EUREX Architects of trusted markets

Eurex Clearing Focus call

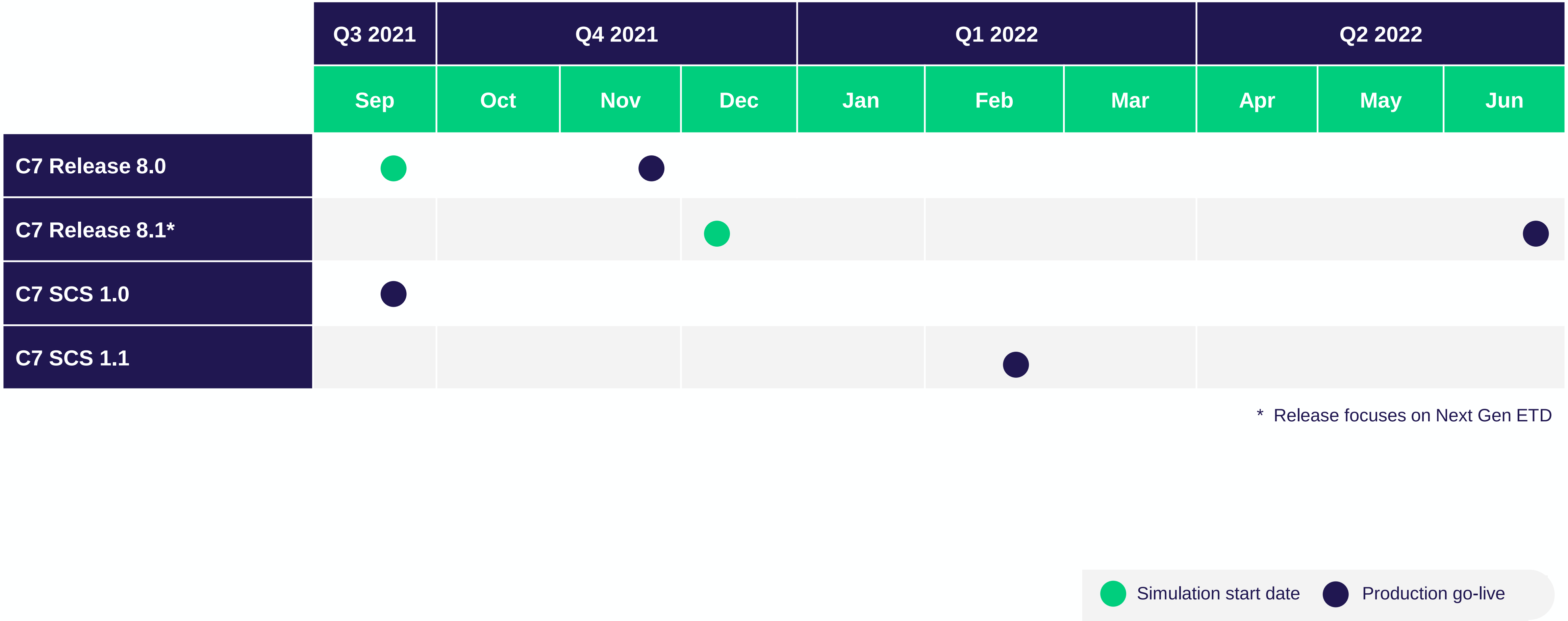
C7 Release 8.0

13 September 2021

Agenda

1 Eurex Clearing Release Roadmap

Eurex Clearing Release Roadmap Q4 2021 & Q1 2022



2 Support initiatives page

Support initiative page

All topics discussed in this call can be found on our website on our dedicated initiatives pages which contain up-to-date information and roadmaps, screencasts and FAQ:

C7 Release 8.0 dedicated initiative page under the following link:
www.eurex.com/ec Support > Initiatives & Releases > C7 Releases > C7 Release 8.0

EUREX Clear Join Trade Support Services Rules & Regs Find

C7 Release 8.0

The main changes on the C7 Release 8.0 are envisaged to harmonize Corporate Action processing across the ETD industry. In addition, this release contains the FIXML Broker migration to Java (previously planned for C7 Release 7.1).

Simulation start: 20 September 2021
Production start: 22 November 2021

Harmonization of Corporate Action Processing
The new behavior in Corporate Actions will bring Eurex Clearing in line with similar processing across the derivative industry.

3 Harmonization of Corporate Action processing

Corporate action processing (page 1 of 2)

Key points

- Applicable to single stock options. No change to Single stock futures
- Post implementation, trading unit will no longer have fractions and will be rounded to the increment of one share
- Premium adjustment / Equalization payment to neutralize the rounding

Corporate action processing (page 2 of 2)

Current vs new behavior

Current processing	New processing
Capital adjustment ratio (R factor) applied to exercise price and trading unit	Capital adjustment ratio (R factor) applied to exercise price and trading unit
Exercise price with decimals. Trading unit rounded to **4 decimals**	Exercise price with decimals. Trading unit **rounded up/down to nearest integer**
Version number increased by 1	Version number increased by 1
	No Fractional trading unit, only integer trading unit
	Rounding of the fractions triggers a **premium adjustment / equalization payment**
Cash settlement of fractions on T+2 upon exercise and assignment	Equalization payment on **ex-date T+1**, if applicable

Eurex Clearing implementation strategy (page 1 of 2)

Implementation date 26 Nov 2021

- Eurex Clearing will **adjust all existing series** with a fractional trading unit
- To achieve this, a Corporate Action with **R-factor “1”** will be triggered for each product where contracts with fractional trading units exist
- This will result in a **one-off cash settlement** of the fractional trading unit for already capital adjusted option series

Eurex Clearing implementation strategy (page 2 of 2)

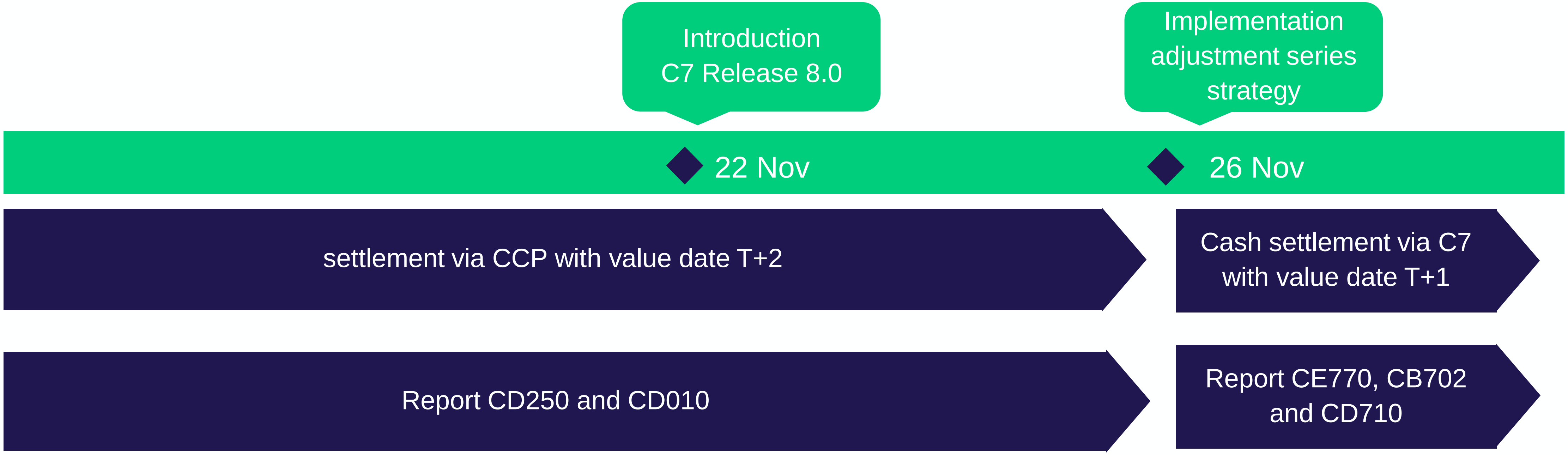
Implementation date 26 Nov 2021

- The **version number** of the adjusted series will not be incremented by the corporate action
- Only the trading unit will be changed (rounded up or down to the next integer)
- An **equalization payment** will be made to neutralize the effect of rounding
- There will be no stock option contracts with a **fractional trading unit** after this one-time adjustment

4 Cash settled options processing

Cash settlement options processing

Implementation timeline Q4 2021



Cash settled options processing

Current vs future behavior

Current behavior

Cash settlements resulting from cash settled stock option contracts (OSTK) or pure cash payments resulting from a basket:

- Processed with value date T+2.
- Report CD250 and CD010

Future behavior

Cash Settlements resulting from Exercise/Assignments of OSTKs:

- Cash Settlement with value date T+1
- C7 will send existing cash transactions of type 294 CASH SETTLEMENT PAID and 296 CASH SETTLEMENT RCV
- Cash settlements will be shown in the reports CB702 and CE770

5 Report changes

Report changes

New Corporate Action processing (page 1 of 2)

Report	Report name	Fields added	Fields removed	Other updates
TA711	All Active Series		blkTrdFlg dispDcml exerPrcDcml TrdSysCod cntrExerPrc trdUntShares trdUntCsh	
CA752	Capital Adjustment Positions Overview	PositionId currSetlmtPrc_1 EqualPmt valDate		
CE770	Exercise And Assign Overview		Ce770Rec3Csh CshQty dlvClgHseTrnNo setlmtSecuQty DlvSetlmtAmnt CshSetlmtAmnt settlDat trdUnt	
CB012	Account Statement			information populated in existing fields (trnTyp 118 for EqualPmt)

Report changes

New Corporate Action processing (page 2 of 2)

Report	Report name	Fields added	Fields removed	Other updates
CB790	Premium Information			information populated in existing fields (prmPayBal / prmRcvBal)
CD710	Daily Cash Account CM			information populated in existing fields (trnDebAmnt / trnCrdAmnt)
CB702	Cash Settled Contracts Overview	cntrIdGrpSC7 cntrClasCod prodId cntrDtlGrpC7 cntrExpMthDat cntrExpYrDat cntrDat cntrExpDat cntrExercisePrice flxCntrSynProdId cntrVersNo exerStylTyp settlTyp cntrTyp cntrFrequency cntrMnemonic uniqueCntrId	flxCntrIdGrpC7 cntrClasCod prodId cntrExpDat cntrExercisePrice flxCntrSynProdId cntrVersNo exerStylTyp settlTyp cntrIdGrpSetlC7 cntrClasCod prodId cntrDtlGrpSetlC7 cntrExpMthDat cntrExpYrDat cntrExercisePri	

Report changes

Collateral Security enhancements & Deliverable Bonds

Report	Report name	Fields added	Fields removed	Other updates
CD031	Daily Collateral Valuation	poolFactor inflationFactor	unUsedSecQty	
CD037	Claim Amount Based Collaterals	poolFactor inflationFactor	unUsedSecQty	
CI720	Intraday Collateral Transaction Report			Rename existing field from AWV to country code
CI731	Intraday Collateral Position Report			Rename existing field from AWV to country code
CE038	Deliverable Bonds			Text version will be decommissioned. Only the xml version and csv format of the report will be generated and provided

6 Four-eyes processing

Four eyes processing

Optional feature

- Optional Four-Eyes processing is offered for:
  - **Automatic Close-Out** maintenance: Clearing Members can optionally instruct the system to automatically close-out open positions during the end-of-day processing
  - **Zero Cost Quantity** (ZCQ): Refers to the number of contracts that can be closed-out without late closing fees being charged

7 FIXML Broker Migration

FIXML Broker migration (page 1 of 3)

Key Points

- In simulation since 16 April 2021. Production date planned for 20 November 2021
- Eurex Clearing FIXML Broker implementation will move from qpid C++ to qpid Broker-Java
- Decommission FIXML Java Broker protocols TLS 1.0 and TLS 1.1. Only protocol TLS 1.2 and above will be supported
- Clearing Members and ISVs using the interface should upgrade the AMQP libraries used in their software to the latest available versions (1.0 or above)
- As Java Broker behaves slightly different, participants are asked to check their applications behavior

FIXML Broker migration (page 2 of 3)

Difference in behavior qpid C++ vs qpid Java

- FIXML Java broker allows to define **flow control** only **on queues**
  - ➢ If request queue is full, the message will be rejected and an error message will be sent

- FIXML Java broker strictly requires a **unique client ID** for this optional field
  - ➢ Not possible to establish two connections with the same client ID
  - ➢ The client ID, if used, must be unique across all the connections of the broker (FIXML/FpML/Margin Calculator/Trade Entry)
  - ➢ Members are suggested to use JMS to specify their client ID

FIXML Broker migration (page 3 of 3)

Focus Dates

Focus days planned in simulation:

- **“Load test”:** Week of 16 August 2021. Upon request. Eurex can facilitate bulk trade upload.
- **“Re-send test”:** 02 September 2021. Duplicate messages will be sent 1 minute after execution so participants can test the application behavior.
- **“Fail-over test”**: 16 September 2021. Clients will experience broker outage for several minutes.

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Thank you!

For functional support, please contact your Clearing Key Account Manager or client.services@eurex.com

For technical support, please contact your Technical Key Account Manager or CTS@deutsche-boerse.com

8 Annexes

Annex 1: Harmonization of Corporate Action processing

Equalization payment (page 1 of 4)

Sample calculation (rounded up)

Before corporate action	Settlement price (unadjusted)	Capital adjustment R factor	Current behavior Adjusted Trading Unit (not rounded)	New behavior Adjusted Trading Unit (rounded)	Fractional trading unit (Cash settled)
C XYZ DEC21 40.00 0 TrdUnit: 100	4,13	0.94614844	C XYZ DEC21 37.85 1 TrdUnit: 105.6916608	C XYZ DEC21 37.85 1 TrdUnit: 106	-0.3083392

Equalization payment (page 2 of 4)

Formula

V = ((Q2*R)-Q/Q

S = c * V * Q

If S<0, then holder of the long position will receive S; holder of the short position will pay S

If S>0, then holder of the long position will pay S; holder of the short position will receive S

Which is the same as:

S = c*((Q2*R) - Q)

Where,

S = Equalization Payment (per contract)

Q = The Lot Size before the corporate action

Q2 = The Lot Size after the corporate action (rounded)

R = R-Factor

c = Series settlement price of the previous day

V = Variation of a position (in %)

Equalization payment (page 3 of 4)

Sample calculation

S = c*((Q2*R) - Q)

S = 4.13 * ((106*0.94614844)-100)

S = 1.2048640632000100

Where,

Q = 105.691661

Q2 = 106

R = 0.94614844

c = 4.13

Equalization payment (page 4 of 4)

Sample calculation

Position details	Tran Type 118 Position Adjustment due to Corporate Actions	Long position	Short position	Equalization payment per contract	Overall premium adjustment / Equalization payment
C XYZ DEC19 40.00 0 TrdUnit: 100	Booking-out		-1,000		
C XYZ DEC19 37.85 1 TrdUnit: 106	Booking-in with equalization payment		1,000	1.20	1,200

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