



# Deutsche Börse Group

## Maturity Frequency Extension

September 5, 2023

v0.2

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## Document History

Revision	Date	Author	Revision Comments
v0.1	September 5, 2023	Deutsche Börse Group	Initial draft
v0.2	November 20, 2023	Hanno Klein, GTC	Changes after GTC presentation on Nov 16 <ul style="list-style-type: none"> <li>• Renamed title, fields etc. from "Expiration Frequency" to "Maturity Frequency"</li> <li>• Used TimeUnit(997) instead of CouponFrequencyUnit(1949)</li> <li>• Added maturity frequency for leg and underlying instruments</li> </ul>
	Jan 12, 2024	FPL Technical Staff	Assigned TBDs and prepared ASBUILT

## 1 Introduction

This gap analysis proposal seeks to address a gap in the FIX Protocol related to the maturity information provided for derivative instruments. It adds the capability to convey the frequency with which the contracts of a given instrument expire, e.g. weekly or monthly.

## 2 Business Requirements

Derivative contracts for options at a given strike price may be offered with various maturity dates. They may expire in regular intervals, e.g. weekly or monthly, so that there is one such contract per week or month. The granularity of the intervals between contracts may change over time but there is a minimum granularity used for the near-term contracts that does not change.

For example, contracts for the EURO STOXX 50® Index Options (OESX) are provided with maturity dates that are up to 119 months from the current date. The terms of these contracts between maturities vary and can go up to one year (only one expiration in the entire year) but the near-term contracts only have a term of one week. The proposal is to add fields to express the unit and period of the minimum granularity as a frequency of the maturity intervals as follows:

- MaturityFrequencyUnit(2982) with the following values:
  - Day – daily expiration
  - Week – weekly expiration
  - Month – monthly expiration
  - EOM – end of month expiration
  - Flex – flexible expiration (no regular interval)
- MaturityFrequencyPeriod(2983) – integer value to express the number of units (not applicable when unit is EOM or Flex)

## 3 Issues and Discussion Points

### 3.1 Terminology: Expiration versus Maturity

An issue was raised that the term "expiration" is about the end of trading for an instrument. The term "maturity" reflects the business view and should be used, which aligns with MaturityMonthYear(200), MaturityDate(541), and MaturityTime(1079). The expiration date of a contract may occur prior to the maturity date due to a holiday schedule.

**Resolution:** Replace the term "expiration" with the term "maturity" in the naming of proposed fields.

### 3.2 Code set for time units

An issue was raised about the use of the code set of CouponFrequencyUnit(1949) to specify a unit for the frequency. This field is specific to bond trading and the code set of the generic field TimeUnit(997) should be used instead.

**Resolution:** Replace CouponFrequencyUnit(1949) with TimeUnit(997) for the code set of MaturityFrequencyUnit(2982).

### 3.3 Flexible time unit

An issue was raised regarding the proposed new value F="Flexible" for TimeUnit(997) to identify non-regular intervals. FIX currently has the field FlexProductEligibilityIndicator(1242) inside the Instrument component to indicate that a derivative product supports user-defined contracts. For example, when the exchange distributes reference data, it may limit the number of far-term expirations available for trading or does not provide the desired frequency, but indicate that the product supports user-defined contracts by flagging it with the FlexProductEligibilityIndicator(1242) field. The field FlexibleIndicator(1244) then indicates, for example in a reference data feed, that a specific contract has one or more user-defined attributes.

As time passes, a previously user-defined contract may be replaced by a standard contract issued by the exchange. The positions are then transferred to the standard contract that has a value for MaturityFrequencyUnit(2982) other than F="Flexible".

Note that FlexProductEligibilityIndicator(1242) indicates that multiple different attributes such as the strike price, exercise style (e.g. European or American) or settlement method (e.g. cash or physical) may be user-defined, not just the maturity date.

**Resolution:** Add value F=Flexible to TimeUnit(997). A contract with FlexibleIndicator(1244)=Y must have MaturityFrequencyUnit(2982) set to F="Flexible" if the maturity date is user-defined.

## 4 Proposed Message Flow

There are no changes to existing message flows.

## 5 FIX Message Tables

No changes

## 6 FIX Component Blocks

### 6.1 Component Instrument

To be completed at the time of the proposal – all information provided will be included in the repository	
Component Name	Instrument
Component Abbreviated Name (for FIXML)	Instrmt
Component Type	__ Block Repeating _X_ Block
Category	Common
Action	__New <b>_X_Change</b>
Component Synopsis	(no change)
Component Elaboration	(no change)
To be finalized by FPL Technical Office	
Repository Component ID 1003	

Component FIXML Abbreviation: <Instrmt>					
Tag	Field Name	Req'd	Action	Mappings and Usage Comments	FIX Spec Comments
<...truncated...>					
1079	MaturityTime	N			
2982	MaturityFrequencyUnit	N	NEW		Conditionally required when MaturityFrequencyPeriod(2983) is specified.
2983	MaturityFrequencyPeriod	N	NEW		Conditionally required when MaturityFrequencyUnit(2982) is specified and the value is not EOM (End of Month) or F (Flexible).
966	SettleOnOpenFlag	N			
<...truncated...>					
</Instrmt>					



## 6.2 Component UnderlyingInstrument

To be completed at the time of the proposal – all information provided will be included in the repository	
Component Name	Instrument
Component Abbreviated Name (for FIXML)	Undly
Component Type	__ Block Repeating _X_ Block
Category	Common
Action	__ New <b>_X_ Change</b>
Component Synopsis	(no change)
Component Elaboration	(no change)
To be finalized by FPL Technical Office	
Repository Component ID 1021	

Component FIXML Abbreviation: <Undly>					
Tag	Field Name	Req'd	Action	Mappings and Usage Comments	FIX Spec Comments
<...truncated...>					
1213	UnderlyingMaturityTime	N			
<b>2984</b>	<b>UnderlyingMaturityFrequencyUnit</b>	<b>N</b>	<b>NEW</b>		<b>Conditionally required when UnderlyingMaturityFrequencyPeriod(2985) is specified.</b>
<b>2985</b>	<b>UnderlyingMaturityFrequencyPeriod</b>	<b>N</b>	<b>NEW</b>		<b>Conditionally required when UnderlyingMaturityFrequencyUnit(2984) is specified and the value is not EOM (End of Month) or F (Flexible).</b>
1837	UnderlyingContractPriceRefMonth	N			
<...truncated...>					
</Undly>					

### 6.3 Component InstrumentLeg

To be completed at the time of the proposal – all information provided will be included in the repository	
Component Name	InstrumentLeg
Component Abbreviated Name (for FIXML)	Leg
Component Type	<input type="checkbox"/> Block Repeating <input checked="" type="checkbox"/> Block
Category	Common
Action	<input type="checkbox"/> New <input checked="" type="checkbox"/> Change
Component Synopsis	(no change)
Component Elaboration	(no change)
To be finalized by FPL Technical Office	
Repository Component ID 1005	

Component FIXML Abbreviation: <Leg>					
Tag	Field Name	Req'd	Action	Mappings and Usage Comments	FIX Spec Comments
<...truncated...>					
1211	LegMaturityTime	N			
2986	LegMaturityFrequencyUnit	N	NEW		Conditionally required when LegMaturityFrequencyPeriod (2987) is specified.
2987	LegMaturityFrequencyPeriod	N	NEW		Conditionally required when LegMaturityFrequencyUnit(2986) is specified and the value is not EOM (End of Month) or F (Flexible).
2146	LegSettleOnOpening	N			
<...truncated...>					
</Leg>					

## 7 Category Changes

No changes

## Appendix A - Data Dictionary

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
2982	MaturityFrequencyUnit	NEW	String	Time unit associated with the minimum frequency of the instrument maturity intervals. [Elaboration: Usage note: When FlexibleIndicator(1244)=Y and the maturity date is user-defined, set MaturityFrequencyUnit(2982)=F (Flexible).]  <i>Uses enums from TimeUnit(997)</i>	@MatFreqUnit	Instrument
2983	MaturityFrequencyPeriod	NEW	int	Time unit multiplier for the minimum frequency of the instrument maturity intervals.	@MatFreqPeriod	Instrument
2984	UnderlyingMaturityFrequencyUnit	NEW	String	Time unit associated with the minimum frequency of the instrument maturity intervals. [Elaboration: Usage note: When UnderlyingFlexibleIndicator(2035)=Y and the underlying maturity is user-defined, set UnderlyingMaturityFrequencyUnit(2984)=F (Flexible).]  <i>Uses enums from TimeUnit(997)</i>	@MatFreqUnit	UnderlyingInstrument

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
2985	UnderlyingMaturityFrequencyPeriod	NEW	int	Time unit multiplier for the minimum frequency of the instrument maturity intervals.	@MatFreqPeriod	UnderlyingInstrument
2986	LegMaturityFrequencyUnit	NEW	String	Time unit associated with the minimum frequency of the instrument maturity intervals. [Elaboration: Usage note: When LegFlexibleIndicator(2202)=Y and the leg maturity is user-defined, set LegMaturityFrequencyUnit(2986)=F (Flexible).]  <i>Uses enums from TimeUnit(997)</i>	@MatFreqUnit	LegInstrument
1987	LegMaturityFrequencyPeriod	NEW	int	Time unit multiplier for the minimum frequency of the instrument maturity intervals.	@MatFreqPeriod	LegInstrument
997	TimeUnit	CHANGE	String	Unit of time associated with the contract. NOTE: Additional values may be used by mutual agreement of the counterparties.  Supported values: H=Hour Min=Minute S=Second D=Day Wk=Week Mo=Month Yr=Year Q=Quarter	@TmUnit	

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				<p>EOM=End of Month                      [Elaboration: End of Month identifies a relative time unit, e.g. until the third Friday of each month.]</p> <p>F=Flexible                      [Elaboration: A flexible time unit indicates that a specific time unit for the contract is currently undetermined.]</p>		
1000	UnderlyingTimeUnit	CHANGE	String	See TimeUnit(997) for complete definition.	@TmUnit	
1001	LegTimeUnit	CHANGE	String	See TimeUnit(997) for complete definition.	@TmUnit	

## 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

[Examples may be entered below this line]