



EUROPEAN CENTRAL BANK

EUROSYSTEM

T2S CHANGE REQUEST FORM		
General Information (Origin of Request)		
<input checked="" type="checkbox"/> User Requirements (URD) <input type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
Request raised by: Eurosystem	Institute: ECB	Date raised: 27/05/2020
Request title: Conversion of annual into daily rate for the application of the Cash Discount Penalty Rate		Request No.: T2S 0737 URD
Request type: Common	Classification: Maintenance	Urgency: Normal
1. Legal/business importance parameter¹: Low		2. Market implementation efforts parameter²: Low
3. Operational/Technical risk parameter³: Low		4. Financial impact parameter⁴: Medium
Requestor Category: Eurosystem		Status: Withdrawn

Reason for change and expected benefits/business motivation:

According to T2S.16.1010 the Cash Discount Penalty Rate is an applicable rate per currency that is used for the computation of Penalties and is stored in the system as a daily flat penalty rate. In line with the applicable regulation, the Cash Discount Penalty Rate corresponds to the “Official interest rate for overnight credit charged by the central bank issuing the settlement currency with a floor of 0.”

Considering that official interest rates are expressed as per annum, while the Cash Discount Penalty Rate is stored as a daily rate, this implies that a manual transformation of an annual rate into a daily rate has to be performed whenever the Cash Discount Penalty Rate has to be updated, i.e. whenever there is a change in the monetary policy interest rates applied to the T2S Settlement Currencies.

In order to reduce operational risks of inputting wrong data with a potential higher number of decimals due to the annual to daily transformation, it is proposed to update the UR so that the Cash Discount Penalty Rate is defined as an annual rate in T2S Static Data and the transformation is done accordingly into the system. For this purpose the Penalty Mechanism will transform the Cash Discount Penalty Rate in a daily rate when this rate is used (i.e. by dividing the cash penalty rate by 360 in the formula used to calculate the related penalty).

Note that this Change Request does not imply any change in the Security Penalty Rate, which remains a daily rate in T2S Static Data and therefore does not require any transformation by the Penalty Mechanism.

Description of requested change:

T2S Operator should be able to input the Cash Discount Penalty Rate as an annual rate, instead of as a daily rate. Additionally the system should convert it in the equivalent daily rate when calculating the relevant Penalties.

16.9.5.2 Cash Discount Penalty Rate

Definition

Reference ID	T2S.16.1010
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The cash discount penalty rate is a list of applicable rates for each currency. Each item of this list includes the following attributes:

- Currency code
- ~~Daily Annual~~ flat penalty rate (rate value i.e. discount rate of the currency)

¹ Legal/business importance parameter was set to Low because this functionality does not have a major impact in T2S functionalities. Nonetheless it reduces operational risk, by avoiding the manual conversion of an annual rate into a daily rate.

² Market implementation effort parameter was set to Low because it does not require relevant adaptations from T2S CSDs / NCBs and their participants

³ Operational/technical risk parameter was set to Low because the implementation of these tools has a limited operational impact

⁴ Financial impact parameter was set to Medium based on the following scale: Low < 100kEUR < Low-Medium < 200 kEUR < Medium < 400kEUR < High < 700kEUR < Very high

- Valid from (date from which the rate value applies)

Table 16-9-5 – Possible attribute combinations and applicable security and cash discount penalty rates:

Financial Instrument Type	Liquid/Illiquid	SME Growth Market ⁵	Asset Type ⁶	Daily Flat Penalty Rate
SHRS	Liquid	Not traded	Liquid Shares	1.0bp
SHRS	Illiquid	Not traded	Illiquid Shares	0.5bp
SHRS	Liquid or illiquid	Traded	SME Growth Market (non-Bonds)	0.25bp
SECU, ETFS, UCIT, EMAL, or OTHR	Not applicable	Traded		
DEBT, or MMKT	Not applicable	Not traded	Corporate Bonds	0.20bp
DEBT, or MMKT	Not applicable	Traded	SME Growth Market Bonds	0.15bp
SOVR	Not applicable	Traded or Not traded	Government and Municipal Bonds	0.10bp
SECU, ETFS, UCIT, EMAL, or OTHR	Not applicable	Not traded	Other financial instruments	0.5bp
Not applicable	Not applicable	Not applicable	Cash	Discount rate per currency with a floor of 0

For cash assets, the cash discount rate per currency will be applied (with a floor of 0).

Summary of the various static data updates that the responsible T2S Actor can perform

Responsible T2S Actor	Class of Information	Attribute	Updatable
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T2S Operator	Securities Penalty Rate	Asset Type	No
		Daily Flat Penalty Rate	Yes
		Valid From	No
T2S Operator	Cash Discount Penalty Rate	Currency Code	No
		Daily Annual Flat Penalty Rate	Yes

⁵ This attribute is derived on a transactional basis and hence is described in Chapter 22.4 under T2S.22.145

⁶ Combination of Type of Financial Instruments (derived with the CFI code mapping as per T2S.16.940), liquid/illiquid attribute of a share (as per T2S.16.960), and whether the instrument was traded on SME growth market (relevant for deriving SME Growth Market non-Bonds/Bonds penalty rates according to T2S.16.970).

Responsible T2S Actor	Class of Information	Attribute	Updatable
		Valid From	No
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22.4.1 Settlement Fail Penalty (SEFP)

Computation of SEFP for a failing RVP

Reference ID	T2S.22.121
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SEFP = $(\text{Cash Discount Penalty Rate}/360) * \text{Reference Price} * \text{Quantity}$, where;

Cash Discount Penalty Rate is the discount rate of the relevant currency stored in Static Data (as described in T2S.16.1010) and for the business day for which the penalty is calculated;

Reference Price is the price stored in Static Data for the ISIN of the instruction and the business day for which the penalty is calculated.

Quantity is the quantity of securities failed to be delivered, which is the quantity of the instruction remaining to be settled at the time of end of processing of the relevant cut-off.

Computation of SEFP for a failing DPFOD or a failing CPFOD

Reference ID	T2S.22.130
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SEFP = $(\text{Cash Discount Penalty Rate}/360) * \text{Amount}$, where:

Cash Discount Rate is the discount rate of the relevant currency stored in Static Data (as described in T2S.16.1010) and the business day for which the penalty is calculated.

Amount is the cash amount failed to be delivered, which is the amount of the instruction remaining to be settled at the time of end of processing of the relevant cut-off.

Computation of SEFP for a failing DWP or a failing RWP

Reference ID	T2S.22.140
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SEFP = $\text{Security Penalty Rate} * \text{Reference Price} * \text{Quantity} + (\text{Cash Discount Penalty Rate}/360) * \text{Amount}$, where:

Security Penalty Rate* Reference Price* Quantity is derived as described in T2S.22.120 and;

Cash Discount Penalty Rate* Amount is derived as described in T2S.22.130.

22.4.2 Late Matching Fail Penalty (LMFP)

Computation of LMFP for a DPFOD or CPFOD received late

Reference ID	T2S.22.220
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LMFP = $(\text{Cash Discount Penalty Rate}/360) * \text{Amount}$, where:

Cash Discount Penalty Rate is the discount rate of the relevant currency stored in Static Data (as described in T2S.16.1010) and for the relevant business day.

Amount is the cash amount failed to be delivered, which is the matched amount of the instruction.

Computation of LMFP for a DWP or a RWP received late

Reference ID	T2S.22.230
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LMFP = $(\text{Security Penalty Rate} * \text{Reference Price} * \text{Quantity} + \text{Cash Discount Penalty Rate}/360) * \text{Amount}$, where:

Security Penalty Rate* Reference Price* Quantity is derived as described in T2S.22.210 and;

Cash Discount Penalty Rate* Amount is derived as described in T2S.22.220.

Computation of LMFP for a RVP received late and matched in T2S

Reference ID	T2S.22.231
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LMFP = $(\text{Cash Discount Penalty Rate}/360) * \text{Reference Price} * \text{Quantity}$, where;

Cash Discount Penalty Rate is the discount rate of the relevant currency stored in Static Data (as described in T2S.16.1010) and for the business day for which the penalty is calculated;

Reference Price is the price stored in Static Data for the ISIN of the instruction and the relevant business day.

Quantity is the quantity of securities failed to be delivered, which is the matched quantity of the instruction.

22.6 Automatic update of existing cash penalties by T2S

Update of reference data triggering a recalculation of existing cash penalties

Reference ID	T2S.22.470
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T2S shall automatically re-calculate existing cash penalties affected by the below data updates occurred since the last recalculation process:

- Changes in the reference price of a given ISIN,
- Changes in the value of the attributes of the Securities Subject to Cash Penalties i.e. the ISIN, the value of the financial instrument type or the Liquidity,
- Changes in the value of the ~~Daily flat~~ penalty rate (either the securities penalty rate or the cash penalty rate) or in the list of SME Growth Markets necessary for identifying the applicable penalty rate.

Submitted annexes / related documents:

Outcome/Decisions:

* CRG on 2 July 2020: The CRG agreed to launch the preliminary assessment of CR-737

* CRG on 18 November 2020: Following the results of the preliminary assessment, the ECB as CR initiator withdrew CR-737.

Preliminary Assessment:

- **Financial impact: medium**
- **Impacted modules: LCMM, LTSI, SDMG, INTF**
- **Findings:**
 - With this change, the maximum number of decimals allowed in the screen for the cash discount penalty rate can be (and will be) reduced from 14 to 6.
 - Data models and screens will have to be amended with regard to the field label and the reduction of the number of decimals.
- **Open issues:**

It must be analysed during the Detailed Assessment, how to handle penalties calculated before the implementation of the CR but which are still modifiable (i.e. within the Appeal Period).

- Option A: If the **cash discount penalty rates are changed (from daily figure to an annual figure) with “valid from” the deployment date**, existing penalties are not affected, but in case they are recalculated for any other reason, the new formula that divides cash discount penalty rate by 360 would be applied, while the cash discount penalty rate available for that business day was already provided and remains as daily rate (i.e. the annual cash discount penalty rate would be divided twice).

→ This option is considered as **not acceptable** because of the impact described as well as because it will imply a wrong calculation for LMFPs that penalise days before and after the deployment date.

- Option B: If the **cash discount penalty rates are changed (from daily figure to an annual figure) also for the past** (since the start of the dry run in September 2021), then existing penalties within the Appeal Period will be recalculated, and hence, the new formulas that divides cash discount penalty rate by 360 will apply for them. However, this could lead to a huge volume of recalculations on Monday morning.

→ Accordingly, it has to be analysed the average numbers of penalties using the cash discount penalty rate (i.e. those with calculation method CASH, MIXE and BOTH). If it is sufficiently high, to avoid impacting Monday production, during the DA it has to be considered the need to find a solution and develop an ad-hoc recalculation process of all penalties affected by the change of the cash discount penalty rate during the deployment weekend.

Documentation to be updated:

Detailed assessment:
