Service Description

related to developments of the KELER Service
Development Program (KSDP)

v 3.0

2 September 2021

VERSION CONTROL

Version	Date	Comment
1.0	15.07.2019	KSDP first phase content introduction
2.0	30.06.2020	Expanded and revised edition based on KSDP system specifications
3.0	06.11.2020	Version containing more specific details and additions, as suggested in the KSDP integration phase and based on questions from customers
4.0	02.09.2021	Version supplemented with modifications and additions, mainly in connection to the chapters about reports and settelement discipline regime

1. INTRODUCTION

In 2018, KELER started KELER Service Development Program (KSDP), a new, comprehensive program. KELER set the goal to create an IT infrastructure that is more modern and of higher quality than the current infrastructure, with domestic developers and suppliers, on new foundations, thus further strengthening its position among European central securities depositories.

KSDP consists of several project phases and will build functionalities and service elements gradually.

The first phase of the Program focuses on the renewal of the securities settlement system. As part of this, in addition to maintaining KELER's current basic account management systems, a new settlement platform will be introduced, an automated interface will be built between KELER and T2S, and services and mechanisms will be created that are required primarily by the provisions of the CSDR[1] and the related EU regulation (SDR[2]) governing settlement discipline.

Parallel with the new settlement platform, the basics of new master data management and fee calculation systems of KELER will also be established, based on which the statements and reports prepared for our Clients will be entirely renewed.

Following the publication of the first version of this document, KELER and its IT suppliers carried out a detailed professional specification in connection with the development of the mentioned systems.

Based on the level of readiness of the specifications, this document summarises all the services and their changes compared to the current operation, which will be available in the future, after the first phase of the Program is implemented, thus enabling our Clients to develop a more detailed definition and predictability of their service level requirements.

No changes are planned in the first phase of the Program related to the services not mentioned in this document.

Please note that this service description cannot be considered complete and final due to the specification tasks running in parallel in KELER and the uncertainty of the regulatory environment. Information concerning certain sub-areas - e.g. functions related to settlement discipline (SDR) - require further analysis.

Nevertheless, during the presentation of the individual service and functional elements, we strived to provide our Clients with the most comprehensive and, if possible, complete information possible.

Further editions of the document are continuously updated with version tracking, with more detailed information related to each feature available at a later stage, and possible changes.

We trust that the Program contributes to the more efficient, secure and competitive operation of the Hungarian capital market in line with European Union standards and our Clients will be satisfied with the developments implemented.

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[1] Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012 („CSDR").
[2] Commission Delegated Regulation (EU) 2018/1229 of 25 May 2018 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on settlement discipline.

2. MASTER DATA

2.1.   Client data

The new systems launched in the KSDP do not change client (partner) level data registration, and ensure the continuity of the services provided based on the existing contracts. No new client ID will be introduced for settlement system participants.

The rules for BIC-based identification of participant accounts and default account assignments are contained in each subsection.

2.2.   Accounts

2.2.1. Account structure

The current securities account structure does not change, i.e. our Clients can continue using the XXXXYYYYYY (4-character main account and 6-character subaccount) format. The currently existing dedicated securities subaccounts will remain in use also. The account numbers must be indicated in 10 characters on each settlement instruction. (E.g., 1234M00000)

In accordance with the provisions of the Capital Markets Act and international law, KELER distinguishes between the participants' own and the participants' clients' assets, and manages the securities and funds on separate accounts and maintains separate accounts for this purpose.

It will be possible in the future also to keep securities provided as collateral on separated accounts, but the blocked balance type also can be used for the same purpose.

2.2.2. Securities accounts and balances

With regard to securities accounts, own and client type will continue to be set at master data level in the KELER system, similarly to current practice.

In the interest of legal compliance, KELER will request additional data related to the management of client securities subaccounts, and our Clients will need to provide information on subaccount type and use, indicating whether the subaccount concerned is the individual account or the omnibus account of the client of the KELER participant.

When opening new subaccounts, this information must be included in the account opening request, with the details of the data request related to the classification of existing accounts provided later.

KELER clients with KID will continue to be able to request the opening, amendment and cancellation of dedicated KELER subaccounts, similarly to the current practice.

No change is expected related to the currently used balance types (blocked + available balance types are differentiated).

2.2.3. Cash accounts and balances

Within the framework of the program, no changes are expected in the current cash account numbers, account and balance types, given that KELER will maintain its current account management systems.

2.2.4. Linking securities and cash accounts in KELER

In the case of settlement instructions involving cash flows, one or more cash accounts may be assigned to the securities accounts - or to the securities accounts with the same segregation (own / client) per main account, per transaction type and currency. In each case, a default relationship can be selected for each transaction type and currency. (See Chapter 4 for a description of transaction types.)

Clients with several main accounts can continue using the same cash accounts, i.e. one MNB or KELER cash account can be linked to several main accounts (securities accounts).
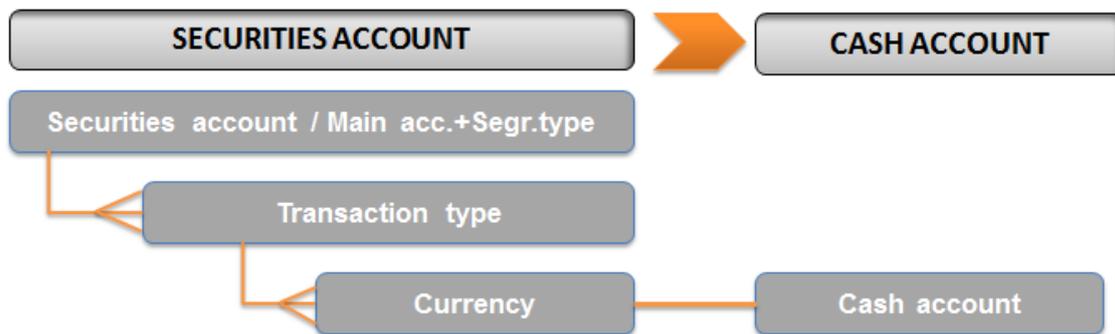
Figure 1 - Linking securities and cash accounts

Our clients may have the choice of linking securities accounts to cash accounts by the following transaction types and currency:

- Securities Purchase and Sale - DVP (TRAD)
- Daily additional issuance and cancellation of investment units with DVP settlement (SUBS, REDM)
- Primary market transaction (KELR/PRMT)
- BSE Fix transaction (KELR/BSEF)
- BSE Auction transaction (KELR / BSEA)
- Penalty settlement (Settlement transaction with no movement of securities - PAIR)
- REPO (REPU, RVPO)

It will still be possible for a KELER participant to acquire the right of disposal over the cash accounts of another participant and thus the financial settlement of the transactions of the authorised participant will take place through the cash account of the authorised client. (Including settlement through an account held at the National Bank of Hungary.)

If the number of the cash account is provided in the settlement instructions initiated by the Client to be executed in KELER, the system will try to settle on the cash account indicated in the instruction instead of the account set as the default. (Provided that the client has the right of disposal over the indicated account and it is an active account, otherwise the instruction will be rejected.)

Prior to the new system going live, KELER will set up the default account numbers based on the current cash account user habits of our Clients (see below), but our Clients will have the opportunity to amend them.

- for credit institutions for HUF settlement: MNB account number
- for credit institutions for foreign currency settlement: KELER account number
- for Clients other than credit institutions for settlements in all currencies: KELER account number

- Cash account assignments for a specific transaction type by inheriting the settings from production (e.g. Primary transaction).

Example of securities account - cash account linking settings:

Securities account data					Cash account data			
Main account	Segregation	Securities account	Currency	Transaction type	Place of cash account management	BIC of the cash account managing Bank	KELER cash account	External cash account
1111	S		HUF	ALL	MNB	MANEHUHBXXX	-	19017004-00000111
1111	M		HUF	ALL	KELER	KELRHUHBXXX	14400018-00000111	-
1111		1111-000001	HUF	ALL	KELER	KELRHUHBXXX	14400018-00000112	-
1111	S		EUR	ALL	KELER	KELRHUHBXXX	1111-EUR1	-
1111	S		USD	ALL	KELER	KELRHUHBXXX	1111-USD1	-
			...					

2.2.5. Account structure in T2S

In 2017 KELER joined the T2S system with securities issued in Hungary but without the national currency, following the so-called partial entry model. Based on a previous decision of the Central Bank of Hungary, the Hungarian Forint (HUF) is not a part of T2S. As a consequence, KELER outsources to the platform only their settlement activity of transactions completed in the T2S currency[3] (except where the transaction relates to a T2S dedicated securities account), whilst the settlement of HUF based (or FOP type) domestic transactions is continued to be performed in their own application. Due to the specificity of securities account structure in T2S, securities settlement may take place in both T2S and KELER.

Securities side

By default, KELER uses an omnibus account in the T2S system to record (in a consolidated manner) the securities positions of clients registering with KELER.

Securities transactions that can be settled on the T2S omnibus securities account include DVP type instructions against the EUR, including

- Securities sale and purchase
- Primary transactions
- BÉT fixed transactions
- BÉT auction transactions
- DVP launched from a Multinet unsecured process
- Repos

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[3] At the moment, KELER provides a settlement service via T2S only in the EUR currency.
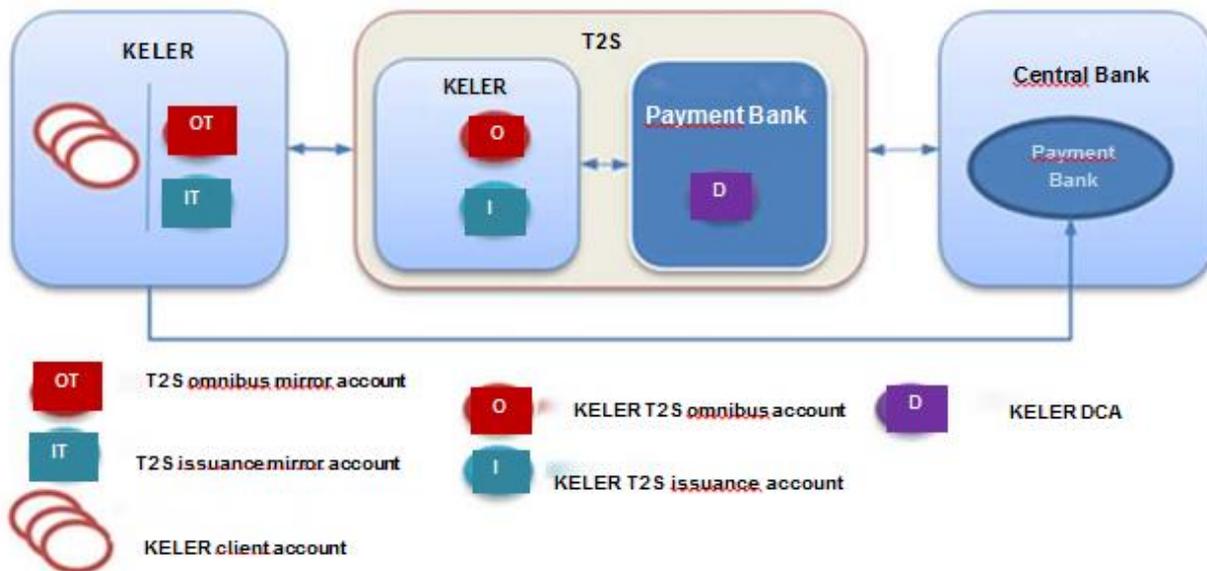
Figure 2 KELER's high level account structure in the T2S environment

T2S currency side

Cash side settlement within T2S is performed on so-called DCAs (Dedicated Cash Account) with respect to all T2S currencies. Regarding transactions completed in T2S currencies (currently in EUR), in base cases KELER serves its Clients via its omnibus T2S dedicated cash account in T2S.

On the securities account side	On the cash account side
T2S securities account	T2S cash account (DCA)
KELER omnibus	KELER omnibus

Figure 3 – Base model of the T2S account structure

By default, the transactions of our Clients are completed via the KELER omnibus account on both cash and securities sides.

The difference between collateral review in the individual models

Prior to forwarding settlement instructions to T2S, KELER performs a collateral review on both the securities and /cash sides. If the collateral review is successful, the securities, or/cash positions are blocked. Subject to the results of the collateral review and the timeliness of blocking, KELER forwards to T2S only collaterised transactions in CDS Released status.

2.2.6. Account Operator model – delegation of disposition right over the account

After the new system goes live, KELER enables the application of the right of disposal over the securities accounts on SWIFT using identification via sender BIC, on the basis of which the account operator can also access the account of the original account holder (on main account level), i.e. can send instructions in their

name and on their behalf, or receive account statements, status messages, and confirmations. Our participants who only have KID can dispose over the account as before, using the transferred KID rights.

Delegation of disposition right over the account is realised at the level of securities main account, i.e. the account operator gets right of disposition over all subaccounts belonging to the main account concerned, without any exception. The condition for this is the setting of the preliminary parameters in KELER's systems on the basis of the account holder's provision.

2.3. Securities

2.3.1. Securities master data related new validation rules

We do not plan any changes in the analytical records of securities and the issuance process in the first phase of the Program, however, in accordance with the CSDR Regulation, more new descriptive security attributes will be introduced than available at present, with which KELER standardises the characteristics of both domestic and foreign securities.

In line with international practice, in the future KELER will consider the nominal value of debt securities and the number of units of shares and investment units as basic transaction data. The system will reject instructions that do not comply with this rule (with status code REJT//DQUA).

Minimum settlement quantity will be introduced as instrument master data in settlements; this determines the lowest number of units that can be settled for shares and investment units and the lowest nominal value of settlement for bonds. In the case of domestic securities, this value equals the nominal value. If a smaller nominal value or number of units is specified in the instruction, it is rejected (with status code REJT//MINO).

The settlement multiplier (tick) above the minimum settlement quantity will continue to be checked. The instruction can state the whole number multiple of the nominal value for bonds and the whole number multiple of number of units for shares and investment units. If this rule is not met, the instruction is rejected (REJT//MUNO status code).

Settlement instruction for instruments with unknown ISIN codes will be rejected also (REJT//DSEC status code)[4].

Fractional securities settlement and registration will not be introduced.

2.3.2. Securities issued in Hungary eligible for T2S settlement

KELER develops its systems to be able to make available in T2S also all the securities with Hungarian ISIN codes (HU) that are fungible in terms of settlement and dematerialized in form.

In accordance with the ECB's recommendation, KELER is obliged to open any ISIN code in T2S in the event of a client request, if it complies with the features described above or is settled in T2S currency.

The following securities are available in T2S:

- dematerialized securities traded on the BSE
  - o Premium share category
  - o Government securities
  - o Mortgage bonds
- government securities and mortgage bonds issued privately in T2S currency

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[4] Cross-border instructions, where the place of settlement is not KELER, are exceptions to this rule. In these instructions KELER does not reject trades with unknown ISIN code.

Due to its central securities depository role, KELER acts as the so-called Securities Maintenance Entity (SME)[5] in T2S with respect to Hungarian securities.

As in the current practice, KELER continues to settle instructions for foreign securities outside T2S in the form of cross-border settlements (except for transactions between two KELER clients to be settled within KELER in the form of OTC, but they are also executed outside T2S.)

3. GENERAL CHARACTERISTICS OF SECURITIES SETTLEMENT

KELER will introduce a new settlement system while maintaining its current securities and cash account management systems. This new system accepts and validates the form and content of all settlement instructions and blocking instructions, as well as status change instructions (messages) sent by participants, market infrastructures and other KELER partner systems, matches instructions, performs real-time status management and the routing and monitoring of instructions to T2S. The new settlement system is responsible for, among other things, communication with the cash settlement systems and KELER's collateral management system.

Instructions are posted to the accounts by the remaining account management and registration systems on the instructions of the settlement system.

In the case of a T2S currency settlement instruction, KELER does not settle in its own securities settlement system, but settles through the T2S platform.

Although the vast majority of settlements are still carried out through KELER's own settlement system, the rules for managing instructions have been largely developed taking into account the international T2S standards and the relevant legal regulations.

3.1. Communication channels related to settlement

Due to the introduction of the new system, KELER expects that settlement instructions should be submitted in a format conforming to international (ISO) standards, in line with T2S and CSDR requirements. The message communication formats to be used in the future and the set of rules to be followed will represent a change compared to the current practice.

For the purposes of submitting settlement instructions to KELER, our account owner clients (participants) may use the following communication channels:

- On the SWIFT channel, based on the ISO15022 standard: MT540, MT541, MT542, MT543

- On the KID channel:

    o Based on the ISO20022 standard: sese.023, and (with regard to blocking transactions): semt.013 (The XML based messages can be imported and exported by the participants). In the case of settlement instructions, txt based communication will cease to exist.

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[5] SME: The entity responsible for the maintenance of securities master data in T2S. The issuing central securities depository automatically becomes SME related to the securities it issued, and if a central securities depository issuing a specific ISIN code is not in T2S, a central securities depository in T2S will have to assume the SME role to ensure that the ISIN code concerned is available in T2S.

o Via manual recording on the KID interface (based on which KID will generate the sese.023 message)

- In exceptional cases, instructions may also be issued outside the system, using a form that will be entered manually by KELER's employees in the settlement system's interface.

The formats of related ISO messages, including their detailed rules are published in the interface specification on the SWIFT MyStandards[6] portal and are accessible to users registering to the KELER Community.

The following table summarises the scope and content of outbound and incoming messages relating to securities settlement.

ISO Message code		Input / output	Business report
sese.023.001.09	xml	I	A message designed to initiate the following instructions by the client: OWNI, TRAD(FOP/DVP/PFOD), KELR/PRMT, REPU, RVPO transaction types
sese.024.001.10	xml	O	Status notification message of securities instructions
sese.025.001.09	xml	O	Settlement confirmation message of securities instructions
sese.020.001.05	xml	I	Deletion of securities instructions
sese.027.001.05	xml	O	Deletion status notification of securities instructions
sese.030.001.08	xml	I	Status-adjustment of securities instructions
sese.031.001.08	xml	O	Status adjustment status message of securities instructions
sese.028.001.08	xml	O	Notification about pairless transactions (allegement)
sese.029.001.04	xml	O	Notification about the deletion of a pairless transaction (in case of successful pairing)
semt.020.001.06	xml	O	Withdrawal of a pairless transaction notification (due to the deletion of instruction)
semt.013.001.04	xml	I	Securities blocking/release instructions
semt.014.001.06	xml	O	Status message of securities blocking / release
semt.015.001.07	xml	O	Accounting notification of securities blocking / release
admi.007.001.01	xml	O	Technical notification in case of an erroneous message or post cut-off acceptance
MT540/MT542	MT	I	TRAD (FOP) instructions
MT542	MT	I	OWNI instructions
MT541/MT543	MT	I	TRAD (DVP and PFOD), KELR/PRMT, REPU, RVPO instructions
MT530	MT	I	Status adjustment of securities instructions
MT540/541/542/543	MT	I	Adjustment of hold-release status (PREA/NEWM), and deletion (CANC)
MT544/545/546/547	MT	O	Settlement confirmations
MT548	MT	O	Settlement status-notification
MT578	MT	O	Notification about a pairless transaction, its deletion or withdrawal
MT598/SMT548	MT	I	Technical notification in the case of an erroneous message or post cut-off acceptance

The participant may, at his/her discretion, use several communication channels simultaneously, e.g. certain types of the instructions may be submitted to KELER on SWIFT, while others on KID.

However, regarding status messages, notifications and the so-called unsolicited messages (excluding report-related messages) to be sent by KELER in response to instructions affecting the participant's account, on main

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[6] https://www.swift.com/mystandards

account level our clients are using the communication channel designated to be the default channel. Regarding settlement instructions, the following unsolicited messages may be sent to our clients:

- a notification about pairless transactions (allegement), their deletion, withdrawal
- in the event of pre-paired settlement instructions that are not initiated by the client, the status notification messages and settlement confirmation messages sent to the affected client (Multinet settlement, FISZER, BÉT fixed and auction transactions, WARP settlement instructions
- in the case of securities accounts with automated credit transfer setting: the status messages and settlement notifications of FOP transactions.

The default communication channel may be one of the following:

- KID (subject to the participant's individual subscription: fat client or e-KID)
- SWIFT

Regarding the status setting of instructions, the principle is that KELER sends the status to the participant via the communication channel on which the instruction was submitted by the participant. (E.g. In response to a sese.023 instruction received on KID, KELER will send a sese.024 message to the participant's KID or if the participant sends a MT54x message on SWIFT, the response will also be received on the SWIFT channel, in an MT548 message format).

If the instruction concerning the participant's account is submitted by a third party (e.g. KELER KSZF, BÉT, account operator), or KELER itself – that is the instruction does not come directly from the participant – the status message to be sent in response to the participant will be sent using the default communication channel and in the default format selected by the client. (Irrespective of the channel used by the party sending in the instruction).

Regarding instructions submitted by a third party or KELER, KELER sends the notification to both the submitting party (e.g. KELER KSZF, BÉT) and the participant via the default channel selected.

If the instruction is coming not directly from the participant, in the status message to be sent to the participant KELER will return 'NONREF', instead of the submitting party's reference.

In a similar manner, allegement notifications to be sent to the participant in connection with pairless instructions against the participant's account will also be forwarded via the default communication channel.

3.2.   Access to T2S services

Our Clients can continue to use T2S services in indirect mode (as ICP, Indirectly Connected Party), in the communication channels provided by KELER and with the use of the message formats determined by KELER. Accordingly, all settlement instructions must be sent to KELER, which KELER forwards to the T2S platform for settlement according to the routing rules and informs the participants about the exact status of the settlement, supplemented by the statuses originating therefrom.

In the first phase of the Program, direct access to T2S, and thus the use of T2S securities settlement services in direct mode (as DCP, Directly Connected Party) and opening a segregated account in T2Swill not be possible.

3.3.   Settlement instruction lifecycle

The life cycle of settlement instructions in KELER and T2S is illustrated in the figure below.
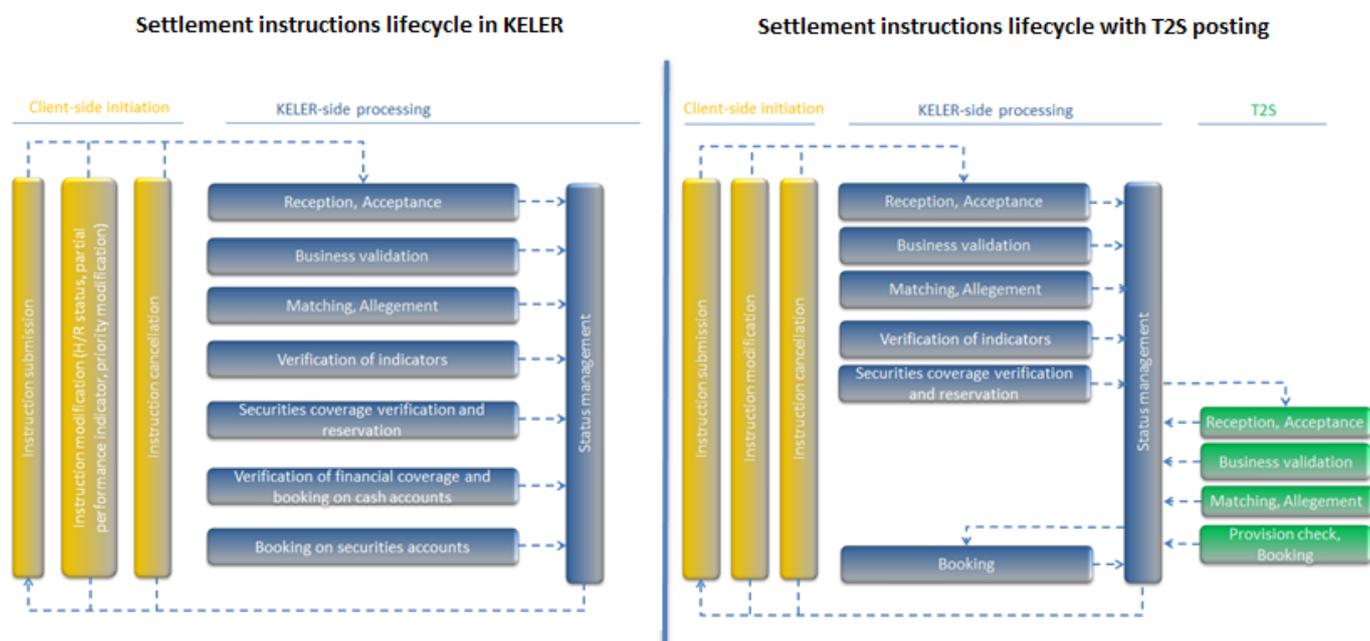
Figure 4. – Settlement instructions lifecycle in KELER and in T2S

3.4.   Receipt and control of instructions

The settlement instructions received by KELER will be controlled and validated in terms of format and business content.

The controls performed by KELER are generally designed according to the individual transaction types (transaction codes), in accordance with the characteristics of the given transaction or business process. The validation rules examine, on the one hand, the interrelationships of the fields and blocks within the message, and, on the other hand, the validity and enforceability of the data provided in the instruction with business, legal and technical aspects such as KELER master data (e.g.: calendar, invoice, partner, instrument data, etc.) based on the result of a comparison.

As a result of the validation, an instruction may be accepted or rejected, the fact and reason for which will be notified to the client or clients concerned in the form of a status message.

3.5.   Status messages relating to instructions

KELER sends status advices related to settlement instructions in real time via the communication channel (KID or SWIFT) and in the format (sese.024 or MT548) used by the client, as soon as a processing event results in a status change that is also relevant to the client.

In the case of instructions received outside the operating hours of the system, during the so-called maintenance period, KELER sends a technical acknowledgement message (admi.007 or MT598/SMT548) to confirm receipt of the message following a   technical validation, but will only perform the actual business validation and processing when the next business day is started, subsuequent to a status message is sent only then.

In reply to messages with formal errors received within operating hours, the system also sends admi.007 or MT598/SMT548 technical response messages for confirmation.

In accordance with legal requirements, the status messages sent by KELER convey significantly more information to our clients by using several status types and reason codes, thus providing an opportunity to increase the settlement discipline and efficiency.

The following three status types can appear together in a status message:

- Processing Status: Expresses the status of the instruction processing when a new message is received or cancelled.

- Matching Status: Expresses the matching status of the instruction. (This can be matched or unmatched.)

- Settlement Status: It primarily indicates a reason that prevents settlement or the information that reflects the hold-release state.

The following table shows some typical cases of status combinations to be sent by the new system, taking into account the ISO20022 standard.

(The list is not exhaustive and is for illustrative purposes only. Possible status codes on the MyStandards portal are included in the message description corresponding to the given standard!)

Event	ProcessingStatus	MatchingStatus	SettlementStatus
Successful acceptance and matching on current day before the ISD daily cut-off, or in the case of a futures transaction, in a released status	[AckdAccptd / NORE]	[Mtchd/-]	Pdg/FUTU
Successful acceptance and matching after the ISD daily cut-off, in a released status	[AckdAccptd / NORE]	[Mtchd/-]	Flng/CYCL
Successful acceptance and matching, with hold indicator	[AckdAccptd / NORE]	[Mtchd/-]	[Pdg|Flng]/[PREA|PRCY|BOTH]
The instruction validation is successful, no match can be found, the submitted instruction has a released status.	[AckdAccptd / NORE]	Umtchd/[CMIS|DDAT|DSEC]	[Pdg/FUTU | Flng/CYCL]
The instruction validation is successful, no match can be found, the submitted instruction has a hold status.	[AckdAccptd / NORE]	Umtchd/[CMIS|DDAT|DSEC]	[Pdg|Flng]/PREA
In case of a linked FOP, successful acceptance and matching in incomplete pool: one of the elements of the linked FOP has not yet been received.	[AckdAccptd / NORE]	[Mtchd/-]	[Pdg|Flng]/INBC
In case of a linked FOP, successful acceptance and matching in a pending pool: all elements of the pool were received, but some instruction remained pending for some reason (NMAT, PREA, …).	[AckdAccptd / NORE]	[Mtchd/-]	[Pdg|Flng]/LINK
Upon acceptance of a linked FOP instruction, the matching failed and one of the pool elements has not yet been received.	[AckdAccptd / NORE]	Umtchd/[CMIS|DDAT|DSEC]	[Pdg|Flng]/INBC
Upon acceptance of a linked FOP instruction, all elements of the pool were received, the current instruction is unmatched, and one of the elements in the pool is still pending for some reason.	[AckdAccptd / NORE]	Umtchd/[CMIS|DDAT|DSEC]	[Pdg|Flng]/LINK

During validation, an instruction fails on a validation rule and is therefore rejected.	Rjctd / […]	-	-
The transaction is unsecured by securities	-	-	[Pdg|Flng]/[LACK|CLAC]
The transaction is not covered by cash	-	-	[Pdg|Flng]/[MONY|CMON]
The instruction is suspended by the client.	-	-	[Pdg|Flng]/[PREA|PRCY|BOTH]
An unmatched instruction is suspended by the client.	-	Umtchd/[CMIS|DDAT|DSEC]	[Pdg|Flng]/PREA
In the case of a linked FOP, another linked instruction has been cancelled from the pool due to insufficient cover or the current instruction is suspended by the client.	-	-	[Pdg|Flng]/INBC
In the case of a linked FOP, processing cannot continue due to an error in any of the instructions in the pool.	-	-	[Pdg|Flng]/LINK
Cancellation of a matched transaction, waiting for the other party's cancellation instruction	PdgCxl/CONF	-	[Pdg|Flng]/[…]
A cancellation request has been received for the matched transaction from the partner.	CxlReqd/-	-	[Pdg|Flng]/[…]
Successful cancellation	Canc/[CANI|CORP|BYIY|OTHR]	-	-
A previously accepted instruction found to be invalid due to a technical error or subsequent validation is cancelled by the system.	Canc/CANS	-	-
At the end of the recycling period, the system cancels the instruction.	Canc/CXLR	-	-
In the case of an Auto-FOP or pre-matched transaction, the confirmation message sent to the other party upon unilateral cancellation by the submitter.	Canc/OTHR	-	-
The instruction arrives during the maintenance period. In this case, KELER sends an admi.007 message rather than a sese.024 message.	-	-	-
Successful accounting. In this case, KELER will send a confirmation (sese.025)	-	-	-

The status messages also contain, on a permanent basis, additional information on the standby status of instructions (hold indicator) and partial settlement (partial settlement indicator), as well as a specific set of reference numbers. (See Section 3.11)

Another new element is the timestamps for the acceptance and matching of instructions, which are of key importance both for the finality of the settlement (finality rules) and for the application of the penalties prescribed by the CSDR.

As a general rule, status messages are received by the client submitting the instruction, or if the submitter and the participant(s) involved in the instruction are not the same, the relevant participant(s) will also be notified. This is possible in the case of pre-matched instructions (non-clearing BSE instructions or transactions sent by KELER CCP) and instructions generated by KELER (e.g.: WARP, manual recording, or penalties).

In the event of sending status messages, we also take the default communication channel (KID/SWIFT) specified by the clients into account. If our clients send the specific instruction to KELER's system via a channel that is different from the default channel, the status notification messages will be returned via both channels and in both formats. In the event of disposal over the account (SWIFT), the status messages are sent to all "Sender BIC" addresses assigned to the main account. (These status sending rules, however, do not apply to maintenance instructions.)

If a transaction is sent to T2S, in addition to the KELER standard status messages, our clients will also receive the statuses sent by T2S, which also include the T2S reference (MITI).

After the cut-off time of the transactions that failed on the intended settlement date, KELER will send a new, failed (Flng/PENF) status to the affected clients, repeating the previously given Settlement Status code, which will be relevant for the calculation of penalties. However, the status of the transaction type may still change between the cut-off time of the given transaction and the closing of the business day, given that during the technical processing period between the end of operating time and the closing, status change instructions (hold/release change and cancellation) are executed, so it is possible that the status displayed on the statement containing end-of-day pending transactions differs from the status received at the end of the cut-off time of the settlement.

The handling of blocking instructions, unlike settlement instructions, is subject to different technical and business processing rules. The statuses of the blocks are available on the KID channel, in semt.014 messages. ISO15022 MT messages will not be available for blockings in the first phase of the Program.

3.6.   Matching

Matching is the process by which the system compares the data in the settlement instructions provided by the seller and buyer of the securities in order to verify that the parties agree on the settlement terms of the transaction.

Based on the statutory provisions, the matching of settlement instructions is mandatory. Exceptions are instructions sent by the trading venue (BSE) and the central counterparty (KELER CCP), as well as FOP transactions (intra-BP transfers) under the same main account, which may be submitted by the relevant parties **pre-matched** to the settlement system of the central securities depository. In these cases, KELER will automatically settle on the seller's and buyer's securities accounts specified in the instruction.

In the future, KELER performs instruction matching for domestic settlements in line with T2S rules.

KELER ensures real-time matching continuously during the business day.

The system applies mandatory, additional and optional criteria during matching.

The following data are **mandatory matching criteria** to be instructed by both counterparties:

- direction of securities movement *(opposite direction is expected)*
- payment type
- intended settlement date
- trade date
- ISIN code
- securities quantity to be settled
- ID of seller and buyer KELER participants (Party 1) (in BIC11 format)

In addition, for settlement instructions to be settled against payment (DVP and PFOD):

- currency
- settlement amount taking into account tolerance limits
- direction of cash flow *(opposite direction is expected)*

For repo transactions, in addition to the above, additional matching fields are required:

- Repo maturity date
- Repurchase amount taking into account tolerance limits

The **additional matching** fields will be introduced, which are optional, but if filled in by one of the parties, they become a matching element. The additional matching fields are as follows:

- Opt-out indicator
- Ex-Cum indicator
- Settlement partner's account number
- Total linked instructions (in case of linked FOP)
- Linkage type (in case of linked FOP)

The **optional matching fields** become matching elements only if both counterparties populate them:

- common trade reference
- BIC11 code of KELER's participating client. *(The system always matches Party 2-level settlement parties, regardless of whether the specified party chain has 2 or 3 elements.)*

It is possible to state additional data in the instruction (e.g. LEI code, or partial settlement indicator); however, KELER will not take such data into account for matching purposes.

The matching process can result in the following conditions:

- Matched, i.e. the system found a counterparty instruction, the data of which meets the matching requirements (the matching fields are the same, and the direction fields are different)
- Unmatched, and the system has not found a counterparty instruction, with which a potential match can be made. The system returns a CMIS reason code in the status message.
- Unmatched, but the system has found a counterparty instruction that matches except for one piece of data and can therefore form a potential match with the submitted instruction. The system sends a DDAT, DSEC, or DMON reason code to the affected clients.

The key changes affecting the matching of instructions are summarised below.

3.6.1. Automatic matching and crediting of FOP transfers

Due to the fact that the matching of transfers and settlement instructions to be executed between the different main accounts will become mandatory on the basis of the SDR regulations, thus the automatic transfer crediting function ('dump') currently provided by KELER will also be transformed. In the future, KELER will provide a passive-matching mechanism for its clients, during which KELER actually generates the settlement instruction in the name and instead of the receiving participant, if the settlement partner initiates a free of payment transfer to the relevant receiving account. The instructions of the delivering and receiving participants thus go through an actual matching process. The generation of the recipient instruction is still subject to the currently used sub-account level indicator, which can be set by the participant in KID when opening the sub-account (or later).

For detailed rules on automatic transfer generation, see under Chapter 4.1.2.

3.6.2. Counterparty identification

Under the new rules, the identification of settlement partners will be based on the BIC code, i.e. matching will be based on the 11-character long matching BIC codes, in both KELER and T2S. The matching BIC is obligatory in case of marking the KELER participants in the Delivering and Receiving Party 1 blocks, i.e. a BIC will be obligatory for each securities main account number.

The BIC code can be a connected BIC, allowing the submission of a SWIFT instruction, or a non-connected BIC, from which no SWIFT instruction can be sent. Clients with non-connected BIC can submit instructions in the KID system.

KELER, unless notified by the participant, automatically assigns a technical BIC code (KELEHUH1XXX) to the main accounts of our clients who do not have a BIC code but participate in the settlement system[7], which can be used in the instructions to identify the counterparty. (Nevertheless, it is recommended for all KELER participants to register a unique BIC, which can be initiated at SWIFT in order to avoid cross-matching.)

Given that the technical BIC code alone is not sufficient to clearly identify the settlement partner, in such cases, it is recommended to enter the technical BIC code and the counterparty securities account number jointly in the instruction.

However, for some transactions (position settlement, credit transfer generation) it will also be mandatory to enter the partner's account number.

If a participant has several securities main accounts but only one BIC, we recommend that a unique 11-length BIC is applied for each main account in the interest of clear identification.

KELER as the place of settlement is also identified with BIC11. Accordingly, the BIC code KELRHUHBXXX must be used in the instructions to identify the place of settlement (PSET or Depository).

As a general rule regarding the BIC codes (partners and depository) that can be entered in the instruction, if an 8-character long BIC code is entered, the instruction will be rejected.

3.6.3. Counterparty account number

The use of the counterparty securities account number will also change. The account number field, which is currently only mandatory for FOP transactions, will become an supplementarymatching field, given that the counterparty will be identified primarily on the basis of the matching BIC code.

At the same time, if one of the counterparties populates the field, the system will use it as mandatory matching criterion, as the account number of the instructing party is always stated in the instruction.

The indication of the counterparty account number in the instructions is highly recommended, as based on this information the Client of KELER that is involved in the settlement can be clearly identified. Accordingly, lack of account number may result in cross-matching.

In case of cross-matching, transaction settlement is performed with a counterparty / on an account that is not the intention of the counterparties. Partner-level cross-matching may occur if the 11-character long BIC code of the counterparty is assigned to more than one main account number (e.g.: in the case of clients without their own BIC codes, to whom KELER assigns the KELEHUH1XXX technical BIC).

Account level cross-matching may result from the lack of account number.

Instructions involved in cross-matching cannot be identified at the level of KELER; Participants are in charge of identifying and sorting out such cases.

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[7] primarily: issuers, fund managers, local governments, state organisations.

In the case of a transfer within one main account (intra-BP transfer), it is mandatory to state the securities account number of the other side, or the instruction will be rejected.

It will also be mandatory to enter the counterparty's securities account number if the place of settlement of the transaction is T2S and the settlement value date is a Hungarian public holiday, as in this case, the system only recognises the place of settlement clearly when receiving the first instruction. Failure to enter the account number may result in rejection of the instruction, considering that, on Hungarian public holidays, only the T2S business calendar will be open, while the settlement calendar of KELER will be closed.

We would like to draw the attention of our Clients to the fact that, in case of domestic settlements, only the 4 + 6-character long securities account number of the partner kept at KELER may be entered for the purpose of Party 1 level identification. As per the current practice, the instruction is rejected if only the main account number (4 characters) is stated.

If only the matching BIC is stated (no counterparty account number is instructed), allegement message will be sent, however, Clients are reminded that if several main account numbers are linked to the same BIC, due to the lack of counterparty account number, the allegement message may not be sent to the proper settlement counterparty, but to the holder of the main account that is registered by KELER.

If the partner is provided with a KELER technical BIC code without an account number, no allegement will be sent.

3.6.4. Intended settlement date

The scheduled settlement date can be indicated in the instructions with a value date in advance and retroactively, but it cannot be earlier or later than 20 settlement days before or after the date of submission of the instruction. In the case of instructions to be settled in T2S, it will also be possible to specify a Hungarian public holiday, because on these days KELER provides a settlement service according to the business calendar for the involved T2S transactions.

3.6.5. Trade date

It is a change compared to the current practice that trade date will be a mandatory field and matching criterion at the same time.

Trade date can be the date of submitting the instruction or an earlier date, and it is permitted to instruct a trade date that is a KELER non-settlement day.

3.6.6. Securities quantity to be settled

Instead of the current record based solely on the number (unit) of shares, the quantity of securities to be settled should be indicated in the settlement instructions as follows:

- in the case of equity securities, the number of shares (units),
- in the case of debt securities, the nominal value is expected.

If a quantity other than the above is indicated, the instruction will be rejected.

3.6.7. Opt-out, Ex/Cum indicators

The Opt-out and Ex/Cum indicators, which will be relevant in the future as part of the market claim and transformation process, will be introduced. These attributes will be taken into account as additional matching criteria during matching, i.e. if either counterparty populates them, they become mandatory matching elements.

3.6.8. Common Trade Reference

As an optional matching element, it will be possible to state in the settlement instruction the transaction reference agreed by counterparties bilaterally. If both counterparties populate the field, references have to be identical for successful matching.

3.6.9. Settlement tolerance limit

Tolerance limit is the maximum difference of the settlement amounts of two related settlement instructions where matching is possible.

Tolerance limits will be used in bands in the future: for settlement amounts up to EUR 100 000 it will be EUR 2, for settlement amounts exceeding EUR 100 000 it will be EUR 25, or equivalent currency amounts for instructions to be settled in both KELER and T2S.

Matching is performed by the system if the difference of settlement amounts is less than the tolerance limit. The system checks the band to be applied based on the settlement amount instructed by the buyer, based on the limit, but if there is a difference in settlement amounts for matched instructions, settlement is based on the amount instructed by the seller. If the system receives several instructions with similar parameters, it matches the two instructions for which the difference of the settlement amount is the least. If the amount is the same for several instructions, the principle of LIFO is applied (the latest submitted from among the possible matches).

For transactions settled within the tolerance limit, the buyer receives in the status messages, confirmation and end-of-day statement after matching the counter value stated by the seller.

KELER plans to calculate (revalue) the bands and tolerance limits valid in each currency once a year, on the first business day of each calendar year based on the current ECB exchange rates. Deviation from this may occur in case of extraordinary volatility or major exchange rate shift on the market.

In the event of a change during the settlement cycle, the bands and tolerance limits in effect on the day of matching will apply, regardless of whether the transaction is settled later.

3.6.10. Potential matching

If the incoming instruction cannot be matched, in line with the matching criteria KELER checks which other instruction already in the system could be potentially matched with the incoming instruction.

If only one of the attributes checked does not match, the system sends advice to the counterparties submitting the instructions on unsuccessfully matching, including the reason of mismatch in the status message.

Upon the launch of the system, status messages will be sent if the following fields do not match. In these cases the following status codes will be applied:

- instrument (ISIN): NMAT//DSEC

- intended settlement date: NMAT//DDAT

- settlement amount (only for payment instructions and only in case of deviation above the tolerance limit): NMAT//DMON

The KELER system sends NMAT//CMIS status message in the following cases:

- from the above mentioned attributes more than one do not match in the given instruction

- in addition to the above mentioned attributes other elements subject to matching of the instructions do not match

In the case of several potentially matchable instructions (if only the settlement amount and/or the repurchase amount deviate within the tolerance limit), the algorithm first takes into account the instruction with the smallest deviation between the settlement amounts. If it is not possible to decide on the basis of this, which instruction can be considered a potential match, then in the case of repo instructions, it tries to decide on the basis of the smallest deviation between the repurchase amounts. In other cases, or where the decision is not successful, the algorithm uses the LIFO principle to select the most recently received potential match.

If the opposite side instruction match, with all data matching, is among the instructions received later, the system performs matching successfully and ignores the earlier submitted instruction that was considered a possible match.

If two instructions have already been potentially matched and marked with the appropriate reason (DDAT, DSEC, DMON) code, there are four ways to change this status of the instruction:

- The potential match is cancelled. The instruction remains unmatched, but receives a CMIS reason code.

- The potential match receives its real match. The client receives a CMIS reason in the status message, indicating that their instruction is still unmatched and no longer has a potential match. The previous potential match progresses in the processing process with a matched status.

- It becomes matched, as its match is received. The client is notified in a status message that the new status of their instruction is matched. (And the previously sent allegement message will also be revoked.)

- The instruction is cancelled (by the client or the system). The client is also notified of this in the form of a status message.

3.7. Allegement function

The system sends an allegement notification (in an MT578 NEWM or sese.028 message according to the selected default communication channel) about the received unmatched settlement instruction, validated in terms of format and business content, to the settlement partner specified in the instruction (if it differs from the instructing party or the no credit transfer generation is set for the recipient's account). The allegement message informs the participant about the details of the original instruction.

The purpose of the allegement is to draw the notified client's attention to the missing instruction and to reduce the likelihood of any late matching or failure. The condition for sending the allegement is that the party submitting the instruction has clearly marked KELER's client with a BIC11 code, whose main securities account has its own matching BIC. (That is, the KELER participant cannot be identified with the technical BIC code (KELEHUH1XXX) provided by KELER.)

If the instructing participant has indicated only the BIC code of the counterparty's securities account number, the notification will still be sent, but the value 'UNKNOWN' will be displayed instead of the referenced securities account number.

The allegement notification is also sent for unmatched instructions with a potential match.

As the instructions sent to T2S in the first phase following the new system going live will always be sent matched and KELER will not support DCP functionality for the time being, no allegement messages are expected from T2S, all allegement notifications will be generated directly by KELER's system.

KELER sends the allegement message in real time after the unsuccessful matching. KELER does not make use of the option of a 1-hour delay permitted by law.

The cancellation of the unmatched instruction triggers the cancellation of the allegement message (allegement cancellation). Allegement cancellation (MT578 CANC, or semt.020) is sent immediately. If a new instruction is submitted subsequently, this means a new allegement will be sent.

At the end of the recycling period, the system cancels allegement messages linked to unmatched transactions.

If the missing instruction is sent by the notified participant, after successful matching, the previously sent allegement message will be cancelled by the system (allegement removal) and the instructing party will be notified without delay (in an MT578 REMO or sese.029 message).

3.8. Priority management

Settlement or blocking instructions with securities debiting received in the settlement system may be executed if there is adequate coverage. However, if there is insufficient coverage on a particular securities account, for a given security, the transactions will be on hold and executed in a specific order as soon a securities credit is received on the account. This queue is called a securities queue, which is recorded by the settlement system for securities account - for ISIN combinations per business day.

Queued transactions are processed in the order specified below:

1. Transaction priority: The transaction type-dependent priority assigned by KELER first of all determines the order of priority between transactions for the same securities account and securities. The high priority transaction types include: settlement of penalties (PAIR), instructions submitted by KELER CCP (MTNS, PDSS), beneficiary blocking and release for collateral purposes. Transaction priority cannot be changed by the client.

2. Client priority: in addition to the transaction priority, transactions are associated with a client priority, which can be defined and modified by the instructing party in the submitted message.

   With the introduction of the new system KELER harmonises the number of current client priorities (0-9) with the priorities established by T2S and available to Clients (0003-0004), where 0003 is the high priority and 0004 is the normal priority. (For values other than priority 0003 or 0004, the instruction is rejected.)

   If the value of the field is not specified by the client, the order priority is given as the default value (0004) after receipt. For transactions with the same transaction priority, the order is decided by the client priority. The Client priority can be specified in both the seller's and the buyer's side instructions, however, only the seller's side (determining the securities account debiting) priority is taken into account in the queue processing.

3. Timestamp of receipt: If the transaction and the client priority are the same for several transactions, the processing order is determined by the timestamp of the settlement instruction receipt: According to the FIFO principle, the earliest received instruction can be debited first.

3.8.1. Client priority modification

KELER assures its Clients that they can change the priority of the instructions submitted by them (except for blocking transactions) in the securities processing queue until they successfully reserve or cancel the coverage. The change of the instruction can be initiated in an MT530 or sese.030 message via the original instruction submission channel (SWIFT or KID) of the party submitting the original instruction. Please note that, as is the current practice, only one instruction can be performed at a time in a status change message. Multiple functions (hold-release, priority change, or change of partial settlement indicator) are not interpreted in one message, such instructions will be rejected.

Priority modification continues not to apply to the cash queue and to buyer side securities transaction priority modification. If the transaction is subject to cover verification and a related priority modification request is received, the system will reject it. However, the hold functionality can apply to financially uncovered items, and bilateral cancellation can be submitted.

In the future, it will be possible to submit messages regarding the priority change outside the KELER operating time assigned to the given transaction type, but also within the given business day (the technical processing period). KELER forwards the status messages related to the execution or rejection of these instructions to its clients prior to the closing of the business day.

3.8.2. Priority management in T2S

KELER will match the T2S priorities to the transaction level and customer priorities used in the domestic environment and will submit the settlement instructions to T2S according thereto.

The following priorities are available in T2S: Reserved, Top, High, and Normal.

Mapping is as follows:

KELER priority	T2S priority
0001	Reserved (cannot be used by Clients, only KELER can use this priority)
0002	Top (cannot be used by Clients, only CCP can use this priority)
0003	High
0004	Normal

Irrespective of the place of settlement (KELER or T2S), the transaction is always processed on the basis of KELER priorities.

The settlement instruction of instructions in T2S is determined by the transaction type, the settlement date, and the priority instructed by the settlement counterparties in T2S.

During its optimisation and recycling processes, T2S takes first the instruction with the highest priority when settling instructions for multiple identical transaction types. It also checks the intended settlement date of instructions and processes first the instruction with the earliest value date from among the instructions of the same type.

The settlement of instructions submitted during the intra-day real-time settlement cycle is preceded by the settlement of the pending (recycled) transactions in the night-time settlement cycle.

3.9.   Hold/Release functionality

Settlement instructions can be submitted in Release or Hold status. If the instruction is submitted in hold status, its settlement will be blocked, however, these instructions will also be involved in the matching process. By modifying, releasing the instruction in Hold status, instruction settlement can be started.

After the start of the new system, it will not be possible to set Hold/Release at account level. In the future, it can only be specified in the settlement instruction (sese.023 or MT54x), and it can be established based on the instruction if it is submitted to the KELER system with a release or hold status.

The participants may send a hold or release status change message as many times as appropriate, with no limit on the number and direction of changes. There are several ways to change the hold/release status:

- If the original instruction was received in a MT540/541/542/543 message:
  - In the same MT54x message, the hold/release status can be set by entering the message function (23G) (NEWM and PREA)
  - In the MT530 message with the Hold Indicator (22F NPRE and YPRE)

- If the original instruction was received in a sese.023 message (from KID): with a sese.030 message, it can be changed by specifying the desired value (true/false) of SctiesSttlmCondsModReq/ReqDtls/HldInd/Ind.

KELER always returns the value of the hold indicator indicating the current hold/release status of the instruction in the form corresponding to the given standard via the status messages.

Please note that, as is the current practice, only one instruction can be performed at a time in a status change message. Multiple functions (hold-release, priority change, or change of partial settlement indicator) are not allowed in one message, such instructions will be rejected.

With the introduction of the new system, the current hold/release functionality will be fully extended to all types of settlement instructions (except blocks) in accordance with the SDR requirement.

Changes in the status of instructions initiated by the BSE or KELER CCP may be initiated by the submitting party. The hold/release indicator of WARP-generated settlement instructions can also be changed by the affected client via the WARP interface.

In the future, the submission of hold/release messages will be possible outside the KELER operating time assigned to the given transaction type, but also within the given business day (in the technical processing period). KELER forwards the status messages related to the execution or rejection of these instructions to its clients prior to the closing of the business day.

3.9.1. Hold/Release mechanisms in T2S

KELER performs a coverage verification on the securities and cash side before sending settlement instructions to T2S. If the coverage verification is successful, the securities or cash positions are blocked and the instruction is sent to T2S with a CSD Release status. It is not possible to send uncovered transactions to T2S, this can only be done after the necessary coverage has been provided.

If the participants submit instructions with a hold status and the place of settlement is T2S, KELER will only forward that instruction to T2S after validation and successful coverage verification.

The status of an instruction sent to T2S can be changed until it is settled or cancelled.

3.10.   Cancellation of settlement instructions

Settlement instructions can be cancelled until transaction settlement as follows:

- Unmatched or already matched instructions (intra-BP transfers, instructions submitted by market infrastructures) with unilateral cancellation, based on the cancellation instruction of the party submitting the original instruction
- FOP reception transfers generated by KELER based on the delivering client's cancellation instructions
- transactions successfully matched by KELER or T2S with bilateral cancellation.

KELER checks if the instruction the client wishes to cancel exists in the system and also if cancellation is possible. If the instruction is already in a settled or cancelled status, the cancellation request will be rejected.

The cancellation of a settlement instruction may also be initiated by the party on the communication channel through the original instruction was submitted.

Cancellation can be initiated using MT54x (CANC function) or sese.020 messages, referring to the transaction reference of the original instruction, via the original submission channel. Three messages can be sent in connection with a successfully validated cancellation request: the status given to the original instruction; the response to the cancellation request; or if an allegement has previously been sent to the counterparty, a cancelling message will be sent by the system.

In the case of bilateral cancellation, the cancellation instruction will be matched also. In the case of cancellation by one of the parties, the counterparty will be sent a status message (with IPRC//CPRC code), however, the transaction takes part in settlement (and can also be settled) until the counterparty submits cancellation. The unmatched cancellation request is linked to the transaction to be cancelled, and shall be recycled together with it until the transaction gets in a final status.

To avoid settlement, we recommend that the instruction is placed in a hold status and that the cancellation request is only submitted after the instruction has been successfully placed in a hold status. However, if the cancellation instruction is not received from both parties by the time of settlement and the original transaction is settled, the two parties will be notified in the form of a confirmation and, simultaneously, the system will reject the unilaterally received cancellation request.

The settlement system may also cancel the instruction in the following cases:

- Unmatched instructions are cancelled automatically on the 20th settlement day after the intended settlement date or the date of the last status change, whichever occurs later. In the sese.024 status message the CXLR (End of Life), in the MT548 message the EXPI (Expired) reason code notifies the client of the cancellation.

- In the case of matched instructions, the system automatically cancels the instructions on the intended settlement day, or on the 60th settlement day following the date of the last status change. In the sese.024 status message the CXLR (End of Life), in the MT548 message the EXPI (Expired) reason code notifies the clients of the cancellation.

- The settlement system re-validates the master data in the instruction at each step of the processing and during the closing of each business day. If it finds invalid data, the given instruction is cancelled by the system (in matched cases, together with its match). The status message is sent with the CANS reason code, and the narrative fields contain the error messages for the failed validation rules.

3.11. Reference numbers

3.11.1. Reference numbers in domestic settlements

In line with international market practice, the system and operation of transaction identifiers (transaction reference numbers) will be significantly renewed. The submitted settlement instructions will be identified with the following references during the process of settlement:

Reference type	Content
References that can be specified by the Client	**Transaction reference:** The unique identifier given to the instruction by the KELER participant. Mandatory: Yes Length: up to 16 characters ISO: - sese.023: SctiesSttlmTxInstr/TxId - MT54x: (Sequence A) :20C::SEME// If KELER generates the instruction in case of automatic FOP transfer reception, the format is as follows: TRYYMMDDXXXXXXXX Where TR refers to the nature of the reference (Transaction Reference), YYYYMMDD is the date the instruction was generated, and the remaining 8 characters are assigned a running serial number that restarts daily.

	Common Trade reference: An identifier agreed bilaterally by the clients and optionally marked for KELER as part of the instruction. It is an optional matching criterion, i.e. if both counterparties populate the field, it becomes a matching element. Mandatory: No Length: up to 16 characters ISO: - sese.023: SctiesSttlmTxConf/TxIdDtls/CmonId - MT54x: (Sequence A1) :20::COMM//
	Repo reference: Reference to identify the starting repo transactions; it identifies the maturing repo and the modified repo also. Mandatory: Conditional (in case of repo) Length: up to 16 characters ISO: - sese.023: SctiesSttlmTxInstr/Lnkgs/Ref/PoolId - MT54x: (Sequence D) :20::REPO//
	Second leg reference: As part of the initial repo instruction, it is mandatory to indicate the identifier which KELER allocates to the maturing leg as a transaction reference during the generation of the repo second leg. Mandatory: Conditional (in case of repo) Length: up to 16 characters ISO: - sese.023: SctiesSttlmTxInstr/Lnkgs/Ref/SctiesSttlmTxId - MT54x: (Sequence D) :20::SECO//
	Pool reference (for linked FOP transactions): In the case of linked FOP (TRAD) instructions, a common identifier linking the related instructions. Mandatory: Conditional (for linked FOP) Length: up to 16 characters ISO: - sese.023: SctiesSttlmTxInstr/Lnkgs/Ref/PoolId - MT54x: (Sequence A1) :20::POOL//
References provided by KELER / T2S	**KELER acceptance reference** After the acceptance and successful validation of the instruction, KELER generates a unique identifier, which accompanies the instruction throughout its entire life cycle. Mandatory: Yes Length: 16 characters ISO: - sese.023: SctiesSttlmTxStsAdvc/TxId/AcctSvcrTxId - MT548: (Sequence A1) :20::PROC// Format: ARYYYYMMDDXXXXXXXX Where AR refers to the nature of the reference (Acceptance Reference), YYYYMMDD is the date of acceptance, and the remaining 8 characters are assigned a running serial number that restarts daily.

	Matching reference
	Identifier given by KELER after successful matching.
	Mandatory: Conditional (Only for matched status) Length: 16 characters ISO: - sese.023: SctiesSttlmTxStsAdvc/SplmtryData/Envlp/Document/SctiesSttlmSD1/RltdTxId - MT548: (Sequence A1) :20::PCTI//
	Format: MRYYYYMMDDXXXXXXXX
	Where MR refers to the nature of the reference (Matching Reference), YYYYMMDD is the date of acceptance, and the remaining 8 characters are assigned a running serial number that restarts daily.
	T2S acceptance reference
	The identifier allocated to the instruction transferred by T2S to KELER after its acceptance. (Market Infrastructure Reference).
	This reference only appears if the place of settlement is T2S.
	Mandatory: Conditional (T2S transaction only) Length: 16 characters ISO: - sese.023: SctiesSttlmTxStsAdvc/TxId/MktInfrstrctrTxId - MT548: (Sequence A1) :20::MITI//
	Format: numeric identifier of 16 digits

The following figure illustrates the use of references in the case of an OTC transaction.
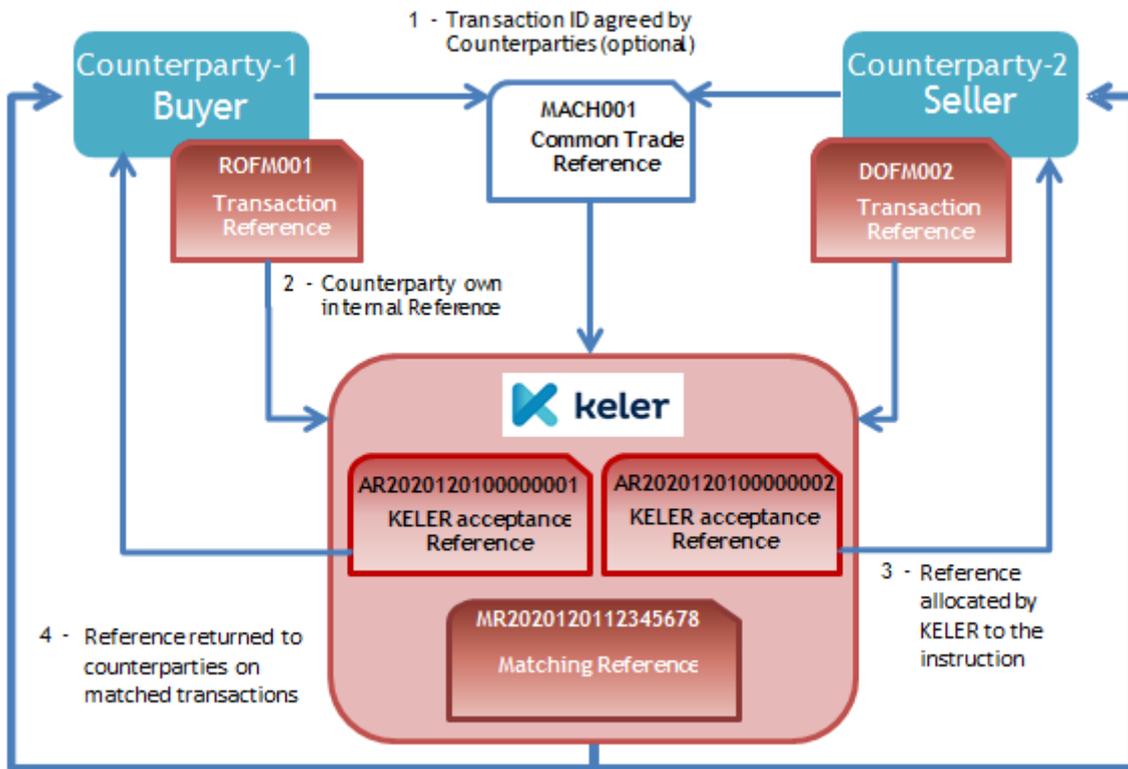
Figure 5 - Use of reference numbers in KELER

The following figure illustrates the use of T2S references in the case of an OTC transaction that is matched by the system of KELER and is submitted to T2S as already matched:
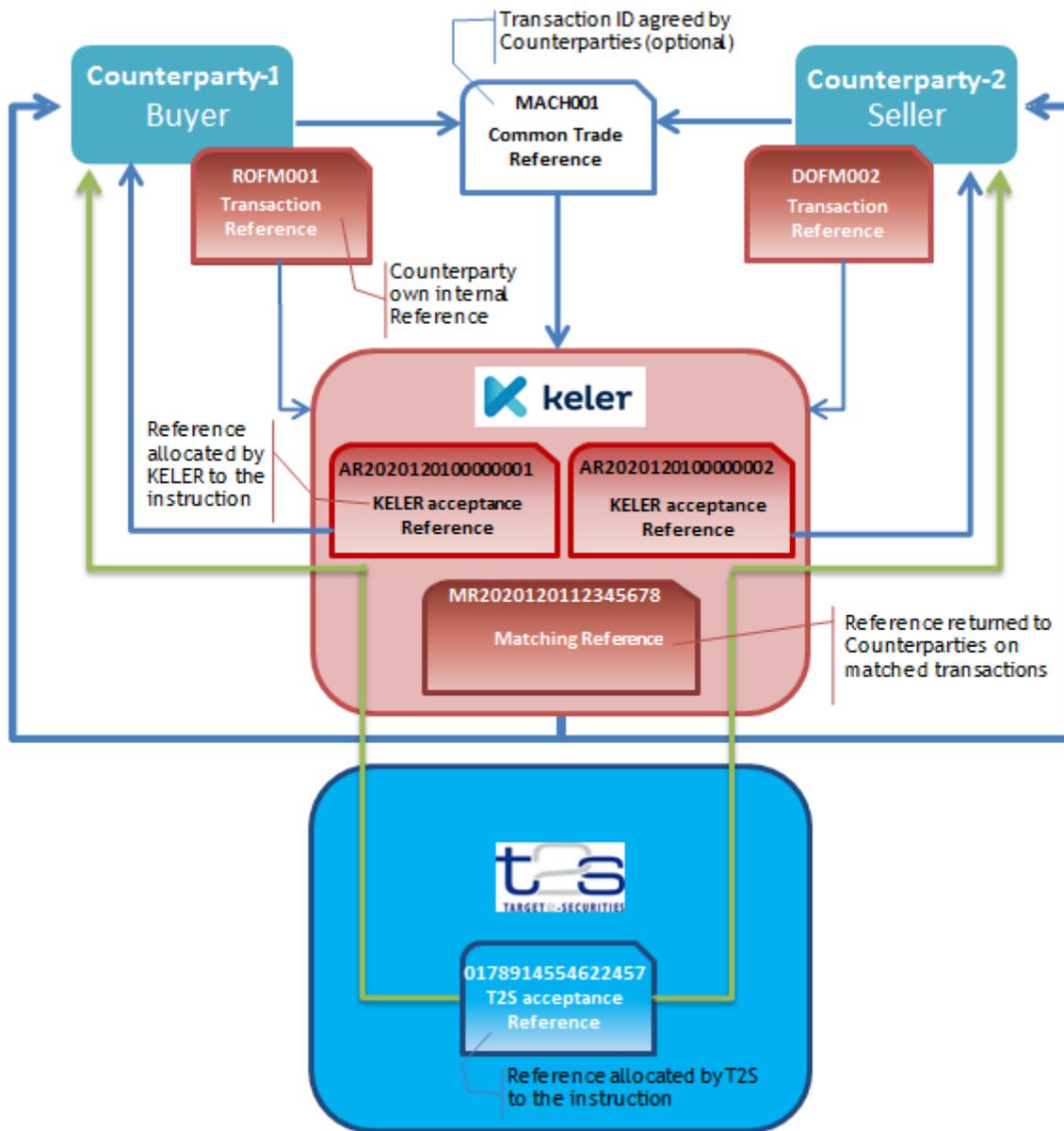
Figure 6 - Use of KELER references, supplemented with T2S references

3.12. Changes to the rules on settlement finality

In line with the basic principles of T2S (T2S Eligibility Criteria), and in order to comply with the harmonized rules on settlement finality (SF) in T2S[8], the following principles will apply to matching and settlement processes after T2S entry.

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[8] The different degrees of finality of transactions in T2S are determined as follows:

Due to the partial entry model, the T2S platform and the KELER system will jointly determine and manage the various degrees, times of settlement finality of settlement instructions (SF I – validation - acceptance, SF II – unilateral irrevocability from the time of matching, SF III – finality and irrevocability after booking). The place of SF I-II-III of various settlements can be different.

The moment of receipt of the settlement instruction (SF I), i.e., the time when the instruction is entered into the settlement system, is determined by KELER. Receipt of instructions during the business day is possible between the opening and closing of the operating timeslot related to the given transaction, and between the closing of the operating time and the daily closing during the technical processing period. During the maintenance period (the period between the closing of a business day and the opening of the next business day), instructions are received, of which our clients are notified in the form of a technical status message, however, these instructions are not considered accepted.

With the introduction of the new system, matching (SF II) can only take place at KELER, given that both legs of instructions to be sent to T2S are submitted to KELER. After a successful matching, the transaction cannot be cancelled unilaterally.

KELER declares **the finality and irrevocability (SF III) of the transaction** if KELER can settle it as domestic transaction (not submitted to T2S) or it occurs simultaneously with posting in T2S if the transaction is submitted to the platform.

The place of settlement is determined jointly by the type of connectivity of the settlement parties (ICP, DCP or issuing depository), the securities account types involved in the settlement instructions (either dedicated T2S account kept in KELER with one to one mapping to a segregated account in T2S, or an account kept in KELER linked to the KELER omnibus account in T2S), the types of instruments (domestic or foreign) and the type and currency of the transaction.

Transactions denominated in Euro are to be settled in T2S, however, FOP or HUF DVP transactions between two ICPs remain in the settlement system of KELER as they do not change the balance of the omnibus account in T2S.

Thus, the place of settlement for transactions between KELER Clients (intra-CSD) will be as follows when the new system will go live:

- Settlement of securities with HU ISIN code as a DVP transaction in T2S currency: place of settlement is T2S only, regardless of the type of connectivity of counterparties and the account type involved;

- HU ISIN code (or foreign ISIN code security between two KELER participants) non-T2S currency (e.g., HUF): the place of settlement is KELER, using an actual DVP transaction

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1. Settlement finality 1 (SF I) is the moment the transfer order is received in the system, from this moment the transfer order is protected against insolvency proceedings. The central securities depositories using the T2S platform identify the time when their own systems receive the securities transfer instructions. This validation can take place in the T2S platform or in the system of the central securities depository (for central securities depositories that offer matching services).
2. Settlement finality 2 (SF II) is the irrevocability of the transfer order, in line with the rules of the system designated in line with the settlement finality rules. In the T2S system the rule protects the irrevocability of instructions by forbidding that forbids the unilateral cancellation of instructions after the order is matched.
3. Settlement finality 3 (SF III) is the irrevocability of transfer instructions (booking in the accounts of the central securities depository) in line with the rules of the system designated in line with the settlement finality rules. In the interest of legally valid and seamless cross-border settlements against payment (DVP), the regulatory/legal environments of the central securities depositories participating in T2S are required to acknowledge that T2S account movements / booking entries are unconditional and irrevocable.

Scenario	Payment type	HU ISIN?	Does either counterparty have a dedicated T2S account?	T2S currency	Place of settlement
1	DVP	Yes	No	No	KELER
2	DVP	Yes	No	Yes	T2S
3	DVP	No	No	Yes	KELER
4	DVP	No	No	No	KELER
5	FOP	Yes	No	n/a	KELER
6	FOP	No	No	n/a	KELER

Place of settlement of transactions

If the settlement instruction contains a security with a HU ISIN code and the securities are due in EUR, the settlement will take place in T2S. In other cases there is no change in the settlement flow and the transaction will be settled in KELER.

We recommend sharing the above information with the settlement counterparties before the instruction is submitted.

Our Clients are reminded that in the case of domestic settlements only the KELER securities account number of the counterparty should be stated.

Any reference to a T2S account number will result in the rejection of the instruction. After T2S entry, if the place of settlement is T2S, the system will automatically derive the T2S account number of the counterparty from the internal KELER account number.

3.13. Business day and operating time

With the introduction of the new system, KELER ensures the implementation of the T2S business calendar and the compliance with the requirement of uniform settlement operating time management within the business day as follows:

3.13.1. Business calendar management

Due to the fact that the business days of each settlement place (KELER and T2S) may be different, KELER maintains a separate business calendar for each settlement place according to the newly implemented calendar management mechanism. Thus, in addition to maintaining the settlement calendar for HUF as a non-T2S currency (still adapting to the VIBER calendar), KELER also harmonises it with the T2S business calendar.

The following considerations need to be taken into account when adapting to the T2S business calendar:

T2S is open every day except the following days:

- Saturday
- Sunday
- 25 December
- 26 December
- 1 January
- Good Friday

- Easter Monday

With the exception of the above days, T2S provides the possibility to settle DVP-type transactions against foreign currency.

The Target2 system, which provides liquidity related to DVP transactions to be settled in T2S, takes a bank holiday in addition to the above public holidays, which means that it is not possible to settle securities against EUR in T2S:

- 1 May

KELER ensures compliance with the harmonization of KELER's calendar with the T2S calendar as follows:

➢ On a T2S business day, which is also a KELER business day, both domestic and T2S settlement will be possible, which KELER provides in connection with the operating time detailed in Section 3.13.2.

➢ On a T2S business day, but on a Hungarian holiday and public holiday according to the VIBER calendar (e.g., 15 March and 20 August, if they fall on a weekday), KELER opens the T2S business calendar and supports the settlement of T2S transactions in T2S to a limited extent.

With regard to that the Hungarian payment system (VIBER) is closed on these days, it is not possible to settle DVP transactions against HUF. On these days, KELER can only settle EUR DVP transactions in the T2S system, while in the Hungarian settlement calendar these days are public holidays.

On Hungarian public holidays, trading venues are also closed, which also means that KELER CCP, as a central counterparty, cannot provide settlement services to trading venues that use its services, with which the framework system between them ensures coordinated and harmonized opening hours. In the case of the domestic securities markets, KELER CCP primarily provides services according to the opening hours of the BSE (trading calendar), so the clearing and settlement days are the same as the trading days of the BSE. KELER CCP provides services to the BSE only on trading days, even if the cooperating payment and securities settlement systems would allow settlement. Therefore, it will not be possible to settle stock exchange transactions guaranteed by KELER CCP on Hungarian public holidays, and the execution of operations and corporate events related to demat securities will also be suspended on these days.

➢ It will not be possible to initiate a settlement in T2S on a VIBER calendar working day on which T2S is closed (e.g., a Saturday working day). The instructions to be sent to T2S submitted on these settlement days will be rejected by KELER, however, participants may still submit value-date T2S instructions. These instructions are queued by KELER and processed in the night-time processing cycle of the next T2S working day.

There is no need to prepare for changes in the settlement of domestic transactions on Saturday working days in KELER. KELER will continue to provide the settlement service in its own system on these days, however, demat securities operations cannot be performed on these days, because synchronization with T2S cannot be ensured for these transactions either in terms of master data maintenance or accounting. On these Saturday business days, KELER will continue to provide abbreviated cut-offs.

3.13.2. Operation of the KELER business day, operating time management

With the launch of the new system, KELER's services will continue to be available intermittently within a given business day. A business day consists of the following phases:
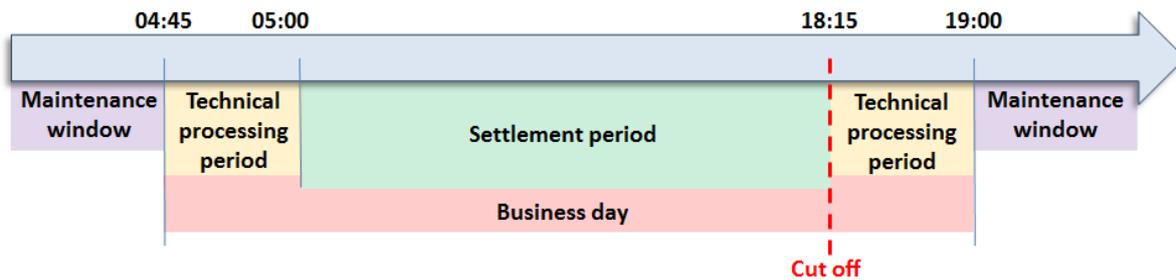
Figure 7 - Operating time concept

- **Business day:** during this period (from 04:45 to 19:00) KELER receives instruction messages concerning securities operations and performs processing operations related to the instructions. Within a business day, we distinguish two phases:

  o **Settlement period**: the period during which the securities settlement system is fully operational and which covers the periods between the opening and closing of the operating timeslot associated with each type of transaction (05:00-16:00/18:00/18:15). All steps of initiated business processes can be performed: the system accepts new instructions, matches, makes status changes and cancellations, or processes recycled transactions that failed during previous settlement days and submits the transactions to the account management systems for posting.

  o **Technical processing period**: A period of limited operation, when the system does not yet perform settlement (posting) or no longer does, but is able to accept, validate and match instructions, performs modification / cancellation of instructions, and provides real-time status of instructions to its clients. In addition, the technical preparation of messages received during the maintenance period takes place during this period. This period typically refers to the period between the opening of the business day and the start of the operating time (04:45-05:00) the period between the closing of the operating time related to each type of transaction and the closing of the business day (16:00/18:00/18:15 – 19:00)

- **Maintenance period:** The period between business days when only internal processing and maintenance operations take place. KELER confirms the messages received during this period with a technical receipt message to the sender, so it does not reject them, but starts the processing (acceptance, validation, matching, possibly accounting) only at the beginning of the next business day. This period is the period between the close of the business day and the opening of the next business day (19:00-04:45).

3.13.3.   Matching the operating hours of KELER and T2S

In order to adapt and harmonise the processing of T2S, KELER shall reschedule its processing activities related to T2S according to the following T2S business rules:

18:45 – 20:00	Opening of the day
20:00 – 03:00	Night-time settlement phase
03:00 – 05:00	Maintenance time window
05:00 – 18:00	Real-time settlement phase (day-time settlement cycle)
18:00 – 18:45	Daily closing

The T2S day-opening process begins at 18:45, during which the business day changes.

On a given working day, the end-of-day processing in KELER starts at approx. 19:00. As part of this, daily reports are prepared for clients, then the next settlement day is opened, during which the system sends the transactions to be processed in the night-time settlement cycle to T2S, and then KELER closes its systems for the night.

In order to settle in the night-time cycle, our clients need to submit their value-date T2S instructions to KELER by SD-1 19:00 at the latest.

T2S is not available between 18:00 and 19:00, although KELER's clients can place instructions during this period, until the beginning of the KELER maintenance period. Processing of these instructions will stop after matching, and will only resume after the opening of the next settlement period (in the night-time processing cycle) if the intended settlement date is the next business day.

Instructions received between 19:00 and 04:45 will be processed in the T2S day-time settlement cycle.

The processing procedure initiated in the system as a result of the business day change sends out value-day and securities unfunded EUR instructions to be processed during the T2S night-time settlement period. Thereafter, the system's operating time changes to a maintenance period, i.e., it closes at night and processes messages from T2S only the morning after the actual opening of the business day, but before the opening of the transaction-related operating hours.

The two settlement cycles of the T2S night-time settlement phase, starting at 20:00, consist of consecutive sequences (batches) in which different types of settlement messages are fulfilled in a batch mode.

The night-time settlement phase lasts until 03:00 on the T2S platform, followed by the maintenance time window between 03:00 and 05:00, when the T2S service is not available.

KELER's system does not process messages (status or confirmation) received from T2S during the T2S night-time settlement cycle. This will only take place the next morning, after the actual opening of the business day, before any other operation (04:45-05:00). When a business day is opened, clients are notified of the acceptance of the transaction in T2S and of its settlement (or, where applicable, the reason for the pending status of the settlement). The accounting takes place in the KELER system after the opening of the operating timeslot related to the given transaction, as a result of the confirmation received from T2S.

At 04:45 KELER opens the business day, then - similarly to the T2S day-time settlement cycle - the real-time settlement period starts at 05:00. However, with regard to that VIBER will still open at 07:00 in the morning, the settlement of DVP transactions in HUF will be queued until then (if at least one of the partners maintains its cash account with the MNB) and will only continue after that. However, DVP transaction settlements between KELER cash account-managed partners against HUF can be realised already after the operating time of the morning at 05:00.

The real-time settlement phase is available until 18:15, during which the submitted instructions for the same or an earlier settlement day are immediately transferred to T2S for processing in the event of available securities and cash coverage. Based on the status messages and approval notifications received from T2S, the system performs KELER side postings and informs the clients.

3.13.4. Transaction-level operating time management

The cut-off time of some types of transactions in T2S differs from the operating time currently used in KELER, for example, current day DVP transactions in T2S currency can only be settled in T2S until 16:00, FOP transactions until 18:00.

In order to ensure that the closing date (18:00) of HUF DVP transactions affecting T2S on the securities side does not have to be linked to the cut-off time (16:00) of the T2S foreign currency DVP, KELER applies different cut-offs per transaction for certain settlement places.

In the case of non-T2S foreign currency DVP instructions to be settled in KELER, the introduction and harmonisation of the 16:00-hour cut-off of T2S is not justified, and it would also be a significant step back from the current 17:30 operating time closing. After market consultation, the current closing time of 17.30 for OTC DVP transactions against HUF on a consensual basis will remain. At the same time, the closing time for repo transactions will be uniformly postponed to 18.00 in the future.

With the implementation of KELER's new system, KELER will also harmonize the operating time for position-settled FOP transfers with the T2S FOP cut-off (i.e., it will be 18:00) from the current operating hours after 18:00, however, it maintains the 18:15 cut-offs for revolving transactions (MNB beneficiary blockings, creation and cancellation of investment unit based on FOP) in the later phase of the CCP program for the time being.

T2S harmonized cut-offs will be as follows (on weekdays):

- DVP, repo, primary transactions, stock exchange fix and auction transactions in T2S currency: 16:00
- FOP, linked FOP: 18:00
- Intra-BP FOP transfers 18:00

Remaining cut-offs (weekdays):

- Multinet and FISZER transactions: 14:00
- DVP, primary transactionsm fix and auction stock transactions, DVP based investment certificates issues and cancellations in case of non-T2S currency: 18:00
- Direct and non-direct VIBER members' repo in case of non-T2S currency: 18:00
- MNB-beneficiary (VIBER limit and bank card) blockings: 18:15
- Daily cancellation and creation of investment units FOP: 18:15

The daily closing process in T2S will start at 18:00, after the end of the settlement service on the same day, while in the KELER system this time is expected to be around 19:00.

3.14.   Recycling

KELER will ensure recycling for all settlement instructions. Unlike the current practice, Clients will not be able to request cancellation at instruction level at the end of the day.
As a major change, in the case of recycling at the end of the day, instructions will not get a status specifically referring to recycling at the end of the day and change status on the next settlement day, but the actual status reflecting the reason of failed settlement (Settlement status) will be shown for the settlement instruction, including transactions pending for several days.

KELER will recycle the matched instruction until the original settlement date or 60 business days after the last status change - or until the bilateral cancellation of the settlement partners or until the expiry of the security.
Unmatched instuctions will be recycled for 20 settlement days after the intended settlement date, or if the intended settlement date is a past date, then for 20 business days after receipt or the last status change, and then unmatched transactions will be cancelled by the system.
Blockings cannot be recycled beyond the intended settlement date, so these instuctions will get a "Cancelled by system" status.

3.15.   Partial settlement

KELER will ensure partial settlement of settlement instructions as an optional service both in its own system and on the T2S platform.

Instead of the total quantity of securities included in the settlement instruction, KELER (or T2S) may even partially use the coverage available on the securities account of the seller and may make an intermediate settlement at the request of the instructing party by recycling the transaction for the remaining amount of securities (missing from the total quantity) until the required coverage is available.

KELER attempts to perform partial settlement at times defined in advance on the settlement date, in line with the applicable schedule. According to our plans, the partial settlement can take place in the following time windows:

- 08:00 – 08:15
- 10:00 – 10:15
- 12:00 – 12:15
- 14:00 – 14:15
- 15:30 – 15:45
- 17:00 – 17:15

In the instructions submitted to KELER, the completing of the indicator of partial performance (PART or NPAR) is mandatory in all cases! If at least one of the parties includes an "NPAR" code in the order, partial performance is not possible.

During partial settlement, the system takes into account the multiple and minimum settlement quantity values stored in the security master data. Accordingly, the number of securities to be partially settled may only be the result of multiplication of the settlement and a whole number multiplication of the denomination unit, and may have a number/face value equal to or greater than the minimum quantity to be settled.

In the case of DVP-type transactions, the system apportions the amount of cash to be settled during each partial settlement based on the matched settlement amount for the total quantity of securities and initiates financial settlement to the various cash settlement systems for this calculated amount.

Partial settlement can take place under the following conditions:

- Both of the settlement parties authorise the function, i.e., they indicated their intention to do so in their instruction (with the PART code word) or requested the setting of the partial settling indicator to PART in a status change order. If none of the counterparties requested partial settlement, then KELER attempts settlement for the full securities coverage, as currently. (In the case of pre-matched instructions, the party submitting the instruction alone determines the value of the partial settlement indicator to be applied to both participants concerned.)

- Within the business day, the partial settlement time window is open.

- The transaction has already gone through all the precautionary steps required for coverage verification, i.e., it is validated, matched, its planned settlement date has arrived, it is within operating time, both parties' instructions are in the released status and the relevant seller order is in the first place in the securities processing queue.

- In the case of DVP type instructions, the buyer must have at least financial coverage calculated for the quantity of securities to be partially settled. If the buyer is unable to provide cash coverage for the partially available and potentially realisable quantity of seller's securities, the system releases the previously blocked securities in the seller's account and next time the system will only attempt partial settlement if a credit is received for the seller's security queue and the partial settlement time window is open again. (If a credit is made to the seller's account within the same partial settlement time window in which the partial settlement previously failed due to insufficient financial coverage of the client, the system will repeat the partial settlement in that time window, even more than once.)

The partial settlement option will not be available in the following cases:

- Linked FOP transfers,

- PFOD type transactions,
- Repo transactions,
- Investment unit issuance and cancellation (FOP and DVP)
- Blockings and releasing of blockings
- In the case of self-contracting, i.e., when the seller's and buyer's securities account are the same

3.15.1.   Process of partial settlement, statusing

The following is an example, at a high level, of the partial settlement process and the messages sent by the system.

Example: The Selling Participant plans to settle 1,000 securities for a settlement amount of HUF 500,000 for the Buyer.

The instructions of the two participants had already been accepted before the intended settlement date and were given matched status.

1. On the intended settlement date, the Seller has only 400 securities. After the opening of the business day, following the first coverage verification - when the first partial settlement time window has not yet opened - the system finds the instruction uncovered for the entire quantity, 1,000 pieces, so it sends LACK status to seller and CLAC reason code to buyer.

2. Within the day, after opening the first partial settlement time window, the system performs a repeated coverage verification and determines that the Seller has 400 securities, which also satisfies the conditions for the settlement multiplier and minimum settlement quantity.

   The 400 securities will be temporarily blocked in the Seller's account and an attempt will be made to debit the correspondingly proportioned settlement amount (400/1,000 x 500,000), HUF 200,000, to the cash settlement system maintaining the Buyer's cash account.

   Upon successful cash settlement, the blocked securities will be released and the 400 securities will be transferred between the Seller's and Buyer's accounts.

   a) This completes the first partial settlement, at which point the system sends a **<u>settlement confirmation</u>** to the affected parties for the first partial settlement about the details of the first partial settlement (HUF 400 vs. HUF 200,000):

   It sends MT547 message to Seller in case of SWIFT, MT545 message to Buyer, and sese.025 message in case of KID with the following business content:

   - **Transaction reference** - The confirmation refers to the reference of the original instruction. In case of instructions submitted in already matched mode, only the Transaction reference provided by one client will be available, but this reference will be returned only by the sender (e.g., KELER CCP in case of multinet settlement), the other participant involved in the settlement will receive the "NONREF" reference in the same field.

   - **Partial Settlement Indicator** - will be filled in with the code word "PAIN" to indicate that part of the original instruction is still pending, further confirmations are expected.

   - **Settled Quantity** - The number of securities partially settled in a given cycle is displayed. *(400 pcs)*

   - **Settled Amount** - If settlement has been made against payment, the message will also include the amount actually settled in proportion to the quantity of securities partially settled. *(HUF 200,000)*

   - **Remaining To Be Settled Quantity** - The message contains the remaining pending quantity. *(600 pcs)*

   - **Remaining To Be Settled Amount** - If the settlement was made against payment, the message will also include the remaining pending amount. *(HUF 300,000)*

- *Previously Settled Quantity - If 2ⁿᵈ or further partial settlement occurs, the message will also include the previously settled quantity. (Since only the first partial settlement occurs here, therefore here: 0 pc!)*

- *Previously Settled Amount - If a 2ⁿᵈ or further partial settlement has been made against payment, the message will also include the amount previously settled. (Since only the first partial settlement occurs here, therefore here: HUF 0!)*

b) **The system sends a status message for the pending quantity (MT548 / sese.024)** (600 pcs vs. HUF 300,000)

- **Transaction reference** - The status message also refers to the reference of the original instruction. In case of instructions submitted in already matched mode, only the Transaction reference provided by one client will be available, but this reference will be returned only by the sender (e.g., KELER CCP in case of multinet settlement), the other participant involved in the settlement will receive the "NONREF" reference in the same field.

- **Settlement Quantity** - The security quantity field indicates the quantity outstanding, not the total quantity in the original instruction. *(600 pcs)*

- **Settlement Amount** - The Settlement Amount field indicates the amount of cash pending in proportion to the quantity of securities, not the total amount in the original instruction. *(HUF 300,000)*

- **Settlement Status** - After a successfully completed sub-quantity, the pending instruction remains in uncovered status, so it receives Seller (PEND / Pdg) / LACK, Buyer (PEND / Pdg) / CLAC status for the first time. (Which, of course, may change as a result of later events.)

3. The seller will receive 500 securities credits from the given security on the originally intended settlement date, before the last partial settlement time window. Thus, when this is reached, the system performs another partial settlement (500 pcs vs. HUF 250,000).

a) The system sends the new settlement confirmations (in messages MT545 / MT547 and sese.025):

- **Transaction reference** - The confirmation refers to the reference of the original order. Same as the reference sent in the previous confirmation and status message.

- **Partial Settlement Indicator** - will be filled in with the code word "PAIN" to indicate that part of the original instruction is still pending, further confirmations are expected.

- **Settled Quantity** - The number of securities partially settled in a given cycle is displayed. *(500 pcs)*

- **Settled Amount** - If settlement has been made against payment, the message will also include the amount actually settled in proportion to the amount of securities partially settled. *(HUF 250,000)*

- **Remaining To Be Settled Quantity** - The message contains the remaining pending quantity. *(100 pcs)*

- **Remaining To Be Settled Amount** - If the settlement was made against payment, the message will also include the remaining pending amount. *(HUF 50,000)*

- **Previously Settled Quantity** - As the first partial settlement is no longer performed, the message includes the previously settled quantity. *(400 pcs)*

- **Previously Settled Amount** - As the first partial settlement is no longer performed, the message also includes the previously settled amount. *(HUF 200,000)*

b) Status messages will also be sent for the pending quantity (100 pcs vs. HUF 50,000)

- **Transaction reference** - The status message also refers to the reference of the original instruction. Same as the reference sent in the previously sent status message.

- **Settlement Quantity** - The security quantity field indicates the quantity outstanding. *(100 pcs)*

- **Settlement Amount** - The Settlement Amount field indicates the amount of cash pending in proportion to the quantity of securities. *(HUF 50,000)*

- **Settlement Status** - After a successfully completed sub-quantity, the pending instruction remains in uncovered status, so it receives Seller PEND (Pdg) / LACK, Buyer PEND (Pdg) / CLAC status for the first time. (Which, of course, may change as a result of later events.)

4. On the intended settlement date no further partial settlement will take place, as the Seller has not received any additional credit that would have covered the quantity included in the pending instruction (100 pieces). On ISD day, at the end of the settlement time window (cut-off), the system sends further status notifications to the parties and indicates the instructions as failed. In other words, instead of the previous pending status, the previously known reason code is sent with a failed status:

    - In case of seller the previous: PENF (Flng) / LACK will be sent after PEND (Pdg) / LACK

    - In case of buyer the previous: PENF (Flng) / CLAC will be sent after PEND (Pdg) / CLAC

5. On the business day following the ISD, Seller has received the full coverage required to settle the outstanding quantity, so the system will make the final settlement. (100 pcs vs. HUF 50,000). The system sends the last settlement confirmations (MT545 / MT547 and sese.025 messages):

- **Partial Settlement Indicator** - "PARC" is filled in, indicating that the (partial) settlement of the instruction has been completed, no further confirmations are expected.

- **Transaction reference** - The confirmation refers to the reference of the original order. Same as the reference sent in previous confirmations and status messages.

- **Settled Quantity** - The number of securities settled in a given cycle is displayed. *(100 pcs)*

- **Settled Amount** - The message contains the amount of cash actually settled in proportion to the amount of securities partially settled. *(HUF 50,000)*

- **Previously Settled Quantity** - The message also contains the amount of previously settled quantities. *(900 pcs)*

- **Previously Settled Amount** - The message also contains the total amount of previously settled amount. *(HUF 450,000)*

Important:

If the client sends a cancellation instruction for the order / quantity of securities pending after the partial settlement(s), the current securities and cash amounts must always be filled in the modification or cancellation messages accordingly. If the full settlement quantity or amount in the original order is filled in, the system will reject the modification / cancellation instructions.

3.16.   Verification of coverage and posting

Settlement is considered completed, final in KELER when the cash and securities debit and credit entries related to the instruction concerned are posted in the respective cash and securities accounts.

In the case of settlement instructions without cash movements, the securities account is also posted immediately if the queueing and security coverage is available.

After the settlement instructions with cash movements (DVP, repo) in case of the securities collateral check and reservation, the cash coverage is verified and settled, followed by the release of the securities reservation

and the posting on the securities accounts. In the case of settlement instructions with cash movement settlement instructions only with cash movements (PFOD), KELER's cash account management system, the MNB or T2S may be the place of cash settlement, depending on the currency of the transaction, the place of the cash account management and the T2S involvement of the transaction.

If partial settlement is allowed in a instructions, the transaction will be settled by debiting the balance available in the seller's securities account, with the related proportional cash settlement. In this case, the instruction is considered partially settled until the settlement of the total quantity of securities specified in the instruction. In both KELER and T2S systems, transactions are settled on a gross basis.

3.16.1. Blocking coverage for transactions to be submitted to T2S

If the place of settlement of the transaction is T2S, KELER will automatically enrich the instruction sent to T2S with the T2S specific attributes (e.g., T2S securities account number, cash account number to be debited, credited).

KELER performs the assignment of securities accounts and cash accounts maintained in T2S both in T2S and in its own system on the basis of the account structure model required by clients.

Before sending the settlement instructions to T2S, KELER locks the securities and the cash by checking the parameters for this purpose. If blocking is possible on the securities or cash account, the system will perform it without delay after a successful coverage verification. If the coverage verification fails, the instruction will not be sent to T2S.

Future value date instructions are posted to T2S on the day before the value date (ISD-1) during daily closing in T2S for the night-time settlement cycle, and the coverage verification is part of this process. In the event of a failed coverage verification, the order is recycled into the day-time settlement cycle and then transferred to T2S after the required cover has been provided.

4. SPECIFIC TRANSACTION TYPE FEATURES

4.1. Securities transfer - FOP

Transaction code: TRAD

The basic type of securities settlement instructions that may be submitted by a KELER participant (or a proxy acting on its behalf). In the event of a successful coverage verification and settlement, the securities account of the seller's participant will be debited, and the securities account of the buyer's client will be credited with the quantity of securities to be transferred. All properties and functional elements described in the General Characteristics of General Settlements section are also generally true for transfers.

(FOP, DVP and PFOD type settlements can also be initiated by entering the transaction code 'TRAD'.)

4.1.1. Linked FOP transfers

A special subtype of securities transfers (TRAD) is represented by underline FOP transfers, which are introduced by KELER primarily as an alternative due to the replacement of the current DVD (Delivery versus Delivery) transaction type. Given that DVD transactions cannot comply with CSDR requirements, going live the new system **will eliminate the possibility of using today's individual DVD transaction type.** The desired functionality remains available to our Clients with linked FOP transfers.

Linked securities transfers allow for the joint settlement of two or more linked settlement instructions. The instructions to be managed jointly together form a common set, a pool in which a common identifier, the Pool IDs are used to link related transfer instructions. The system does not limit the direction and number of instructions in a given pool, so there may be opposite and directional transfers in a given pool.

Linking instruction is only allowed for FOP transactions with the TRAD transaction code.

The following additional information, different from normal transfers, must be provided in the instructions of linked FOP transfers:

- Linkage type = WITH (*Other linkage types (BEFO, AFTE) cannot be marked when submitting instructions!*)
- Pool ID: A unique reference of up to 16 characters chosen by the client, which is the same for all instructions linked in the same pool
- Total of Linked Settlement Instructions (Number Counts / TOSE)
- Current Settlement Instruction Number (Number Counts /SETT)

Under a WITH linkage, any transfer that is part of a given pool can only be settled if all of the following conditions are met:

- All the expected number of instructions (TOSE) instructions for that pool have been accepted. (Until the last instruction arrives, the system will send an 'INBC' settlement reason code in the status messages of the other instructions in the pool.)

- All instructions that were part of the pool were matched. The matching is performed separately for each instruction as soon as an instruction is accepted.

- A given linked FOP pool can only be paired with another linked FOP pool, in case every instruction in the transaction are between the same two clients (according to the BIC code). In case at least one of

the pool's transaction was paired, then from that time the instructions can only be paired within the same two pools.

- None of the instructions in the pool can be in 'hold' status.

- The required securities coverage is available on all securities accounts to be debited. As long as the system checks this condition, it temporarily blocks the securities on each account and performs the settlement only after the last block of the last instruction / account. <u>Partial settlement is not possible for linked transfers!</u>

- In case of linked FOP transfers, some or all of the pool elements (i.e.: the entire pool) can be cancelled. If a given instruction is cancelled, processing will stop, the already successfully blocked securities coverage will be released and the uncovered or queued items will be removed from the securities queue. Processing will resume if the pool becomes complete again or is completely cancelled.

If all the required number of instructions have been received, but it finds a problem with any of the instructions in the pool (e.g., matching error, hold status), a settlement reason code indicating the actual problem will be sent to the affected instruction, while other instructions in the pool 'LINK 'reason code is given to indicate that the settlement is due to a problem with an associated instruction.

Linked FOP transfers involving T2S are also transmitted to T2S as a linked TRAD instruction.

4.1.2. Automatic transfer generation and credit

Due to the fact that the matching of transfers and settlement instructions to be settled between the different main accounts will become mandatory on the basis of the SDR regulations, thus the automatic transfer crediting function ("dump") currently provided by KELER will also be transformed. Our clients are currently provided with the option, on the basis of the instruction of the delivering client, to automatically credit the transferred securities to the receiving account specified in the instruction, in the absence of instructions from the receiving party and without matching, if this setting was enabled on the recipient sub-account.

In the future, KELER will provide a passive-matching mechanism for its clients, during which KELER actually generates the settlement instruction in the name and instead of the receiving participant, if the counterparty initiates a FOP transfer to the relevant receiving account. The instructions of the delibering and receiving participants thus go through an actual matching process.

The generation of the receiving instruction is still subject to the currently used sub-account level indicator, which can be set by the participant when opening the sub-account (or later).

If the instruction of the delivering client has been successfully accepted and <u>contains the securities account number</u> of the receiving party, KELER will then generate the receiving instruction with the main data and parameters that were also included in the instruction of the delivering participant.

The transaction reference included in the receiving instruction generated by KELER will be completed in the TRYYMMDDXXXXXXXX format based on the day of generation, subsequent statuses and confirmations will be sent with a reference to this.

It is important to note that if the account holder participant enables automatic transfer acceptance, it automatically accepts the following conditions:

- The receiving instruction is automatically generated in the released state, the hold indicator cannot be modified by the receiving participant.

- The generated receiving instruction cannot be cancelled by the receiving participant. The cancellation can take place if the instruction of the delivering participant has not yet been settled and the cancellation is initiated.

- If the account number of the receiving party has not been completed in the instruction of the delivering participant, i.e., only the matching BIC identifies the receiving participant, the instruction will not be formed for the receiving party. The transaction can only be settled by submitting the instruction of the receiving participant after a successful matching.

- The value of the partial settlement indicator in the receiving instructions is always set in the same way as the instruction of the delivering party. That is, for example, if the delivering party has enabled partial settlement with the 'PART' indicator, the transaction may also be settled partially, as the receiving party will also receive a value of 'PART'. The partial settlement indicator of the receiving instruction cannot be changed.

- In case of linked FOP transfers, the automatic receive transfer generation is not provided by KELER. It is the responsibility of the participant to submit the appropriate instructions.

- If the delivering party submits the instruction after the intended settlement date specified in the instruction, the receiving participant bears the risk of late matching and failure due to subsequent acceptance instructions and is responsible for paying any penalties (LMFP) that may arise, taking into account legal requirements[9].

4.2. Securities transfer within the main account - FOP (intra-BP transfer)

Transaction code: OWNI

KELER participants may initiate free of payment (FOP) securities transfers to be settled between their own securities accounts (sub-accounts belonging to the same main account) in a simplified manner, with already matched status, by submitting an instruction indicating the transaction code 'OWNI' for this purpose. The already-matched instruction must always be submitted on behalf of the seller side (Securities Movement Type = 'DELI'), with the mandatory indication of the delivering and receiving securities accounts.

The settlement system manages transfer processing appropriately with 'TRAD' type transactions, with the exception of matching. Status messages and confirmations are sent by the system for both securities accounts. For the receiving side, the transaction reference (TxID / SEME) is replaced by 'NONREF'.

In the case of intra-BP transfers, the transaction can be unilaterally cancelled at any point in the settlement cycle only by the party submitting the instruction (seller).

4.3. Securities sale and purchase (DVP)

Transaction code: TRAD (Payment type=APMT)

In a securities purchase transaction to be executed against payment, a cash flow in the opposite direction to the transfer of the security is also related to the transaction (Delivery Versus Payment). Cash settlements can only be made between cash accounts in the same currency, without conversion, and the currency of the cash accounts used for settlement must be the same as the currency of the settlement amount.

The following cash accounts can be linked to DVP settlements:

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[9] Pursuant to Article 16 (3) of Regulation (EU) 1229/2018

- A cash account maintained in KELER or the MNB can be used for a transaction to be settled on the KELER platform in HUF currency.

- KELER's foreign currency accounts can be used in a foreign currency for a transaction to be settled on the KELER platform.

- For DVP transactions involving the T2S currency (EUR) to be settled on the T2S platform, either a foreign exchange account maintained with KELER may be used. For a detailed description of the possible account models, see in sub-section 2.2.5.

During the processing of the settlement instruction, the cash coverage of the buyer is checked only after the securities cover- or in the case of partial settlement - a part of it - has been successfully blocked on the side of the participant delivering the securities.

If partial settlement has been allowed, the system will examine the cash coverage in proportion to the quantity of partial securities.

4.4. Primary market transactions

Transaction code: KELR/PRMT

In primary market transactions, newly issued and traded securities are settled on the basis of seller-side settlement instructions received from the issuer or its agent, as well as settlement instructions to be submitted by buyers (distributors) of securities, on a DVP basis.

In current practice, primary market transactions are used by the Government Debt Management Agency (ÁKK), which submits instructions unilaterally (matched), however, due to the mandatory matching requirement prescribed by the SDR, it will also be necessary for the buyer side to submit counterparty settlement instructions after the KSDP has been gone live.

With the exception of the transaction code, the primary market transactions are in all respects the same as the securities settlement transaction (DVP TRAD), and KELER does not apply any restrictions to the party submitting the instruction, so any KELER participant may use instructions marked with the KELR/PRMT transaction code.

When matching instructions, KELER does not take into account the transaction codes, i.e., - if all other matching conditions are met - an 'KELR/PRMT' instruction may also be matched with a 'TRAD' instruction.

4.5. BSE fix and auction transactions

Transaction code(s): KELR/BSEF and KELR/BSEA

Fix and auction transactions belonging to the category of transactions concluded at the trading venue but not cleared by the CCP are settled on a gross basis, i.e., without netting, on the basis of the BSE instruction. Although the manner and format of data transfer between the BSE and KELER will change with the transition to ISO20022-based messages, no fundamental changes are planned from the client side in the settlement process. However, please note that:

- The BSE shall send the settlement instructions to KELER in a already matched status, indicating in the instruction the data necessary for the identification of the relevant (seller and buyer) KELER participants.

- settlements in EUR will be submitted to T2S.

- Unlike current practices, the client has to provide cash cover for self-deals, i.e. when the buyer and seller sides of the transaction involve the same cash account,

- Debt securities are settled at the gross price: the settlement amounts of instructions are determined by the BSE on the basis of the gross price, including accrued interest.

- In the case of settlement instructions received from the BSE, KELER will also provide the BSE - as party submitting instructions – the possibility to automatically cancel the instructions and change status, furthermore the recycling function also applies to these settlement instructions. Putting the instruction on hold following the end of the mandatory settlement grace period and cancellation due at the end of the compulsory buy-in procedure may be performed manually by the participants, via a form.

4.6.   Multinet settlement guaranteed by KELER CCP

Transaction code: KELR/MTNS

KELER CCP settles transactions concluded at individual trading venues in KELER in accordance with the principle of multilateral netting on the money and securities side. KELER CCP submits the settlement instructions resulting from clearing to KELER, in already matched format, to the client's account, no settlement instruction is to be submitted by the client.

KELER CCP multinet transactions are settled in HUF primarily; however, settlement in EUR and USD is possible.

No change in the method of securities and cash netting is expected at the same time as the Program is going live. According to the current practice, KELER CCP primarily transfers securities-side instructions to KELER as a FOP transaction, and forwards cash-side transactions directly to the clearing member or clearing agent's cash settlement system outside the securities settlement system (direct debit, or in the form of a cash transfer).

Multinet securities debit and credit transactions shall be posted to the KELER settlement system on the clearing date (ISD-2) with execution on the ISD. Debit transactions shall be settled starting from the ISD, with a possibility of partial execution. Multinet securities credit instructions shall be executed following the booking of the debit transactions.

In the case of cash instructions, debit items are posted already on ISD-2 day, indicating execution on the ISD. Credit items are posted and executed, as before, on ISD, following the booking of securities debit transactions.

Due to the requirements of the regulation concerning the settlement discipline ("SDR"), the transformative non-compliance processes and sanction mechanisms of KELER CCP, also the system of rules of the compulsory buy-in and the partial settlement's related guidelines will be published in details in the company's General Business Rules published during autumn..

KELER CCP will continue to check the given daily settlement instructions within one day (at 14:00) under its own discretion.

- If all debit instructions have been successfully settled, KELER CCP will settle the crediting instructions that have been suspended until then.

- If the clearing member has not fulfilled in full its obligation to deliver securities even with the possibility of partial settlement, KELER CCP shall cancel the FOP multinet instruction with the outstanding partial quantity queued and send a new DVP instruction to KELER regarding the outstanding quantity of securities and the proportionally calculated cash consideration.

- The so-called default DVP instructions can be executed partially constantly during the default grace period, and in the case of lack of funds or securities they will be recycled until the end of the grace period.

Settlement instructions will be suspended and any compulsory buy-in process initiated only after the mandatory settlement extension period stated in the regulations.

Additional features of the transaction:

- KELER CCP allows partial settlement in the case of both FOP and DVP type MTNS transactions, thus increasing the settlement efficiency.

- The party submitting the instruction (KELER CCP) can cancel and modify the instruction.

4.7.   Physical delivery of derivatives (FISZER)

Transaction code: KELR/PDSS

No client-side change in core operations is expected compared to current practice. Similar to multinet transactions, FISZER instructions also arrive in already matched mode from KELER CCP, the characteristics and settlement of the transaction are largely the same as those listed at multinet, with the difference that FISZER transactions are always DVP-based and the managing of fails is performed by KELER CCP on the basis of a separate procedure.

Key changes related to the transaction:

- FISZER debit and credit transactions shall be posted on ISD-2 to the KELER settlement system, indicating the ISD as execution settlement date.

- KELER CCP also allows partial settlement in respect of FISZER type transactions.

The instruction can be cancelled and modified by the party submitting the instruction (KELER CCP).

4.8.   Posting cross-border instructions

Transaction code: KELR/CBTR

If a KELER participant initiates a cross-border transaction, then after its successful settlement - with the foreign depository - KELER shall post the transaction on the client's securities account with a CBTR-type transaction against the KELER mirror account. This transaction is initiated by KELER's cross-border system and sent to the settlement system in already matched mode concerning the client's account. The instruction cannot be modified nor cacncelled from the client side.

Comment: The statuses and confirmations of the original cross-border instructions given by the participants will be reported in the current way (KID or SWIFT), however, on the account statements and reports to be generated by the new system, cross-border transactions will be included with the original transaction data (e.g., foreign market and partner, currency, etc.) as planned.

KELER's services provided to foreign securities markets will not change in connection with the first phase of the Program!

4.9.   Posting of foreign corporate events

Transaction code: KELR/CORP

Following the execution of a corporate event involving a securities debit or credit with KELER's foreign depository or custodian KELER performs the postong on the client's securities account with a KELR/CORP transaction against the KELER mirror account. This transaction is initiated by KELER's corporate event management system and sent to the client's account in already matched mode. The instruction cannot be modified nor cancelled from the client side.

4.10.   Blockings

4.10.1.   Features of blocking instructions

Our Clients are still entitled to give an instruction to KELER for blocking on a securities account. A blocking instruction can be submitted in semt.013 message according to ISO20022 via KID.

Depending on the direction of the blocking instruction, blocking operations involving a decrease in the available balance of the security, as well as block release operations involving the release of the blocked balance, may be initiated by the account owner / blocker.

Blocking instructions do not fall within the scope of settlement instructions, however, their reception, formal and substantive validation, management rules according to operating time and status management principles are the same as the procedures for processing settlement instructions. Blocking instructions are not sent to T2S.
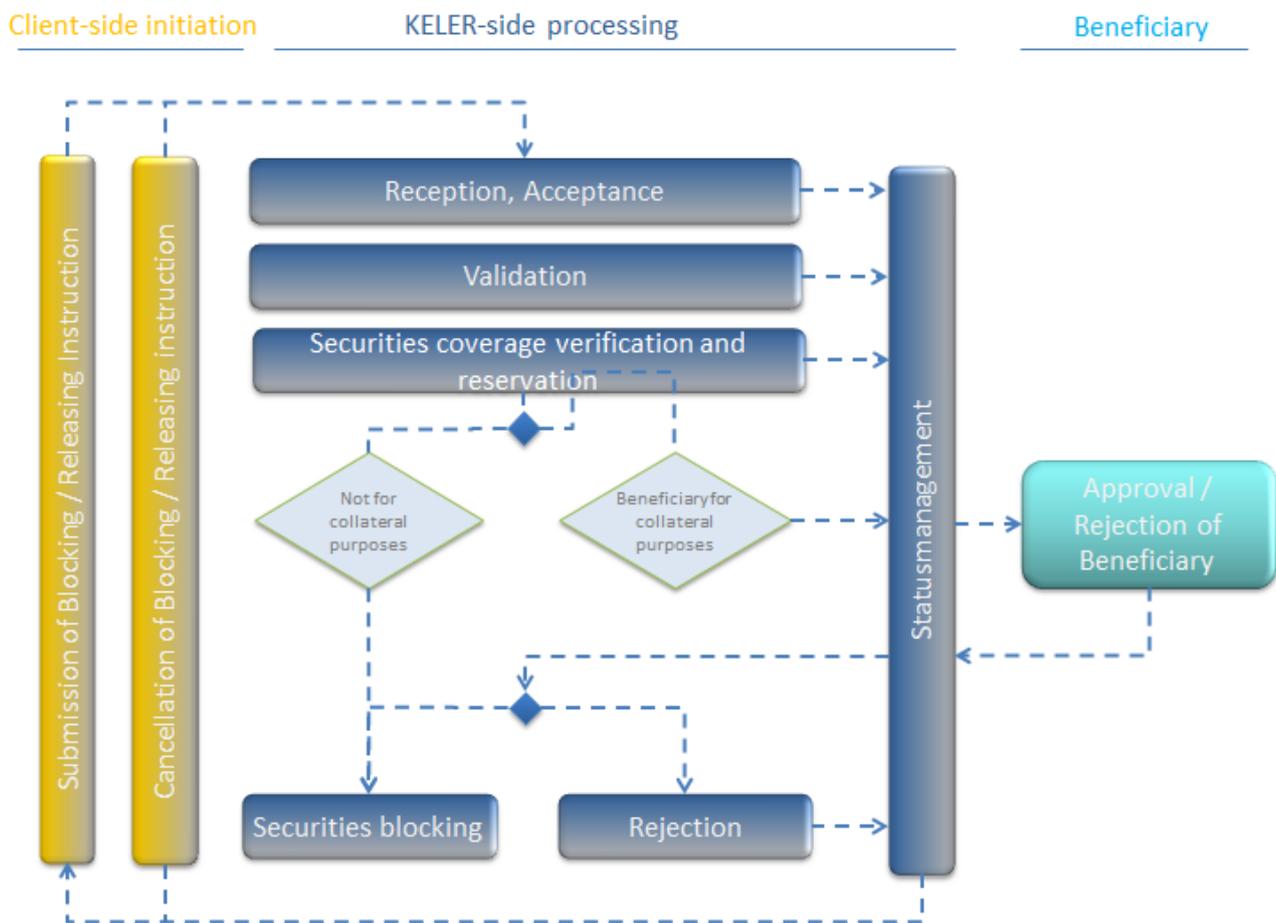
Figure 7: Blocking instruction lifecycle

KELER sends the status notice messages related to the blocking / release blocking instructions to the clients in a message in ISO 20022 semt.014 format. The successful completion of the blocking operations shall be indicated by the settlement system by sending a confirmation message to the party submitting the instruction in ISO 20022 semt.015 format.

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If the blocking instruction was not initiated by the account holder (e.g., paper-based blocking instruction, blocking revocation, intra-day securities transformation or automatic releasing due to expiration, conversion or cancellation of securities with a value date), KELER always sends a status message to the account holder about the receipt and execution of the blocking instruction, taking into account the set default channel - in this case only on KID (semt.014, semt.015).

A blocking release requires the clear identification of the original blocking, which can be done using the completely unique receipt reference generated by KELER in the original blocking (KELER acceptance reference). In these cases, in the semt.013 messages to be sent, this value must be stated in the "Securities Sub Balance ID" field both for full and partial release.

It is also possible to block within a day for a definite period of time. However, due to the provisions of Section 144 (4) of the Capital Market Act, a new blocking instruction for the blocked security is not possible.

The beneficiary may instruct KELER to withdraw the blocked securities by specifying the account number to be credited. In this case, in addition to release the blocked security on the account holder's securities account, the security will be transferred to the beneficiary's securities account at the same time, of which the account holder will be notified in a status message.

Cancellation of blocking instructions is possible until a successful security coverage verification and reservation for the blocking has taken place. If the blocking instruction is not a beneficiary blocking for collateral purposes, the blocking will be posted at the same time as the security coverage verification. In the case of beneficiary blocking for collateral purposes, the approval of the beneficiary is preceded by the booking following the securities coverage verification, in the condition of which the blocking instruction can no longer be deleted at the client's initiative.

In the case of a blocking instruction, the hold / release status change and the priority change are not interpreted. Unsecured blocking instructions are deleted by the system at the end of the operating time.

4.10.2.   Types of blocking instructions

The blocking instructions are identified by the blocking type, which can be divided into the following main categories:

- Unilateral blocking
- Joint blocking
- Beneficiary blocking for collateral purposes with MNB benefits
- Beneficiary blocking for collateral purposes with KELER CCP or KELER beneficiary
- Beneficiary blocking - general

Unilateral blocking

Unilateral blocking can be submitted on KID and as a paper-based instruction. A blocking certificate can be requested for the operation. Depending on the blocking certificate, it is possible to release it:

- If the blocking party has requested a blocking certificate for blocking, it can only be released on presentation, on paper,
- If the blocking party did not request a blocking certificate for the blocking, the release of blocking can also be triggered on KID.

The unilateral blocking can be only for a definite period of time, but not more than two working days prior to the maturity of the security.

Joint blocking

Joint blocking can still be requested only on paper, for a definite period of time, but not more than two working days prior to the maturity of the security. Releasing can still only take place after the return of both paper-based blocking certificates. Joint blocking instruction can only be submitted on a dedicated client account, as at present.

Beneficiary blockings

Bilateral and trilateral beneficiary blockings can be submitted on KID and as a paper-based instruction as well.

MNB beneficiary bank card blockings last for a definite period of time, but not more than two business days prior to the maturity of the security. VIBER limit and AFR blockings can be submitted as for indefinite term.

Other beneficiary blockings have a fixed term, taking into account that the maturity date cannot be later than the second working day preceding the maturity of the blocked security.

In the case of KELER CCP beneficiary blockings (collateral type blockings), it is necessary to determine the collateral segregation type when submitting the instruction, which can be Own or Client in case of blocking on Own securities account, and Client in case of blocking on Client securities account.

In the case of MNB or KELER CCP beneficiary blocking, a certificate of bocking / certificate of ownership cannot be requested.

4.10.3. Blocking titles

When submitting the blocking instruction, the account owner must also provide the blocking title as a legal requirement of Section 144 (2) of the Capital Market Act. The blockings may have the following titles, from which the account owner must select the appropriate title for the given blocking transaction.

Title code	Title in English	Title in Hungarian
LIEN	Lien	zálogjog
BAIL	Bail	óvadék
DECO	Deposit in court	bírósági letét
DCPN	Deposit in the care of a public-notary	közjegyzői letét
RFLA	Registration of filing for legal action	perfeljegyzés
EXPO	Executory power	végrehajtási jog
REOC	Restriction on conveyance	átruházás korlátozása
RPEM	Right of pre-emption	elővásárlási jog
RREP	Right of repurchase	visszavásárlási jog
RSEL	Right of sell	eladási jog
RPUR	Right of purchase	vételi jog
PSFM	Provision/safeguard measure	biztosítási intézkedés
INTM	Injunction/temporary measure	ideiglenes intézkedés
BLAW	Blocking based on law	egyéb jogszabályon alapuló zárolás
BJUM	Blocking based on juridical measure	egyéb bírósági intézkedésen alapuló zárolás
BREM	Blocking based on regulatory measure	egyéb hatósági intézkedésen alapuló zárolás
BLCO	Blocking based on contract	egyéb szerződésen alapuló zárolás,
BLIN	Blocking based on instruction	egyéb instrukción alapuló zárolás
OTHR	Other	egyéb

4.10.4. Automatic releasing of expired blockings or automatic releasing of blocking due to security expiration

Fixed-term blockings are automatically released at the end of the expiration date. Blockings for an indefinite period remain blocked for one working days prior to the maturity of the security, and then the system automatically releases them when the operating time closes.

The account holder will be notified about the release of expired blockings: semt.014 on receipt of the instruction, semt.015 on the successful execution of the releasing.

If the automatic releasing is necessary due to a security conversion, the account owners will also be notified of the releasing of blocking due to the securities conversion and the blocking of the new security in messages semt.014 and semt.015 as part of the KSDP developments.

In the semt.015 message the business action behind the release of the matured blockings (and other blocking operations) can be identified based on the value of the Balance FROM- balance TO fields as follows:

AVAI-BLOK (blocking)

BLOK-AVAI (release of blocking)

EXPI-AVAI (release of blocking because of securities maturity or release of expired blocking or value date conversion/delete)

BLOK-DRAW (blocking revocation)

BLOCK-CONV (securities blocking release due to intraday conversion)

CONV-BLOK (blocking due to intraday securities conversion)

4.11.   Repo transactions

Transaction codes: REPU / RVPO

In a repo transaction, the seller and the buyer enter into an immediate securities sale and purchase transaction that simultaneously imposes a repurchase obligation on the seller in respect of the security that is the subject of the transaction at a predetermined future date at a predetermined repurchase price.

With the going live of the new system, delivery-type repo transactions will still be available.

Based on the results of a survey conducted among KELER's clients, it decided that <u>hold-in-custody repo transactions will not be available</u>, they will be phased out with the transition to the new system.

The opening leg of the repo transaction for immediate sale and the repurchase (maturity) leg at a later date, as well as the extended repo are managed by the system as separate transactions, but linked to the same repo reference.

The instructions representing the opening leg of the transaction are submitted separately by the seller and the buyer (MT541, MT543 / sese.023 messages), which KELER matches in accordance with the matching criteria.

The client who represents the seller side in the starting leg of the repo can indicate the transaction code 'REPU' and the client stands on the buyer the code 'RVPO'.

The opening instructions also include the necessary information on the repo closing leg, such as:

- Repo Closing Date, which will be the intended settlement date of the second leg,

- Repurchase Amount, which will be the settlement amount of the second leg,

  Comment: Only the amount to be actually paid can be entered as the repurchase amount, interest percentage and interest amount are not allowed! The value of the repurchase amount may be even lower than or equal to the settlement amount of the starting leg.

- Second Leg Reference, which will be the transaction reference of the second leg by which the second leg can be identified by the client,

- Repo reference, which links all instructions submitted during the transaction.

KELER automatically generates the instructions representing the second leg of the repo transaction initiated by the clients' instructions after the successful matching of the opening instructions, based on the data contained therein.

Closing repo legs are generated with the following deviation:

- Transaction codes are exchanged page by page, i.e., whoever was originally the seller on the opening leg and marked a 'REPU' transaction code in their instructions, the expiring leg will automatically receive a 'RVPO' code and vice versa.

- The closing leg automatically results in a cash flow in the opposite direction to the opening leg in terms of the settlement (repurchase) amount.

Closing leg instructions are matched immediately at the same time as generation. After matching, the parties concerned will be notified in a status message that the second legs have entered the system and any further status changes. The closing leg instructions refer to the opening instructions, and the opening repo transaction and the expiring repo transaction are also linked by a common repo reference.

If the given transaction is a repo within one day, i.e., the intended settlement date of the opening leg and the expiry date are the same, the system generates the second leg (both instructions) in hold status. It is then left to the clients when the status of the instruction is changed in order for the repurchase transaction to be settled, i.e., a status change request needs to be sent to the system for settlement.

If the repo opening legs are cancelled before they are settled, the system will also automatically cancel the expiring legs.

KELER assigns a lower priority to the priority of repo transactions compared to other DVP ('TRAD' and 'KELR / PRMT') instructions that can be submitted by participants.

The following new services will be introduced for repo transactions:

- *Allegement sending:* Similarly to FOP and DVP transactions, KELER will send allegement message to settlement counterparties, and will send allegement removal or cancellation for matched or cancelled transactions.

- *Recycling:* Repo transactions will also be recyclable under the general rules, with the data in the original instruction. If one of the legs of a repo transaction fails or is settled late, the settlement can still be made at the originally specified settlement / repurchase amount. In the special case if the repo opening legs would only be settled on or after the expiry date, the system will process and complete the repo closing legs immediately in case it is covered after the opening leg is settled. As a general rule, however, closing repo transactions cannot be settled until the opening leg has been settled!

- *Repo hold/release:* Hold-release functionality will be introduced for the opening and closing repo transactions, related to which Clients will receive more detailed repo transaction status feed-back.

- *Repo maturity date modification:* KELER provides an opportunity to modify the intended settlement date of the closing leg to a later or earlier date, if the starting leg has already been settled.

If the maturity date is modified, both clients must be keeping the order and first submit a cancellation instruction due to the maturity date modification, which must refer to the closing leg to be cancelled and include the code word 'ROLP' in case of extension and 'CALL' in case of expiration in the Repurchase Type field.

After the cancellation instruction, a new instruction must also be submitted with the modified repurchase amount based on the data provided in the original repo transaction and the modified maturity by entering the reference to the original openingtransaction and the value 'ROLP' or 'CALL' in the Repurchase Type field.

The repo transaction may be extended or the maturity date brought forward on the basis of instructions submitted and matched by the seller and the buyer.

In case of repo extension, full and partial extension will be possible, repo maturity earlier can only be initiated for the total quantity of securities.

If the client requests a partial extension, several new instructions must be submitted: separately for the quantity of securities for the maturity date to be modified and the new maturity date, and separately for the amount remaining on the original maturity date. The total partial quantities submitted must be equal to the total quantity in the original closing leg.

The system will only start modifying the repo instruction when all the necessary messages have been received and matched. So, wait for the cancel instructions and then all the necessary new repo instructions. In extreme cases, this may also mean that the original closing leg may even be settled in the meantime if all the related instructions have not been received in time.

The maturity date of repo transactions is modified in the same format as the messages used to submit a new repo instruction. If the modification is submitted in the KID interface, the related messages (delete + new instruction) will also be available on this channel.

REPO transactions in T2S

T2S does not support directly repo transactions, however, KELER submits the EUR instructions to T2S when processing the various legs of repo transactions by transforming the Client instructions into T2S-eligible settlement instructions, marked with transaction code 'TRAD'.

4.12. Distribution and settlement of open-end investment funds – Changes in WARP

The KELER WARP (Wide Application Routing Platform) system allows the automation of processes and order management related to the distribution, clearing and settlement of open-end investment fund units.

The integration of the new settlement and master data management systems of KELER and the WARP will mean changes for our clients primarily in the management of settlement instructions, out of which changes the following are highlighted:

- In line with the new settlement backend system functionality, new settlement instruction types and statuses will be introduced in WARP also.

- The process of daily additional issuance and deletions will be simplified:

  o for FOP issuance transactions also, in line with the current DVP transaction operation principle, one "SUBS" type transaction will ensure that the additional issuance of the new investment

units is made to the settlement agent account 787878, and from there the securities are moved to the target account instructed in the distributor instruction,

- o for FOP redemptions the transfer between the distributor's securities account and the account of the settlement agent (account 606060) will be linked with the deletion of the investment fund units ("REDM" type instruction).

In the case of FOP transactions, the additional issuance and cancellation transactions of a security on the same settlement date but affecting several accounts will not be consolidated in the future, so any failures or settlement delays will be limited to one account.Under settlement settings associated with the individual ISINs, it is possible to set up (by dealers and instruction types) the default hold-release values. By taking these into account WARP will generate and transfer the settlement instructions to the new settlement system. The current 'automated start of clearings' option will be replaced by the hold-release function. That is, e.g. if the settlement agent does not wish to automatically approve the automated completion of DVP type redemptions (REDM) at the time of transferring them to the system, the "H" (that is Hold) value needs to be set up beforehand. The client can then initiate that the instruction is released for settlement via the Settlement instructions screen.

If the client sets up "R" (release) as the default option under the settlement instructions, the system will transfer the instruction in a state released for automated settlement, that is settlement can take place immediately provided the securities and/or cash coverage is in place.

- It will become possible to delete the transactions after the generation of settlement instructions and their transfer to the settlement system, until the date/time of actual settlement. The full (bilateral) deletion of settlement instructions may, at the same time, also entail the deletion of all related trading instructions, and the instructions can also be set up to be in a closed position without settlement. The Dealer's user can set up the desired final state on the interface. Due to the new statues, the set of possible options in the export file format of the instructions will be expanded. Regarding the changes, a separation information kit is available on KELER's website.[10]

- In the first phase of the Programme, the origination and deletion transactions of open-ended investment units will not be posted to T2S. Accordingly, it is not allowed to generate a WARP transaction on the dedicated T2S sub-account.

Further changes:

- Changes in and to terminology affect the entire interface of the system (e.g. settlement is used instead of clearing, settlement instruction is used instead of clearing transaction, settlement agent is used instead of clearing party, etc.)

- Securities master data / "Clearing transaction generation cut-off" is renamed as "The earliest date of settlement". The maximum value of this is 13:55. KELER will use migration to re-set the time of ISINs with a later time. In the case of securities with T+X day settlement, settlement instructions with a time set up in this parameter will be automatically transferred to the settlement system.

Important: In settlement instructions transferred by WARP, the Hold indicator will be filled according to the default Hold/Release parameter value, so later on it may be necessary to release the instruction for settlement. This can be launched manually via the interface.

- Settlement instructions held or waiting for approval can be verified via the Dashboard.

- Via the new WARP system, it will become possible to transfer the right of disposal over securities and cash accounts. Accordingly, an account owner having a securities account with KELER may authorise another WARP client to submit trading instructions to the account of the original account owner, thus settlement can place directly on the account of the authorising party. In a similar manner, it is possible to assign the cash accounts kept with KELER or the Central Bank of Hungary (MNB) to the authorised party. The above settings may open up new business opportunities for our clients, e.g. a (fund

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[10] See: KSZP / Development Aids / WARP

manager) dealer customer without an account at KELER may initiate that the transactions are completed directly on the account of the principal (e.g. a foreign or institutional client) kept with the fund manager.

The ability to dispose over the accounts may be set up by KELER. In case you have such a testing need, please report this to us separately.

4.13.   Payment free of delivery / PFOD

Transaction codes: 'TRAD' and 'PAIR'

PFOD will be introduced as new transaction type, meaning a payment related to securities, but without securities settlement taking place, as the securities quantity in the settlement instruction is zero.

PFOD introduction was originally necessary due to T2S integration, however, KELER made this transaction type generally available to its Clients for settlement within KELER also, in addition to T2S settlements. Its use may be justified in cases that result in the payment or distribution of cash or the financial settlement of other rights or obligations related to the security.

The processing and validation rules of the PFOD are the same as for DVP transactions, except for the coverage verification on the securities side, i.e., KELER's securities settlement system (or T2S) sends debit and credit instructions to the relevant cash account management system(s). If the answer is positive, the instruction will receive a settled status.

KELER participants can initiate PFOD-type settlement with the transaction code 'TRAD', which always goes through a matching process.

In addition to general-purpose PFOD instructions that can be submitted by clients, the collection and distribution of penalties by KELER is also planned with PFOD transactions. These penalty instructions with transaction code 'PAIR', generated by KELER, are sent to the settlement system with already matched status. For details on penalties, see Chapter 5.

5. MEASURES CONCERNING SETTLEMENT DISCIPLINE

The CSDR and the related Settlement Discipline Regime (SDR) contain a number of new requirements for all market participants involved in securities settlement to prevent and sanction failed transactions. The following is a summary of the measures that are relevant to the CSD and its participants in relation to settlements.

5.1. Measures to prevent failures

KELER also provides its participants with all the services specified in the law and performs the regulations aimed at preventing the failure of settlements, including the following:

- In addition to using international standard message formats, settlement instructions go through automatic processing procedures.

- During the business day, KELER matches the settlement instructions in real time, on a mandatory basis, taking into account the required matching criteria and tolerance levels.

- Bilateral cancellation of matched instructions will be introduced.

- The hold-release mechanism will be extended to a wide range of settlement instructions.

- In the case of matched settlement instructions, the current 20 business day recycling rule will be terminated and thus settlement instructions will be recycled for up to 60 business days after the planned settlement date or the last status change affecting the instruction. (However, in the case of instructions subject to buy-in, it is mandatory to cancel the instruction at the end of the buy-in period!)

- The option of partial settlement is introduced.

- KELER sends real-time status messages and allegement notifications to participants.

The detailed characteristics of these services are presented in detail in Chapter 3.

5.2. Penalties

Pursuant to legal regulations, KELER will also be obliged to impose penalties on participants causing failed settlements.

It is the task of KELER to identify those settlement instructions that were not settled (i.e., failed) on the originally intended settlement date, or - in case of a late matching - on the following day(s) and after such transactions, calculate, report, collect and distribute the applicable penalties using the quantity of securities in the instructions, their market prices, or the settlement amount and the statutory penalty rate.

Penalty, as one of the sanction mechanisms stated in the regulation, is not part of KELER income, but will be paid to the participants that have to receive the penalties amounts.

Regarding the management of penalties, KELER also follows the recommendations of the European Central Securities Depository Association (ECSDA)[11].

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[11]Detailed information on penalties is provided in the ECSDA CSDR Penalties Framework document

5.2.1. Instructions subject to a penalty

Penalties apply to trades made on both trading venues and on the OTC market.

Penalties are to be imposed on matched settlement instructions that do not settle on the intended settlement date and are for the settlement of financial instruments

- that can be traded on EU trading venues or can be cleared by EU central counterparty
- where the primary trading venue of the share is not outside the EU, in so-called third country

(Unmatched instructions are not subject to penalties!)

The above criteria are defined on the basis of databases operated by ESMA:

- Instruments listed on an EU trading venue are contained in the Financial Instruments Data System (FIRDS)[12] database.
- The list of shares whose primary trading venue is outside the EU can be determined on the basis of the Short Selling Regulation (SSR) list[13].

Penalties (SEFP) are determined based on the status the matched instruction has at the end of the settlement time window (at cut-off) and the reason of faiure. This reason defines whether for the given instruction penalty could be counted, i.e. the party for which the penalty is to be imposed, thus e.g. in case of insufficient securities cover the seller, in case of insufficient cash cover the buyer, in case of instructions in hold status penalties can be imposed on both parties at the same time.

KELER calculates the penalty for all instructions to be settled in its own system.

The external settlement platform (T2S) or the central securities depositories calculating and reporting the penalty will report to KELER the penalties imposed on instructions to be settled outside KELER (T2S or cross-border) directly (e.g. KDPW) or indirectly (e.g. SIX SIS). KELER also includes these penalties in the daily and monthly reports, and the penalties imposed and passed on at these external settlement places are settled together with the penalties calculated by KELER.

5.2.2. Types and calculation of penalties

The following two types of penalties may be applied, depending on when the settlement instructions involved were matched compared to the intended settlement date and compared to the its intraday cut-off time.

- **_LMFP (Late Matching Fail Penalty)_**: If, on the intended settlement date (ISD), the settlement instructions are successfully matched after the cut-off date allowing settlement, either on an ISD day, before the close of the business day, or on a later business day, the settlement date of the transaction shall be up to the date of matching, a penalty may be imposed, even retroactively for several days (N) at a time, to sanction late matching. The participant who initiated the last operation before matching is obliged to pay the penalty (e.g. the one that has sent the instruction which is the second instruction).

    Calculation formula DF, RF, RVP, DVP (i.e., for instructions resulting in actual securities movements):

    $$\text{LMFP} = \sum_{n=1}^{N} (\text{Penalty rate} * \text{Securities daily reference price} * \text{Securities quantity})$$

    Calculation formula PFOD (i.e., for instructions that do not result in an actual movement of securities):

    $$\text{LMFP} = \sum_{}^{N} (\text{Penalty rate (daily discount rate)} * \text{Settlement amount})$$

[12] https://registers.esma.europa.eu/publication/searchRegister?core=esma_registers_firds
[13] https://registers.esma.europa.eu/publication/searchRegister?core=esma_registers_mifid_shsexs

- **SEFP (Settlement Fail Penalty):** Penalty calculated for the period between the intended and effective settlement date(s), payable for settlement instructions that are matched until the applicable cut-off on the intended settlement date, but are not settled on the intended settlement date or on the following business day(s). On one business day, only the SEFP applicable to the day concerned is charged.

Calculation formula DF, RF, RVP, DVP (i.e., for instructions resulting in actual securities movements):

SEFP = Penalty rate * Securities daily reference price* Securities quantity

Calculation formula PFOD (i.e., for instructions that do not result in an actual movement of securities):

SEFP = Penalty Rate (daily discountt rate) * Settlement Amount

Penalty rate:

- in the case of an instruction with lack of securities (LACK) or a withheld instruction (PREA, BOTH) or an instruction failed due to a related transaction (INBC, LINK): value depending on the type of security (see table)
- in the case of transactions with lack of funds (MONY): prorated part of the discount rate defined by the central bank issuing the currency concerned (on a 360-day basis).
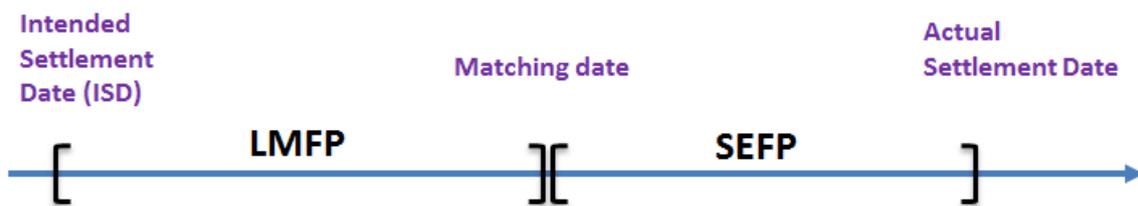
Figure 9 - Types of penalties depending on the intended settlement date

Penalty rates for the calculation of penalties[14]

Liquid shares	1.00 bp
Illiquid shares	0.50 bp
Government bonds	0.10 bp
Corporate bonds	0.20 bp
Financial instruments other than bonds traded on the SME growth market (e.g., BSE Xtend) *	0.25 bp
Bonds traded on the SME growth market *	0.15 bp
Other financial assets	0.50 bp
In case of cash shortage (RVP and PFOD transactions)	Official interest rate charged for daily credit by the central bank issuing the currency of settlement, which cannot be less than 0

[14] For details please see: Regulation EU 2017/389.

KELER identifies transactions concluded on SME growth markets on the basis of the MIC code of the trading venue (Place of Trade) included in the settlement instruction.

Currency for calculating and collecting penalties in case of intra-CSD transactions:

- if the original settlement instruction type is FOP, in HUF (also for trades in securities denominated in other currencies or in the case of a market price recorded in a foreign currency)

- if the settlement method is DVP, the penalty will also be calculated in the original currency of the settlement instruction

Example:

The date of a failed (fictitious) transaction include:

- *Intended settlement day:*   *14.02.2022*
- *Method of settlement:*   *Against payment (APMT)*
- *Currency of settlement:*   *HUF*
- *The quantity of securities to be settled:*   *25.000 units*
- *Type of security:*   *Liquid stock (SHRS)*
- *Penalty rate:*   *1.0 bp (=0.0001)*
- *The market price of the security on the individual days:*
  - *14.02.2022.:*   *HUF 15,000*
  - *15.02.2022:*   *HUF 15,300*
  - *16.02.2022:*   *HUF 14,600*
- *O/N credit interest rate (HUF):*   *2.0 % (annual)*
- *Time stamp of the acceptance of the seller's (DVP) instruction:*   *16.02.2022 13:00:00*
- *Time stamp of the acceptance of the buyer's (DVP) instruction:*   *14.02. 2022 08:05:00*
- *Date/time of pairing:*   *16.02.2022 13:00:01*

The Seller in the example sends their instructions two business days after the intended settlement day so the successful pairing of the two parties' instructions can only take place on 16.02.2022. However, the transaction cannot be completed on 16.02.2022 as the Buyer's cash account is uncovered. Settlement only takes place a day later, on 17.02.2022.
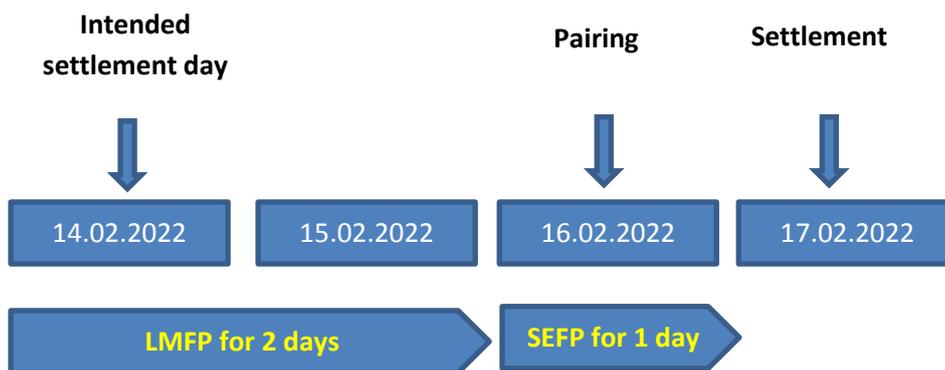
Based on the above, the first occasion when the fail can be detected and the penalty can be calculated is 16.02.2021 (following cut-off at the end of the day), as the instructions can be regarded as paired only from this day. Based on the detection of the fail, KELER calculates the following penalties:

1. For two business days between 14.01.2022 – 16.02.2022: LMFP, the party at fault: the Seller. The penalty is calculated retroactively for two business days. As instruction type is DVP, the calculation algorithm is SECU, that is the penalty's amount is determined by the security's daily reference price and the penalty rate depending on the type of the security:

   - 14.04.2022:   25.000 units x HUF 15,000 x 0,0001 = HUF 37,500

- 15.02.2022:   25.000 units x HUF 15,300 x 0.0001 = HUF 38,250

  Total (LMFP) penalty: for 2 days: … HUF 75,750

2. On 16.02.2022, the RVP instruction of the Buyer is cash-uncovered at the time of day-end cut off (reason: MONY fail), therefore the party at fault is the Buyer, so the penalty amount for one day must be calculated based on the Buyer's instruction. Calculation algorithm= MIXE, that is the penalty rate is the daily credit interest rate (annual interest rate divided by 360), that must be determined for the security's reference price and quantity:

   25.000 units x HUF 14,600 x (0.02 /360) =   HUF 20,778 (SEFP)

KELER reports the above penalties as of the penalty detection date of 16.02.2022, in their daily penalty reports submitted until 12:00 on 17.02.2022.

5.2.3. Reporting of penalties

For each penalty, the participant causing the failure, i.e., the guilty participant liable to pay the penalty, and the innocent party who will be the beneficiary of the penalty will be identified. In terms of penalties, the partners are determined in each case per KELER participant (KELER main account), so the recipients of the reports will always be the KELER participants, at whose level the penalties will be aggregated. (That is, KELER does not provide a breakdown by sub-account or underlying client / clearing member in its reports).

KELER participants are obliged to ensure the allocation, reporting and forwarding of penalties to their own clients.

Daily report

KELER will send to each participant a report on a daily basis no later than 12 a.m. on the business day following the relevant day about the penalties to be paid or credited to the participant for the previous business day and the details of the related settlement instructions. The reporting of penalties will be available in the form of MT537 and semt.044 reports on the KID .

Monthly report

The monthly report also shows the summaries per currency and counterparty based on the data of the finalised penalties for the previous month, as well as the netted amounts of the penalties actually to be paid to the given participant. The monthly report does not include individual penalties and related transaction data. The range of messages used for monthly reports is the same as for daily reports.

Reporting penalty items from external securities depositories

If a KELER participant's instruction to be executed at an external (EU based) settlement venue (cross-border instruction) fails, the associated penalty item shall be calculated and reported directly by the local depository for KELER as participant or indirectly to KELER's external account manager. KELER will also process this information and these reports, and shall prepare distinct daily and monthly reports on external penalties. This means that where a KELER participant is affected on a given business day (or month) not only due to a cancellation within KELER, but also due to cross-border transactions based on an external depository's report, such KELER participant will receive multiple reports for that business day or month (i.e. one per each depository). The sending of reports on external penalties depends on the time of receipt and processing at KELER, but it is expected that by 14:00 even the reports containg the penalties of external depositories will be prepared.

5.2.4. Lifecycle of penalties, penalty calendar

ECSDA depositories, including KELER, develop their procedures in such a way that, as far as possible, the days for reporting, appealing and settling penalties are determined on the basis of a harmonized calendar between the individual countries. On this basis, a single Penalties Business Calendar has been established, in which all days except Saturdays, Sundays, 25 December and 1 January are considered to be relevant business days for the administration of penalties (Penalties Business Day - PBD).

The following priority days and deadlines are determined in connection with the number of business days (PBD):

1) The participant affected by the penalty may appeal to KELER until the 10th business day of the month in connection with the penalty concerning the previous month.

2) The foreign CSD (investor CSD) holding an account with KELER may appeal to KELER until the 11th business day of the month in connection with the penalty concerning the previous month.

3) KELER may make changes to the penalties calculated for the previous month by the 12th business day of the month.

4) KELER will send the monthly report based on the finalised penalties of the previous month, including summaries, to the relevant participants on the 14th business day.

5) On the 15th business day the (PAIR) PFOD instructions are generated and sent to the settlement system dated to the 17th business day.

6) The penalties are due on the 17th business day of the month. The (PAIR) PFOD settlements planned settlement day.

If the PBD day listed in Sections 1-45 falls on a day that is not a KELER business day (i.e., KELER does not provide a settlement service), then the given event is due on the last day before the given PBD, when KELER is also open.

Thus, for example, if KELER kept it closed on the 12th PBD, the changes will be implemented by KELER on the 11th PBD at the latest, but at the same time the deadlines for appeals will be postponed earlier (e.g., the participant may file an appeal until the 9th PBD instead of the 10th day, or the foreign CSD type participant may submit an appeal until the 10th PBD instead of the 11^{t}h PND.) Accordingly, the sending of monthly reports is also no later than on the 14th business day (but in case of KELER closure, it is due on the previous KELER business day!)

If the 17th business day of the month (PBD) is not a KELER business day, then the settlement of the PFOD instructions for the settlement of penalties (Section 6) is due on the next KELER business day.

5.2.5. Appeal and modification of penalties

KELER participants may file an appeal on the basis of the daily reports received, if they object to the legitimacy of any of the penalties included in the report or to the details of its calculation or even the absence of a penalty. From the receipt of the daily report until the designated deadline of the month following the relevant month, up to and including the 10th business day (PBD), the participants or foreign (investing) depositoriesmay file an appeal until the 11th business day.

It may give rise to an appeal, among others, if the penalty reported by KELER deviates from the amount determined by the participant due to a master data error. For example, an error in the classification, liquidity of a financial instrument, or in the reference interest rate, and thus in the penalty interest rate applied, etc. due to incorrect details of the calculation, or if the penalty was charged on a late receipt of an instruction due to a technical error of KELER, a payment restriction procedure may be initiated against one of the participants concerned.

The message format required by KELER is not yet available for appeal, and an international standard is not yet known. Participants will be able to request a review of their penalties via email. During the appeal, all the data and information necessary to verify it was required. Thus, among others: The participant's account number, the identifier of the failed instruction, the reason for the appeal, and the details of the calculation deemed valid by the participant.

KELER examines the appeal and, if justified, corrects the previously calculated penalty. The modification may result in the cancellation, re-entry of the previously calculated penalty, modification of any details of the penalty. KELER will provide information on the result of the appeal in a reply letter to the party submitting the appeal, and in case of a change in the amount of the penalty, the amended (new) record will also appear in the next day's report.

However, KELER may make changes to the calculated penalties without appeal by the 12th business day of the month at the latest, if any of the data and parameters used for the calculation change in its own system. (E.g., the market price of the security).

If KELER modifies a penalty item or records it later, the item will appear in the next day's report to be sent to the affected participants. According to our plans, the daily reports will include both new and modified penalties for that day. (So, a consolidated report is made, no separate report is made for the new and one for the amended penalties.)

5.2.6. Settlement of penalties

No later than on the 15th business day of the month, KELER's penalty management system shall prepare the pre-value-dated and pre-matched PFOD instructions, with the help of which penalties will be collected and allocated on the 17th business day (PBD) of the month, or if that day non-KELER business day, then on the next KELER business day.

Where an external securities depository imposes penalties on a KELER participant in connection with its cross-border transaction, any amounts payable to the external depository that have been charged shall be settled on a separate PFOD instruction, in addition to any penalties calculated by KELER. Penalties emerging at external depositories are netted on the level of KELER's external account keeping parties (CSD links), including also cases where the specific KELER participant had a penalty in the specific month at several EU based central depositories via the affected external account keeping party. If, for example, the KELER participant had failed transactions also in French and Austrian depositories, for which the penalty was calculated in EUR and where KELER forwarded the affected instructions to the local markets through SIX SIS (as an external account keeping party), the French and Austrian penalty items that were imposed in the EUR currency are netted on SIX SIS's level vis-à-vis the KELER participant.

This means that KELER will generate as many PFOD instructions for a participant as is the number of account managers in which the participant has incurred penalties and the currencies in which such penalties are due to be collected / allocated *(e.g. 1. KELER HUF (Intra-CSD), 2. KELER EUR (Intra-CSD), 3. KELER USD (Intra-CSD), 4. KDPW PLN (Cross-CSD, 5. SIX SIS EUR (Cross-CSD)).*

Upon receipt of PFOD instructions with this PAIR transaction code in the settlement system, the client will be notified via the status advice message (MT548, sese.024) and in the monthly penalty reporton the final net amount by currency payable by the client to KELER or payable by KELER to the client after penalty amounts are summarized.

On the basis of this notification, the net paying participantshall, on the 17th business day, provide at least the amount in their cash collection account to cover the settlement of the penalties to be paid by the start of the settlement period.

(In connection with the settlement of penalties, the participants must indicate in advance and notify KELER the cash account numbers on which the collection and distribution may be performed by KELER. KELER registers these cash account numbers as master data and uses them to generate PFOD instructions.)

On the 17th business day, KELER attempts to collect penalties with the special PFOD transaction. (Instructions to debit penalties are expected to be submitted in a released-for-settlement (released) status and instructions to credit penalties to participants to be submitted in a withheld (hold) status to the settlement system on a monthly basis.)

Based on the successfully executed PFOD instructions, KELER stores the collected amounts in a dedicated cash account until all related penalties have been settled. Eligible participants will only be credited with penalties (PFOD instructions for payment suspended until then), if all collections have been successfully completed.

KELER will generate the PFOD instructions designed to settle cash penalties using the following key data:

- *Transaction type: PAIR*
- *ISIN: LU2128008567*
- *Trade day: 15. PBD*
- *Intended settlement day: 17. PDB*
- *Securities quantity: 0*
- *The participant's securities account number: XXXXPENLTY (where XXXX denote the participant's main account, PENLTY denotes the sub-account dedicated for cash penalty settlement; this account was/is opened for all KELER participants)*
- *The settlement partner's securities account number: 9999PENLTY (KELER technical account, matching BIC: KELRHUHBXXX)*

Regarding the management of any possible non-payment of penalties, it is expected that KELER would apply the following procedure:

None of the participants may receive a penalty credit on the 17th business day (PBD) as long as and until any of the participants fails to meet their payment obligation. KELER would not make payments to any of the entitled participants until KELER managed to successfully collect the amounts from all participants, that is until such time KELER would withhold the settlement of the affected PFOD instructions (in hold status).

- If the PFOD instruction fails to be completed due to the lack of cash (at the latest) until 9 AM on the 17th business day, KELER concludes the default and sends a notification to the defaulting participant. If debiting continues to remain unsuccessful within the day, until 1:00 PM, KELER notifies all participants of the fact of defaulting.

- If the default continues to persist even on the 18th business day, KELEL recalculates the payment conditions of the defaulting and also of all affected participants and generates new PFOD instructions (1. For amounts that are expected to be settled and 2. for defaulting amounts.)

- If KELEL detects PFOD instructions that remained suspended on the last business day of the specific month, these are going to be deleted from the system. Subsequently the affected participants (and their clients) may assert and enforce their claims against each other in a bilateral manner, outside the cash penalty system.

In the event that a default occurs or the above exception-management procedures are followed, it is the plan of KELER to sanction the defaulting participant by charging an increased fee, and if the payment discipline is repeatedly not maintained, this may result in the suspension and withdrawal of KELER membership. Moreover, the affected cases – including the names of the participants – may be reported to the supervisory authority!

5.2.7. Penalties due for transactions settled by the central counterparty (KELER CCP)

The calculation of penalties related to settlement instructions settled and failed by the central counterparty, thus the managing of possible appeals, is also the task of KELER, at the same time the collection and distribution of penalties is the task of the central counterparty (KELER CCP Ltd.)!

Based on legal requirements, the central securities depository reports to the central counterparty the details of penalties due for failed settlement instructions that the central counterparty cleared, and the central counterparty is required to collect from and distribute to clearing members such penalties.

Pursuant to the above, KELER reports the data of failed transactions and penalties to both the relevant participant and KELER CCP, (indicating the CCP involvement), however, these penalties are disregarded in determining the net payment positions per KELER participant calculated by KELER and thus these amounts do not form part of the penalty settlements initiated by KELER (type PFOD).

KELER CCP provides its clients with special information on SDR compliance and penalty management!

5.3.   Compulsory buy-in

Pursuant to the legal provisions, the parties involved in the transaction are obliged to partially settle their settlement instructions at the end of the mandatory settlement extension grace period. The pending settlement instruction must be suspended by the non-performing party (the participant delivering the securities) and a compulsory buy-in process must be performed instead. The original seller instruction must be kept in the hold condition until the end of the buy-in process. At the instruction level, the reason for the suspension will be optionally indicated in the status change messages (MT530/sese.030) (Buy-in reason: BYIY).

The receiving (innocent buyer) participant settles the buy-in transaction against the buy-in agent of their choice, or performs cash compensation if the buy-in is not or only partially successful. KELER enables the settlement of buy-in transactions with the transaction code 'TRAD' or 'OWNI'. (Dedicated 'BYBIY" transaction type for this purpose will not be available at the time of the go-live date.)

KELER has no role in customer-side processes related to buy-in. (e.g., instruction monitoring, suspension, notification of partners, appointment of a buy-in agent, conclusion of a transaction, cancellation and creation of an instruction, cash compensation, etc.) This is entirely the task and responsibility of the participants involved in the transaction and the CCP!

In case of a partially successful buy-in, new instructions must be created between the original parties and entered into KELER's system with regard to the remaining quantity of securities on the same date as the intended settlement date of the original settlement instruction. These settlement instructions may be given a special designation in order to be exempt from the LMFP-type penalty, as the penalty is only applicable from the time of acceptance to the settlement system. To indicate instructions, the code 'BPSS [15]must be used in accordance with the rules for filling in the particular message type. The exemption can only be enforced if both participants have indicated their instructions as required.

At the end of the buy-in (or cash compensation) process, the participants concerned are obliged to cancel their original settlement instructions from KELER's system.

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[15] As part of the 2021. November SWIFT release the code will change from BSSP to BPSS.

5.3.1. Reporting buy-in

The receiving trading party - or the receiving KELER participant acting in its name and on its behalf - is obliged to report on the final result of the buy-in process to the CSD. Based on its legal obligation, KELER is obliged to register these data and provide them to the supervisory authorities.

The report sent by the participant / CCP shall include, among others, the following information:

- The ID of the failed settlement instruction
- Securities account number
- The outcome of the buy-in process (fully successful, partially successful, financial compensation was provided)
- Quantity of bought-in financial instruments
- Price and currency of bought-in financial instruments
- Amount and currency of cash compensation
- Date of buy-in

KELER's clients at the beginning can complete the reports with an excel form sent through e-mail.

Later, KELER is planning to develop a surface on KID and an XML import for this purpose, and also MT530 messages, but these developments will be accomplished in a later phase of the programme.

6. CLIENT REPORTS, QUERIES

The general goal related to the redesign of statements is to ensure as full compliance as possible with KELER reports based on ISO standards, and that statements are easy to interpret and are bilingual (Hungarian, English).

Accordingly, the currently available reports that are linked in terms of content or sometimes contain redundant information will be merged. The reviewed data content does not mean that information content will be reduced, reports will show all data that are relevant for Clients.

Furthermore, the introduction of the new reports will make available additional information in many areas, or will bring useful fine-tuning. However, please note that in addition to the new reports, some business process-related reports will continue to be generated in the current account management systems, so existing reports will not change and will continue to be available on KID.

Within the framework of the Program, KELER plans to expand the queries that can be initiated by the Clients through the KID interface (e.g., account history, balances etc.).

The format descriptions of the new ISO reports produced under the Program will also be published on the SWIFT MyStandards portal, and the descriptions of the remaining KID reports are included in the new KIDIO.

Reports related to securities settlement:

Code:	Description		Terminated due to refinancing	Format
EP01	Securities account balance statement	new	T751	semt.002.001.10 MT535
EP02	Statement of booked securities instructions with opening / closing balance	new	O101, O106, O108, V106, V108, B101,	semt.017.001.10 MT536
EP34	Statement of pending and deleted securities instructions	new	O100, B100, T708N,	semt.018.001.11 MT537
EP05	Statement of completed blocking instructions	new	T433, T522	semt.016.001.08
EP67	Statement of deleted, non-completed blocking instructions	new	T527, T541	semt.034.001.01
PB	Daily and monthly penalty for failed settlements	new		semt.044.001.01 , MT537
T523	Blocking statement for the blocking party and the beneficiary (custody certificate)	no variation		text
E761	Combined consolidated securities account statement	no variation		text
T761	T-day statement of consolidated securities accounts	no variation		text
T768	Consolidated securities account statement changed on T-day	no variation		text
D762	Central securities account status	no variation		text
T521	Statement of live blockings	new fields added		text
T524	Statement of blockings changed on T-day	no variation		text
T550	Service fees item by item	no variation		text
T700	Intra-day turnover	the value set of the transaction type changes		text
T711	Securities account detailed and consolidated status list	no variation		text
T712	Securities account detailed and consolidated status list	no variation		text
T714	Statement of inventory at the balance sheet date of securities conversion	no variation		text
T772	Issuers consolidated statement	no variation		text
A705	T + 2 Government securities statement	name of the statement changed		text
T705	Statement of securities custody accounts	no variation		text

Securities settlement queries:

Title	Description	Terminated due to refinancing	Format
Unmatched transactions	EÉR and OTC unmatched transactions can be queried together with the function provided by KID	EERNONP, NONPAIR	xml
Queued items	The KID provides queries for pending securities settlement transactions (queue monitor)	KVSMON	xml
Securities account balance	The function is available unchanged on the KID interface		text

Regarding new reports, with KSZP's implementation it will become possible to select the delivery channel of the report (KID/SWIFT) and in certain cases the language can be selected of the report on main account level.

In the case of individual reports, it is also possible to set up if the report should be generated only if there is turnover (change) or in all cases (zero report). The above parameters are set up in the test and live environments according to the declaration issued by our clients.

The scope of reports making it possible to set up the above parameters:

- EP01N –Securities account statement – daily, Hungarian
- EP01NA - Securities account statement – daily, English
- EP02N – Completed securities transactions – daily
- EP34 – Suspended and deleted securities instructions
- EP05 – Completed blockings
- EP67 – Deleted and not completed blockings
- PBNR – Cash penalty report (daily)
- PBHR - Cash penalty report (monthly)

7. FEE CALCULATION, INVOICING

When designing our new fee calculation and invoicing preparation system, we strive to make it as complete as possible to perform calculations according to the current fee structure, as well as to invoice the calculated fees in units that also take into account the expectations of our clients.

The introduction of the new fee calculation and invoicing preparation system is currently planned to take place in several phases, where the going live date of the first phase coincides with the going live date of the securities settlement system, while the planning of further phases is currently in progress.

The content of the first phase is in line with the functionality of the securities settlement system, focusing primarily on the related fee calculation, so its going live does not significantly affect our Clients. Accordingly, the content and format of invoicing and related reports do not change at this phase.

In general, KELER strives to develop a parameterisable fee calculation and invoicing preparation system that flexibly satisfies both clients and internal needs, the benefits of which our Clients will experience only after the later phases of the Program have been gone live.

The prevailing Fee Schedule of KELER provides information on fees, fee structures and any changes in the process of fee calculation applied in the future.

In connection with the changes implemented within the framework of the first phase of the modernisation of the Program concerning fee calculation and invoicing, the following points can be highlighted.

7.1. Changes related to fee calculation

7.1.1. Newly introduced securities settlement transactions

With the going live of the securities settlement system, the current DVD (Delivery versus Delivery) transaction type will be replaced by linked FOP transfers, the Payment free of delivery (PFOD) transaction will be introduced as a new transaction type, and the managing of REPO transactions will also change, for which the new fee calculation algorithms are implemented simultaneously with the going live of the securities settlement system.

7.2. Novelties and changes in invoicing

7.2.1. SWIFT message communication fees related to securities settlement

With the introduction of the new securities settlement system, the message communication formats to be used in the future and the set of rules to be followed will change compared to current practice. As a result, SWIFT message fees related to securities settlement will in future be included in the fee account (account number starting with K5), which includes securities custody and registration fees as well as securities transaction fees.

As before, SWIFT message fees related to cash transactions will continue to be displayed on the fee account containing the fees related to foreign exchange account management (account number starting with DM).

7.2.2. Reverse Billing

As a part of reverse billing – as an optional service – KELER makes it possible for our Clients to pay SWIFT's message based fees to be charged by KELER directly to SWIFT (contrary to the practice followed until now). It is the benefit of the service that Clients that are already a member of SWIFT will be charged the fee pursuant

to their existing contract with the service provider, and it will only be necessary to pay a fixed monthly fee to KELER. Information about the rate and the order of magnitude of this fee will be provided in KELER's Fee Regulation.

The conditions for using the reverse billing service include:

- conclusion of a contract with KELER regarding the use of the service,
- RMA key exchange among the affected parties,
- Accession to KELER's closed user group (CUG, Closed User Group) via the SWIFT website (www.swift.com).

Accession to KELER's closed user group must be requested by the affected parties themselves after which both KELER and SWIFT must approve the request, and if this is approved, they become members of the closed user group.

During live operation KELER will use the KELRHUHAXXX BIC code for communication within the closed user group in the case of sending outgoing messages (the test run equivalent of this is ZYAKHUH0XXX).

During the course of both test and live operation, our Clients can choose from two options regarding the sending of messages associated with the reverse billing service:

- they continue to send their messages addressed to KELER to KELER's Master Bic (live: KELRHUHBXXX, test: KELRHUH0XXX) in which case a one-way RMA key exchange application will be necessary (in the case of live operation for both the KELRHUHBXXX and the KELRHUHAXXX BIC codes and in the case of test operation for both the KELRHUH0XXX and the ZYAKHUH0XXX BIC codes); or
- during live operation they may send their messages to the KELRHUHAXXX BIC code, and in the case of testing also to the ZYAKHUH0XXX BIC code; in this case, however, they will have to request a two-way exchange when requesting the RMA key exchange.

It is important to note that Clients currently not having a SWIFT relationship with KELER must initiate that the RMA key is exchanged with regard to KELER'S both BIC codes, prior to the testing period.

During the course of live operation KELER will, in all cases, return reverse billing related messages from the KELRHUHAXXX BIC code, and during test operation from the ZYAKHUH0XXX BIC code. In VIBER turnover, our Clients will continue to be contacted with the KELRHUHBXXX BIC code.

For the purposes of sending and receiving messages within the group, our Clients are not expected to apply for a new BIC code.

The service is available with respect to SWIFT messages (conforming to the ISO15022 message standard) in the closed group set up by KELER (MT103, MT202, MT202COV, MT210, MTn92, MTn96, MT900, MT910, MT920, MT940, MT941, MT942, MT950, MTn98, MT508, MT530, MT535, MT536, MT537, MT540, MT541, MT542, MT543, MT544, MT545, MT546, MT547, MT548, MT549, MT578, MT564, MT565, MT566, MT567, MT568).

TO our customers who use the Reverse Billing service, KELER will send the foillowing MT messages from the BIC code KELRHUHAXXX BIC:

- Statements: MT535, MT536, MT537, MT950
- Status messages and confirmations: MT544, MT545, MT546, MT547, MT548, MT508, MT900, MT910
- Allegements and acknowledgement: MT578, MTn96

Our customers need to implement the required system developments to receive messages.

More information about the fees shall be included in KELER's Fees Regulations published prior to introducing the service.