</a>	<a href="#">Introduction .....</a>	<a href="#">5</a>
1.1	<a href="#">Summary of Changes .....</a>	<a href="#">5</a>
<a href="#">2</a>	<a href="#">Business Requirements.....</a>	<a href="#">7</a>
<a href="#">3</a>	<a href="#">Issues and Discussion Points.....</a>	<a href="#">17</a>
<a href="#">4</a>	<a href="#">Proposed Message Flow .....</a>	<a href="#">18</a>
<a href="#">5</a>	<a href="#">FIX Message Tables.....</a>	<a href="#">20</a>
5.1	<a href="#">FIX Message – MarketDefinition .....</a>	<a href="#">20</a>
<a href="#">6</a>	<a href="#">FIX Component Blocks .....</a>	<a href="#">22</a>
6.1	<a href="#">Component - MDStatisticParameters .....</a>	<a href="#">22</a>
6.2	<a href="#">Component – MiscFeesGrp .....</a>	<a href="#">27</a>
<a href="#">Appendix A - Data Dictionary.....</a>		<a href="#">29</a>
<a href="#">Appendix B - Glossary Entries .....</a>		<a href="#">41</a>
<a href="#">Appendix C - Abbreviations.....</a>		<a href="#">41</a>
<a href="#">Appendix D - Usage Examples.....</a>		<a href="#">42</a>

## Document History

Revision	Date	Author	Revision Comments
0.1	April 30, 2017	Hanno Klein Deutsche Börse Group  Charu Mittal itiviti	Initial draft based on BestExecutionReporting guidelines and ESMA RTS 27 specified requirements.
0.2	May 15, 2017	Hanno Klein Deutsche Börse Group  Charu Mittal itiviti	Added section 2 - Business Requirements and provided elaboration for new fields and valid values
0.3	May 24, 2017	Hanno Klein Deutsche Börse Group	Review and standardization of terminology
0.4	May 26, 2017	Charu Mittal itiviti	Added text for existing fields. Updated elaborations based on the feedback provided.
0.5	June 13, 2017	Charu Mittal itiviti	Changes based on GTC feedback after presentation on May 30, 2017
	<a href="#">June 27, 2017</a>	<a href="#">GTC Tech</a>	<a href="#">Generated ASBUILT and pre-assigned IDs.</a>

# 1 Introduction

The purpose of this document is to provide FIX gap analysis for MIFID II RTS 27 specified reporting requirements. The document is to be used in conjunction with Best Execution reporting guidelines document.

The following documents are used as references and input to this gap analysis document:

1. ESMA RTS documents reference via this link:  
[http://ec.europa.eu/finance/securities/docs/isd/mifid/rts/160608-rts-27\\_en.pdf](http://ec.europa.eu/finance/securities/docs/isd/mifid/rts/160608-rts-27_en.pdf)
2. ESMA RTS 27 Annex 1  
[http://ec.europa.eu/finance/docs/level-2-measures/mifid-rts-27-annex\\_en.pdf](http://ec.europa.eu/finance/docs/level-2-measures/mifid-rts-27-annex_en.pdf)
3. Recommended Practices for Best Execution Reporting –  
[http://www.fixtradingcommunity.org/pg/file/fplpo/read/3965459/fix-mifid-recommended-practices\\_best-execution-reporting\\_draft](http://www.fixtradingcommunity.org/pg/file/fplpo/read/3965459/fix-mifid-recommended-practices_best-execution-reporting_draft)
4. RTS 27 Mapping spreadsheet - MIFID\_II\_RTS27\_FIXMappings v13

## 1.1 Summary of Changes

Below is a summary list of all the proposed extensions:

### Components:

Addition of existing component <MiscFeesGrp> to MarketDefinition(MsgType=BU) message to report current set of fees and rebates.

### Fields:

Addition of existing field MDOriginType(1024) to existing component <MDStatisticParameters> to describe the type of the trading system.

Addition of new field MDValueTier(~~2711~~**TBD**) to existing component <MDStatisticParameters> to generically describe reporting ranges for executed transactions.

Addition of existing field TradSesMethod(338) to existing component <MDStatisticParameters> to describe method of trading.

Addition of existing field MDFeedType(1022) to existing component <MDStatisticParameters> to describe the class service for a given market data feed.

Addition of existing fields ExposureDuration(1629) and ExposureDurationUnit(1916) to existing component <MDStatisticParameters> to describe sub-scope and the unit for a given time period.

Addition of existing field AggressorIndicator(1057) to existing component <MDStatisticParameters> to reduce the data set to aggressive or passive orders.

- | Addition of new field MiscFeeDesc (~~2713TBD~~) to existing component <MiscFeesGrp> to provide a textual description of the fee type.
- | Addition of new field MiscFeeQualifier(~~2712TBD~~) to existing component <MiscFeesGrp> to communicate whether the fee affects trade economics.

Valid values:

- New valid values for field MiscFeeType(139) to distinguish between different types of fees (Execution fee, order entry fee, modification fee etc.)
- New valid value “Voice” for TradSesMethod(338) to support voice method of trading.
- New valid values for MDStatisticType(2456) to support new types of statistical value (Average duration, Average price, fees, benefits, median value, average liquidity, median duration)
- New valid values for MDStatisticScope(2457) to support new entities used as basis for statistics (Outages, scheduled auctions, reference prices, orders and RFQs, no quotes etc.)
- New valid values for MDStatisticSubScope(2458) to support new sub-scope values (Failed, executed, modified, cancelled, large in scale etc.)
- New valid values for MDStatisticRatioType(2472) to support new types of ratios (Failed to successful trade value, benefits to total value, fees to total value)
- Change valid values for MDStatisticType(2456) from 11=Average turnover and 12=Total turnover to 11=Average value and 12=Total value

## 2 Business Requirements

The table below describes the regulatory requirements driving the extensions along with the proposed solution:

**Table 1: Summary of proposed solution**

#	Subject	Reference	Regulatory Text (from source RTS)	Proposed Solution
1	Best Exec Reporting – outages	RTS 27, Article 3 (1) (v)	<i>Article 3 (1)(v): “nature, number and average duration of any outage, within the venue’s normal trading period, that interrupted trading across all instruments available to trade at the venue on the date of the trading day”</i>	<p>Following fields in the <b>component &lt;MDStatisticParameters&gt;</b> will be used to provide information regarding outages and distinguish between different types.</p> <p>New valid values being proposed are highlighted.</p> <p>MDStatisticType(2456):                      1 = Count  <b>24tbd = Average duration</b></p> <p>MDStatisticScope (2457):  <b>18tbd = Outages</b></p> <p>MDStatisticSubScope (2458):  <b>7tbd = Power</b>  <b>8tbd = Hardware error</b>  <b>9tbd = Software error</b>  <b>10tbd = Network error</b></p>
2	Best Exec Reporting – Scheduled Auctions	RTS 27, Article 3 (1) (vi)	<i>Article 3 (1)(vi): “nature, number, and average duration of any scheduled auctions within the venue’s normal trading period on the date of the trading day”</i>	<p>MDStatisticType(2456):                      1 = Count  <b>24tbd = Average duration</b></p> <p>It is being proposed to add “scheduled auctions” as a new valid value to the following field in the component <b>&lt;MDStatisticParameters&gt;</b>:</p> <p>MDStatisticScope (2457):  <b>19tbd = Scheduled Auctions</b></p> <p>TradingSessionID (336) and TradingSessionSubID(625) will provide more information regarding the type of the scheduled auctions.</p>

#	Subject	Reference	Regulatory Text (from source RTS)	Proposed Solution
				TradingSessionID(336)=1(Day) TradingSessionSubID(625) 2 = Opening or opening auction 4 = Closing or closing auction 6 = Scheduled intra-day auction
3	Best Exec Reporting – Failed transactions	RTS 27, Article 3 (1) (vii) (viii)	<i>Article 3 (1) - (vii) and (viii)</i> <i>“vii) number of failed transactions on the date of the trading day;</i> <i>viii) value of failed transactions expressed as a percentage of total value of transactions that were executed on the date of the trading day”</i>	To provide statistical information regarding the number and value of the transactions that were voided by the venue, following fields and values will be used. MDStatisticType(2456): 1 = Count 5 = Ratio  MDStatisticScope (2457): 8 = Trades  MDStatisticSubScope (2458): <b>11tbd = Failed</b>  MDStatisticRatioType (2472): <b>8tbd = Failed to total traded value</b>
4	Best Exec Reporting – Intra-day information (Price)	RTS 27, Article 4 (a) (i)	<i>Article 4(a)(i)</i> <i>“the simple average price of all transactions that were executed in the two minutes starting at each of the reference times ...on that date and for each size range as set out in Article 9”</i>	It is proposed to add a new statistical type to incorporate average price for intra-day price information. Since the reporting is to be performed for transactions for different size ranges, a new field <b>MDValueTier(2711tbd)</b> is also being introduced in the component <b>&lt;MDStatisticParameters&gt;</b> (please see #11 for more information):  MDStatisticType(2456): <b>25tbd = Average Price</b>  MDStatisticScope (2457):



#	Subject	Reference	Regulatory Text (from source RTS)	Proposed Solution
				9 = Trade prices
5	Best Exec Reporting – Intra-day information (Trade value)	RTS 27, Article 4 (a)(iii)	<i>Article 4(a)(iii)</i> <i>“total value of trades executed during the two minute period”</i>	<p>Following fields in the <b>component &lt;MDStatisticParameters&gt;</b> will be used to provide information regarding total value of trades:</p> <p>MDStatisticType(2456): 12 = Total <del>turnover</del> <b>value</b></p> <p>MDStatisticScope (2457): 8 = Trades</p> <p>Also, in order to provide more clarification regarding the terms size, value, volume, and turnover, changes have been proposed to the existing valid values and /or their elaborations for the field (see Appendix A for more details)</p> <p>MDStatisticType(2456) 2 = Average volume 3 = Total volume 11 = Average <del>turnover</del> <b>value</b></p>
6	Best Exec Reporting – Intra-day information (transaction size)	RTS 27, Article 4 (a)(vii)	<i>Article 4(a)(vii)</i> <i>“Transaction size in terms of value for each executed transaction referred to in points....”</i>	<p>Following fields will be used in order to describe the trade value:</p> <p>MDStatisticType(2456): 16 = First</p> <p>MDStatisticScope (2457): <b>21td</b> = Trade value</p> <p>TradingSessionID(336)=1(Day) TradingSessionSubID(625)= 2 = Opening or opening auction 3 = (Continuous) Trading 4 = Closing or closing auction 5 = Post-trading 6 = scheduled intraday auction</p>

#	Subject	Reference	Regulatory Text (from source RTS)	Proposed Solution
				<p>9 = unscheduled auction                      10 = trading out of main session</p> <p>TradSesMethod(338):                      1 = Electronic                      2 = Outcry  <b>4tbd = Voice</b></p> <p><b>MDValueTier(2711tbd):</b>                      1 = Range 1                      2 = Range 2                      3 = Range 3</p>
7	Best Exec Reporting – Intra-day information (trading system)	RTS 27, Article 4 (a)(viii)	<p><i>Article 4(a)(viii)</i>                      “trading system and trading mode under which the transactions referred to in points .... were executed”                      Trading system is defined as                      “trading system means the way in which an execution venue executes orders as continuous auction order book, continuous quote driven, request for quote, periodic auction or any hybrid system falling into two or more of these categories”</p>	<p>Trading system over market data is currently described through an existing field MDOriginType (1024). In order to describe the trading system within the component &lt;MDStatisticParameters&gt;, it is proposed to add MDOriginType(1024) in the component.</p>
8	Best Exec Reporting – Intra-day information (trading platform)	RTS 27, Article 4 (a)(ix)	<p><i>Article 4(a)(ix)</i>                      “trading platform on which the transactions referred to in ....were executed”                      Trading platform is defined as                      “trading platform means the type of platform the execution venue operates: electronic, voice or outcry”</p>	<p>Addition of existing field <b>TradSesMethod(338)</b> in the component &lt;MDStatisticParameters&gt; to describe trading platform.</p> <p>It is also proposed to add a new valid value to the field to describe the voice method of trading.</p> <p>Additional valid value:  <b>4tbd = Voice</b></p>
9	Best Exec Reporting – Intra-day information (Reference Prices)	RTS 27, Article 4(a)(x)	<p><i>Article 4(a)(x)</i>                      “best bid and offer or the suitable reference price at the time of execution for each executed transaction”</p>	<p>It is proposed to add a new valid value to the following field MDStatisticScope (2457):  <b>20tbd = Reference prices</b></p>
10	Best Exec	RTS 27,	<i>Article 5:</i>	In order to convey current fees

#	Subject	Reference	Regulatory Text (from source RTS)	Proposed Solution
	Reporting - Costs	Article 5	<p><i>“(a) a description of the nature and level of all components of costs applied by the execution venue, before any rebates or discounts are applied, and information on how those costs differ according to the user or financial instrument involved and the relevant amounts by which they differ. The components of costs shall include:</i></p> <ul style="list-style-type: none"> <li><i>(i) execution fees;</i></li> <li><i>(ii) fees for the submission, modification or cancellation of orders or quotes withdrawals;</i></li> <li><i>(iii) fees related to market data access and use of terminals;</i></li> <li><i>(iv) any clearing and settlement fees and any other fees paid to third parties involved in the execution of the order;</i></li> </ul> <p><i>(b) a description of the nature and level of any rebates, discounts or other payments offered to users of the execution venue including information on how those rebates, discounts or other payments differ according to the user or financial instrument involved and the amounts by which they differ;</i></p> <p><i>(c) a description of the nature and amount of any non-monetary benefits offered to users of the execution venue, including information on how those non-monetary benefits differ according to the user or financial instrument involved and the value by which they differ</i></p> <p><i>(d) a description of the nature and level of any taxes or levies invoiced to, or incurred by the execution venue on behalf of the members or users of the venue;</i></p> <p><i>(e) a link to the website of the venue or to another source where further information on costs is available;</i></p>	<p>applied by an execution venue, it is proposed to add component <b>&lt;MiscFeesGrp&gt;</b> in the MarketDefinition (35=BU) message.</p> <p>Following additional changes are also proposed for the component <b>&lt;MiscFeesGrp&gt;</b>:</p> <ol style="list-style-type: none"> <li>1. Addition of <b>MiscFeeDesc (2713tbd)</b> in the component <b>&lt;MiscFeesGrp&gt;</b> which can be used to provide a website link or to another source where further information on fees and rebates is available (Article 5 (e))</li> <li>2. Addition of <b>MiscFeeQualifier(2712tbd)</b> in the component <b>&lt;MiscFeesGrp&gt;</b> in order to identify if the fee entry affects trade economics or not.</li> <li>3. For additional fee types required by regulations, it is proposed to add following new valid values to the field <b>MiscFeeType(139)</b>: <ul style="list-style-type: none"> <li><b>24tbd</b> = Execution fee</li> <li><b>25tbd</b> = Order or quote entry fee</li> <li><b>26tbd</b> = Order or quote modification fee</li> <li><b>27tbd</b> = Orders or quote cancellation fee</li> <li><b>28tbd</b> = Market data access fee</li> <li><b>29tbd</b> = Market data terminal fee</li> <li><b>30tbd</b> = Market data volume fee</li> <li><b>31tbd</b> = Clearing fee</li> <li><b>32tbd</b> = Settlement fee</li> <li><b>33tbd</b> = Rebates</li> </ul> </li> </ol>

#	Subject	Reference	Regulatory Text (from source RTS)	Proposed Solution
			<p><i>(f) the total value of all rebates, discounts, non-monetary benefits or other payments as set out under points (b) and (c), expressed as a percentage of the total traded value during the reporting period;</i></p> <p><i>(g) the total value of all costs as set out in point (a), excluding the total value of rebates and discounts, non-monetary benefits or other payment as set out in points (b) and (c), expressed as a percentage of the total traded value during the reporting period."</i></p>	<p><b><u>34tbd</u> = Discounts</b>  <b><u>35tbd</u> = Payments</b>  <b><u>36tbd</u> = Non-monetary payments</b></p> <p>For actual statistical values over a reported period of time, it is recommended to use <b>MarketDataStatisticsReport (35=DP)</b> message. Following changes have been proposed to add an existing field <b>MDFeedType (1022)</b> in the component <b>&lt;MDStatisticParameters&gt;</b>.</p> <p>It is also proposed to add following valid values to below fields in order to meet requirements related to fees and benefits.</p> <p>MDStatisticType(2456):  <b><u>26tbd</u> = Total fees</b>  <b><u>27tbd</u> = Total benefits</b></p> <p>The statistical type is further defined by field MDStatisticScope (2457) with the addition of following new valid values:</p> <p><b><u>22tbd</u> = Market data fee items</b>  <b><u>23tbd</u> = Rebates</b>  <b><u>24tbd</u> = Discounts</b>  <b><u>25tbd</u> = Payments</b>  <b><u>26tbd</u> = Taxes</b>  <b><u>27tbd</u> = Levies</b>  <b><u>28tbd</u> = Benefits</b>  <b><u>29tbd</u> = Fees</b></p> <p>The scope is further refined by field MDStatisticSubScope (2458). It is proposed to add following valid values:</p> <p><b><u>12tbd</u> = Executed</b>  <b><u>13tbd</u> = Entered</b></p>

#	Subject	Reference	Regulatory Text (from source RTS)	Proposed Solution
				<p> <a href="#">14tbd</a> = Modified  <a href="#">15tbd</a> = Cancelled  <a href="#">16tbd</a> = Market Data Access  <a href="#">17tbd</a> = Terminal Access  <a href="#">18tbd</a> = Volume  <a href="#">19tbd</a> = Cleared  <a href="#">20tbd</a> = Settled  <a href="#">21tbd</a> = Other  <a href="#">22tbd</a> = Monetary  <a href="#">23tbd</a> = Non-monetary  <a href="#">24tbd</a> = Gross                     </p> <p>To meet the requirements of two new ratio types as described in the Article 5 (f) and (g), it is proposed to add two new valid values to the field MDStatisticRatioType (2472):</p> <p> <a href="#">9tbd</a> = Benefits to total value  <a href="#">10tbd</a> = Fees to total value                     </p>
11	Best Exec Reporting – Size Ranges	RTS 27, Article 9	<p><i>Article 9:</i>  <i>"Execution venues shall report the executed transactions specified in Article 4 for the following ranges:</i>  <i>(a) for all financial instruments other than money market instruments:</i>  <i>range 1: greater than EUR 0 and less than or equal to the Standard Market Size or the Size Specific to the financial instrument;</i>  <i>range 2: greater than the Standard Market Size or the Size Specific to the financial instrument and less than or equal to Large in Scale;</i>  <i>range 3: greater than Large in Scale.</i></p>	<p>In order to report transactions for different size ranges, it is important to identify and distinguish between the size ranges. It is proposed to add a new generic field in the component <b>&lt;MDStatisticParameters&gt;</b>. <b>MDValueTier (2711tbd)</b> will contain following valid values:</p> <p> <b>1 = Range 1</b>  <b>2 = Range 2</b>  <b>3 = Range 3</b> </p> <p>The value of the ranges will depend on the type of the financial instrument.</p>

#	Subject	Reference	Regulatory Text (from source RTS)	Proposed Solution
			<p><i>(b) for illiquid shares, exchange traded funds or certificates:</i></p> <p><i>range 1: greater than EUR 0 and less than or equal to the smallest available Standard Market Size in that type of instrument;</i></p> <p><i>range 2: greater than the smallest available Standard Market Size in that type of instrument and less than or equal to Large in Scale;</i></p> <p><i>range 3: greater than Large in Scale.</i></p> <p><i>(c) for money market instruments:</i></p> <p><i>range 1: greater than EUR 0 and less than or equal to EUR 10million;</i></p> <p><i>range 2: greater than EUR 10million and less than or equal to EUR 50million;</i></p> <p><i>range 3: greater than EUR 50million"</i></p>	Refer to Appendix A for more information.
12	Best Exec Reporting – Median Size for Orders and RFQs	RTS 22, Article 6 (f)	<p><i>Article 6 (f):</i></p> <p><i>“median size of all orders or requests for quote on that date if more than one order or request for quote was received”</i></p>	<p>It is proposed to add following new valid values to report median value for order or requests for quotes received.</p> <p>MDStatisticType(2456):  <b>28tbd = Median value</b></p> <p>MDStatisticScope (2457):  <b>30tbd = Orders and RFQs</b></p>
13	Best Exec Reporting – Market makers	RTS 27, Article 6 (g)	<p><i>Article 6 (g):</i></p> <p><i>“Number of designated market makers”</i></p>	<p>MDStatisticType(2456):                      1 = Count</p> <p>MDStatisticScope (2457):  <b>31tbd = Market makers</b></p>
14	Best Exec Reporting – Effective spread	RTS 27, Article 7 (2)(a)	<p><i>Article 7(2)(a):</i></p> <p><i>“average effective spread”</i></p>	<p>In order to report average effective spread, it is proposed to add a new valid value to the field</p> <p>MDStatisticType(2456):  <b>29tbd = Average liquidity</b></p> <p>MDStatisticScope (2457):                      9 = Trade prices</p>
16	Best Exec Reporting	RTS 27 Article 7	<p><i>Article 7(2)(g):</i></p> <p><i>“mean and median time elapsed</i></p>	Addition of following valid values to the fields:

#	Subject	Reference	Regulatory Text (from source RTS)	Proposed Solution
		(2)(g)	<i>between an aggressive order or quote acceptance being received by the execution venue and the subsequent total or partial execution"</i>	<p>MDStatisticType(2456):  <b>24tbd = Average duration</b>  <b>30tbd = Median duration</b></p> <p>MDStatisticScope (2457):                      7 = Orders and Quotes</p> <p>MDStatisticSubScope (2458):  <b>12tbd = Executed</b></p> <p>In order to distinguish between aggressive and passive orders or quotes, it is proposed to include existing field <b>AggressorIndicator(1057)</b> in the component <b>&lt;MDStatisticParameters&gt;</b>.</p>
17	Best Exec Reporting	RTS 27 Article 7 (2)(i)	<i>Article (2)(i) "number of Fill or Kill orders that failed"</i>	<p>MDStatisticType(2456):                      1 = Count</p> <p>MDStatisticScope (2457):                      5 = Orders</p> <p>To report statistics for orders that didn't get executed, it is proposed to add following valid value to the field:                      MDStatisticSubScope (2458):  <b>31tbd = Not executed</b></p>
18	Best Exec Reporting – Large in Scale	RTS 27 Article 7 (2)(k)	<i>Article (2)(k) "number and value of transactions that were executed on the trading venue that are Large in Scale pursuant to Article 4 or 9 of Regulation (EU) No 600/2014"</i>	<p>For reporting LIS orders, following valid values have been proposed:                      MDStatisticType(2456):                      1 = Count                      12 = Total <del>turnover</del>-value</p> <p>MDStatisticScope (2457):                      8 = Trades</p> <p>MDStatisticSubScope (2458):  <b>25tbd = Large in scale</b></p>
19	Best Exec Reporting –	RTS 27 Article 7	<i>Article (2)(l)</i>	In order to report transaction value excluding pending

#	Subject	Reference	Regulatory Text (from source RTS)	Proposed Solution
	Not Large in Scale	(2)(l)	<i>“number and value of transactions that were executed on the trading venue pursuant to Article 4 or Article 9 of Regulation (EU) No 600/2014, but excluding orders that are held in an order management facility of the trading venue pending disclosure and not included under point (k)”</i>	disclosures and LIS orders, it is proposed to add following values:  MDStatisticType(2456): 1 = Count 12 = Total turnover value  MDStatisticScope (2457): 8=Trades  MDStatisticSubScope (2458): <b>26tbd = Neither hidden nor large in scale</b>
20	Best Exec Reporting – Trading Interruptions	RTS 27 Article 7 (2)(m)	<i>Article (2)(m) “number and average duration of trading interruptions as the result of any volatility auction or circuit breaker which occurred within the venue’s normal trading period”</i>	MDStatisticType(2456): 1 = Count <b>24tbd = Average duration</b>  MDStatisticScope (2457): <b>32tbd = Trading interruptions</b>
21	Best Exec Reporting – Trading Suspensions	RTS 27 Article 7 (2)(n)	<i>Article (2)(n) “nature, number and average duration of any trading suspension that occurred as a result of a decision by the venue within the venue’s normal trading period, outside of any that were reported under Article 3(1)(v)”</i>	MDStatisticType(2456): 1 = Count <b>24tbd = Average duration</b>  MDStatisticScope (2457): <b>33tbd = Trading suspensions</b>  MDStatisticSubScope (2458): <b>27tbd = Corporate action</b> <b>28tbd = Venue decision</b>
22	Best Exec Reporting	RTS 27 Article 7 (3)(a)	<i>Article (3)(a) “the number and average duration, during the venue’s normal trading hours, of any periods lasting more than 15 minutes during which no bid or offers were provided for each trading day”</i>	MDStatisticType(2456): 1 = Count <b>24tbd = Average duration</b>  MDStatisticScope (2457): <b>34tbd = No quotes</b>  MDStatisticSubScope (2458): <b>29tbd = Minimum time period</b>



#	Subject	Reference	Regulatory Text (from source RTS)	Proposed Solution
				In order to represent the scope of the minimum time period, it is proposed to add following existing fields in the component <b>&lt;MDStatisticParameters&gt;</b> : <b>ExposureDuration (1629)</b> <b>and ExposureDurationUnit (1916)</b>
23	Best Exec Reporting – Provision of quotes	RTS 27 Article 8 1(b)	<i>Article (1)(b)</i> <i>“the mean amount of time and median amount of time elapsed between a request for a quote and provision of any corresponding quotes, for all quotes in that financial instrument”</i>	MDStatisticType(2456): <b><u>24tbd</u></b> = Average duration <b><u>30tbd</u></b> = Median duration  MDStatisticScope (2457): <b><u>35tbd</u></b> = Request for Quotes  MDStatisticSubScope (2458): <b><u>30tbd</u></b> = Open

### 3 Issues and Discussion Points.

#	Subject	Reference	Change Request	Issue / Resolution
1	Fees by user	Table 1 – row 10 RTS 27 Article 5(a)(b)(c)	Ability to distinguish different users is required in RTS 27 Article 5 which says “... how those ... differ according to the user ...”. This can be covered by adding a single field (MDStatisticPartyRole) based on PartyRole(452) as there is no need to identify a specific party. However, RTS 28 requires to identify the top 5 venues which can be covered by means of an entire and new parties block (<MDStatisticParties>) outside of the existing component <MDStatisticParameters>.  This is not possible as it would result in duplicate field names in a tag=value	Closed. Remove new field MDStatisticPartyRole.  ESMA is vague in terms of which users are to be distinguished, i.e. market makers may or may not be one of them. Existing FIX fields such as TradingCapacity(1815) may also be an option. Hence, it was decided not to provide an explicit distinction at this time and await further clarification on this requirement.

#	Subject	Reference	Change Request	Issue / Resolution
			encoding. Options include the choice of a different field or to use the complete Parties component with the party identifier set to "N/A".	
2	Rebates etc. as part of fees	Table 1 – row 10 RTS 27 Article 5(a)(b)(c)	Ability to identify rebates, discounts or other payments to the users of the execution venue is required in RTS 27 Article 5. The proposal to extend the valid values of MiscFeeType(139) leads to a problem for the current usage of MiscFeesGrp on a trade or transaction level to contain only fees contributing to their economics, ultimately expressed in NetMoney(118).  Options include the introduction of a separate, new component to capture these kind of payments to the user.	Closed. Add new field MiscFeeQualifier(2712+BD) to distinguish fees contributing to the economic terms of a trade or transaction from those that do not. In general, "negative" fees such as rebates etc. are to be covered by the same, existing component <MiscFeesGrp>.
3	Cost vs fees	General	ESMA uses the term "cost" to express fees from the viewpoint of the user and not to identify the cost of a venue to provide its services. FIX consistently uses the term "fee" for non-negative charges that apply in a given context.  The current proposal is to add new valid values with the ESMA term "cost" but the intended semantics are equivalent to fees in the sense used in FIX.	Closed. Do not use the term "cost" for valid values when a fee needs to be expressed. The introduction of the term "cost" for new valid values in FIX will cause confusion. The elaborations can refer to ESMA and its usage of the term "cost" in RTS 27 Article 5.

## 4 Proposed Message Flow

Two different use cases are proposed to support the requirements mentioned in RTS 27 Article 5 – "cost information by instrument". The following use cases differ based on the information being conveyed and are proposed to be represented over FIX by two different message types.

### 1. Distribution of a fee schedule:

The MarketDefinition (35=BU) message is to be used in situations where a static fee and benefit schedule needs to be conveyed. The component <MiscFeeGrp> in this message then contains the actual fee information where MiscFeesType (139) specifies the nature of the fees along with the benefits (both monetary and non-monetary) offered to the clients.

### 2. Reporting of actual fees collected over a period of time

In order to convey actual fees and benefits over a reported period of time, it is proposed to use the MarketStatisticsDataReport (35=DP) message. The component < MDStatisticRptGrp> in this message contains the actual statistics where component <MDStatisticParameters> define the type of the fees and benefits offered to the clients along with the reported time period.

## 5 FIX Message Tables

### 5.1 FIX Message – MarketDefinition

To be completed at the time of the proposal – all information provided will be stored in the repository	
Message Name	MarketDefinition
Message Abbreviated Name (for FIXML)	MktDef
Category	MarketStructureReferenceData
Action	__New      _X Change
Message Synopsis	The MarketDefinition (35=BU) message will be used to convey current set of fees applied by the trading/execution venue to any members or users of the venue for each market segment or a financial instrument.
Message Elaboration	
To be finalized by FIX Technical Office	
(MsgType(tag 35) Enumeration)	BU
Repository Component ID	

Tag	Field Name	Req'd	FIX Spec Usage Comments	Action	Gap Analysis Comments
	<StandardHeader>	Y	MsgType = BU		
	<ApplicationSequenceControl>	N	The ApplicationSequenceControl is used for application sequencing and recovery.		
(...truncated...)					
	<Parties>	N	Specifies parties relevant for the market or market segment, e.g. market makers.		
	Component block <MiscFeesGrp>	N		ADD	This component may be used by the execution venue to publish nature and level of current set of fees like execution

Tag	Field Name	Req'd	FIX Spec Usage Comments	Action	Gap Analysis Comments
					fees, market data fees, submission and modification fees.
2400	EffectiveBusinessDate	N			
60	TransactTime	N			
58	Text	N			
354	EncodedTextLen	N	Must be set if EncodedText(355) field is specified and must immediately precede it.		
355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text(58) field in the encoded format specified via the MessageEncoding(347) field.		
	<StandardTrailer>	Y	The standard FIX message trailer		

## 6 FIX Component Blocks

### 6.1 Component - MDStatisticParameters

To be completed at the time of the proposal – all information provided will be included in the repository	
Component Name	MDStatisticParameters
Component Abbreviated Name (for FIXML)	StatsPrm
Component Type	___ Block Repeating _X_ Block
Category	(no change)
Action	__New _X_Change
Component Synopsis	<p>This component block comprises all parameters that can be used to describe the market data statistics. These can be part of the request as well as the response. All parameters defined on the MarketDataStatisticsRequest(35=DO) message should be echoed in the MarketDataStatisticsReport(35=DP) message as the latter could also be sent unsolicited.</p> <p>The general category and the entities involved in the statistics are defined by MDStatisticType(2456), MDStatisticScope(2457), and MDStatisticIntervalType(2464) and must always be specified. The remaining fields are optional and restrict the data range in one way or another. The time range for the data can either be specified in terms of an interval for which the statistics are typically calculated on a regular basis or in terms of an absolute date and/or time range.</p>
Component Elaboration	(no change)
To be finalized by FPL Technical Office	
Repository Component ID	

Tag	Field Name	Req'd	FIX Spec Usage Comments	Action	Gap Analysis Comments
2456	MDStatisticType	Y			
2457	MDStatisticScope	Y			
2458	MDStatisticSubScope	N			
2459	MDStatisticScopeType	N			
2454	MDStatisticName	N			

Tag	Field Name	Req'd	FIX Spec Usage Comments	Action	Gap Analysis Comments
2455	MDStatisticDesc	N			Describes the statistic reported in the component.
(...truncated...)					
264	MarketDepth	N	May be used to specify the market depth up to specified level.		Value "1" for best bids and offers; to be used with MDStasticType(2456)=19(Exchange best)
2460	MDStatisticFrequencyPeriod	N	Conditionally required when MDStatisticFrequencyUnit (2461) is specified. Omission represents a one-time dissemination.		
2461	MDStatisticFrequencyUnit	N	Conditionally required when MDStatisticFrequencyPeriod(2460) is specified.		
2462	MDStatisticDelayPeriod	N	Conditionally required when MDStatisticDelayUnit(2463) is specified.		
2463	MDStatisticDelayUnit	N	Conditionally required when MDStatisticDelayPeriod(2462) is specified.		
2464	MDStatisticIntervalType	Y			For message per day, use 3 = Fixed date range and refer to TradeDate(75) for the value.
2465	MDStatisticIntervalTypeUnit	N	Conditionally required when MDStatisticIntervalType (2464) = 5(Current time unit), 6(Previous time unit) or 8(Maximum range up to previous time unit).		
2466	MDStatisticIntervalPeriod	N	Conditionally required if/when MDStatisticIntervalUnit(2467) is specified.		

Tag	Field Name	Req'd	FIX Spec Usage Comments	Action	Gap Analysis Comments
			Conditionally required when MDStatisticIntervalType(2464) = 1 (Sliding window) or 2 (Sliding window peak).		
2467	MDStatisticIntervalUnit	N	Conditionally required when MDStatisticIntervalPeriod(2466) is specified.		
2468	MDStatisticStartDate	N	Can be used to define a date range for a sliding window peak other than the current day. Omission represents a date range starting with the first available day.		Start date of the reporting period.
2469	MDStatisticEndDate	N	Can be used to define a date range for a sliding window peak other than the current day. Omission represents a date range including the current day.		End date of the reporting period.
2470	MDStatisticStartTime	N	Can be used to define a time range for a sliding window peak other than the complete day. Omission represents a time range starting at midnight.		Start time is the first timestamp inside of the range.
2471	MDStatisticEndTime	N	Can be used to define a time range for a sliding window peak other than the complete day. Omission represents a time range ending with the time of dissemination of the statistical data.		End time is the first timestamp outside of the range.
2472	MDStatisticRatioType	N	Conditionally required when MDStatisticType(2456) = 5(Ratio).		
<i>(...truncated...)</i>					
336	TradingSessionID	N			
625	TradingSessionSubID	N			Specifies trading mode.



Tag	Field Name	Req'd	FIX Spec Usage Comments	Action	Gap Analysis Comments
					Absence of the tag depicts no distinction between the types of scheduled auctions. <u>Valid values:</u> 2=Opening or opening auction 4=Closing or closing auction 6=Scheduled intraday auction
1024	MDOriginType	N		ADD	Specifies the trading system. In the context of ESMA RTS 27, trading system means the way in which an execution venue executes orders as continuous auction order book, continuous quote driven, request for quote, periodic auction or any hybrid system falling into two or more of these categories
2711 TBD	MDValueTier	N		NEW	Describes the reporting ranges for executed transactions. In context of ESMA RTS 27 Article 9, the execution venue is required to report on transactions within several size ranges. The thresholds for these ranges are

Tag	Field Name	Req'd	FIX Spec Usage Comments	Action	Gap Analysis Comments
					dependent on the type of financial instrument.
338	TradSesMethod	N		ADD	Specifies trading platform. In the context of ESMA RTS 27, trading platform means the type of platform the execution venue operates: electronic, voice or outcry.
1022	MDFeedType	N		ADD	Describes the volume group of market data feed.
1629	ExposureDuration	N		ADD	Defines sub-scope for a given time period
1916	ExposureDurationUnit	N	Conditionally required when ExposureDuration(1629) is specified.	ADD	Defines the unit of the sub-scope for a given time period
1057	AggressorIndicator	N		ADD	Indicates if the order is aggressive or passive.

## 6.2 Component – MiscFeesGrp

To be completed at the time of the proposal – all information provided will be included in the repository	
Component Name	MiscFeesGrp
Component Abbreviated Name (for FIXML)	MiscFees
Component Type	<input checked="" type="checkbox"/> _X_ Block Repeating <input type="checkbox"/> __ Block
Category	(no change)
Action	<input type="checkbox"/> __ New <input checked="" type="checkbox"/> _X_ Change
Component Synopsis	The MiscFeesGrp component is used to provide details of trade and transaction fees other than commissions, e.g. regulatory, exchange, taxes, levies, markup, trade reporting, etc. In the context of ESMA RTS 27 Best Execution Reporting, it may also be used to collect and publish the nature and level of current venue fees, rebates and payouts. Use MiscFeeQualifier( <del>2712</del> <del>TBD</del> ) to communicate whether the fee affects trade economics.
Component Elaboration	(no change)
To be finalized by FPL Technical Office	
Repository Component ID	<a href="#">2035</a>

Tag	Field Name	Req'd	FIX Spec Usage Comments	Action	Gap Analysis Comments
136	NoMiscFees	N	Required if any miscellaneous fees are reported. Indicates number of repeating entries.		
→	137 MiscFeeAmt	N	Required if NoMiscFees(136) > 0.		
→	138 MiscFeeCurr	N			
→	139 MiscFeeType	N	Required if NoMiscFees(136) > 0.		
→	<del>2712</del> <del>TBD</del> MiscFeeQualifier	<b>N</b>		<b>NEW</b>	
→	<MiscFeesSubGrp>	N	The MiscFeesSubGrp component is used to provide further details for a given MiscFeeType(139) value.		

Tag	Field Name		Req'd	FIX Spec Usage Comments	Action	Gap Analysis Comments
→	891	MiscFeeBasis	N			
→	2216	MiscFeeRate	N			
→	2217	MiscFeeAmountDue	N			
→	2713 TBD	MiscFeeDesc	N		NEW	Can be used to provide a textual description of the fee type.

## Appendix A - Data Dictionary

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
<a href="#">2711</a> <a href="#">TBD</a>	MDValueTier	NEW	int	<p>Describes the reporting ranges for executed transactions.</p> <p><u>Elaboration:</u> In context of ESMA RTS 27 Article 9, the execution venue is required to report on transactions within several size ranges (in terms of a value and currency). The thresholds for these ranges are dependent on the type of financial instrument.]</p> <p><u>Valid values:</u>                      1 = Range 1                      2 = Range 2                      3 = Range 3</p>	@Tier	Add to: MDStatisticParameters
<a href="#">2712</a> <a href="#">TBD</a>	MiscFeeQualifier	NEW	int	<p>Identifies whether the current entry contributes to the trade or transaction economics, i.e. affects NetMoney(118).</p> <p><u>Valid values:</u>                      0 = Contributes (default)                      [Elaboration: Fee contributes to the trade or transaction economics.]</p> <p>1 = Does not contribute                      [Elaboration: Fee does not contribute to the trade or transaction economics.]</p>	@Qual	Add to: MiscFeesGrp
<a href="#">2713</a>	MiscFeeDesc	NEW	String	Can be used to provide a textual	@Desc	Add to:

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
<del>189</del>				description of the fee type.		MiscFeesGrp
<del>1024</del>	<del>MDOriginType</del>	<del>ADD</del>	int	Used to describe the origin of the market data entry.		Add to: MDStatisticParameters
<del>338</del>	<del>TradSesMethod</del>	<del>ADD</del>	int	Method of trading.		Add to: MDStatisticParameters
<del>1022</del>	<del>MDFeedType</del>	<del>ADD</del>	String	Describes a class of service for a given data feed, i.e. Regular and Market Maker, Bandwidth Intensive or Bandwidth Conservative.		Add to: MDStatisticParameters
<del>1629</del>	<del>ExposureDuration</del>	<del>ADD</del>	int	The period of time a quoted price is tradable (i.e. on the wire) before it becomes indicative (i.e. off the wire).		Add to: MDStatisticParameters
<del>1916</del>	<del>ExposureDurationUnit</del>	<del>ADD</del>	int	Time unit in which the ExposureDuration(1629) is expressed.		Add to: MDStatisticParameters
<del>1057</del>	<del>AggressorIndicator</del>	<del>ADD</del>	Boolean	Used to identify whether the order initiator is an aggressor or not in the trade.		Add to: MDStatisticParameters
139	MiscFeeType	Change	String	Indicates type of miscellaneous fee.  Valid values: 1 = Regulatory (e.g. SEC) 2 = Tax  ....  <del>24tbd</del> = Execution fee		

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				<p><u>25tbd</u> = Order or quote entry fee                      [Elaboration: Order or quote submission fees per transaction.]</p> <p><u>26tbd</u> = Order or quote modification fee                      [Elaboration: Order or quote modification fees per transaction.]</p> <p><u>27tbd</u> = Orders or quote cancellation fee                      [Elaboration: Order or quote cancellation fees per transaction.]</p> <p><u>28tbd</u> = Market data access fee                      [Elaboration: Fee for market data access.]</p> <p><u>29tbd</u> = Market data terminal fee                      [Elaboration: Fee for market data terminal.]</p> <p><u>30tbd</u> = Market data volume fee                      [Elaboration: Fee for market data per volume group.]</p> <p><u>31tbd</u> = Clearing fee                      [Elaboration: Fee for clearing of trades.]</p> <p><u>32tbd</u> = Settlement fee                      [Elaboration: Fee for settlement of trades.]</p> <p><u>33tbd</u> = Rebates                      [Elaboration: Rebates offered to the client.]</p> <p><u>34tbd</u> = Discounts</p>		

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				<p>[Elaboration: Discounts offered to the client.]</p> <p><del>35tbd</del> = Payments                      [Elaboration: Other benefits offered to the client.]</p> <p><del>36tbd</del> = Non-monetary payments                      [Elaboration: Non-monetary benefits offered to the client.]</p>		
338	TradSesMethod	Change	int	<p>Method of trading</p> <p><u>Valid values:</u>                      1 = Electronic                      2 = Open Outcry                      3 = Two Party  <del>4tbd</del> = Voice</p>		
2456	MDStatisticType	Change	int	<p>Type of statistic value.</p> <p><u>Valid values:</u>                      1 = Count                      2 = Average volume                      [Elaboration: Average quantity of entities, e.g. average size volume of incoming quotes or average trade size volume.]                      3 = Total volume                      [Elaboration: Aggregated volume quantities of entities...]</p> <p>...</p>		



Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				<p>11=Average turnover value                      [Elaboration: Average volume quantity multiplied by price.]</p> <p>12=Total turnover value                      [Elaboration: Aggregated volume quantity multiplied by price; also described as turnover.]</p> <p>...</p> <p><del>24tbd</del> = Average duration                      [Elaboration: Average duration of time periods of events.]</p> <p><del>25tbd</del> = Average price                      [Elaboration: Average price across entities e.g. trade prices.]</p> <p><del>26tbd</del> = Total fees                      [Elaboration: Aggregated fees.]</p> <p><del>27tbd</del> = Total benefits                      [Elaboration: Aggregated benefits.]</p> <p><del>28tbd</del> = Median value                      [Elaboration: Median quantity multiplied by price for orders or quotes.]</p> <p><del>29tbd</del> = Average liquidity                      [Elaboration: Average liquidity of an instrument e.g. average effective spread.]</p>		

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				<p><a href="#">30tbd</a> = Median duration                      [Elaboration: Median duration of time periods of events.]</p>		
2457	MDStatisticScope	Change	int	<p>Entities used as basis for the statistics.</p> <p>Valid values:                      1 = Bid prices                      2 = Offer prices</p> <p>...</p> <p><a href="#">18tbd</a> = Outages                      [Elaboration: System halt due to a technical malfunction or failure.]</p> <p><a href="#">19tbd</a> = Scheduled auctions</p> <p><a href="#">20tbd</a> = Reference prices</p> <p><a href="#">21tbd</a> = Trade value                      [Elaboration: Trade size multiplied by price.]</p> <p><a href="#">22tbd</a> = Market data fee items                      [Elaboration: Fees related to market data access.]</p> <p><a href="#">23tbd</a> = Rebates                      [Elaboration: Rebate items offered to the client.]</p> <p><a href="#">24tbd</a> = Discounts</p>		

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				<p>[Elaboration: Discounts offered to the client.]</p> <p><u>25tbd</u> = Payments                      [Elaboration: Other benefits offered to the client.]</p> <p><u>26tbd</u> = Taxes                      [Elaboration: Taxes incurred.]</p> <p><u>27tbd</u> = Levies                      [Elaboration: Levies incurred.]</p> <p><u>28tbd</u> = Benefits                      [Elaboration: Benefits offered to the client.]</p> <p><u>29tbd</u> = Fees</p> <p><u>30tbd</u> = Orders and RFQs (Request for quotes)</p> <p><u>31tbd</u> = Market makers</p> <p><u>32tbd</u> = Trading interruptions                      [Elaboration: Disruption in trading due to an automatic or manual decision.]</p> <p><u>33tbd</u> = Trading suspensions                      [Elaboration: An instrument is deliberately prevented from being quoted or traded due to a decision by execution venue or a competent authority.]</p>		

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				<p><a href="#">34tbd</a> = No quotes                      [Elaboration: Period of no quotes received.]</p> <p><a href="#">35tbd</a> = Request for quotes</p>		
2458	MDStatisticSubScope	Change	int	<p>Sub-scope of the statistics to further reduce the entities used as basis for the statistics.</p> <p><u>Valid Values:</u>                      1 = Visible                      2 = Hidden</p> <p>...</p> <p><a href="#">7tbd</a> = Power                      [Elaboration: Outages due to power failure.]</p> <p><a href="#">8tbd</a> = Hardware error                      [Elaboration: Outages due to a hardware malfunction or failure.]</p> <p><a href="#">9tbd</a> = Software error                      [Elaboration: Outages due to a software malfunction or failure.]</p> <p><a href="#">10tbd</a> = Network error                      [Elaboration: Outages due to network error]</p>		

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				<p><u>11</u><del>tb</del> = Failed                      [Elaboration: Transaction voided by the execution venue]</p> <p><u>12</u><del>tb</del> = Executed                      [Elaboration: Total or partial execution of an order or quote]</p> <p><u>13</u><del>tb</del> = Entered                      [Elaboration: Order or quote entry]</p> <p><u>14</u><del>tb</del> = Modified                      [Elaboration: Order or quote modification]</p> <p><u>15</u><del>tb</del> = Cancelled                      [Elaboration: Order or quote cancellation]</p> <p><u>16</u><del>tb</del> = Market <u>d</u>Data <u>a</u>Access</p> <p><u>17</u><del>tb</del> = Terminal <u>a</u>Access</p> <p><u>18</u><del>tb</del> = Volume                      [Elaboration: Specifies sub-scope of market data per volume]</p> <p><u>19</u><del>tb</del> = Cleared                      [Elaboration: Cleared trade]</p> <p><u>20</u><del>tb</del> = Settled                      [Elaboration: Settled trade]</p> <p><u>21</u><del>tb</del> = Other                      [Elaboration: Any other fees incurred by</p>		

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				<p>the client]</p> <p><del>22tbd</del> = Monetary                      [Elaboration: Monetary benefits offered to the clients]</p> <p><del>23tbd</del> = Non-monetary                      [Elaboration: Non-monetary benefits offered to the clients]</p> <p><del>24tbd</del> = Gross                      [Elaboration: Total fees excluding rebates and discounts]</p> <p><del>25tbd</del> = Large in scale                      [Elaboration: <del>m</del>Means an order classified as large in scale in accordance with a regulatory definition]</p> <p><del>26tbd</del> = Neither hidden nor large in scale                      [Elaboration: Excluding orders pending disclosures and LIS]</p> <p><del>27tbd</del> = Corporate action                      [Elaboration: Specifies type of trading suspension]</p> <p><del>28tbd</del> = Venue decision                      [Elaboration: Specifies type of trading suspension]</p> <p><del>29tbd</del> = Minimum time period                      [Elaboration: Minimum time period for the</p>		

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				<p>event defined by scope]</p> <p><u>30tbd</u> = Open                      [Elaboration: Open status of RFQs (request for quotes), no quotes have been provided]</p> <p><u>31tbd</u> = Not executed                      [Elaboration: Orders or quotes that didn't execute]</p>		
2472	MDStatisticRatioType	Change	int	<p>Ratios between various entities.</p> <p><u>Valid values:</u>                      1 = Buyers to sellers                      2 = Upticks to downticks</p> <p>...</p> <p><u>8tbd</u> = Failed to total traded value                      [Elaboration: Total value of failed trades over total traded value.]</p> <p><u>9tbd</u> = Benefits to total traded value                      [Elaboration: Total value of all benefits over total traded value.]</p> <p><u>10tbd</u> = Fees to total traded value                      [Elaboration: Total value of all fees excluding rebates over total traded value.]</p>		





## Appendix B - Glossary Entries

Term	Definition	Field where used

## Appendix C - Abbreviations

Term	Proposed Abbreviation	Proposed Messages, Components, Fields where used

## Appendix D - Usage Examples

The following tables show excerpts from a reference mapping between ESMA and FIX for the reporting requirements defined in RTS 27. Further details are available in the spreadsheet (Excel file) referenced in Item 4 in Chapter 1 “Introduction”. The separate spreadsheet file will be updated with the actual tag numbers and valid values once they have been assigned as part of the standard FIX implementation process for Extension Packs.

### D.1 Overview of RTS 27 Articles and sample tables

RTS 27 doc	Tabs	Message or Component	FIX message/Component	FIX MessageType
Article 3(1) - Market Information	<a href="#">Table 1</a>	Message	MarketDataStatisticsReport	DP
Article 3 (2) - Instrument Identifier	<a href="#">Table 2</a>	Component	Instrument	
Article 4 (a) - Price Information: Intra-Day	<a href="#">Table 3 (a)</a>	Message	MarketDataStatisticsReport	DP
Article 4 (b) - Price Information: Daily	<a href="#">Table 4</a>	Message	MarketDataStatisticsReport	DP
Article 5 - Cost information by instrument	<a href="#">Table 5</a>	Message	MarketDefinition/ MarketDataStatisticsReport	BU/DP
Article 6 - Likelihood of Execution by instrument (daily)	<a href="#">Table 6</a>	Message	MarketDataStatisticsReport	DP
Article 7 - Likelihood of Execution - continuous auction order book and quote driven execution venues	<a href="#">Table 7</a>	Message	MarketDataStatisticsReport	DP
Article 7 - (2)/(3)	<a href="#">Table 8</a>	Message	MarketDataStatisticsReport	DP
Article 8 - Additional information for request for quote execution venues	<a href="#">Table 9</a>	Message	MarketDataStatisticsReport	DP

### D.2 Root level for Table 1 (Market information)

ESMA Terminology	FIX Tags		1

Table 1 - Market Information	Attributes - >	Req'D	Nature and number of outages (1h) (1g, 1a-f included)
	NoPartyIDs(453)	Y	3
Venue name/identifier	> PartyID(448)	Y	<Venue name or venue MIC/LEI>
	> PartyIDSource(447)	Y	D=Proprietary E=ISO Country Code G=MIC (Market Identifier Code) N=Legal Entity Identifier
Country of Competent Authority	> PartyRole(452)	Y	63=Systematic Internaliser 66=Market Maker 69=Home Competent Authority 73=Execution Venue
Market segment Identifier	MarketSegmentID(1300)	Y	<MIC>
Market segment	MarketSegmentDesc(1396)	Y	<MarketSegmentName>
Trading day	TradeDate(75)	Y	<Date related to data>

D.3 Table 1 (a) – Market Information

Attributes - >	Req'D	Nature and number of outages (1h) (1g, 1a-f included)	Average Duration of outages (1i) (1a-f included)	Nature and number of scheduled auctions (1k) (1j,1a-f included)
NoMDStatistics(2474)	Y	1-4	1-4	1-3
> MDStatisticType(2456)	Y	1=Count	24<tbd>=Average duration	1=Count
> MDStatisticScope(2457)	Y	18<tbd>=Outages	18<tbd>=Outages	19<tbd>=Scheduled Auctions

> MDStatisticSubScope(2458)	N	7<tbd>=Power 8<tbd>=Hardware Error 9<tbd>=Software Error 10<tbd>=Network Error	7<tbd>=Power 8<tbd>=Hardware Error 9<tbd>=Software Error 10<tbd>=Network Error	N/A
> MDStatisticDesc(2455)	Y	"Number of outages per reporting period"	"Average duration of outages per reporting period"	"Number of scheduled auctions per reporting period"
> TradingSessionID(336)	N	N/A	N/A	1=Day
> TradingSessionSubID(625)	N	N/A	N/A	2=Opening or opening auction 4=Closing or closing auction 6=Scheduled intraday auction
> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months
> MDStatisticRatioType(2472)	N	N/A	N/A	N/A
> MDStatisticID(2475)	N	T1h	T1i	T1k
> MDStatisticValue(2478)	Y	<Number>	<Average duration value>	<Number>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	1=Absolute
> MDStatisticValueUnit(2480)	N	N/A	0=Seconds	N/A

**D.4 Table 1(b) – Market Information**

Attributes - >	Req'D	Average Duration of scheduled auctions (1l) (1a-f included)	Number of failed transactions (1m) (1a-f included)	Value of failed transactions (1n) (1a-f included)
<b>NoMDStatistics(2474)</b>	Y	1-3	1	1
> MDStatisticType(2456)	Y	<u>24&lt;tbd&gt;</u> =Average duration	1=Count	5=Ratio
> MDStatisticScope(2457)	Y	<u>19&lt;tbd&gt;</u> =Scheduled Auctions	8=Trades	8=Trades
> MDStatisticSubScope(2458)	N	N/A	<u>11&lt;tbd&gt;</u> =Failed	<u>11&lt;tbd&gt;</u> =Failed
> MDStatisticDesc(2455)	Y	“Average duration of scheduled actions per reporting period”	“Number of failed transactions per day”	“Ratio of failed transaction value per day”
> TradingSessionID(336)	N	1=Day	N/A	N/A
> TradingSessionSubID(625)	N	2=Opening or opening auction 4=Closing or closing auction 6=Scheduled intraday auction	N/A	N/A
> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months
> MDStatisticRatioType(2472)	N	N/A	N/A	<u>8&lt;tbd&gt;</u> = Failed/total trade value
> MDStatisticID(2475)	N	T1l	T1m	T1n
> MDStatisticValue(2478)	Y	<Average duration value>	<Number>	

				<Value>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	
> MDStatisticValueUnit(2480)	N	0=Seconds	N/A	2=Percentage N/A

**D.5 Table 2 – Instrument identifier**

Table 2 - Instrument Identifier	Attributes - >	Req'd	Instrument Identifier (2a-e)
Financial instrument name/Identifier	SecurityID(48)	Y	<ISIN value>
	SecurityIDSource(22)	Y	4=ISIN
Instrument description	SecurityDesc(107)	N	<description>
Instrument classification	CFICode(461)	Y	<CFI Code>
Currency	Currency(15)	Y	<ISO 4217 code>

**D.6 Root level for Table 3 – Price Information**

SecurityID(48)	Y	<ISIN value>
SecurityIDSource(22)	Y	4=ISIN
SecurityDesc(107)	N	<description>
CFICode(461)	Y	<CFI Code>
Currency(15)	Y	<ISO 4217 code>
TradeDate(75)	Y	<Date related to data>
MarketID(1301)	N	<MIC>

**D.7 Table 3(1) – Price Information**

Attributes - >	Req'D	Simple average executed price (3a)	Total value executed (3b)
NoMDStatistics(2474)	Y	4-12	4-12
>MDStatisticType(2456)	Y	25=<td>Average Price	12=Total turnover value
>MDStatisticScope(2457)	Y	9=Trade prices	8=Trades
>MDStatisticDesc(2455)	Y	"Simple average executed price for trades executed within the specified interval"	"Total value executed within the specified interval"
>MDStatisticIntervalType(2464)	Y	4=Fixed time range	4=Fixed time range
>MDStatisticStartTime(2470)	Y	<9:30> <11:30> <13:30> <15:30>	<9:30> <11:30> <13:30> <15:30>
>MDStatisticEndTime(2471)	Y	<9:32> <11:32> <13:32> <15:32>	<9:32> <11:32> <13:32> <15:32>
>MarketDepth(264)	N	N/A	N/A
>MDStatisticFrequencyPeriod(2460)	Y	3	3
>MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months
>TradingSessionID(336)	N	N/A	N/A
>TradingSessionSubID(625)	N	N/A	N/A
> MDOriginType(1024)	N	N/A	N/A
> TradSesMethod(338)	N	N/A	N/A

>MDValueTier(2711)<TBD>	Y	1 2 3	1 2 3
>MDStatisticID(2475)	Y	"T3a0930" "T3a1130" "T3a1330" "T3a1530"	"T3b0930" "T3b1130" "T3b1330" "T3b1530"
> MDStatisticTime(2476)	Y	<timestamp of calculation>	<timestamp of calculation>
>MDStatisticValue(2478)	Y	<Average price>	<Total value>
>MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute

D.8 Table 3(2) – Price Information

Attributes - >	Req'D	First transaction price (3c) (3d, 3f-i included)	First transaction size (3e) (3d, 3f-h included)
NoMDStatistics(2474)	Y	4-12	4-12
>MDStatisticType(2456)	Y	16=First 19=Exchange best 21=Consolidated best	16=First
>MDStatisticScope(2457)	Y	9=Trade prices 1=Bid prices 2=Offer prices 20<tbd>=Reference prices	21<tbd>=Trade value
>MDStatisticDesc(2455)	Y	"First traded price after specified point in time"	"First traded value after specified point in time"
>MDStatisticIntervalType(2464)	Y	4=Fixed time range	4=Fixed time range



>MDStatisticStartTime(2470)	Y	<9:32> <11:32> <13:32> <15:32>	<9:32> <11:32> <13:32> <15:32>
>MDStatisticEndTime(2471)	Y	N/A	N/A
>MarketDepth(264)	N	1	N/A
>MDStatisticFrequencyPeriod(2460)	Y	3	3
>MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months
>TradingSessionID(336)	N	1=Day	1=Day
>TradingSessionSubID(625)	N	2=Opening or opening auction 3=(Continuous) Trading 4=Closing or closing auction 5=Post-trading 6=scheduled intraday auction 9=unscheduled auction 10=trading out of main session	2=Opening or opening auction 3=(Continuous) Trading 4=Closing or closing auction 5=Post-trading 6=scheduled intraday auction 9=unscheduled auction 10=trading out of main session
> MDOriginType(1024)	N	0=Book 3=Quote driven market 5=Auction driven market 6=Quote negotiation 7=Voice negotiation 8=Hybrid market	N/A
> TradSesMethod(338)	N	1=Electronic 2=Outcry 4<tbd>=Voice	1=Electronic 2=Outcry 4<tbd>=Voice
>MDValueTier(2711)<TBD>	Y	1 2 3	1 2 3

>MDStatisticID(2475)	Y	"T3c0930" "T3c1130" "T3c1330" "T3c1530"	"T3e0930" "T3e1130" "T3e1330" "T3e1530"
> MDStatisticTime(2476)	Y	<Time of execution>	<Time of execution>
>MDStatisticValue(2478)	Y	<Price>	<Value>
>MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute

**D.9 Root Level for Table 4 – Price information (Daily)**

SecurityID(48)	Y	<ISIN value>
SecurityIDSource(22)	Y	4=ISIN
SecurityDesc(107)	N	<description>
CFIcode(461)	Y	<CFI Code>
Currency(15)	Y	<ISO 4217 code>
TradeDate(75)	Y	<Date related to data>
MarketID(1301)	N	<MIC>

**D.10 Table 4 – Price Information (Daily)**

Attibutes - >	Req'D	Simple average transaction price (4a)	Volume weighted transaction price (4b)	Highest executed price (4c)	Lowest executed price (4d)
NoMDStatistics(2474)	Y	1	1	1	1
> MDStatisticType(2456)	Y	25<td>=Average Price	7=VWAP	13=High	14=Low
> MDStatisticScope(2457)	Y	9=Trade prices	9=Trade prices	9=Trade prices	9=Trade prices
> MDStatisticDesc(2455)	Y	"Simple average transaction price"	"Volume weighted transaction price"	"Highest executed price"	"Lowest executed price"
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months	14=Months

> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range
> MDStatisticID(2475)	Y	T4a	T4b	T4c	T4d
> MDStatisticValue(2478)	Y	<price>	<price>	<price>	<price>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	1=Absolute	1=Absolute

**D.11 Root level for MarketDefinition (BU) message, Table 5 - Cost Information**

InstrumentScopeSecurityID(1538)	Y	<ISIN value>
InstrumentScopeSecurityIDSource(1539)	Y	4=ISIN
InstrumentScopeSecurityDesc(1556)	N	<description>
InstrumentScopeCFIcode(1546)	Y	<CFI Code>
Currency(15)	Y	<ISO 4217 code>
MarketID(1301)	N	<MIC>

**D.12 MarketDefinition (BU) message, Table 5(a) - Cost Information**

Attributes - >	Req'D	Execution Fees (5a-i)	Fees for submission, modification or cancellation of orders/quotes (5a-ii)	Fees related to market data access and use of terminals (5a-iii)
NoMiscFees(136)	Y	1	1-3	1-3
> MiscFeeAmt(137)	Y	<Fees>	<Fees>	<Fees>
> MiscFeeType(139)	Y	24<tbd>=Execution fee	25<tbd>=Order or quote entry fee 26<tbd>=Order or quote modification fee 27<tbd>=Orders or quote cancellation fee	28<tbd>=Market Data Access fee 29<tbd>=Market Data Terminal fee 30<tbd>=Market Data Volume fee

> MiscFeeDesc(2713TBD)	Y	"Execution fee per trade"	"Fee for entry, modification or cancellation of a single order or quote"	"Fee for access to market data and terminals"
> MiscFeeQualifier(2712TBD)	Y	0=Contributes	0=Contributes	0=Contributes

D.12 MarketDefinition (BU) message, Table 5(b) - Cost Information

Attributes - >	Req'D	Clearing and settlement fees paid to third party (5a-iv)	Description of nature and level of any rebates, discounts, and or other payments offered to the clients. (5b, includes 5e)	Description of the nature and amount of non-monetary benefits (5c, includes 5e)	Nature and level of any taxes or levies invoiced (5d, includes 5e)
NoMiscFees(136)	Y	1-3	1-3	1	1-3
> MiscFeeAmt(137)	Y	<Fees>	<Fees>	<Fees>	<Fees>
> MiscFeeType(139)	Y	31<tbd>=Clearing fee 32<tbd>=Settlement fee 7=Other	33<tbd>=Rebates 34<tbd>=Discounts 35<tbd>=Payments (generic)	36<tbd>=Non-monetary payments (generics)	2=Tax 6=Levy 35<tbd>=Payments (generic)

> MiscFeeDesc(2713TBD)	Y	"Fee for third party clearing and settlement"	"Rebates, discounts, and or other payments offered to the clients". <u>For more information:</u> <link to website or other sources>	"Non-monetary benefits" <u>For more information:</u> <link to website or other sources>	"Taxes or levies" <u>For more information:</u> <link to website or other sources>
> MiscFeeQualifier(2712TBD)	Y	0=Contributes	1=Does not contribute	1=Does not contribute	0=Contributes

**D.13 Root level for MarketDataStatisticReport (DP) message, Table 5 – Cost Information**

SecurityID(48)	Y	<ISIN value>
SecurityIDSource(22)	Y	4=ISIN
SecurityDesc(107)	N	<description>
CFIcode(461)	Y	<CFI Code>
Currency(15)	Y	<ISO 4217 code>
MarketID(1301)	N	<MIC>
TradeDate(75)	Y	<Date>

**D.14 MarketDataStatisticReport (DP) message, Table 5(a) – Cost Information**

Attributes - >	Req' D	Execution Fees (5a-i)	Fees for submission, modification or cancellation of orders/quotes (5a-ii)	Fees related to market data access and use of terminals (5a-iii)	Clearing and settlement fees paid to third party (5a-iv)	Description of nature and level of any rebates, discounts, and or other payments offered to the
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						clients. (5b, includes 5e)
<b>NoMDStatistics(2474)</b>	Y	1	1-3	1-3	1-3	1-3
> <b>MDStatisticType(2456)</b>	Y	<a href="#">26&lt;tbd&gt;</a> =Total fees	<a href="#">26&lt;tbd&gt;</a> =Total fees	<a href="#">26&lt;tbd&gt;</a> =Total fees	<a href="#">26&lt;tbd&gt;</a> =Total fees	<a href="#">27&lt;tbd&gt;</a> =Total benefits
> <b>MDStatisticDesc(2455)</b>	Y	"Execution fee per trade"	"Fee for entry, modification or cancellation of a single order or quote"	"Fee for access to market data and terminals"	"Fee for third party clearing and settlement"	"Rebates, discounts, and or other payments offered to the clients"
> <b>MDStatisticScope(2457)</b>	Y	8=Trades	7=Orders and Quotes	<a href="#">22&lt;tbd&gt;</a> =Market data fee items	8=Trades	<a href="#">23&lt;tbd&gt;</a> =Rebates <a href="#">24&lt;tbd&gt;</a> =Discounts <a href="#">25&lt;tbd&gt;</a> =Payments
> <b>MDStatisticSubScope(2458)</b>	N	<a href="#">12&lt;tbd&gt;</a> =Executed	<a href="#">13&lt;tbd&gt;</a> =Entered <a href="#">14&lt;tbd&gt;</a> =Modified <a href="#">15&lt;tbd&gt;</a> =Cancelled	<a href="#">16&lt;tbd&gt;</a> =Market Data Access <a href="#">17&lt;tbd&gt;</a> =Terminal Access <a href="#">18&lt;tbd&gt;</a> =Volume	<a href="#">19&lt;tbd&gt;</a> =Cleared <a href="#">20&lt;tbd&gt;</a> =Settled <a href="#">21&lt;tbd&gt;</a> =Other	<a href="#">22&lt;tbd&gt;</a> =Monetary
> <b>MDStatisticRatioType(2472)</b>	N	N/A	N/A	N/A	N/A	N/A
> <b>MDStatisticFrequencyPeriod(2460)</b>	Y	3	3	3	3	3
> <b>MDStatisticFrequencyUnit(2461)</b>	Y	14=Months	14=Months	14=Months	14=Months	14=Months

> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range
> MDStatisticStartDate(2468)	Y	<start date>	<start date>	<start date>	<start date>	<start date>
> MDStatisticEndDate(2469)	Y	<end date>	<end date>	<end date>	<end date>	<end date>
> MDFeedType(1022)	N	N/A	N/A	<Volume group>	N/A	N/A
> MDStatisticID(2475)	N	T5ai	T5aai	T5aiii	T5aiv	T5b
> MDStatisticValue(2478)	Y	<Fees>	<Fees>	<Fees>	<Fees>	<Benefits>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	1=Absolute	1=Absolute	1=Absolute

**D.15 MarketDataStatisticReport (DP) message, Table 5(b) – Cost Information**

Attributes - >	Req'D	Description of the nature and amount of non-monetary benefits (5c, includes 5e)	Nature and level of any taxes or levies invoiced (5d, includes 5e)	Total value of all rebates, discounts, or other payments offered. (5f)	Total value of all costs (as % of total traded value during the reporting period volume) (5g)
NoMDStatistics(2474)	Y	1-3	1-3	1	1
> MDStatisticType(2456)	Y	27<tbd>=Total benefits	26<tbd>=Total fees	5=Ratio	5=Ratio
> MDStatisticDesc(2455)	Y	"Non-monetary benefits"	"Taxes or levies"	"Percentage of Total value of all rebates and discounts over total traded value"	"Percentage of all fees excluding rebates and discounts over total traded value"
> MDStatisticScope(2457)	Y	23<tbd>=Rebates 24<tbd>=Discounts 25<tbd>=Payments	26<tbd>=Taxes 27<tbd>=Levies 25<tbd>=Payments	28<tbd>=Benefits	29<tbd>=Fees

> MDStatisticSubScope(2458)	N	23<td>=Non-monetary	N/A	N/A	24<td>=Gross
> MDStatisticRatioType(2472)	N	N/A	N/A	9<td>=Benefits/total traded value	10<td>=Fees/total traded value
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months	14=Months
> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range
> MDStatisticStartDate(2468)	Y	<start date>	<start date>	<start date>	<start date>
> MDStatisticEndDate(2469)	Y	<end date>	<end date>	<end date>	<end date>
> MDFeedType(1022)	N	N/A	N/A	N/A	N/A
> MDStatisticID(2475)	N	T5c	T5d	T5f	T5g
> MDStatisticValue(2478)	Y	<Benefits>	<Fees>	<Value>	<Value>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	2=Percentage	2=Percentage

**D.16 Root level for Table 6 – Likelihood of Execution**

SecurityID(48)	Y	<ISIN value>
SecurityIDSource(22)	Y	4=ISIN
SecurityDesc(107)	N	<description>
CFIcode(461)	Y	<CFI Code>
Currency(15)	Y	<ISO 4217 code>
MarketID(1301)	N	<MIC>
TradeDate(75)	Y	<Date>

**D.17 Table 6(a) – Likelihood of Execution**



Attributes ->	Req'D	Number of orders or request for quotes received (6a)	Number of transactions executed (6b)	Total value of transactions executed (6c)	Number of orders or request for quotes received cancelled or withdrawn (6d)
NoMDStatistics(2474)	Y	1	1	1	1
> MDStatisticType(2456)	Y	1=Count	1=Count	12=Total turnover value	1=Count
> MDStatisticScope(2457)	Y	30<td>=Orders and RFQs (Request for Quotes)	8=Trades	8=Trades	30<td>=Orders and RFQs (Request for Quotes)
> MDStatisticScopeType(2459)	N	N/A	N/A	N/A	3=Cancel rate
> MDStatisticDesc(2455)	Y	"Number of orders or request for quotes received"	"Number of transactions executed"	"Total value of transactions executed"	"Number of cancelled orders or request for quotes"
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months	14=Months
> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range
> MDStatisticID(2475)	Y	T6a	T6b	T6c	T6d
> MDStatisticValue(2478)	Y	<Number>	<Number>	<Value>	<Number>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	1=Absolute	1=Absolute

D.17 Table 6(b) – Likelihood of Execution

Attributes ->	Req'D	Number of orders or request for quotes received modified (6e)	Median transaction size (6f)	Median size of all orders or request for quotes (6g)	Number of designated market makers (6h)
NoMDStatistics(2474)	Y	1	1	1	1

> MDStatisticType(2456)	Y	1=Count	28<td>=Median value	28<td>=Median value	1=Count
> MDStatisticScope(2457)	Y	30<td>=Orders and RFQs (Request for Quotes)	8=Trades	30<td>=Orders and RFQs (Request for Quotes)	31<td>=Market makers
> MDStatisticScopeType(2459)	N	2=Modification rate	N/A	N/A	N/A
> MDStatisticDesc(2455)	Y	"Number of modified orders or request for quotes received"	"Median transaction value"	"Median value of all orders or request for quotes"	"Number of designated market makers"
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months	14=Months
> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range	5=Current time unit
> MDStatisticID(2475)	Y	T6e	T6f	T6g	T6h
> MDStatisticValue(2478)	Y	<Number>	<Value>	<Value>	<Number>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	1=Absolute	1=Absolute

**D.18 Root level for Table 7 – Likelihood of Execution (continuous auction order book and quote driven execution venues)**

SecurityID(48)	Y	<ISIN value>
SecurityIDSource(22)	Y	4=ISIN
SecurityDesc(107)	N	<description>
CFIcode(461)	Y	<CFI Code>
Currency(15)	Y	<ISO 4217 code>
MarketID(1301)	N	<MIC>
TradingDate(75)	N	<Date>

**D.18 Table 7 – Likelihood of Execution (continuous auction order book and quote driven execution venues)**

Attributes ->	Req'D	Best Bid price (7a)	Best Offer price (7b)	Bid Size (7c)	Offer Size (7d)	Book depth within 3 price increments (7e)
<b>NoMDStatistics(2474)</b>	Y	4	4	4	4	4
> <b>MDStatisticType(2456)</b>	Y	19=Exchange best	19=Exchange best	3= Total Volume	3= Total Volume	12=Total turnover value
> <b>MDStatisticScope(2457)</b>	Y	1=Bid prices	2=Offer prices	7=Orders and Quotes	7=Orders and Quotes	7=Orders and Quotes
> <b>MDStatisticDesc(2455)</b>	Y	"Best bid price"	"Best offer price"	"Volume available at best bid"	"Volume available at best offer"	"Total book value for 3 price levels"
> <b>MDStatisticFrequencyPeriod(2460)</b>	Y	3	3	3	3	3
> <b>MDStatisticFrequencyUnit(2461)</b>	Y	14=Months	14=Months	14=Months	14=Months	14=Months
> <b>MDStatisticIntervalType(2464)</b>	Y	1=Sliding window	1=Sliding window	1=Sliding window	1=Sliding window	1=Sliding window
> <b>MDStatisticIntervalPeriod(2466)</b>	Y	0=Real time	0=Real time	0=Real time	0=Real time	0=Real time
> <b>MarketDepth(264)</b>	N	1	1	1	1	3
> <b>Side(54)</b>	N	N/A	N/A	1=Buy	2=Sell	N/A
> <b>MDStatisticID(2475)</b>	Y	T7a	T7b	T7c	T7d	T7e
> <b>MDStatisticTime(2476)</b>	Y	<date><9:30> <date><11:30> <date><13:30> <date><15:30>	<date><9:30> <date><11:30> <date><13:30> <date><15:30>	<date><9:30> <date><11:30> <date><13:30> <date><15:30>	<date><9:30> <date><11:30> <date><13:30> <date><15:30>	<date><9:30> <date><11:30> <date><13:30> <date><15:30>
> <b>MDStatisticValue(2478)</b>	Y	<Price>	<Price>	<Quantity>	<Quantity>	<Value>
> <b>MDStatisticValueType(2479)</b>	Y	1=Absolute	1=Absolute	1=Absolute	1=Absolute	1=Absolute

**D.19 Root level for Table 8 – Likelihood of Execution**

<b>SecurityID(48)</b>	Y	<ISIN value>
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SecurityIDSource(22)	Y	4=ISIN
SecurityDesc(107)	N	<description>
CFICode(461)	Y	<CFI Code>
Currency(15)	Y	<ISO 4217 code>
MarketID(1301)	N	<MIC>
TradeDate(75)	Y	<Date>

**D.20 Table 8(a) – Likelihood of Execution**

Attributes ->	Req' D	Average effective spread (8a)	Average volume at best bid and offer (8b)	Average Spread at best bid and offer (8c)	Number of cancellations at best bid and offer (8d)	Number of modifications at best bid and offer (8e)
NoMDStatistics(2474)	Y	1	1	1	1	1
> MDStatisticType(2456)	Y	29<td>=Average liquidity	2=Average volume	29<td>=Average liquidity	1=Count	1=Count
> MDStatisticScope(2457)	Y	9=Trade prices	7=Orders and Quotes	7=Orders and Quotes	7=Orders and Quotes	7=Orders and Quotes
> MDStatisticSubScope(2458)	Y	N/A	N/A	N/A	N/A	N/A
> MDStatisticScopeType(2459)	N	N/A	N/A	N/A	3=Cancel rate	2=Modification rate

> MDStatisticDesc(2455)	Y	"Average effective spread"	"Average volume at best bid and offer"	"Average spread at best bid and offer"	"Number of cancelations at best bid and offer"	"Number of modifications at best bid and offer"
> MarketDepth(264)	N	N/A	1	1	1	1
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months	14=Months	14=Months
> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range
> MDStatisticValue(2478)	Y	<Spread>	<Volume>	<Spread>	<Number>	<Number>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	1=Absolute	1=Absolute	1=Absolute
> MDStatisticValueUnit(2480)	Y	N/A	N/A	N/A	N/A	N/A

D.21 Table 8(b) – Likelihood of Execution

Attributes ->	Req' D	Average book depth at 3 price increments (8f)	Mean time elapsed (to the milli-second) between an aggressive order or quote acceptance being received by the execution venue and the subsequent total	Median time elapsed (to the mili-second) between an aggressive order or quote being received by the execution venue and the subsequent total or partial	Average speed of execution for unmodified passive orders at best bid and offer (8i)	Number of Fill or Kill orders that failed (8j)

			or partial execution (8g)	execution (8h)		
<b>NoMDStatistics(2474)</b>	Y	1	1	1	1	1
> MDStatisticType(2456)	Y	11=Average turnover value	24<tbd>=Average duration	30<tbd>=Median duration	24<tbd>=Average duration	1=Count
> MDStatisticScope(2457)	Y	7=Orders and Quotes	7 = Orders and Quotes	7 = Orders and Quotes	5=Orders	5=Orders
> MDStatisticSubScope(2458)	Y	N/A	12<tbd>=Execute d	12<tbd>=Execute d	12<tbd>=Execute d	31<tbd>=Not executed
> MDStatisticScopeType(2459)	N	N/A	N/A	N/A	N/A	N/A
> MDStatisticDesc(2455)	Y	"Average book value for 3 price levels"	"Mean time elapsed to execute aggressive order or quote"	"Median time elapsed to execute aggressive order or quote"	"Average speed of execution"	"Number of FOK orders failed to execute"
> MarketDepth(264)	N	3	N/A	N/A	1	N/A
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months	14=Months	14=Months
> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range
> TimeInForce(59)	N	N/A	N/A	N/A	N/A	4=FOK (Fill or Kill)
> ExposureDuration(1629)	N	N/A	N/A	N/A	N/A	N/A
> ExposureDurationUnit(1916)	N	N/A	N/A	N/A	N/A	N/A

> <b>AgressorIndicator(1057)</b>	N	N/A	Y	Y	N	N/A
> <b>MDStatisticID(2475)</b>	Y	T8f	T8g	T8h	T8i	T8j
> <b>MDStatisticValue(2478)</b>	Y	<Value>	<Time>	<Time>	<Time>	<Number>
> <b>MDStatisticValueType(2479)</b>	Y	1=Absolute	1=Absolute	1=Absolute	1=Absolute	1=Absolute
> <b>MDStatisticValueUnit(2480)</b>	Y	N/A	3=Milliseconds	3=Milliseconds	3=Milliseconds	N/A

**D.22 Table 8(c) – Likelihood of Execution**

		<b>Number of Immediate or Cancel orders that got zero fill (8k)</b>	<b>Number of transactions executed on the trading venue that are Large in Scale pursuant to Article 4 or 9 of Regulation (EU) No 600/2014 (8l)</b>	<b>Value of transactions executed on the trading venue that are Large in Scale pursuant to Article 4 or 9 of Regulation (EU) No 600/2014 (8m)</b>	<b>Number of transactions that were executed on the trading venue pursuant to Article 4 or 9 of MiFIR, except for orders that are held in an order management facility of the trading venue pending disclosure and not Large in Scale (8n)</b>	<b>Value of transactions that were executed on the trading venue pursuant to Article 4 or 9 of MiFIR, except for orders that are held in an order management facility of the trading venue pending disclosure and not Large in Scale (8o)</b>
<b>Attributes -&gt;</b>	<b>Req' D</b>					
<b>NoMDStatistics(2474)</b>	Y	1	1	1	1	1
> <b>MDStatisticType(2456)</b>	Y	1=Count	1=Count	12=Total turnover value	1=Count	12=Total turnover value
> <b>MDStatisticScope(2457)</b>	Y	5=Orders	8=Trades	8=Trades	8=Trades	8=Trades

> MDStatisticSubScope(2458)	Y	31<td>=Not executed	25<td>=Large in scale	25<td>=Large in scale	26<td>= Neither hidden nor large in scale	26<td>= Neither hidden nor large in scale
> MDStatisticScopeType(2459)	N	N/A	N/A	N/A	N/A	N/A
> MDStatisticDesc(2455)	Y	"Number of IOC orders failed to execute"	"Number of LIS transactions"	"Value of LIS transactions"	"Number of transactions except pending disclosures and LIS orders"	"Value of transactions except pending disclosures and LIS orders"
> MarketDepth(264)	N	N/A	N/A	N/A	N/A	N/A
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months	14=Months	14=Months
> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range
> TimelnForce(59)	N	3=IOC (Immediate or Cancel)	N/A	N/A	N/A	N/A
> MDStatisticID(2475)	Y	T8k	T8l	T8m	T8n	T8o
> MDStatisticValue(2478)	Y	<Number>	<Number>	<Value>	<Number>	<Value>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	1=Absolute	1=Absolute	1=Absolute
> MDStatisticValueUnit(2480)	Y	N/A	N/A	N/A	N/A	N/A

**D.23 Table 8(d) – Likelihood of Execution**



Attributes ->	Req'D	Value of transactions that were executed on the trading venue pursuant to Article 4 or 9 of MiFIR, except for orders that are held in an order management facility of the trading venue pending disclosure and not Large in Scale (8o)	Number of trading interruptions (8p)	Average duration of trading interruptions (8q)	Number and nature of suspensions (8r,s)
NoMDStatistics(2474)	Y	1	1	1	1-2
> MDStatisticType(2456)	Y	12=Total turnover value	1=Count	24<tbd>=Average duration	1=Count
> MDStatisticScope(2457)	Y	8=Trades	32<tbd>=Trading interruptions	32<tbd>=Trading interruptions	33<tbd>=Trading suspensions
> MDStatisticSubScope(2458)	Y	26<tbd>= Neither hidden nor large in scale	N/A	N/A	27<tbd>=Corporate action 28<tbd>=Venue decision
> MDStatisticScopeType(2459)	N	N/A	N/A	N/A	N/A
> MDStatisticDesc(2455)	Y	"Value of transactions except pending disclosures and LIS orders"	"Number of trading interruptions"	"Average duration of trading interruptions"	"Number of suspensions"
> MarketDepth(264)	N	N/A	N/A	N/A	N/A
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months	14=Months

> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range
> MDStatisticID(2475)	Y	T8o	T8p	T8q	T8r
> MDStatisticValue(2478)	Y	<Value>	<Number>	<Average duration value>	<Number>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	1=Absolute	1=Absolute
> MDStatisticValueUnit(2480)	Y	N/A	N/A	0=Seconds	N/A

D.24 Table 8(e) – Likelihood of Execution

Attributes ->	Req'D	Average duration and nature of suspensions (8t)	For continuous quote venues, number of periods during which no quotes were provided (8u)	For continuous quote venues, average duration of periods during which no quotes were provided (8v)	average quote presence expressed in percentage of the venue's normal trading period on that date (8w)
NoMDStatistics(2474)	Y	1-2	1	1	1
> MDStatisticType(2456)	Y	24<td>=Average duration	1=Count	24<td>=Average duration	4=Distribution
> MDStatisticScope(2457)	Y	33<td>=Trading suspensions	34<td>=No quotes	34<td>=No quotes	6=Quotes
> MDStatisticSubScope(2458)	Y	27<td>=Corporate action 28<td>=Venue decision	29<td>=Minimum time period	29<td>=Minimum time period	1=Visible
> MDStatisticScopeType(2459)	N	N/A	N/A	N/A	N/A
> MDStatisticDesc(2455)	Y	"Average duration of suspensions"	"Number of periods more than 15 mins where no bid/offer"	"Average duration of periods more than 15 mins where no"	"Average quote presence during trading hours"

			provided"	bid/offer provided"		
> MarketDepth(264)	N	N/A	N/A	N/A	N/A	N/A
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months	14=Months	14=Months
> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range
> ExposureDuration(1629)	N	N/A	15	15	N/A	N/A
> ExposureDurationUnit(1916)	N	N/A	10=Minutes	10=Minutes	N/A	N/A
> MDStatisticID(2475)	Y	T8t	T8u	T8v	T8w	T8w
> MDStatisticValue(2478)	Y	<Average duration value>	<Number>	<Average duration value>	<Average availability>	<Average availability>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	1=Absolute	2=Percentage	2=Percentage
> MDStatisticValueUnit(2480)	Y	0=Seconds	N/A	10=Minutes	N/A	N/A

**D.25 Root level of Table 9 – Additional information for request for quote execution venues**

SecurityID(48)	Y	<ISIN value>
SecurityIDSource(22)	Y	4=ISIN
SecurityDesc(107)	N	<description>
CFIcode(461)	Y	<CFI Code>
Currency(15)	Y	<ISO 4217 code>
MarketID(1301)	N	<MIC>
TradeDate(75)	Y	<Date>

**D.25 Table 9 – Additional information for request for quote execution venues**

Attributes ->	Req' D	Mean time elapsed between acceptance and execution (9a)	Median time elapsed between acceptance and execution (9b)	Mean time elapsed between request and provision of any corresponding quotes (9c)	Median time elapsed between request and provision of any corresponding quotes (9d)
<b>NoMDStatistics(2474)</b>	Y	1	1	1	1
> MDStatisticType(2456)	Y	24<tbd>=Average duration	30<tbd>=Median duration	24<tbd>=Average duration	30<tbd>=Median duration
> MDStatisticScope(2457)	Y	6=Quotes	6=Quotes	35<tbd>=Request for Quotes	35<tbd>=Request for Quotes
> MDStatisticSubScope(2458)	Y	12<tbd>=Execute d	12<tbd>=Execute d	30<tbd>=Open	30<tbd>=Open
> MDStatisticDesc(2455)	Y	"Mean time between acceptance and execution of quote"	"Median time between acceptance and execution of quote"	"Mean time between RFQ and provide quotes"	"Median time between RFQ and provide quotes"
> MDStatisticFrequencyPeriod(2460)	Y	3	3	3	3
> MDStatisticFrequencyUnit(2461)	Y	14=Months	14=Months	14=Months	14=Months
> MDStatisticIntervalType(2464)	Y	3=Fixed date range	3=Fixed date range	3=Fixed date range	3=Fixed date range
> MDStatisticID(2475)	Y	T9a	T9b	T9c	T9d
> MDStatisticValue(2478)	Y	<Average duration value>	<Median duration value>	<Average duration value>	<Median duration value>
> MDStatisticValueType(2479)	Y	1=Absolute	1=Absolute	1=Absolute	1=Absolute
> MDStatisticValueUnit(2480)	Y	3=Milliseconds	3=Milliseconds	3=Milliseconds	3=Milliseconds

