



EUROPEAN CENTRAL BANK

EUROSYSTEM

General Information (Origin of Request)		
<input type="checkbox"/> User Requirements (URD)		
<input checked="" type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
<b>Request raised by:</b> Deutsche Bundesbank on behalf of German T2 and T2S NUG	<b>Institute:</b> Central Bank	<b>Date raised:</b> 11 September 2015
<b>Request title:</b> Modification of cash forecast for the current and following business day after DVP cut-off	<b>Classification:</b> Scope enhancement	<b>Request ref. no:</b> T2S 0556 SYS
<b>Request type:</b> Common	<b>Urgency:</b> Normal	
<b>1. Legal/business importance parameter:</b> High	<b>2. Market implementation efforts parameter:</b> Low	
<b>3. Operational/Technical risk parameter:</b> Low	<b>4. Financial impact parameter:</b> Low-Medium	
<b>Requestor Category:</b> Central Bank	<b>Status:</b> Implemented	

#### Reason for change and expected benefits/business motivation:

##### Background

According to the UDFS chapter 1.6.2.7.3 the *Current Settlement Day Cash Information Report* "... provides information on cash needs for the current settlement day on aggregated level. The forecast is based on the current T2S Dedicated Cash Account balance (aggregated over all restriction types), liquidity transfer orders and Settlement Instructions still to be settled (aggregated over all restriction types) as well as the amount of outstanding intraday credit from auto-collateralisation valid for a T2S Dedicated Cash Account."

In addition, the UDFS chapter 3.3.3.1.3 clarifies that "...the *Cash Forecast Query* for the current settlement day returns information about cash needs for transactions pending to settle during the current settlement day..."

Moreover, UDFS chapter 1.4.4.4.7 states that during the real-time settlement closure T2S executes a DVP cut-off procedure, which is currently scheduled at 4 p.m. This means that T2S does not attempt to settle DVP/PFOD Settlement Instructions received after this point in time on the current settlement day. In addition, the clarification note UT PBR-050 explains that "...T2S ensures to do one settlement attempt during DVP cut-off period for all the DVP Settlement Instructions with ISD before or equal the current business day, received by T2S before cut-off and eligible for the current settlement day. ..."

##### Business expectation

Against that background market participants expected that the cash forecast for the current business day – if initiated after the last settlement attempt during the process of the DVP cut-off event – contains only those instructions, which can still be settled on the current settlement day (such as BATM and CBO settlement instructions) and thus could result in a need of cash at the very same day. Therefore, pending DVP instructions, which had been submitted before 4 p.m. and thus at least one settlement attempt has been made, but which have not been settled before the end of the event DVP cut-off, were not expected to be contained in the cash forecast. The reason is that those instructions cannot be settled on the current business day, since the DVP cut-off has been reached and the last settlement attempt has been done already.<sup>1</sup>

On the other hand, if DVP instructions cannot settle any more on a given business day, e.g. after the end of the DVP cut-off event, they will be re-attempted to be settled on the next business day, and thus they will impact the cash needs of the next business day. Therefore, after the end of the DVP cut-off event, all pending DVP instructions that have not been settled on the current business day should be accounted for in the following business day cash forecast.

##### Conclusion

During testing it turned out, that T2S does not behave as explained in the business expectation. In view of the UTSG clarification note UT-PBR-050, it seems that different possibilities for interpreting the UDFS and the settlement instructions included in the cash forecast exist. Therefore, market participants identified the need to adjust the implementation of the current business day cash forecast according to their original expectations and to update the UDFS so that in future diverging interpretations will be avoided.

<sup>1</sup> Example: A settlement instruction entered into the system at 3.45 p.m. which could not settle until DVP cut-off at 4 p.m. should not be considered in the cash forecast initiated at 4.15 p.m. whereas potentially pending BATM or CBO settlement instructions would have to be considered.

Implementing the current business day cash forecast in a way that after the end of the DVP cut-off process only those instructions are considered, which can be settled on the current business day, is essential for the end of day liquidity management by the Payment Banks. Payment Banks might for example wish to initiate a cash forecast at 4.50 p.m. with the intention to receive information on how much cash is needed to settle all pending BATM and CBO instructions. However, the current T2S behaviour might on the one hand lead to a situation where Payment Banks provide additional liquidity on the DCA although it is not needed or on the other hand – which is even worse – they might end up with BATM and CBO instructions not being settled due to a lack of cash. The former case might occur when the Payment Bank provides additional liquidity due to the fact that settlement instructions contained in the current business day cash forecast indicate a cash need, although they cannot be settled anymore. The latter case might occur when a Payment Bank concludes from the cash forecast that it will receive liquidity from settlement instructions although those instructions cannot be settled on the current business day. This Payment Bank would then not be able to fulfil its obligations from CBO and BATM. Such treasury-related instructions might be crucial for a bank's end of day liquidity management and their failure might result in compensation claims.

Following the above reasoning Payment Banks cannot rely on the current business day cash forecast to determine their liquidity need in the last two hours of the business day. Moreover, as far as we know, there are no workarounds to identify the relevant information.

Similar reasoning also drives the need to adjust the following business day cash forecast. Namely, pending instructions which cannot settle any more on a given business day (e.g. after the end of the DVP cut-off event), must be accounted for in the following business day cash forecast when the DVP cut-off event of the current day has been finished. They will be re-attempted to be settled on the next business day, and therefore they contribute to the cash need of the next business day. Without this adjustment, T2S users would have no means to receive complete cash forecast information from T2S, including liquidity needs resulting from instructions for the given ISD as well as needs resulting from pending instructions being carried over from previous days.

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**Description of requested change:**

Following the above the *Current Settlement Day Cash Information Report* as well as the *Cash Forecast Query* for the current business day, if initiated after the event DVP cut-off has been finished (presently around 4 p.m.), should only include instructions, which can still be settled during the current business day.

Moreover, the *Following Settlement Day Cash Forecast Report* as well as the *Cash Forecast Query* for the following business day, if initiated after the event DVP cut-off has been finished, should also include instructions pending from previous days which cannot settle any more on the given business day, and which will only be re-attempted for settlement on the next business day.

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**Submitted annexes / related documents:**

UT-PBR-050 – Cash Forecast for the current business day after DVP Cut-off (INC167296)

[http://www.ecb.europa.eu/paym/t2s/progress/pdf/tg/crg/crg51/03.ut-pbr-050\\_cash\\_forecast\\_for\\_the\\_current\\_business\\_day\\_inc167296\\_updated.pdf](http://www.ecb.europa.eu/paym/t2s/progress/pdf/tg/crg/crg51/03.ut-pbr-050_cash_forecast_for_the_current_business_day_inc167296_updated.pdf)

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**Proposed wording for the Change request:****UDFS:**

1.6.2.7.3 Liquidity monitoring process:

**Current Settlement Day Cash Information Report**

The Current Settlement Day Cash Information Report provides information on cash needs for the current settlement day on aggregated level. The forecast is based on the current T2S Dedicated Cash Account balance (aggregated over all restriction types), debiting liquidity transfer orders and debiting and crediting Settlement Instructions still to be settled (aggregated over all restriction types) as well as the amount of outstanding intraday credit from auto-collateralisation valid for a T2S Dedicated Cash Account. Settlement Instructions still to be settled comprise:

- SI with ISD = current business day and ISO Settlement Status = Pending
- SI with ISD before the current business day and ISO Settlement Status = Failing and last failing date is also before the current business day

**Following Settlement Day Cash Forecast Report**

This report provides a forecast of the cash needs for the following cash settlement day, i.e. for the next business day where the currency is again eligible for cash settlement. It provides information on the same fields as the above mentioned Current Settlement Day Cash Information Report, in order to enable the T2S Actor to prepare and dedicate in advance sufficient cash on the T2S Dedicated Cash Account for the following night-time settlement period, or in case the next settlement day is a cash holiday for the currency in scope, for the night time settlement period of the first

settlement day on which the currency is again eligible for cash settlement (CR-630, CR-749)

Settlement Instructions to be settled on the following business day comprise:

- SI with ISD = following business day
- SI with ISD on or before the current business day and ISO Settlement Status = Failing and last failing date is the current business day

#### 1.6.4.2.3 Report generation process

Current Settlement Day Cash Information Report:

This report is available in complete version only and provides information on the cash balances of the T2S Dedicated Cash Account, the amount of outstanding intraday credit from auto-collateralisation as well as the projected cash balance. For the calculation of the projected balance, the following debiting and crediting Settlement Instructions are taken into account:

- SI with ISD = current business day and ISO Settlement Status = Pending
- SI with ISD before the current business day and ISO Settlement Status = Failing and last failing date is also before the current business day

The cash forecast does not cover a breakdown of the different restricted balances although: for the projection of the cash information, they are consolidated and returned per T2S Dedicated Cash Account.

In case the Default Dedicated Cash Account is changed (please see section Links between securities accounts and T2S dedicated cash accounts [101]) this change only affects the calculated cash needs for those Settlement Instructions still to be settled, that were accepted by T2S after the change of the Default Dedicated Cash Account. All Settlement Instructions accepted by T2S before this change will be included in the cash forecast of the "old" Default Dedicated Cash Account even though they will be settled through the new account.

Following Settlement Day Cash Forecast Report:

This report is available in complete version only and provides T2S Actors the same information as the Current Settlement Day Cash Report just only for the following cash settlement day, i.e. for the next T2S settlement day where cash settlement in the affected currency is possible again. In case the next T2S settlement day is a cash holiday, this is the first settlement day after the cash holiday (CR-630). For the calculation of the projected balance, the following debiting and crediting Settlement Instructions are taken into account:

- SI with ISD = following business day
- SI with ISD on or before the current business day and ISO Settlement Status = Failing and last failing date is the current business day

Settlement Instructions sent to T2S with no T2S DCA specified will be considered for Following Settlement Day Cash Forecast Report according to the same rules for default DCA as for Current Settlement Day Cash Information Report.

This report may be subject to currency specific routing.

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**High level description of Impact:**

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**Outcome/Decisions:**

- \* CRG meeting of 17-18 September 2015: The CRG agreed to put the Change Request on hold and indicated that the Change Request is a potential candidate for Release 2.
- \* CRG meeting on 26 October 2016: The CRG agreed that the Change Request can be considered mature from a context point of view and therefore, it is ready for its preliminary assessment.
- \* CRG on 10 November 2016: the CRG recommended the launch of the preliminary assessment of the Change Request in a written procedure from 4 to 10 November 2016.
- \* OMG on 02 December 2016: During a written procedure from 11 November 2016 to 02 December 2016, the Operations Managers Group did not identify any blocking operational impact of the Change Request
- \* CRG meeting on 12/13 December 2016: The CRG took note of the T2S functionalities/modules impacted by the Change Request following the 4CB preliminary assessment, however that a redesign of the cash forecast is necessary to implement this functionality. Furthermore, there are synergies with the Change Request T2S-0540-URD (Alignment of U2A and A2A cash forecast information), T2S-0629-SYS (Enhance Cash Forecast Query and Report to display CORP related cash movements separately) and T2S-0630-SYS (Enhance Cash Forecast Query and Report to display expected aggregated cash movements, with separate status Hold or Released) therefore, a joint implementation would be favourable.
- \* PMG on the 15 October 2019: The PMG proposed the allocation of the CR for R5.0.
- \* CSG on 25 October 2019: The CSG authorised the CR for allocation to a T2S release.
- \* NECSG on 28 October 2019: The NECSG authorised the CR for allocation to a T2S release.
- \* MIB on 8 October 2019: The MIB authorised CR-556.
- \* CRG on 22 January 2020: The CRG took note of the CR detailed assessment results and agreed to recommend the implementation of CR-556 in R5.0 to the PMG.
- \* PMG on 23 January 2020: The PMG recommended the CR for approval by the T2S Steering Level and on its inclusion in R5.0.
- \* OMG on 30 January 2020: The OMG completed the operational assessment of the CR.
- \* CSG on 5 February 2020: The CSG approved the inclusion of CR-556 in R5.0.
- \* NECSG on 10 February 2020: The NECSG approved the inclusion of CR-556 in T2S R5.0.
- \* MIB on 13 February 2020: The MIB approved the inclusion of CR-556 in the scope of T2S Release 5.0:

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**Preliminary assessment:**

- **Impacted functionality/module:** U2A, A2A, SETT, LCMM
- **Following issues have to be clarified before the start of detailed assessment:**
  - The initiator is invited to take note that during EOD phase a process is running which could lead to a cancellation of some settlement instructions. Only if the cash forecast for the following business day is executed after this process finished, these instructions would be excluded. Could you please confirm that this is accepted?
  - Additionally, we understand that BATM settlement instructions (CR 640) should still be included in the cash forecast for the current business day after DvP cut-off. Please note that this change is expected to have high impact on T2S and it is expected to decrease the performance of the query and report. Could you please confirm that the inclusion of BATM settlement instructions is required?

- **To be considered:**
  - Should be implemented together with CR-0609
  - The current cash forecast functionality does not allow any functional enhancements without significant negative performance impact.
  - Potential performance impact on RTS closure.
  - All of the cash forecast CRs, which are deemed necessary by the CRG (CR-0540, CR-0556, CR-0629, CR-0630), have to be implemented in one package by means of a complete re-design of the cash forecast functionality in order to make use of synergies.
  - The impact of this re-design is to be considered very high.

No further functional, technical and risk related issues have been identified beyond the elements already described in the Change Request.

EUROSYSTEM ANALYSIS – GENERAL INFORMATION			
T2S Specific Components		Common Components	
<b>LCMM</b>			
	Instructions validation		
	Status management		
	Instruction matching		
	Instructions maintenance		
	Penalty Mechanism		
<b>Settlement</b>			
	Standardisation and preparation to settlement		
	Night-time Settlement		
	Daytime Recycling and optimisation		
	Daytime Validation, provisioning & booking		
	Auto-collateralisation		
<b>Liquidity Management</b>			
	Outbound Information Management		
	NCB Business Procedures		
	Liquidity Operations		
<b>T2S Interface</b> (as of June 2022 without Static Data Management, Communication for SDMG, Scheduler, Billing)			
	Communication		
	Outbound Processing		
	Inbound Processing		
<b>Static Data Management</b> (until Nov 2021)		<b>Common Reference Data Management</b> (from PROD R5.2 Nov 2021)	
	Party data management		Party data management
	Securities data management		Securities data management
	Cash account data management		Cash account data management
	Securities account data management		Securities account data management
	Rules and parameters data management		Rules and parameters data management
<b>Statistics and archive</b>		<b>Statistics and archive</b>	
	Statistical information (until Nov 2021)		Short term statistical information
	Legal archiving (until Nov 2021)		Legal archiving (from PROD R5.2)
			Data Warehouse (from PROD R5.2)
<b>Information</b> (until June 2022 containing reference data)		<b>CRDM business interface</b> (from PROD R6.0 June 2022)	
X	Report management		Report management
X	Query management		Query management
			Communication
			Outbound Processing
			Inbound Processing
<b>Operational Services</b>			
	Data Migration (T2S DMT)		Data Migration (CRDM DMT, from PROD R5.2)
	Scheduling (until Nov 2021)		Business Day Management (from PROD R5.2)
			Business Day Management business interface (from PROD R6.0)
	Billing (until June 2022)		Billing (from PROD R5.2)
			Billing business interface (from PROD R6.0)
	Operational Monitoring		Operational and Business Monitoring



Impact on major documentation		
Document	Chapter	Change
Impacted GFS chapter		
Impacted UDFS chapter	1.6.2.7.3 Liquidity monitoring process	Clarify the description of Current Settlement Day Cash Information and Following Settlement Day Report
	1.6.4.2.3 Report generation process	
Additional deliveries for Message Specification		
UHB		
Other documentations		
Links with other requests		
T2S-0629-SYS, T2S-0630-SYS		
OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2S SYSTEM AND ON THE PROJECT		
Summary of functional, development, infrastructure and migration impacts		
<p>This CR uses the functionalities implemented with CR-0609, for which T2S identifies as 'Failing' the matched instructions that can no longer settle at the end of their cut-off.</p> <p>The Cash Forecast Query U2A/A2A for the current settlement day should only include Settlement Instructions with ISD equal or before the current business day and fulfilling the following new condition:</p> <ul style="list-style-type: none"> <li>ISO Settlement Status either 'Pending' or 'Failing' ('Failing' only if the last failing date stored in the data base is before the current business day).</li> </ul> <p>Cash Forecast Query U2A/A2A for the following settlement day should only include Settlement Instructions with ISD equal the following business day and those with ISD before the following business day and ISO Settlement Status 'Failing' and flagged as 'Failing' with last failing business date equal to the current business.</p> <p>Current Settlement Day Cash Information Report (camt.052) should only include Settlement Instructions with ISD equal or before the current business day and fulfilling the following new condition:</p> <ul style="list-style-type: none"> <li>ISO Settlement Status either 'Pending' or 'Failing' ('Failing' only if the last failing date stored in the data base is before the current business day).</li> </ul> <p>Following Settlement Day Cash Forecast Report (camt.052) should only include Settlement Instructions with ISD equal the following business day and those with ISD before the following business day and ISO Settlement Status 'Failing' and flagged as 'Failing' with last failing date equal to the current business day.</p> <p>Main Cost drivers:</p> <ul style="list-style-type: none"> <li>Update of the calculation for the related cash forecast query and report.</li> </ul>		
Summary of project risk		
Security analysis		
No adverse effect has been detected during detailed assessment.		



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RE & PAYMENTS

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23 December 2019

## Cost assessment on Change Requests

<b>T2S-0556-SYS – Modification of cash forecast for the current and following business day after DVP cut-off</b>			
One-off	Assessment costs*		
	- Preliminary	2,000.00	Euro
	- Detailed	10,000.00	Euro
One-off	Development costs	186,846.89	Euro
Annual	Operational costs		
	- Maintenance costs	13,589.31	Euro
	- Running costs	0.00	Euro

\*The relevant assessment costs will be charged regardless of whether the CR is implemented (Cf. T2S Framework Agreement, Schedule 7, par. 5.2.3).