

# Eurex MMPM

## XML File with Parameters for MMPM

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Abstract

This document describes the parameters and structure of the daily XML file  
NNFILMMPARPUBLIYYYYMMDDXEUR.

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## 1 Introduction

The parameters XML file contains the parameters for MMPM, which are used to calculate the performance of market makers. The file contains the snapshot of parameters. That means this is a whole extract from the parameter set.

The name of the parameter file is standardized and has the form of a string with the following characters: **NNFILMMPARPUBLIYYYYMMDDXEUR.XML**, as an example for one given day: **90FILMMPARPUBLI20230402XEUR.XML**, where NN has value 90 for production environment. YYYYYMMDD is the business date of the extract and XEUR signifies it is the Eurex Exchange.

The content of XML has the following structure. XML file contains one root element: “mmpar”. Under root element there are 12 elements, which represent the tables for different parameter sets. They are displayed in table below.

Table 1: Sets of Parameters

<b>Name</b>	<b>Description</b>
exSwMmProductScope	The scope for strategies
exSwMmStrtgParam	The definition of strategies
mmprmPckgCalSprdMtrx	The definition of Matrix for Calendar Spreads
mmprmPckgPrdParam	The definition of packages.
mmprmPckgPrdQIntv	The description of quotation intervals for Program, Package, and Product
mmprmSizeClass	Size Class
mmprmSizeClassDt	Details for Size Class
mmprmSpreadClass	Spread Class
mmprmSpreadClassDt	Details for Spread Class
mmprmProductClass	Product Class
mmprmRmmSpreadClass	Spread Class for RMM
mmprmPckgComp	Provides a link between Product ID, Package Name and Primary flag (that separates types of instruments under scope)

Figure 1: Sets of Parameters in XML file

Every element from Table 1 contains the records with the parameters. The name of records is the Name of Element + "Rec". Below we describe the parameters from different tables.

All elements in XML file contain common fields: businessValidFrom, and businessValidTo except element 'mmprmRmmSpreadClass'

```
<xsd:complexType name="mmparType">
  <xsd:sequence>
    <xsd:element name="exSwMmProductScope" type="exSwMmProductScopeType" />
    <xsd:element name="exSwMmStrtgParam" type="exSwMmStrtgParamType" />
    <xsd:element name="mmprmPckgCalSprdMtrx" type="mmprmPckgCalSprdMtrxType" />
    <xsd:element name="mmprmPckgPrdParam" type="mmprmPckgPrdParamType" />
    <xsd:element name="mmprmPckgPrdQIntv" type="mmprmPckgPrdQIntvType" />
    <xsd:element name="mmprmSizeClass" type="mmprmSizeClassType" />
    <xsd:element name="mmprmSizeClassDt" type="mmprmSizeClassDtType" />
    <xsd:element name="mmprmSpreadClass" type="mmprmSpreadClassType" />
    <xsd:element name="mmprmSpreadClassDt" type="mmprmSpreadClassDtType" />
    <xsd:element name="mmprmProductClass" type="mmprmProductClassType" />
    <xsd:element name="mmprmRmmSpreadClass" type="mmprmRmmSpreadClassType" />
    <xsd:element name="mmprmPckgComp" type="mmprmPckgCompType"/>
  </xsd:sequence>
</xsd:complexType>
```

Fields businessValidFrom and businessValidTo contain the validity of parameters. These two fields give the possibility to show parameters, which will be applied in the **near** future. For example, we would like to select a set of parameters, which are valid for 02.04.2023. We need to open last xml file and select all parameters, where businessValidFrom <= 02.04.2023 and 02.04.2023 <= businessValidTo, or in other words 02.04.2023 between businessValidFrom and businessValidTo. The businessValidTo field can contain the artificial date 31.12.9999. This date means that the parameter is valid and the to date is not defined yet.

```
<xsd:element name="businessValidFrom" type="businessValidFromType" minOccurs="0" maxOccurs="1" />
<xsd:element name="businessValidTo" type="businessValidToType" minOccurs="0" maxOccurs="1" />
```

## 2 XML Elements

### 2.1 mmprmPckgPrdParam

Name	Description
mmProgram	Market Maker program.
mmProgPackage	Market Maker package for MM program AMM. Not defined (NA) for PMM or RMM.
productBusinessId	Business product ID (e.g. OGBL = Opt. on Euro-Bund Futures, DB1 = Option on Deutsche Börse)
mmQuotType	Quotation type. Possible values are PQ for permanent quotation, QR for quotation on request
applyDaysToExpSpread	Apply day to spread
expSelectionRule	Expiration selection rule
scopeExpCycleNoFrom	Expiration cycle interval start number.
scopeExpCycleNoTo	Expiration cycle interval end number.
requiredCoverage	Required coverage of quote obligation (answers to quote requests or daily quotation time), e.g. 0.65 for 65%
toleratedViolationDays	Maximum number of tolerated days with violation per month, e.g. 4
requiredMthlyVolumne	Required minimum monthly volume under the members M-accounts.
timeValueFactor	Time value factor. Series in the strike price window which have settled with a time value (difference between settlement price and the intrinsic value) lower than TVF times the minimum tick size will not be used for the evaluation
aqNbrOfRelvAuct	Number of auction
aqRequiredAuctCoverage	Required auction coverage
requiredAvgSpread	Required average spread

settlementPriceFactor	Settlement price factor. Series which have settled with a settlement price lower than or equal to the minimum tick size times the settlement price factor will not be used for the quotation on request evaluation.
qrDailyCutLimit	Daily cut limit for quotation on request.
qrMonthlyFloorLimit	Monthly floor limit for quotation on request
qrMaxTransactTimeDiff	Maximum time difference between two valid quotes to be concatenated to one valid quote request response
qrCloseTimeDiff	Close time difference
maxUnlInsideMktSpread	Maximum inside market spread
minUnlInsideMktSize	Minimum inside market size
spreadUnit	Unit of the preceding spread field. Possible values: ABS = the spread is given in absolute terms and reflects the absolute difference between a bid and an ask price, PCT = the spread is given as a percentage of the bid price.
quoteSizeQtyTrgtFct	Quote size quality target

Example:

```

<mmpmPckgPrdParamRec>
  <mmProgram>AMM</mmProgram>
  <mmProgPackage>EFIO</mmProgPackage>
  <productBusinessId>OGBM</productBusinessId>
  <mmQuotType>PQ</mmQuotType>
  <scopeExpCycleNoFrom>1</scopeExpCycleNoFrom>
  <scopeExpCycleNoTo>3</scopeExpCycleNoTo>
  <requiredCoverage>0.9</requiredCoverage>
  <toleratedViolationDays>50</toleratedViolationDays>
  <maxUnlInsideMktSpread>0.03</maxUnlInsideMktSpread>
  <minUnlInsideMktSize>50</minUnlInsideMktSize>
  <spreadUnit>ABS</spreadUnit>
  <businessValidFrom>27-12-2018</businessValidFrom>

```

```
<businessValidTo>31-12-9999</businessValidTo>  
</mmprmPckgPrdParamRec>
```

## 2.2 mmprmPckgPrdQIntv

Name	Description
mmProgram	Market Maker program.
mmProgPackage	Market Maker package for MM program AMM. Not defined (NA) for PMM or RMM.
productBusinessId	Business product ID
mmQuotType	Quotation type. Possible values are PQ for permanent quotation, QR for quotation on request
quotationIntvNo	Serial number of quotation interval.
spwCode	Reference to Strike Price Window
spreadClassCode	Reference to spread class
sizeClassCode	Reference to size class
productClassCode	Product Class Code
quotationStartTime	Quotation start time.
quotationEndTime	Quotation end time.

Example:

```
<mmprmPckgPrdQIntvRec>  
  <mmProgram>AMM</mmProgram>  
  <mmProgPackage>OSTK-DE</mmProgPackage>  
  <productBusinessId>TKA</productBusinessId>  
  <mmQuotType>PQ</mmQuotType>  
  <quotationIntvNo>1</quotationIntvNo>  
  <spwCode>DR #SZ:15 #RQ07</spwCode>  
  <spreadClassCode>OSTK-2-8EXP</spreadClassCode>  
  <sizeClassCode>STD_20</sizeClassCode>  
  <productClassCode>EO-LC3</productClassCode>
```



```
<quotationStartTime>09:00:00</quotationStartTime>  
<quotationEndTime>17:30:00</quotationEndTime>  
<businessValidFrom>02-07-2018</businessValidFrom>  
<businessValidTo>31-12-9999</businessValidTo>  
  
</mmprmPckgPrdQIntvRec>
```

### 2.3 mmprmSizeClass

Name	Description
sizeClassCode	Size Class Code
sizeClassName	Name of size class
sizeClassDescr	Description of size class

Example:

```
<mmprmSizeClassRec>  
  <sizeClassCode>EFIO</sizeClassCode>  
  <sizeClassName>EFIO</sizeClassName>  
  <businessValidFrom>01-03-2019</businessValidFrom>  
  <businessValidTo>31-12-9999</businessValidTo>  
  
</mmprmSizeClassRec>
```

### 2.4 mmprmSizeClassDt

Name	Description
sizeClassCode	Size Class Code
daysToExpiration	Number of trading days until expiration. 0 – the parameter is not active.
expCycleNoFrom	Expiration cycle interval start number.
expCycleNoTo	Expiration cycle interval end number.

minQuoteSize	Minimum quote size to be compared with the order quantity of the respective quote leg.
minQuoteSizeTotal	Minimum quote size total
minQuoteSizeFast	Minimum quote size in case of fast markets to be compared with the order quantity of the respective quote leg.
minQuoteSizeTotalFast	Minimum quote size total in fast market.
redMinQuoteSize	See above, but reduced.
redMinQuoteSizeTotal	See above, but reduced.
redMinQuoteSizeFast	See above, but reduced.
redMinQuoteSizeTotalFast	See above, but reduced.
qrHoldTime	Hold/ dwell time for quotation on request.
qrResponseTime	Response time for quotation on request.
maxSpreadFastIncrement	Increment factor to increase all maximum spreads in case of fast markets (e.g. 1.1)
contractfrequencyId	Displays to which contract frequency IDs this size class is applied to. Values are A for all types of frequencies under scope, W for weekly, D for daily and E for Month-End

Example:

```
<mmprmSizeClassDtRec>
  <sizeClassCode>STD_3_QR</sizeClassCode>
  <daysToExpiration>0</daysToExpiration>
  <expCycleNoFrom>1</expCycleNoFrom>
  <expCycleNoTo>50</expCycleNoTo>
  <minQuoteSize>3</minQuoteSize>
  <minQuoteSizeFast>1</minQuoteSizeFast>
  <qrHoldTime>1000</qrHoldTime>
  <qrResponseTime>6000</qrResponseTime>
  <maxSpreadFastIncrement>2</maxSpreadFastIncrement>
  <businessValidFrom>10-12-2018</businessValidFrom>
```

```
<businessValidTo>31-12-9999</businessValidTo>  
<contractfrequencyId></contractfrequencyId> </mmpmSizeClassDtRec>
```

## 2.5 mmpmSpreadClass

Name	Description
spreadClassCode	Spread class code
spreadClassName	Name of spread class
spreadClassDescr	Description of spread class

Example:

```
<mmpmSpreadClassRec>  
  <spreadClassCode>OVS</spreadClassCode>  
  <spreadClassName>OVS</spreadClassName>  
  <businessValidFrom>01-01-2020</businessValidFrom>  
  <businessValidTo>31-12-2020</businessValidTo>  
</mmpmSpreadClassRec>
```

## 2.6 mmpmSpreadClassDt

Name	Description
spreadClassCode	Spread class code
daysToExpiration	Number of trading days until expiration.
expCycleNoFrom	Expiration cycle interval start number.
expCycleNoTo	Expiration cycle interval end number.
bidPriceIntervalNo	Serial number for bid price interval
bidPriceUpperBoundary	Upper bid price for this interval
maxSpread	Maximal spread of quotes with bid price in the range of minimum tick size and upper bid price for this interval.
maxSpreadRed	See above, but reduced

spreadUnit	Unit of the preceding spread field. Possible values: ABS = the spread is given in absolute terms and reflects the absolute difference between a bid and an ask price, PCT = the spread is given as a percentage of the bid price.
contractfrequencyId	Displays to which contract frequency IDs this spread class is applied to. Values are A for all types of frequencies under scope, W for weekly, D for daily and E for Month-End

Example:

```
<mmprmSpreadClassDtRec>
  <spreadClassCode>FXFCM_8</spreadClassCode>
  <daysToExpiration>0</daysToExpiration>
  <expCycleNoFrom>0</expCycleNoFrom>
  <expCycleNoTo>0</expCycleNoTo>
  <bidPriceIntervalNo>1</bidPriceIntervalNo>
  <maxSpread>0.00008</maxSpread>
  <spreadUnit>ABS</spreadUnit>
  <businessValidFrom>01-06-2018</businessValidFrom>
  <businessValidTo>31-12-2027</businessValidTo>
  <contractfrequencyId></contractfrequencyId>
</mmprmSpreadClassDtRec>
```

## 2.7 mmprmPckgCalSprdMtrx

Name	Description
mmProgram	Market Maker program.
mmProgPackage	Market Maker package for MM program AMM. Not defined (NA) for PMM or RMM.
productBusinessId	Business product ID
leg01Exp	First Expiry Leg
leg01ExpPrimaryFlag	Primary Flag value for first leg (Y or N)

leg02Exp	Second Expiry Leg
leg02ExpPrimaryFlag	Primary Flag value for second leg (Y or N), a value of N here differentiates a basis spread from a calendar spread

Example:

```

<mmpmPckgCalSprdMtrxRec>
  <mmProgram>AMM</mmProgram>
  <mmProgPackage>FXFCM-WD</mmProgPackage>
  <productBusinessId>FCUY</productBusinessId>
  <leg01Exp>1</leg01Exp>
  <leg01ExpPrimaryFlag>Y</leg01ExpPrimaryFlag>
  <leg02Exp>3</leg02Exp>
  <leg02ExpPrimaryFlag>Y</leg02ExpPrimaryFlag>
  <businessValidFrom>01-10-2019</businessValidFrom>
  <businessValidTo>31-12-9999</businessValidTo>
</mmpmPckgCalSprdMtrxRec>

```

## 2.8 exSwMmProductScope

Name	Description
productSetNo	Serial number of product set
productSetName	Name of product set
product	Business product ID
qrDailyCutLimit	Daily cut limit for quotation on request.
qrDailyFloorLimit	Daily floor limit for quotation on request.
quotationStartTime	Quotation start time.
quotationEndTime	Quotation end time.
requiredCoverage	Required Coverage
primaryFlag	Primary Flag (Y or N)

Example:

```
<exSwMmProductScopeRec>
  <productSetNo>1</productSetNo>
  <productSetName>Index Options</productSetName>
  <product>ODAX</product>
  <qrDailyCutLimit>200</qrDailyCutLimit>
  <qrDailyFloorLimit>100</qrDailyFloorLimit>
  <quotationStartTime>09:15:00</quotationStartTime>
  <quotationEndTime>17:25:00</quotationEndTime>
  <requiredCoverage>0.5</requiredCoverage>
  <primaryFlag>Y</primaryFlag>
  <businessValidFrom>01-01-2000</businessValidFrom>
  <businessValidTo>31-12-9999</businessValidTo>
</exSwMmProductScopeRec>
```

## 2.9 exSwMmStrtgParam

Name	Description
productSetNo	Serial number of product set
strategySymbol	Symbol for strategy
expCycleNFrom	Expiration cycle interval start number.
expCycleNTo	Expiration cycle interval end number.
strategyName	Strategy name
withUnderlyingInd	With or without underling indicator
outrightMaxSpreadMultpl	Outright maximum spread multiplier
outrightMinQSizeMultpl	Outright minimum quote size multiplier
daysToExpFadeOut	Days to expirations
qrMaxTransactTimeDiff	Maximum time difference between two valid quotes to be concatenated to one valid quote request response
qrHoldTime	Hold time for quotation on request
qrResponseTime	Response time for quotation on request

Example:

```
<exSwMmStrtgParamRec>
  <productSetNo>1</productSetNo>
  <strategySymbol>BUL</strategySymbol>
  <expCycleNFrom>1</expCycleNFrom>
  <expCycleNTo>5</expCycleNTo>
  <strategyName>Call Spread</strategyName>
  <withUnderlyingInd>N</withUnderlyingInd>

  <outrightMaxSpreadMultpl>1</outrightMaxSpreadMultpl>
  <outrightMinQSizeMultpl>3</outrightMinQSizeMultpl>
  <daysToExpFadeOut>5</daysToExpFadeOut>
  <qrMaxTransactTimeDiff>500</qrMaxTransactTimeDiff>
  <qrHoldTime>2000</qrHoldTime>
  <qrResponseTime>2000</qrResponseTime>
  <businessValidFrom>01-01-2000</businessValidFrom>
  <businessValidTo>31-12-9999</businessValidTo>
</exSwMmStrtgParamRec>
```

## 2.10 mmpmProductClass

Name	Description
productClassCode	Product Class Code
factorBbSpread	Multiplicator for tighter spread
factorBbSize	Multiplicator for larger size

Example:

```
<mmpmProductClassRec>
  <productClassCode>test</productClassCode>
  <factorBbSpread>0.5</factorBbSpread>
  <factorBbSize>2</factorBbSize>
  <businessValidFrom>08-03-2019</businessValidFrom>
```

```
<businessValidTo>31-12-9999</businessValidTo>
</mmpmProductClassRec>
```

## 2.11 mmpmRmmSpreadClass

Name	Description
productBusinessId	Business product ID
spreadClassCode	Spread class code indication
daysToExpiration	Number of trading days until expiration.
expCycleNoFrom	Expiration cycle interval start number.
expCycleNoTo	Expiration cycle interval end number.
bidPriceIntervalNo	Serial number for bid price interval
maxSpread	Maximal spread of quotes with bid price in the range of minimum tick size and upper bid price for this interval.
spreadUnit	Unit of the preceding spread field. Possible values: ABS = the spread is given in absolute terms and reflects the absolute difference between a bid and an ask price, PCT = the spread is given as a percentage of the bid price.
quotationStartTime	Quotation start time.
quotationEndTime	Quotation end time.
tradingHours	Possible values: "Regular" for usual trading hours and "Extended" for extended trading hours.

Example:

```
<mmpmRmmSpreadClassRec>
  <productBusinessId>TAMU</productBusinessId>
  <spreadClassCode>based_on_SMC-SSF 3</spreadClassCode>
  <daysToExpiration>0</daysToExpiration>
  <expCycleNoFrom>1</expCycleNoFrom>
  <expCycleNoTo>99</expCycleNoTo>
  <bidPriceIntervalNo>2</bidPriceIntervalNo>
```



```
<maxSpread>0.004</maxSpread>  
<spreadUnit>PCT</spreadUnit>  
<quotationStartTime>00:00:00</quotationStartTime>  
<quotationEndTime>23:59:59</quotationEndTime>  
<tradingHours>Regular</tradingHours>  
</mmpmRmmSpreadClassRec>
```

## 2.12 mmpmPckgComp

Name	Description
mmProgram	Market Maker Program
mmProgPackage	Market Maker package for MM program AMM. Not defined (NA) for PMM or RMM.
productBusinessId	Product ID
stdExpInclWeeklyQuoFrm	Is the standard expiration included in weekly requirement
alternMandatoryInd	Y/N Indicator for alternative mandatory product
weeklyQuoFrmSize	How many weeks need to be quoted
mandatoryFulfillInd	Is this product mandatory to fulfil for the package (i.e. OESX Primary Flag Y for AMM-ESX50)
weeklyOptionInd	Is this a weekly option (parameter redundant as of 01.04.2023 as primary flag is to be used)
primaryFlag	Primary Flag (Y or N or <u>D or W or E</u> ). <a href="#">Detailed Explanation below</a>
quarterlyExpInd	As of 01.04.2023 this parameter is not in use
underlyingIsinOvrd	If the underlying ISIN overridden from master data with another ISIN the overridden ISIN is provided in this field

Example:

```
<mmprmPckgCompRec>
  <mmProgram>AMM</mmProgram>
  <mmProgPackage>ESX-WE</mmProgPackage>
  <productBusinessId>OESX</productBusinessId>
  <stdExpInclWeeklyQuoFrm>N</stdExpInclWeeklyQuoFrm>
  <alternMandatoryInd>N</alternMandatoryInd>
  <weeklyQuoFrmSize>4</weeklyQuoFrmSize>
  <mandatoryFulfillInd>N</mandatoryFulfillInd>
  <weeklyOptionInd>Y</weeklyOptionInd>
  <primaryFlag>N</primaryFlag>
  <businessValidFrom>01-04-2023</businessValidFrom>
  <businessValidTo>31-12-2023</businessValidTo>
</mmprmPckgCompRec>
```

#### **Primary Flag Value explanation:**

The Primary Flag on mmprmPckgComp is used to define which instruments are in scope of the package based on Primary Flag / Contract Frequency ID. Each value corresponds to a packaging rule and only those instruments of the product will be considered in measurement as this flag dictates. As only AMM packages are defined on this table, only AMM packages are under scope. PMM packages are by default Primary Flag = Y.

Y -> All instruments with Primary Flag Y are under scope. E.G. AMM-OSTK-CH packages only primary expirations of the selected CH Equity Options, ignoring any non-Primary (sub monthly) expirations. If the package has first 10 expirations under scope, only 10 primary expirations are counted.

N -> All instruments with Primary Flag N are under scope. E.G. AMM-ESX-WE packages only non-primary expirations of OESX, ignoring any Primary (monthly or longer) expirations. All types of non-primary expirations are in scope ("W" + "E"). If the package has first 4 expirations under scope, only 4 non-primary expirations are counted.

W -> All instruments with Contract Frequency ID "W" are under scope. E.G. AMM-OEXP W only packages those instruments with a weekly contract frequency ID, ignoring any other non-primary expirations of that product. If the package has first 5 expirations under scope, only 5 weekly expirations are counted.

E -> All instruments with Contract Frequency ID "E" are under scope. E.G. AMM-OEXP E only packages those instruments with an end-of month contract frequency ID, ignoring any other non-primary expirations of that product. If the package has 1 expiration under scope, only the first end of month expiration is counted.

D -> Only used for ODTE as an alternative to usage of two packages ("E" + "W"). Both "E" and "W" are in scope. Furthermore all weekly expirations ("W") are in scope which are tradable on a given trading day and only the first X end-of month as defined on mmprmPckgPrdParam (scopeExpCycleNoFrom : scopeExpCycleNoTo).