



Post-trade made easy

NewClear

Product description

4th June, 2003

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1. Introduction and guidelines

During the past year Euroclear Sweden has worked together with market participants to produce a clearing and settlement system that offers secure and effective settlement without the risk of delay. NewClear replaces today's existing clearing and settlement system, at the same time as it introduces functions to meet future demands concerning functionality.

This product description comprises an amalgamation and update of the previously published documents "Produktbeskrivning Bas" (Product Description – Basic) and "Produktbeskrivning Tillägg" (Product description – Additional functionality). It describes how Euroclear Sweden's new settlement functionality will operate, following the necessary development and adaptation of the systems at Euroclear Sweden and its clearing members.

The main sections of the document deal with the roles in NewClear, the settlement process, payment administration and redemption and interest payments. In the section on "Payment administration", a description is given of the credit-creating transactions that will be offered to settlement banks in conjunction with PM settlement.

One of the sections outlines the settlement process from the time of execution of the trade up to the day prior to settlement, and a further section deals with the settlement process on the actual day of settlement.

1.1 Reading recommendations

Reading recommendations for the different sections are outlined in the table below. Parts that are strongly recommended for reading have been marked with an “x” in the column for the respective roles. The first column “SB” gives recommendations for settlement banks, the columns “CM” give recommendations for clearing members in the respective sub-markets and “clients” columns give recommendations for other participants in general. Note that the recommendations are stated on the level of what is strongly recommended reading. There may also be parts of interest for clearing members in what is stated as recommended reading for settlement banks.

		AM/PM Settl. Bank	AM Submarket, Euroclear Sweden		PM Submarket, Euroclear Sweden	
		SB	CM	Client	CM	Client
1 Introduction						
1	Introduction	x	x	x	x	x
2 Roles in NewClear						
2.1	Roles in NewClear	x	x	x	x	x
2.1.1	Account operators	x	x	x	x	x
2.1.2	Clearing members	x	x	x	x	x
2.1.3	Settlement banks	x	x	x	x	x
2.1.4	Summary of relations between account operators, settlement banks and clearing members	x	x	x	x	x
3 The settlement process						
3.1	The settlement process at VPC	x	x	x	x	x
3.2	The settlement timetable	x	x	x	x	x
4 Liquidity management						
4.1	Liquidity management in NewClear	x	x		x	
4.1.1	Clearing member identity (CID) and PM account group, PMK group		x		x	
4.2	Settlement headroom	x	x	x	x	x
4.2.1	Settlement headroom - settlement banks	x				
4.2.2	Settlement headroom - clearing members	x	x		x	
4.2.3	Dealing with settlement headroom after settlement - settlement banks	x				
4.2.4	Dealing with settlement headroom after settlement - clearing members	x	x		x	
4.3	Credit-creating transactions relating to settlement banks	x				
4.3.1	Purpose	x				
4.3.2	Recording of intraday credits	x				
4.3.3	Collateral with respect to intraday credit	x				
4.3.4	Valuation of collateral	x				
4.3.5	Manual repayment of intraday credit	x				
4.3.6	Repayment of intraday credit after final settlement	x				
4.3.7	Fallback procedure for resetting intraday credit to zero	x				
4.3.8	Consequences for settlement banks	x				
5 Redemption and interest payments						
5.1	The interest and redemption process	x			x	x
5.2	Phase 1 –Pre-settlement check of the instructions concerning securities subject to redemption	x			x	x
5.3	Phase 2 - Beneficial owners and the calculation of redemption	x			x	x
5.4	Phase 3 – Pre-settlement check of issue	x			x	x

5.5	Phase 4 - Liquidity-saving measures	x			x	x
5.5.1	Offsetting	x			x	x
5.5.2	Internal disbursements - clearing members / issuing agents	x			x	x
5.5.3	Internal disbursements - Settlement Banks	x			x	x
5.6	Phase 5 - Final pre-settlement check	x			x	x
5.7	Phase 6 – Disbursement	x			x	x
5.8	Preparations and follow-up	x			x	
6	The settlement process up to day S					
6.1	Reporting of instructions relating to securities		x		x	
6.1.1	Transfer transactions		x		x	
6.1.2	Transactions relating to AM settlement		x			
6.1.3	Prematch transactions		x			
6.1.4	Premium bonds		x			
6.1.5	Transactions relating to PM settlement				x	
6.1.6	Transactions relating to real time gross settlement (RTGS)	x	x		x	
6.2	Cancellations	x	x		x	
6.3	Status handling		x		x	
6.3.1	Status of cancellation transactions		x		x	
6.4	Preparing for S		x		x	
6.4.1	Dealing with instructions without counterparty		x		x	
6.4.2	Matching		x		x	
6.4.3	Dealing with negative positions and discrepancies		x		x	
6.4.4	Preparing payment capacity for clearing members	x	x		x	
7	The settlement process on day S					
7.1	Queue handling		x		x	
7.1.1	Quantity queuing - VPC accounts		x		x	
7.1.2	Quantity queuing - clearing accounts (applies only to the equity market)		x		x	
7.1.3	Payment queuing	x	x		x	
7.2	The provision of liquidity	x				
7.3	Pre-settlement check	x	x		x	
7.3.1	Netting functions	x	x		x	
7.4	Reconciliation and follow-up	x	x		x	
7.4.1	Settlement banks	x				
7.4.2	Clearing members		x		x	
7.4.3	Clearing member identity/PM account group		x		x	
7.5	Settlement	x	x		x	
7.5.1	Settlement against payment	x	x		x	
7.5.2	Resetting to zero of intraday credits	x				
7.5.3	Settlement free of payment		x		x	
8	Definitions					
8	Definitions	x	x	x	x	x

2. Roles in NewClear

2.1 Roles in NewClear

Those who have worked with the VPC system before will recognise the roles and many of the concepts used in NewClear. The roles which will primarily be affected by the pending changes in conjunction with NewClear are settlement banks and clearing members.

Below is a brief description of some important roles in NewClear.

2.1.1 Account operators

An account operator (KI) is an institution that operates specific VPC accounts, and handles the opening, changing and termination of these accounts.

Account operators must have a direct connection to VPC and are responsible for making entries on VPC accounts on behalf of the VPC account holder, and on clearing accounts on behalf of clearing members.

2.1.2 Clearing members

A clearing member may choose to participate in one or more of the following sub-markets in the VPC system, depending on the type of security and the currency:

- PM – EUR
- PM – SEK
- AM – EUR
- AM – SEK

A clearing member is registered in VPC's participant register, where it is possible to obtain information regarding which sub-market settlement the clearing member is participating in. Each clearing member is assigned at least one clearing member identity, by means of which all instructions registered by the clearing member are identified.

In conjunction with the commencement of clearing membership, the clearing member is also assigned a cash memorandum account (LNK) for each currency and settlement category.

It is possible for a clearing member to apply for more than one clearing member identity.

2.1.3 Settlement banks

Settlement banks receive and make payments on behalf of clearing members. The payments are related to the transfer orders registered in VPC for a clearing member.

Settlement banks may operate in one or more of the currencies and sub-markets that are handled in VPC. At present, settlement only takes place in SEK and EUR.

A settlement bank must register a limit for those clearing members for whom it acts as settlement bank. In essence, this limit means that the settlement bank assumes an unconditional obligation, on behalf of its clearing member, to pay to another settlement bank or clearing member at the same time as the limit is being utilised in conjunction with 'ready to settle' marking.

A settlement bank must ensure that sufficient funds are available at VPC to guarantee its own commitments with respect to settlement on behalf of a clearing member. This is achieved by transferring funds in RIX to central bank accounts administered by VPC for

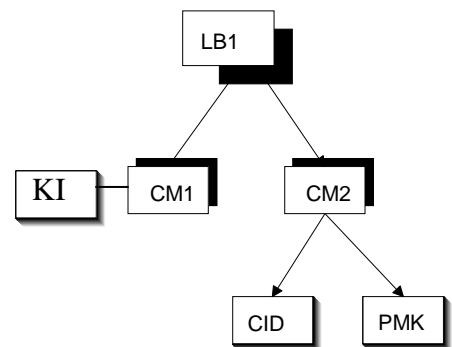
securities settlement. By transferring funds for settlement at VPC, the settlement bank foregoes the right to freely dispose of these funds.

2.1.4 Summary of relations between account operators, settlement banks and clearing members

The settlement banks exchange funds for their underlying clearing members. Clearing members are responsible for carrying out the instructions that have been entered on their behalf. This obligation includes all clearing identities (CIDs) of the clearing member. The account operator must be connected to the system, which is not a requirement in the case of the clearing member.

- ❑ A settlement bank (*LB*) has one or more clearing members (*CM1* and *CM2*), on whose behalf it exchanges payments.
- ❑ A clearing member (*CM2*) may be identified by one or more clearing member identities (*CID*).
- ❑ A *CM* may group its instructions and payments as preferred, by registering one or more *CIDs* (in *AM* settlement) and one or more *PM* account groups, *PMKs* (in *PM* settlement).
- ❑ A clearing member (*CM1*) may effect the transaction input itself or give instructions to an account operator (*KI*) to effect the transaction input on its behalf.

Fig. 1: Relations between settlement bank (*LB*), clearing members (*CM*) and account operator (*KI*)



The contractual relations with VPC as regards clearing members, settlement banks and account operators are regulated in VPC's General Terms and Conditions.

3. The settlement process

With the introduction of NewClear, VPC will be able to offer two main types of settlement:

- Gross settlement at certain pre-determined points in time, known as DTGS (Designated Time Gross Settlement)
- Gross settlement in real time, known as RTGS (Real Time Gross Settlement).

RTGS is in operation at present. However, certain changes will be made in the existing procedures.

3.1 The settlement process at VPC

The VPC system for clearing and settlement aims to guarantee clearing members a final and irrevocable settlement via DvP (Delivery versus Payment) at the clearing member level. This means, inter alia, that the system guarantees that no clearing member risks delivering without receiving payment or vice versa. For clearing members that in themselves act as a settlement bank and have an account in RIX, payment is received, in VPC's settlement, from another settlement bank in the form of central bank funds. For clearing members that are not settlement banks in their own right, payment is received at VPC in the form of an irrevocable commitment by the settlement bank to pay to the clearing member's account at the settlement bank.

The settlement process in NewClear distinguishes itself from today's settlement in that in the future it will not be dependent on a simultaneous regulation of accounts in the RIX system in order to be implemented. The aim is to enable the VPC system to settle, independent of the RIX system.

Settlement is in itself a process covering several stages. The various phases in the process are briefly described in the following outline. (For a more detailed description, see sections 6 and 7).

1. Input of transfer order

The settlement process is initiated when a clearing member submits a transfer order to VPC. Technically, this is done in a way that is strictly regulated in the VPC Rules and user documentation. In short, this presupposes that a clearing member gives instructions to VPC to transfer securities against payment. The Regulations specify when a transfer order is deemed to have been entered in the system.

2. Matching

Once both the purchasing and the selling clearing members have entered their respective transfer orders in the system, a matching of the instructions is normally required for the settlement process to continue. Matching involves checking that the parties' settlement instructions agree with each other. Once matching has been conducted, neither party may unilaterally revoke its transfer order. If, however, the parties are in agreement, a cancellation may be made, which in itself shall be considered as a new instruction requiring matching.

3. Assuring delivery and payment capacity

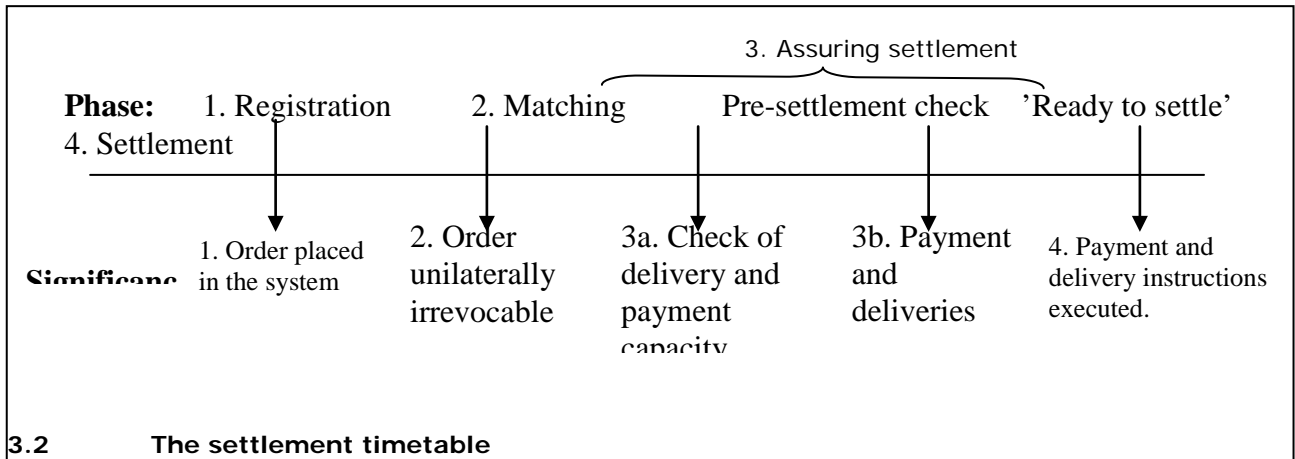
Clearing members at VPC do not need to guarantee either delivery or payment capacity in advance for all their registered transfer orders. One requirement, however, is that each clearing member shall have a settlement bank which undertakes to make and receive payment on behalf of the clearing member and in accordance with the VPC Rules. In order for settlement to take place, it is necessary for VPC to carry out a pre-settlement check, that is, a check to confirm that the clearing members have delivery or payment capacity. This is done by giving a 'ready to settle' marking to the clearing members' payment and delivery instructions. To acquire 'ready to settle' status, a sufficient amount of 'disposable' securities and sufficient settlement headroom must be available.

4. The moment of settlement

This is the final stage in the settlement process. Settlement takes place when the securities are finally credited to the accounts specified by the purchasing clearing member. At the same time the same amount and type of securities are debited to those accounts specified by the selling clearing member. A condition for being able to effect the debiting and crediting is that the purchasing clearing member effects payment to the selling clearing member. Only those instructions that have been designated 'ready to settle' will be settled.

After settlement both securities and the funds are free to be used by the holders.

Fig 2: The various stages of the settlement process and their significance.

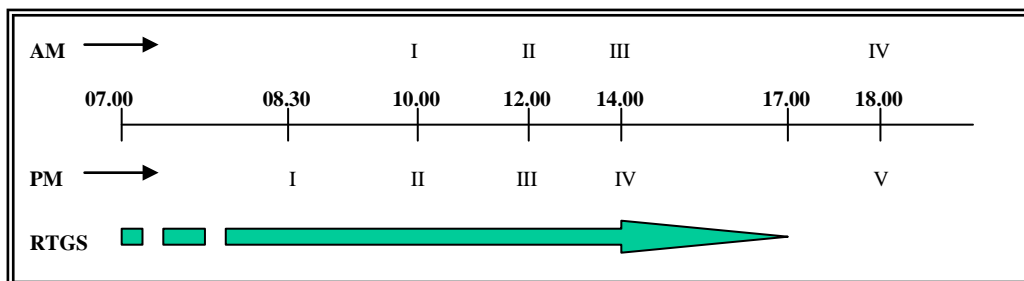


NewClear will be able to offer several settlement cycles. The following description is based on four settlement cycles for AM settlement and five for PM settlement.

NewClear will be developed in such a way as to facilitate the inclusion of further settlement cycles or the alteration of times. If the market prefers, it is technically possible to change over to a continuous settlement throughout the day and settlement at times when RIX is not open.

The settlement timetable specifies the times when settlement occasions take place. In the proposed timetable, which is not yet confirmed, settlement against payment occurs for both sub-markets in the VPC system at 10.00, 12.00 and 14.00 hours. A further settlement, free of payment, occurs at 18.00 hours. For the PM sub-market, an additional settlement against payment has been proposed for 08.30.

Fig. 3: Proposed settlement timetable for the different settlement types – AM, PM, RTGS



Instructions that have not been settled in the first settlement cycle will instead be assessed for 'ready to settle' marking and settlement in subsequent cycles. Instructions that have not been possible to settle in any of the settlement cycles will receive the status

'not settled'. They must consequently be entered once again for settlement on the following day.

Gross settlement (RTGS instructions) with payment may occur at any time between 07.00-17.00 hours, i.e. while the RIX system is open.

By introducing several settlement cycles and by making it possible to enter transactions on settlement day, the foundation has been laid for proceeding towards a trade timetable that involves trading on one day with settlement on the following day, in other words T+1, or, if preferred, T+0.

The PM settlements include settlement of interest and redemption payments.

4. Liquidity management

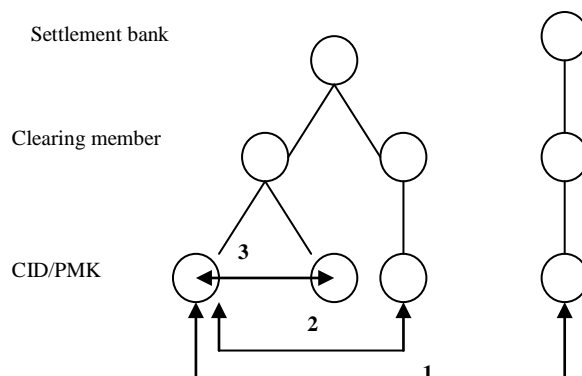
4.1 Liquidity management in NewClear

NewClear will only designate an instruction as 'ready to settle' when an assessment of the delivery and payment capacity has been successfully executed. Payment capacity is checked at different payment levels, on the purchasing clearing member's cash memorandum account (LNK), and, where appropriate, on the liquidity settlement account (LAK) of the settlement bank.

In NewClear the term "settlement headroom" is used instead of, or as a complement to, "payment capacity".

Below are some examples of various transaction types leading to an interrelationship between the different levels: settlement bank, clearing member and clearing member identity (CID)/PM account group (PMK)

Fig.4: Different settlement types and the interrelationship between settlement bank, clearing member and clearing member identity



- Payment level 1, a transaction between two CID/PMKs belonging to different clearing members, each with its own settlement bank, affects the settlement headroom for both clearing members concerned, as well as the settlement headroom for their settlement banks.
- Payment level 2, a transaction between two CID/PMKs belonging to different clearing members, using the same settlement bank, affects the settlement headroom for the clearing members but not the settlement headroom for the settlement bank.
- Payment level 3, a transaction between two CID/PMKs belonging to the same clearing member does not affect the settlement headroom for either the clearing member or the settlement bank.

4.1.1 Clearing member identity (CID), and PM account group (PMK)

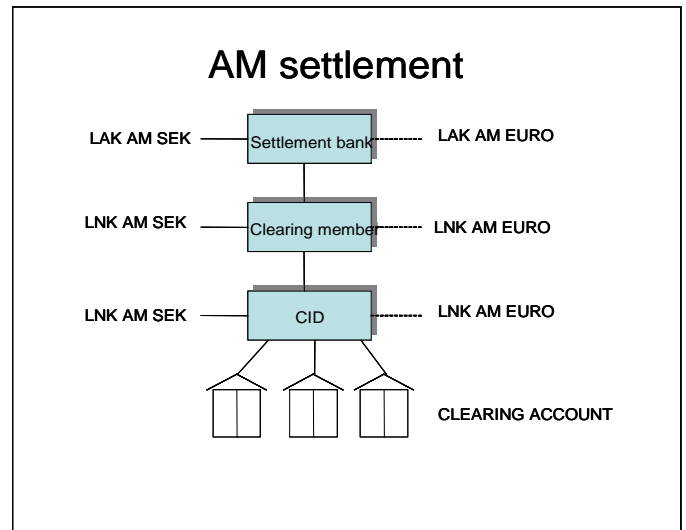
- **CID in the AM sub-market**

An instruction relating to AM settlement is always linked to a CID. A CID is composed of a 3-character clearing member identity, also known as clearing identity.

A clearing member may have one or more clearing member identities depending on how it prefers to group the instructions/ payments.

The 3-character clearing member identity links together the clearing accounts created for that identity with a specific cash memorandum account, LNK.

In this way, the pre-settlement check of a payment is directed to a specific cash memorandum account, LNK



Each CID is linked to an LNK in SEK and/or an LNK in EURO.

- **PMK in the PM sub-market**

An instruction relating to PM settlement is always linked to a PM account.

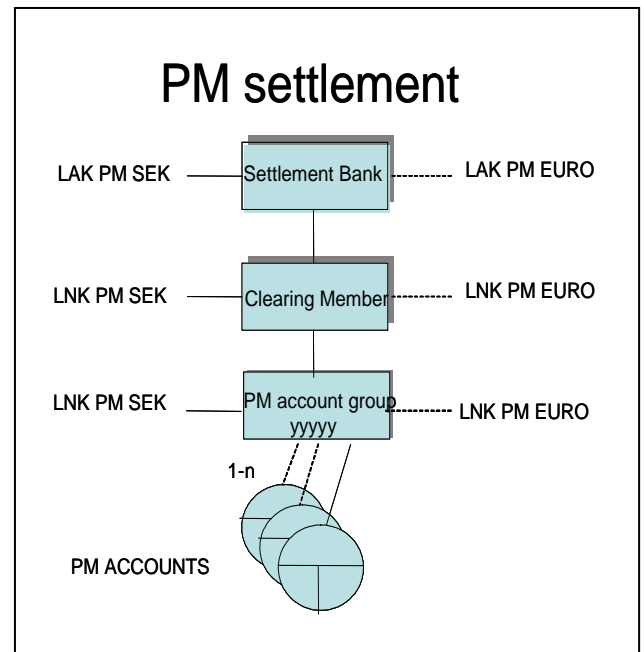
Each PM account is linked to a PM account group, PMK.

A clearing member may have one or more PM account groups depending how it prefers to group the instructions/payments.

To each PM account group, one or more PM accounts may be linked.

With the help of a PM account group, which is registered by the clearing member and and is designated at the opening of a PM account, the pre-settlement check of a payment is directed to a specific cash memorandum account, LNK.

Each PM account group has a cash memorandum account, LNK, in SEK and/or in EURO.



4.2 Settlement headroom

Settlement headroom constitutes the amount available for utilisation as payment capacity in conjunction with a pre-settlement check. The settlement headroom comprises two parts. One part is made available before the settlement process starts. Insofar as clearing members are concerned, this part is defined by limits set by the settlement bank. For settlement banks, this part consists of central bank funds allocated for securities settlement. The second part of the settlement headroom is created within the framework of the settlement process in conjunction with the 'ready to settle' marking of instructions, i.e. the net total of 'ready to settle' instructions.

The following sections describe the settlement headroom for settlement banks and for clearing members.

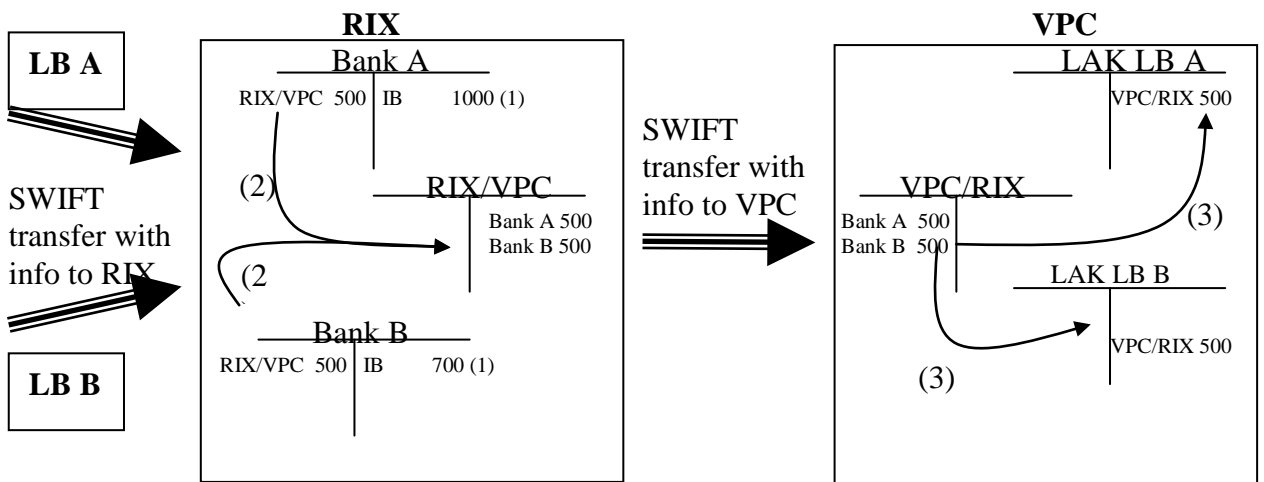
4.2.1 Settlement headroom – settlement banks

The settlement bank must assure its obligations in respect of settlement by allocating central bank funds for securities settlement before VPC initiates a pre-settlement check. The settlement bank achieves this by transferring funds from its regular RIX account in the RIX system to a particular central bank credit account at VPC intended for securities settlement, known as a liquidity settlement account (LAK). VPC administrates these liquidity settlement accounts in conjunction with the settlement process.

For accounting reasons, special accounts are used to enable the transfer of funds between the RIX accounts that exist in the Central Bank’s RIX system and the central bank credit accounts that exist in the VPC system. These accounts are called RIX/VPC (in the RIX system) and VPC/RIX (in the VPC system) and shall be considered simply as “transfer accounts” in order to be able to transfer funds between the two systems.

The illustration below shows how settlement headroom is created by transfer of funds from the RIX system to the VPC system. The diagram is made from the Riksbank’s perspective, that is, the accounts used are to be seen as “debt accounts” and show the debt that the Riksbank has to each settlement bank, or, expressed in different terms, the claim that each bank has on the Riksbank. This means that a debit involves a reduction of the balance on the account whereas a credit involves an increase of the balance on the account.

Fig. 5: The transfer of funds from RIX to VPC



- 1) To begin with, settlement bank A has a balance on its regular RIX account of 1000. Settlement bank B has a balance of 700.
- 2) Bank A and Bank B each want to allocate 500 for settlement in VPC by transferring to their respective liquidity settlement accounts, LAKs. Each bank does this by sending transfer order MT202 via Swift to the Riksbank in respect of 500 from the regular RIX account to the RIX/VPC omnibus account that the Riksbank maintains for the accounts administered by VPC, called RIX/VPC. After transfer, settlement bank A has 500 (1000-500) left on its regular account and settlement bank B has 200 (700-500) left on its regular RIX account.
- 3) The 500 transferred from each bank to RIX/VPC is registered in VPC on the liquidity settlement account (LAK) of each settlement bank. The balance constitutes each settlement bank’s initial settlement headroom in VPC. Settlement bank A therefore has a settlement headroom of 500 and settlement bank B has a settlement headroom of 500 after transfer. In order to be able to make a simple reconciliation of all settlement bank claims on the RIX/VPC account at the Riksbank, all transfers from RIX to NewClear are entered against

an account which in NewClear is called VPC/RIX. The balance on RIX/VPC must always equal the balance on VPC/RIX.

The settlement headroom in respect of settlement banks is comprised of payments transferred to the liquidity settlement account (LAK), plus the net of the underlying clearing members' instructions that are marked 'ready to settle'. In the fixed income market, interest and redemption are also included for receipt/payment. An instruction with 'ready to settle' status that has been entered on a liquidity settlement account (LAK) involves a commitment to make or receive payment from another settlement bank on behalf of the clearing member.

Each settlement bank has a liquidity settlement account (LAK) in those currencies and settlement types in which it participates.

Changes in the settlement headroom can be illustrated by the following example, showing how a purchase or sale instruction with 'ready to settle' marking affects the size of the settlement headroom:

Fig. 6: Settlement headroom in respect of a settlement bank

Event:	Amount	Current settlement headroom:	
1. Before transfer from regular RIX account to LAK		0	
2. Transfer from regular RIX account to LAK	500	500	
3. 'Ready to settle' purchase for CM	100	400	
4. 'Ready to settle' sale for CM		200	600

The 'ready to settle' instructions in the example above refer to underlying clearing members' instructions where the counterparty uses another settlement bank. The size of the settlement headroom may be increased by the transfer of additional funds RIX/VPC for deposit on the liquidity settlement account (LAK), or alternatively decreased by withdrawal from the VPC system for deposit on a regular RIX account.

4.2.2 Settlement headroom – clearing members

The payment commitment of clearing members is guaranteed by utilising each clearing member's settlement headroom in the 'ready to settle' marking. The settlement headroom for a clearing member consists of a limit, set by the settlement bank, plus the net of all 'ready to settle' instructions. Other events/measures that may affect the size of the settlement headroom are increases/decreases instructed by the settlement bank. Such instructions could be made, if preferred, in the form of a standing order.

The limit for a clearing member is registered in the VPC system by the settlement bank before 'ready to settle' marking begins on settlement day S. The limit involves a commitment from the settlement bank to pay this amount on behalf of the clearing member. In addition to the limit, the settlement bank is obliged to pay, on the clearing member's behalf, the whole of the settlement headroom employed in conjunction with the 'ready to settle' marking.

The settlement headroom may be considered as consisting of two parts, of which one part (the limit, and any manual increase of the headroom) is not guaranteed within the framework of NewClear, but can be seen rather as a credit guaranteed by means of an agreement between the settlement bank and the clearing member. The second part, the net of the 'ready to settle' instructions is, on the other hand, guaranteed within the framework of NewClear, by utilising the settlement headroom at the relevant levels.

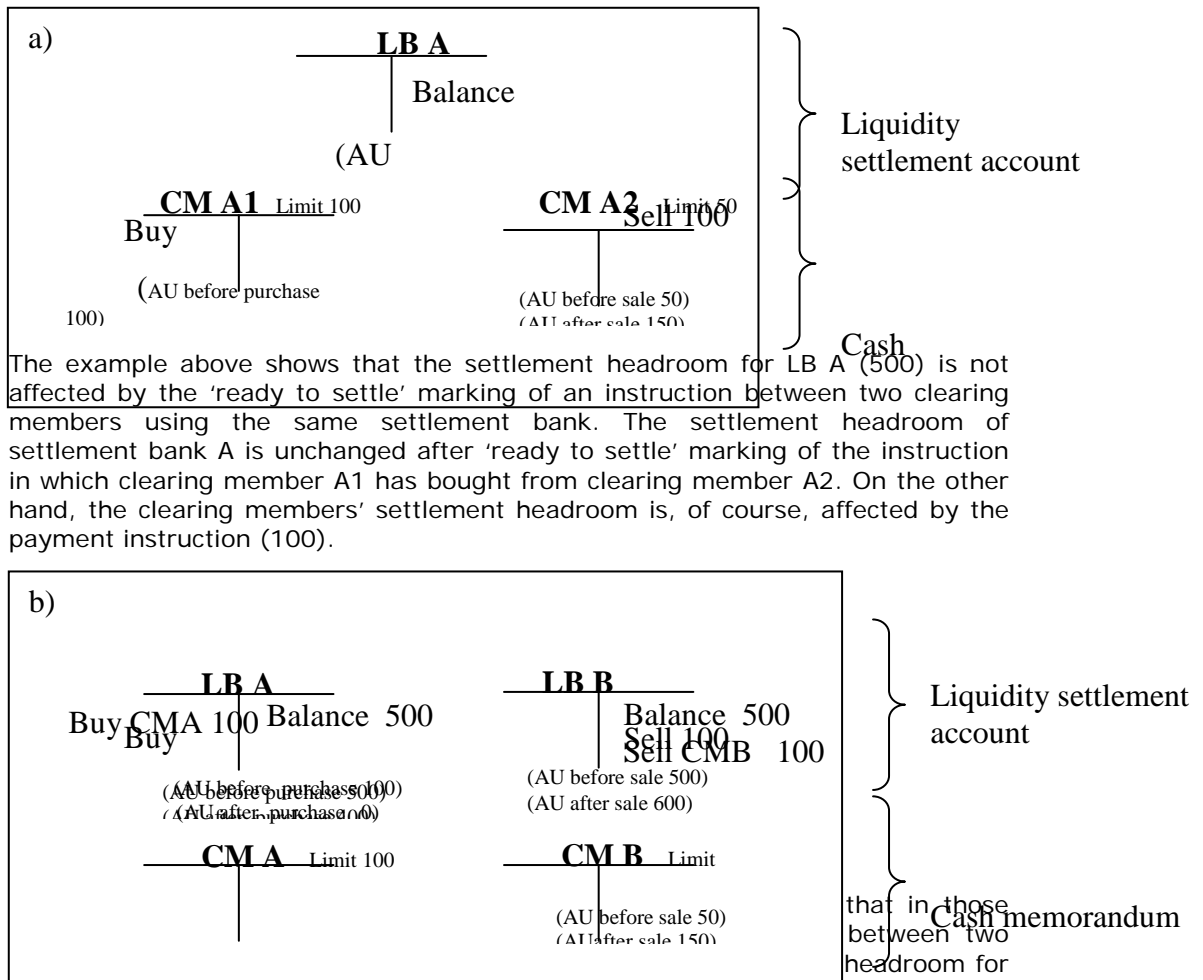
A clearing member's settlement headroom is recorded continuously at VPC on the cash memorandum account. Prior to the first settlement cycle, the settlement headroom is identical to the registered limit set by the settlement bank. As the instructions are being

checked and marked 'ready to settle', the settlement headroom will increase or decrease. All 'ready to settle' selling instructions will increase the settlement headroom, whereas all 'ready to settle' purchase instructions will decrease the settlement headroom.

All instructions involving a payment between two clearing members that utilise the services of *different* settlement banks will result in a check of the settlement headroom at both the clearing member level (on the cash memorandum account) and at the settlement bank level (on the liquidity settlement account). Instructions involving a payment between two clearing members using the *same* settlement bank will simply require that an adequate settlement headroom exists at the clearing member level, since this instruction does not involve a commitment from a settlement bank to pay to another settlement bank.

The two examples below illustrate, on the one hand, the change in the settlement headroom in respect of the settlement bank at the 'ready to settle' marking of an instruction between two clearing members using the same settlement bank (a) and, on the other hand, the change at 'ready to settle' marking of an instruction between two clearing members using different settlement banks (b). In the first case, the settlement headroom of the settlement bank is not affected (a) and in the second case it is affected.

Fig. 7: Change in the settlement headroom (AU) for settlement bank (LB A) and clearing members (A1 and A2)



The example above shows that the settlement headroom for LB A (500) is not affected by the 'ready to settle' marking of an instruction between two clearing members using the same settlement bank. The settlement headroom of settlement bank A is unchanged after 'ready to settle' marking of the instruction in which clearing member A1 has bought from clearing member A2. On the other hand, the clearing members' settlement headroom is, of course, affected by the payment instruction (100).

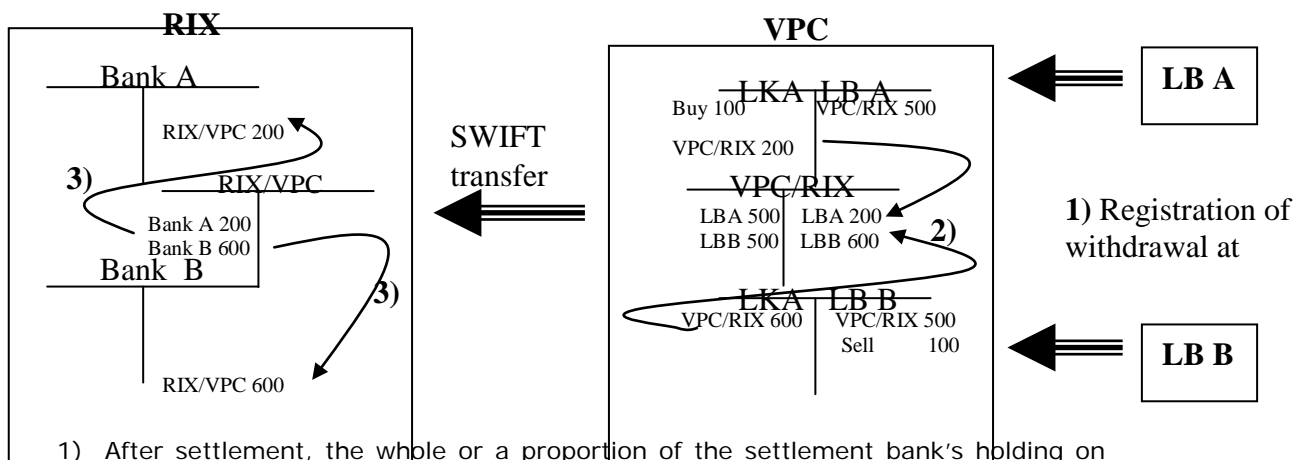
that in those between two headroom for both settlement banks and clearing members is affected. The settlement headroom (500) for settlement bank A is reduced by 100 because of clearing member A's purchasing instruction marked 'ready to settle'. The same, of course, applies to clearing member A, whose settlement headroom is also reduced by 100 to 0 after the 'ready to settle' marking. The settlement headroom of settlement bank B increases, on the other hand, by 100 to 600 at the same time as clearing member B's settlement headroom also increases by 100 to 150.

4.2.3 Dealing with settlement headroom after settlement - settlement banks

In conjunction with settlement, the settlement headroom becomes freely disposable to the settlement bank. Thus, funds may be freely transferred to a regular account at RIX or to another liquidity settlement account (LAK), if so desired. A transfer from VPC to a regular RIX account is initiated by the settlement bank via a registration at VPC. With this registration as a basis, VPC debits the liquidity settlement account of the settlement bank and creates a transfer order, MT 202, to the Riksbank. This order involves the debiting of RIX/VPC and the crediting of the settlement bank's regular RIX account.

Transfers from a liquidity settlement account to a regular RIX account may be executed whenever the settlement bank wishes, up to the final settlement against payment. It should, however, be noted that withdrawals from the liquidity settlement account may only be made to an amount settled at VPC, or in the event that the settlement bank has a settlement headroom equivalent to a previously deposited amount or a proportion thereof.

Fig. 8: Regulation in RIX and regulation of the settlement headroom in NewClear



- 1) After settlement, the whole or a proportion of the settlement bank's holding on the liquidity settlement account (400 for LB A and 500 + 100 for LB B) may be transferred to a regular account at RIX if the withdrawal has been requested by the settlement bank. In this example, settlement bank A (LB A) has registered a withdrawal of 200 and settlement bank B (LB B) a withdrawal of 600.
- 2) The withdrawals are debited to the respective settlement banks' liquidity settlement accounts (LAK) and credited to the VPC/RIX account at VPC and a SWIFT MT 202 is sent by VPC to the Riksbank.
- 3) The Riksbank receives the SWIFT instruction and therefore debits the RIX/VPC account to the requested withdrawal amount. The amount consequently becomes available for other payments in the RIX system.

4.2.4 Dealing with settlement headroom after settlement – clearing members

The settlement bank may specify via a transaction how it wants the settlement headroom for a clearing member to be dealt with after a settlement cycle. The settlement bank may choose for the settlement headroom to be automatically reduced down to the limit, whenever it exceeds the limit, or alternatively, for it to remain unaltered prior to the subsequent settlement cycle.

In the event that the settlement bank has chosen for the settlement headroom to be reduced, the handling will be different, depending on whether the settlement headroom exceeds the limit or not. The basic principle, however, in the case of those clearing members which have a net payment to receive from their settlement bank, is that the settlement headroom will be reduced to a level equivalent to the limit.

The aim of this handling procedure is to prevent a clearing member from being able to utilise the same liquidity twice. Because the settlement bank receives information concerning the amount that the clearing member is to receive, the settlement bank is obliged to pay that amount to the clearing member. Thus, the clearing member is able, under normal circumstances, to dispose of these funds as it wishes. If, furthermore, the settlement headroom should remain in VPC for use in conjunction with settlement, there is a risk that it could be used both in VPC, in conjunction with settlement, and through withdrawal from the account in the bank.

No automatic increase in the settlement headroom will be made for a clearing member that has a net payment to make to its settlement bank, in other words, that has used all or part of its limit. Instead, the settlement bank informs VPC when this may be done by means of a registration at VPC. The reason that VPC does not adjust the settlement headroom for a clearing member that is a net payer is so that the clearing member shall not be able to utilise its limit twice, in that VPC is not in a position to know whether the

part of the limit that has been utilised in conjunction with settlement has been paid to the settlement bank or not.

4.3 Credit-creating transactions relating to settlement banks

4.3.1 Purpose

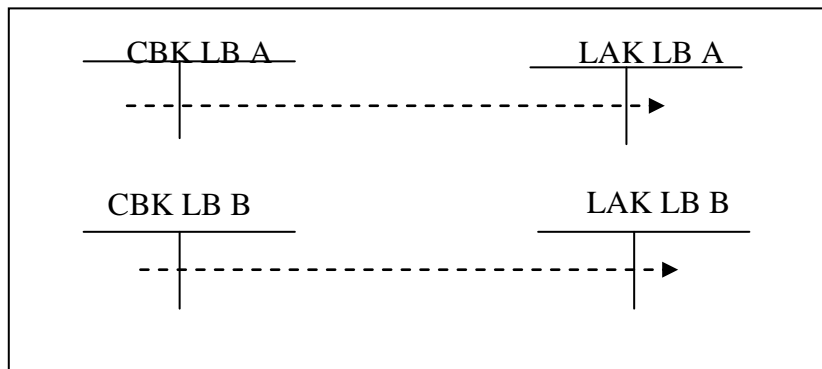
NewClear will offer a supplementary service in the form of credit-creating transactions, aimed at minimising the need for liquidity in PM settlement, reducing dependence on the Riksbank system and making the 'ready to settle' process more efficient. These credit-creating transactions consist of intraday credits from the Riksbank against collateral comprising securities on a PM account specified by the settlement bank. This is administered by VPC in order to create an increased settlement headroom when required. The transactions are created automatically by VPC in conjunction with the resource check and may be considered as intraday credits to be paid back during the course of the day.

4.3.2 Recording of intraday credits

In order to keep track of intraday credits from the Riksbank to a settlement bank, 'credit accounts' are set up in the VPC system. Settlement banks that are authorised to have intraday credits at the Riksbank shall be assigned a special credit account known as a Central Bank Credit Account, CBK.

A recording on a central bank credit account, CBK, is always matched by a recording on a liquidity settlement account, LAK. Whenever the pre-settlement check of an instruction generates a credit to a settlement bank, this produces a credit entry on the settlement bank's liquidity settlement account (LAK) and a debit entry on the settlement bank's central bank credit account (CBK)

Fig. 9: Account structure.



4.3.3 Collateral with respect to intraday credit

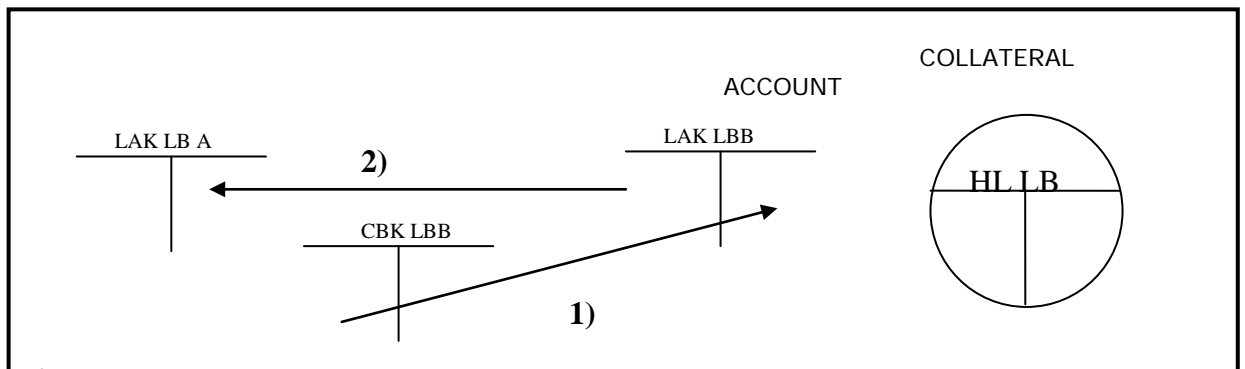
For a settlement bank to be able to receive an intraday credit at the Riksbank in conjunction with the pre-settlement check at VPC, the settlement bank shall specify one or more PM accounts, known as collateral accounts, in which all securities that at any one time are registered in the account are pledged to the Riksbank. With these securities as collateral, the Riksbank arranges, as required, a credit facility consisting of an intraday credit, which is intended for use in conjunction with 'ready to settle' marking.

Only PM accounts that are 'owner accounts' (or proprietary trading accounts) may be designated as collateral accounts. Since the Riksbank only accepts the pledging of holdings owned by the pledgor, the holdings on a nominee account may not be included in this pledging procedure.

The total holding on these collateral accounts will be pledged and will be included in the valuation of the account, which is an integral part of the service. By 'holding' is meant registered holding as well as instructions with 'ready to settle' marking. Even those securities in an instruction that are subject to pre-settlement checking and are intended for registration on this account are included in the total collateral value at the moment they are marked as 'ready to settle'.

The credit is utilised where settlement headroom on a settlement bank's liquidity settlement account is insufficient when the pre-settlement check is made.

Fig. 10: Utilisation of the credit facility in order to increase the settlement headroom of a settlement bank.



- 1) Settlement headroom is lacking at the pre-settlement check of settlement bank B's liquidity settlement account (LAK LBB). The intraday credit is then utilised automatically on condition that the unutilised pledge value on the collateral account is at least equal to, or greater than, the utilised credit. This occasions the registration of a utilised credit on the central bank credit account (debit on the CBK) and an equivalent rise of the settlement headroom on the liquidity settlement account (credit on the settlement bank's LAK).
- 2) Once these transactions have been made, settlement bank B has sufficient settlement headroom to effect payment to settlement bank A. This is achieved by debiting the liquidity settlement account of settlement bank B and crediting the liquidity settlement account of settlement bank A.

NOTE that to enable this to take place, all the procedures described above (debiting/crediting and 'ready to settle' marking) occur instantaneously.

4.3.4 Valuation of collateral

The Riksbank rules are used for the calculation of the collateral value on a collateral account. 'The Riksbank rules' refers to those securities that the Riksbank accepts for credit in RIX and which may be registered on PM accounts at VPC, the exceptions that apply to certain participants due to their relationship to the issuer (known as 'close links'), and the valuation price announced by the Riksbank to VPC on a daily basis.

The collateral value forms the basis of the maximum intraday credit that consists of a complement to the settlement headroom existing on all liquidity settlement accounts. Where several accounts are specified as collateral accounts, the collateral value of each account is added up to constitute a total collateral value in order to receive the maximum intraday credit. In the event that the settlement headroom is insufficient for the marking of an instruction as 'ready to settle', the intraday credit may be utilised for the execution of the 'ready to settle' process.

When making calculations in conjunction with pre-settlement checking, two values are used;

- the total collateral value, i.e. the maximum intraday credit that is the sum of the collateral value on all PM accounts specified, and

- utilised credit, i.e. that proportion of the maximum intraday credit utilised in conjunction with 'ready to settle' marking. This corresponds to the balance on the central bank credit account, CBK.

The example below shows how the Riksbank rules for the calculation of collateral value is used to find out the total collateral value:

VPC acct.	ISIN	Approved by the Riksbank	Nom amount	Valuation price	Collateral value ¹
1111	AAA	Yes	100	90	90
2222	BBB	No	200	----	----
3333	CCC	Yes	100	80	80
Total					170

During the course of a day, the Riksbank may amend the rules for the calculation of collateral value, as, for example, in the case of extreme price fluctuations.

4.3.4.1 Purchase of securities

In the case of the purchase to a collateral account of a security approved by the Riksbank, the collateral value increases, and thus also the maximum intraday credit. The credit is utilised only when the settlement headroom on the liquidity settlement account has been fully employed. Utilised credit increases by the whole or a proportion of the amount in the payment instruction, depending on the balance remaining on the liquidity settlement account.

This can be illustrated by the example below.

VPC account	ISIN	Approved by the Riksbank	Nom amnt	Valuation price	Collat-eral value	Utilised credit (= balance on CBK)	Settlement headroom LAK
1111	AAA	Yes	100	90	90		
2222	BBB	No	200	----	0		
3333	CCC	Yes	100	80	80		
Total					170	0	0
Buy							
2222	AAA	Yes	50	90	45	50	
New total					215	50	0

If settlement headroom is available on the liquidity settlement account (LAK), this is used first. In this example, there is no settlement headroom on the LAK, which is why the whole payment sum for the purchase increases the credit utilised. If there had been a settlement headroom on the LAK of, for example, 20, then this would have been used initially and the remaining 30 would have been charged to the credit.

Where the security is not approved by the Riksbank, and/or is not to be placed in a collateral account, the collateral value does not change. Where the instruction is marked 'ready to settle' with the help of an intraday credit, the utilised credit increases by the

¹ The collateral value per ISIN is calculated according to the formula: nominal amount * valuation price. The maximum intra-day credit comprises the pledge value of all securities on all collateral accounts.

whole or a proportion of the amount in the payment instruction, depending on the balance remaining on the liquidity settlement account.

This may be illustrated by a further development of the example above.

VPC account	ISIN	Approved by the Riksbank	Nom amnt	Valuation price	Collateral value	Utilised credit (= balance on CBK)	Settlement headroom LAK
Total					215	50	0
Buy							
1212	BBB	No	50	----	0	55	
New total					215	105	0

4.3.4.2 Sale/transfer of securities

In order to avoid creating unnecessary stoppages, a smooth operation for the release of collateral is required. This, in turn, means that it should be possible to make a withdrawal on condition that it does not lead to a situation where the collateral value of the remaining holding becomes less than the utilised credit. This applies both to delivery versus payment and to transfers free of payment.

This is illustrated by a continuation of the above example.

VPC account	ISIN	Approved by the Riksbank	Nom amnt	Valuation price	Collateral value	Utilised credit (=balance on CBK)	Settlement headroom LAK
Total					215	105	0
Transfer free of payment							
3333	CCC	Ja	100	80	80		
New total					135	105	0

In the case above, the difference between the total collateral value and the utilised credit is sufficiently large to allow a withdrawal to take place. The withdrawal results in a reduction of the collateral value by the value of the securities that are withdrawn. The utilised credit in this case remains unchanged.

If a withdrawal from a collateral account would result in the utilised credit exceeding the maximum intraday credit, a repayment of the utilised credit must be made. This is done by withdrawing from the liquidity settlement account (LAK) all or a portion of the sales payment (where the withdrawal is a delivery versus payment) and thus reducing the credit on the central bank credit account.

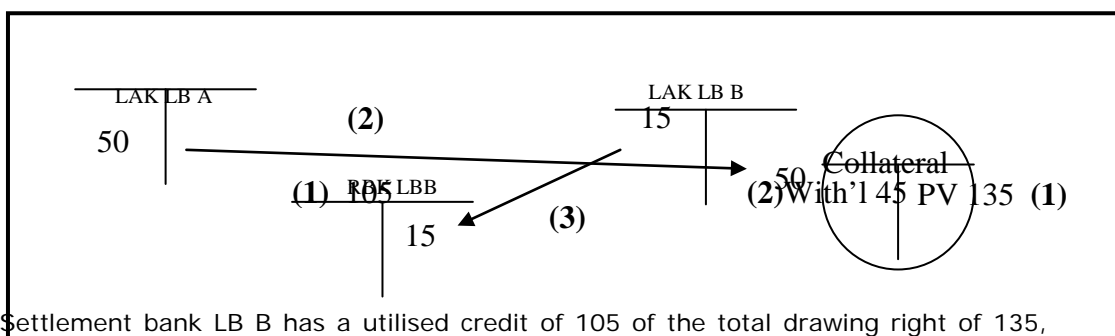
This, too, can be illustrated by a continuation from the previous example.

VPC account	ISIN	Approved by the Riksbank	Nom amnt	Valuation price	Collateral value	Utilised credit (= balance	Settlement headroom LAK

						on CBK)	
Total					135	105	0
Sell:							
2222	AAA	Yes	50	90	45		50
New part sum					90	105	50
Repayment						15	15
New total					90	90	35

This may also be illustrated as in the figure below.

Fig. 11: Repayment of central bank credit



(1) Settlement bank LB B has a utilised credit of 105 of the total drawing right of 135, which constitutes the total collateral value of all the settlement bank's collateral accounts. (2) In the subsequent pre-settlement check there is an instruction requiring a withdrawal of 50 from one of the settlement bank's collateral accounts (collateral value 45) against a sales payment of 50. In order to be able to mark the instruction as 'ready to settle', it is necessary to remove the securities from the collateral account. This is only possible if a part of the utilised credit is repaid at the same time to prevent the utilised credit from exceeding the maximum intraday credit after 'ready to settle' marking. (3) By repaying the credit, using a portion of the sales payment, the instruction can be marked as 'ready to settle'.

From the example below, it can be seen that a reduction of the collateral value by 45, in this case due to a transfer free of payment, would lead to utilised credit exceeding the drawing rights. Since this is not possible, the utilised credit would have to be adjusted by means of a transfer from the liquidity settlement account, LAK. In this case, the settlement headroom on the LAK is not sufficient, which results in the withdrawal not receiving a 'ready to settle' marking.

This may be illustrated by a continuation of the previous example.

VPC account	ISIN	Approved by the Riksbank	Nom amnt	Valuation price	Collat-eral value	Utilised credit (= balance on CBK)	Settlement headroom LAK
Total					90	90	35
Transfer free of payment							

2222	AAA	Yes	50	45	45		
New total					90	90	35

From the example below, it can be seen that a reduction of the pledge value by 45, in this case due to a transfer free of payment, would lead to utilised credit exceeding the drawing rights. Since this is not possible, the utilised credit would have to be adjusted by means of a transfer from the cash clearing account, LAK. In this case, the settlement headroom on the LAK is not sufficient, which results in the withdrawal not receiving a 'ready to settle' marking.

This may be illustrated by a continuation of the previous example.

VPC account	ISIN	Approved by RB	Nom amnt	Valuation price	Pledge value	Utilised credit (= balance on CBK)	Avvecklings utrymme LAK
Total					90	90	35
Transfer free of payment							
2222	AAA	Yes	50	45	45		
New total					90	90	35

From the example below, it can be seen that a reduction of the pledge value by 45, in this case due to a transfer free of payment, would lead to utilised credit exceeding the drawing rights. Since this is not possible, the utilised credit would have to be adjusted by means of a transfer from the cash clearing account, LAK. In this case, the settlement headroom on the LAK is not sufficient, which results in the withdrawal not receiving a 'ready to settle' marking.

This may be illustrated by a continuation of the previous example.

VPC account	ISIN	Approved by RB	Nom amnt	Valuation price	Pledge value	Utilised credit (= balance on CBK)	Avvecklings utrymme LAK
Total					90	90	35
Transfer free of payment							
2222	AAA	Yes	50	45	45		
New total					90	90	35

4.3.5 Manual repayment of intraday credits

If a settlement bank wishes, it can make a repayment of a credit during the day up to 15.00 hours. Such repayment may be initiated by the settlement bank with the help of a special registration transaction in the VPC-system. Repayment occurs immediately by an amount specified if sufficient settlement headroom is available on the liquidity settlement account.

Repayment may also be initiated by indicating in the payment order, for transfer from a regular RIX account, that the amount is intended as repayment of credit to the Riksbank.

4.3.6 Repayment of intraday credit after final settlement

Any balance on the liquidity settlement account after the final settlement versus payment is transferred automatically by VPC to a regular RIX account, without the settlement bank having to take any action to initiate this.

Before any transfer to a regular RIX account can occur after the final settlement against payment, any outstanding credits to the Riksbank must be regulated. This regulation is carried out automatically in conjunction with the final settlement against payment, though

only to the extent that a disposable headroom is available on the participant's liquidity settlement account, LAK. Where the disposable settlement headroom on the LAK is insufficient to reset any remaining credits to zero, the settlement bank must itself see to it that a manual repayment is made in order to allow resetting to zero to be effected. The settlement bank is therefore obliged, on its own initiative and before 15.00 hours, to reset its credits to zero by transferring funds from its regular RIX account to its liquidity settlement account, LAK.

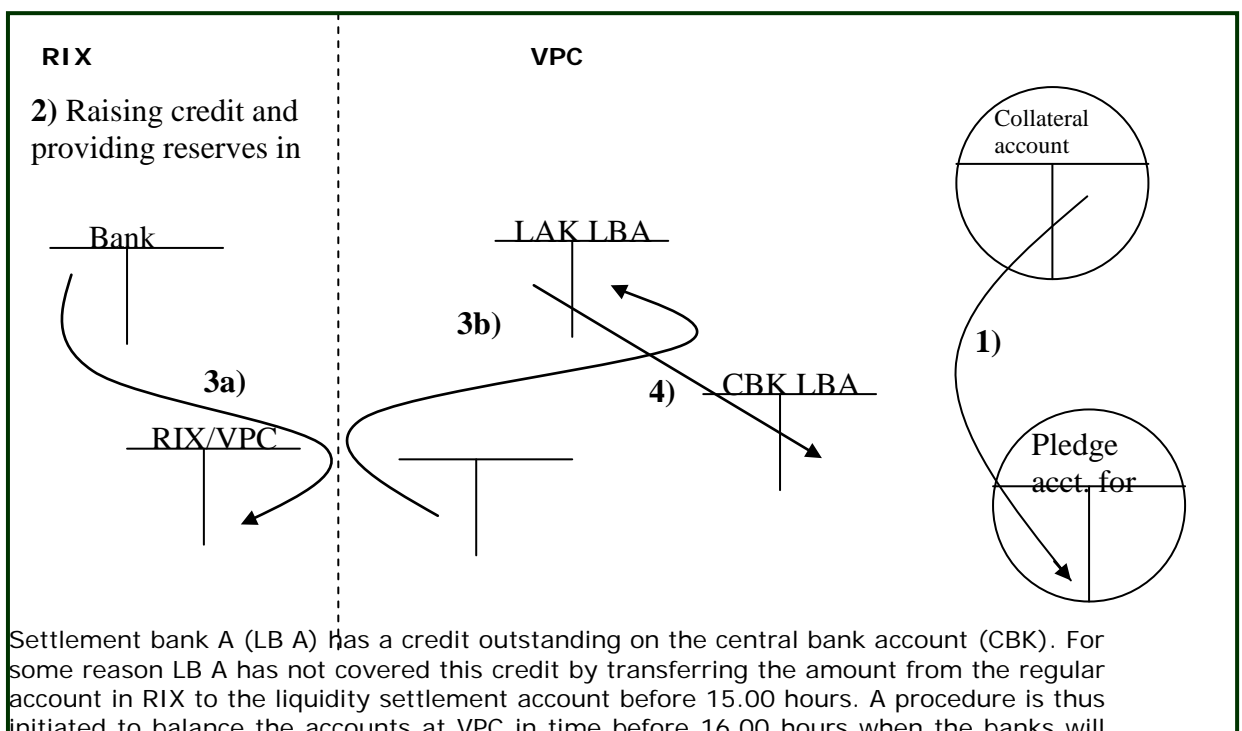
Some examples of automatic repayment of central bank credit and transfer to a regular RIX account are shown below, together with demands for transfer from a regular RIX account to the liquidity settlement account.

Settlement bank	Settlement headroom before final settlement	Outstanding debt to the Riksbank	Automatic repayment in conjunction with final settlement	Automatic transfer to regular RIX account	Demand for transfer from regular RIX account before 15.00 hours
A	100	50	50	50	0
B	0	200	0	0	200
C	75	75	75	0	0
D	10	25	10	0	15

4.3.7 Fallback procedure for resetting intraday credit to zero

If the settlement bank has not reset its credit at VPC to zero before 15.00 hours, there is a procedure which resets the credit automatically to zero. This is done by means of an automatic transfer of securities from the collateral account for credit in VPC to a collateral account for credit on a regular RIX account. In this way further credit is created on a regular RIX account for use in the transfer to the liquidity settlement account, LAK, for regulating the credit on the central bank credit account, CBK. This presupposes the settlement bank's acceptance of a direct debit.

Fig. 12: Automatic resetting to zero at the end of the day.



have balanced their positions on their regular accounts in RIX. This procedure involves the following;

- 1) Pledges are automatically moved from collateral accounts to pledge accounts for credit in RIX.
- 2) When the Riksbank receives a message that collateral has been transferred to a pledge account for credit on a regular RIX account, the credit in RIX is increased and an amount equivalent to the balance on the central bank credit account, CBK, is reserved.
- 3a) VPC sends a transfer order (MT 202) to the Riksbank involving a transfer from the settlement bank's regular RIX account to its liquidity settlement account, LAK.
- 3b) A payment is made by the Riksbank, RB, from the settlement bank's regular RIX account to RIX/VPC for forwarding to LB A's liquidity settlement account, LAK.
- 4) LB A's LAK is debited and a credit is made on LB A's central bank credit account, CBK.

4.3.8 Consequences for settlement banks

The section that follows is intended as a description of how the introduction of credit-creating transactions will affect the settlement banks. How they can make use of this function, what it means for them and what information, as a settlement bank, they receive from VPC in conjunction with this function.

4.3.8.1 Services at VPC

"Intraday credit for settlement banks" will be a VPC service to those acting as settlement banks within the framework of NewClear. Settlement banks that require the automatic creation of liquidity at VPC in conjunction with settlement on the fixed income market are entitled to use this service.

4.3.8.2 Obligations of the settlement bank

Settlement banks making use of this service must register in the VPC system which PM (collateral) account or accounts are to be linked to this service. Any changes concerning collateral accounts must be registered by S-1 at the latest.

All securities on the specified collateral accounts are pledged in favour of the Riksbank from the time the system opens on day S to a certain point in time on the afternoon of day S. The settlement bank shall be able to dispose of securities on the collateral account on condition that a withdrawal does not result in a shortfall in the Riksbank's collateral in respect of a utilised credit.

Settlement banks may specify, if they wish, a maximum amount up to which the intraday credit may be utilised.

4.3.8.3 Information to settlement banks

Settlement banks can observe continuously in the system the valuation of collateral and those credits that arise in the 'ready to settle' marking procedures.

4.3.8.4 Transferring liquidity created in the VPC system to a regular RIX account

Settlement banks may, if they wish, transfer liquidity during the day from a liquidity settlement account, LAK, to a regular RIX account. Prior to settlement, however, a settlement bank may not withdraw from its liquidity settlement account more than it has itself deposited. An automatic transfer is also made from the liquidity settlement account to a regular RIX account after the final settlement against payment. A transfer made by a settlement bank from a liquidity settlement account to a regular RIX account may, in certain cases, involve a transfer of liquidity created by another settlement bank with the help of the Riksbank's credit facility within the framework for NewClear. In reality, this means that the total availability of funds on regular RIX accounts increases without a corresponding collateral existing on pledge accounts for credit on a regular RIX account.

It should be observed that the withdrawal of payments received from a liquidity settlement account may only be effected after settlement has taken place. As regards deposits that the settlement bank has itself made on its liquidity settlement account, these, or a proportion of these funds, may be withdrawn at any time, on condition that the net of those instructions that are 'ready to settle', but not yet settled, does not exceed the sum deposited on the liquidity settlement account.

5. Redemption and interest payments

The handling of redemption and interest payment in PM settlement today allows an issuer to finance a redemption amount by issuing new instruments, which are settled on the same occasion on redemption day, at 12.45. In this way, a net effect is achieved in respect of payments.

With the coming into operation of NewClear's functionality, settlement will occur on several occasions and an interest and redemption amount cannot be made available to the holder, unless the issuer's payment has been secured. The same applies to issues in conjunction with the issuer's redemption/interest, in other words, the principle amount for the issue cannot be made available to the issuer, unless the buyer's payment has been ensured. This may come to place heavy liquidity demands on the issuer, the clearing member and the paying settlement bank. With the aim of minimising liquidity needs, VPC has developed a special procedure for handling redemption and interest payments, where, as far as possible, consideration has been given to those issuing instructions where coverage exists.

The special procedure existing today for AVPS instruments² will not continue to be available in VPC. These instruments will instead be treated as all other instruments.

The description below is intended to secure payment and to decrease liquidity needs, both for the paying issuer, the issuing agent (EI) and the paying settlement bank. In other words, a structure that enables an examination of the payment capacity at different levels, settlement bank level, clearing member level and CID/PMK level, depending on the type of transaction.

A further change compared with today is that it will be necessary to become a clearing member in order to act as an issuing agent.

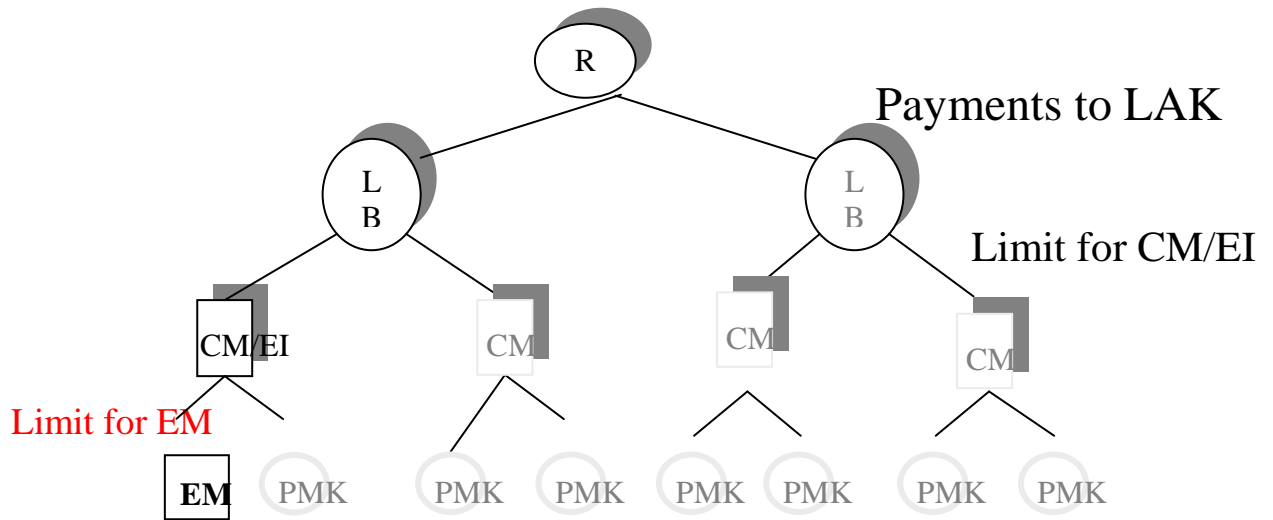
The procedure described below applies, regardless of whether it is a question of interest payment, redemption of bonds including coupon or redemption of discount securities.

Regardless of whether it concerns redemption or interest payments, there is a dependence on the basic structure on which NewClear is based for ensuring payment capacity prior to settlement.

² AVPS instruments refers to those instruments in PM clearing that cannot be settled within the framework of net settlement in PM, since certain demands are not met by the issuer, and are instead settled gross.

Below is an illustration of the structure

Fig.13: Structure.



The ensuring of payment capacity means that the settlement banks transfer funds from their regular RIX accounts to their respective liquidity settlement accounts in NewClear. Where clearing members are concerned, payment capacity is ensured by the settlement bank's registration of limits for underlying clearing members. The clearing member acting as issuing agent registers the limit on the issuer's cash memorandum account (LNK), to which the issuer's PM accounts are linked via one or more PM account groups (PMK).

In order for the issuer to be able to use the opportunity to reduce liquidity needs for an interest or redemption payment by issuing new securities, the issuer's registration account and redemption account must be linked to the same PM account group (PMK)

5.1 The interest and redemption process

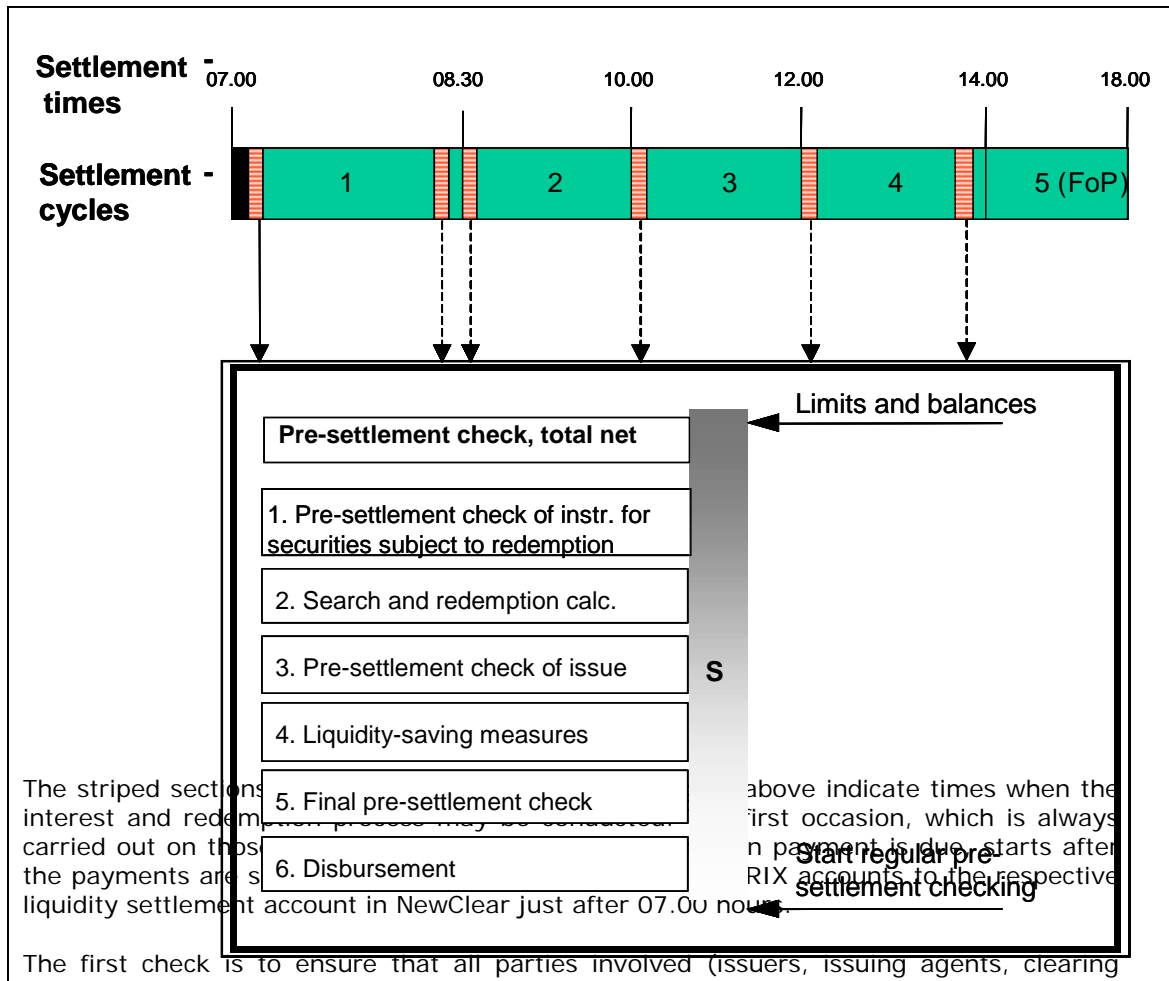
Interest and redemption payments must be pre-settlement checked using a special process, the interest and redemption process, as the first routine when VPC opens for the day. Once this routine has been carried out, the pre-settlement check of the instructions regarding trades on the secondary market will be made. The interest and redemption process may be carried out on several occasions during the day if needs be, that is, if it was not possible to execute the interest payment or redemption on the preceding occasion. The description that follows is based on the assumption that settlement against payment in the PM sub-market takes place at 08.30, 10.00, 12.00 and 14.00 and that a final settlement free of payment occurs at 18.00.

In order to reduce liquidity needs, the interest and redemption process will include a pre-settlement check of any issuing instructions which may be netted against the interest and/or redemption amount. The interest and redemption process also includes a number of other steps which must be taken before a final pre-settlement check is carried out.

It is important to note that only those instructions concerning ISINs for issuers that have payment of interest and/or redemption for that particular day will be included in the interest and redemption process. Issuing instructions for these issuers, with the same settlement date, will also be included in the interest and redemption process. Issuing instructions for issuers that do not have an interest payment or redemption on the same settlement date will not be handled in the interest and redemption process, but will be checked in the routine pre-settlement check.

The figure that follows shows when, during the settlement day, the interest and redemption process can be conducted, together with the different steps that make up the process.

Fig. 14: The interest and redemption process.



The striped sections above indicate times when the interest and redemption process may be conducted. The first check is to ensure that all parties involved (issuers, issuing agents, clearing members and settlement banks) have their respective net amounts available. If this is the case, the instructions of all those involved will be marked 'ready to settle'. If any party should lack resources, a more comprehensive pre-settlement check is conducted, consisting of several different steps that are described below in sections 5.2 – 5.6.

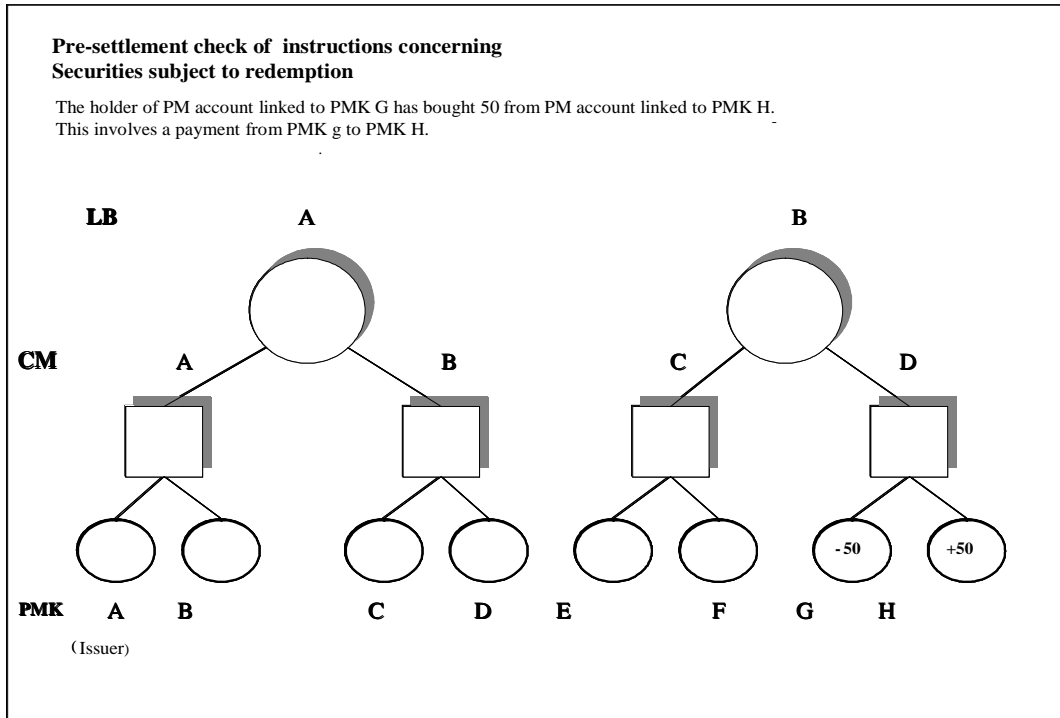
If resources are lacking in the first cycle for one or more payments, the processing will be conducted once again just before the first settlement occasion (at 08.30). If resources are lacking this time, too, the processing will be conducted as the first item in the second settlement cycle, and so on. In all, there will be six occasions from the start when the interest and redemption process can be carried out. The final occasion is just before the final settlement against payment, at 14.00 hours. If resources are still lacking on this final occasion, it will not be possible to effect the payment during the actual day in question.

The different steps in the interest and redemption process are described below.

5.2 Phase 1 – Pre-settlement check of the instructions concerning securities subject to redemption

The payment of a redemption amount must be made to the correct holder. Consequently, a check must be made as to whether there are purchasing instructions concerning the security that is the subject of redemption. In the event that the seller has delivery capacity and there is sufficient headroom, it is marked 'ready to settle' for any further redemption processing.

Fig. 15: Example:

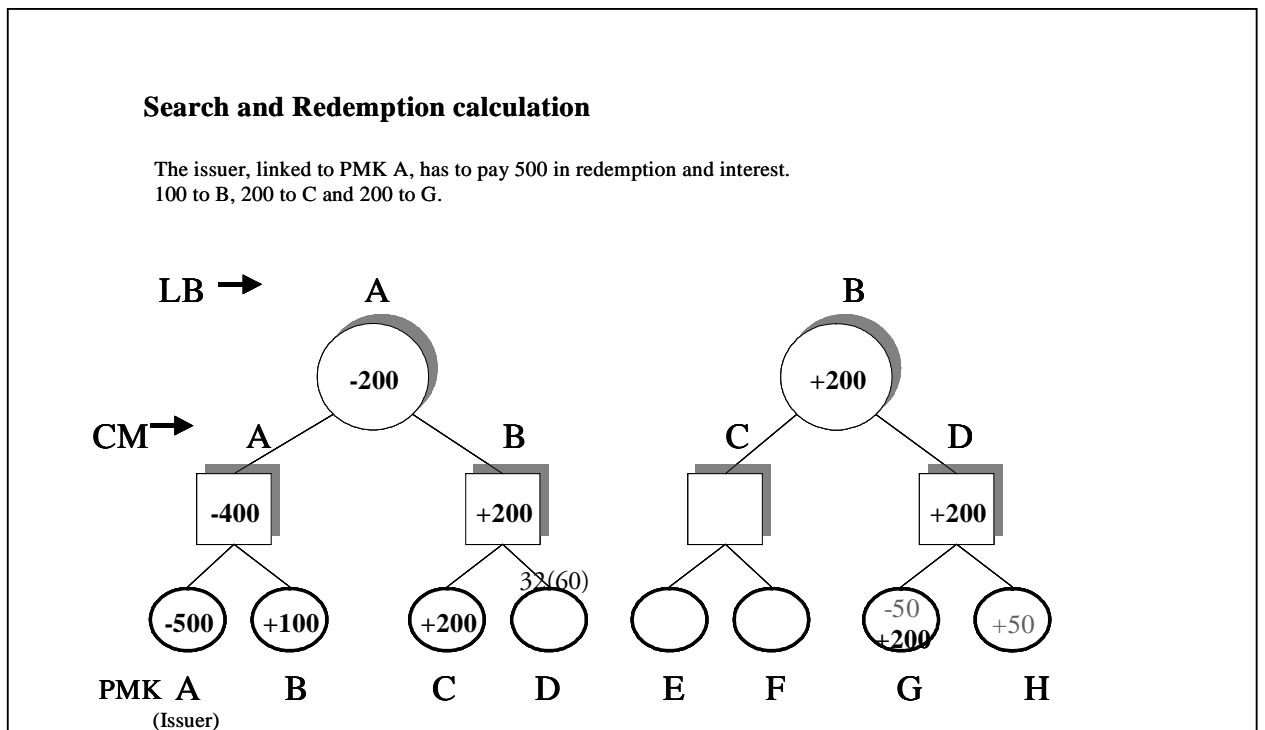


5.3 Phase 2 – Beneficial owners and the calculation of redemption

In this stage, the system searches the owners and their proportion of the loan to be redeemed. The calculation also takes into consideration the interest to be paid.

During this process, a calculation is also made of how much is to be received at each level, that is, how much the holder, the clearing member and, where relevant, the settlement bank shall receive. All this information is saved for further interest and redemption processing.

Fig.16 Example:



5.4 Phase 3 – Pre-settlement check of issue

With the aim of diminishing liquidity needs, a check is made of whether the issuer has executed an issue with the date of redemption as settlement day. A security is considered as issued when it is “sold” from the issuer’s registration account. This is normally effected as a purchase to a VPC account held by whoever acts as authorised dealer of the loan.

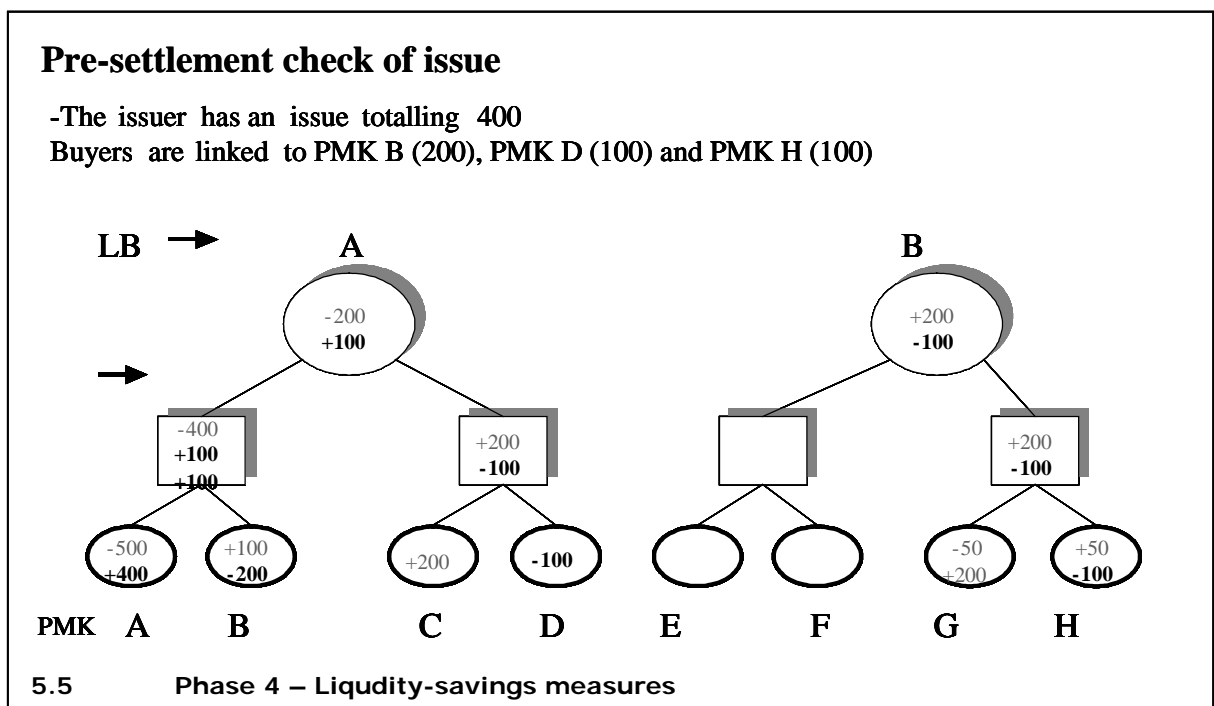
The pre-settlement checking function simply matches selling instructions from the registration account with the purchaser’s settlement headroom.

In the event that an issue has taken place and payment is available within the settlement headroom of the buyer, settlement headroom and delivery capacity are temporarily blocked for further interest and redemption processing. This means that the issuer may count on the issue payment in the subsequent interest and redemption processing.

Where the issuer has failed to make an issue, the payment amount as regards interest and/or redemption is immediately checked against the issuer’s settlement headroom.

If the payment amount is not available within the issuer’s settlement headroom, the processing is terminated as far as the issuer is concerned and the interest payment and/or redemption is not executed on this occasion.

Fig. 17 Example:



Apart from the pre-settlement check of an issue, further liquidity-saving measures are available. These are:

- Offsetting

- Internal disbursements clearing member / issuing agent
- Internal disbursements settlement bank

These liquidity-saving measures are briefly described below.

5.5.1 Offsettings

This function makes a pre-settlement check of all issue instructions that it has not yet been possible to block preliminarily owing to the fact that the buyer did not have sufficient settlement headroom.

The offsetting process checks whether any of the instructions can be offset against any potential incoming payment amounts from the same issuer. In the event that incoming payment amounts are sufficient for a preliminary blocking, this is then implemented.

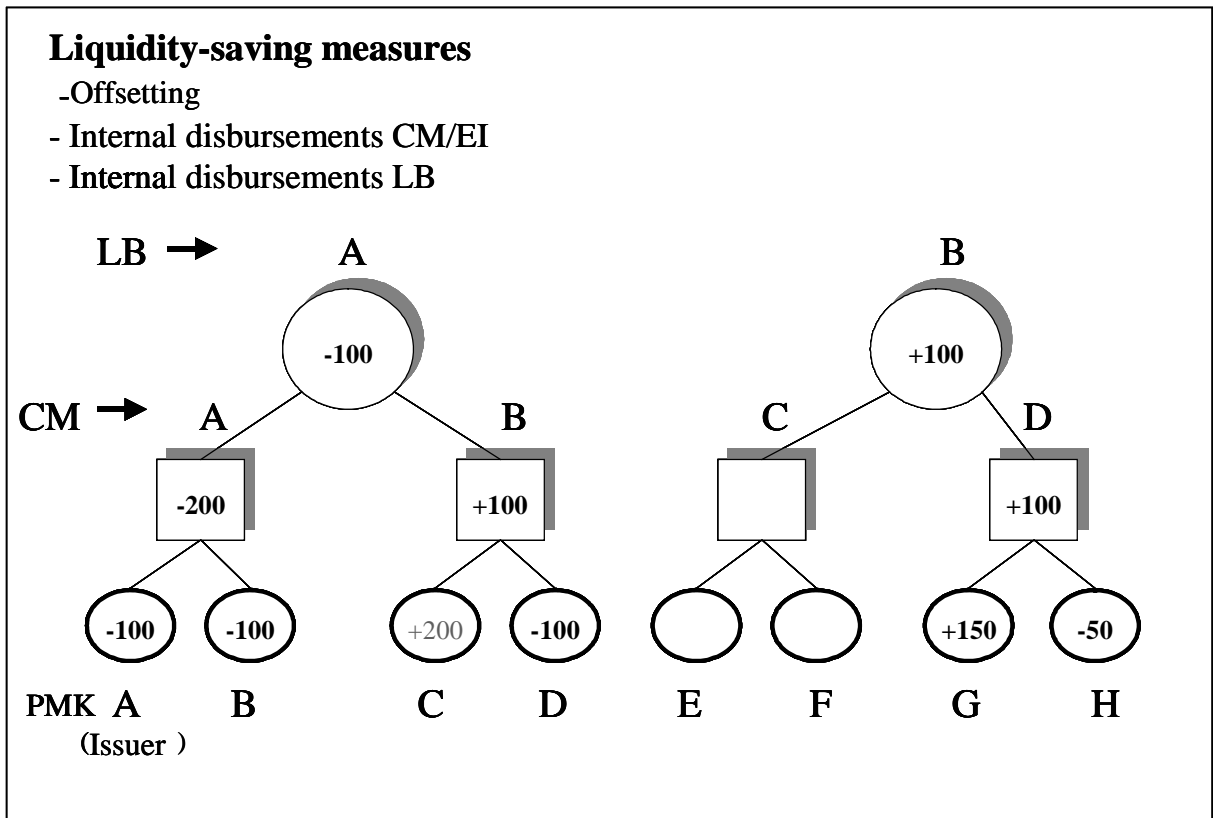
5.5.2 Internal disbursements – clearing members/issuing agents

This stage is intended to further reduce the need for settlement headroom for clearing members/issuing agents, by taking into consideration the total disbursements to its own customers, in other words, those disbursements that do not involve an obligation to pay another settlement bank/clearing member. This sum is then deducted from the settlement headroom demanded.

5.5.3 Internal disbursements – settlement banks

This stage is intended to minimise the need for settlement headroom in respect of settlement banks. Just as in the previous stage, all disbursements to underlying customers are identified. In this case, to underlying clearing members. This amount can then be deducted from the settlement headroom required.

Fig. 18 Example:



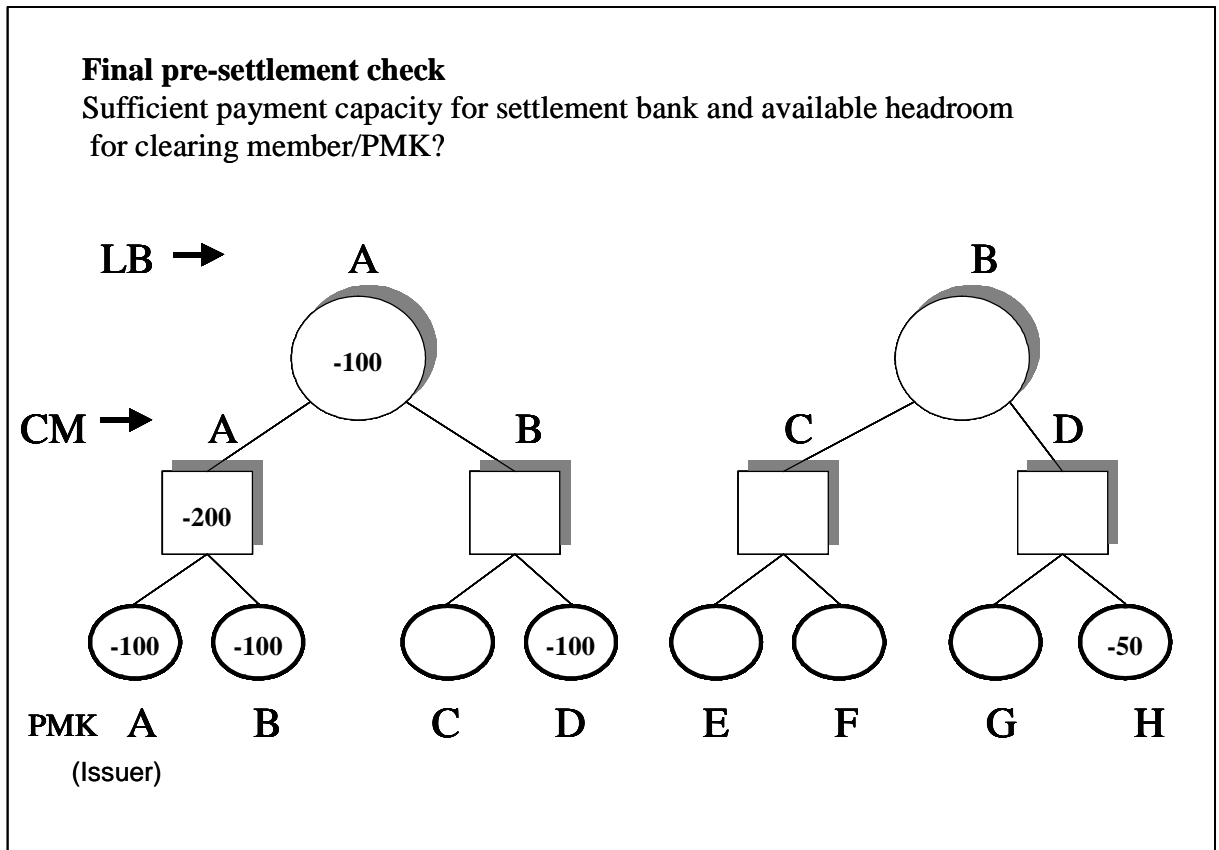
5.6 Phase 5 – Final pre-settlement check

In this stage, the final pre-settlement check is made of whether the payment amount calculated in all the previous stages is available in the settlement headroom of the issuer and the clearing member/ issuing agent. A check is also made that the settlement bank has sufficient settlement headroom.

Where resources are lacking for *the issuer's payment*, neither redemptions, nor interest payments, nor any pending issues are made and all preliminarily blocked instructions and settlement headrooms are released.

In contrast, where the disbursement amount is available within the issuer's settlement headroom, the checking continues of the settlement headroom of clearing member/issuing agent, clearing member identity and settlement bank. If there is sufficient settlement headroom, the interest and redemption payment is executed.

Fig. 19 Example:



If, on the other hand, settlement headroom is lacking at any one of these, i.e. clearing member/issuing agent, clearing member identity or settlement bank, the process continues with a check of whether it could be solved by netting. If there are several different interest payments and/or redemptions from different issuers on the same day, the incoming payments can be counted where a lack of settlement headroom exists. If the insufficiency persists, despite this netting, it will not be possible to effect the disbursement in the current settlement cycle and the process with respect to the issuer concerned will be repeated later during the day.

If it has not been possible to effect the interest payment and/or redemption, the transaction instructions in the redemption paper will be the subject of a pre-settlement check in conjunction with instructions for the secondary market. Any issuing instructions relating to the same issuer cannot be marked 'ready to settle' unless the interest payment and/or redemption is executed in full, that is, they are barred from pre-settlement checking in the secondary market.

5.7 Phase 6 - Disbursement

Payment is effected by debiting the settlement headroom and all payment amounts are recorded on the holder's cash memorandum account. All those issuing instructions, where it has been confirmed during the course of the process that sufficient resources are available, are marked 'ready to settle'. This therefore entails a debiting of the settlement headroom of the buyers in the primary market of the issue and of the issuers as regards the interest and/or redemption amount. The liquidity settlement accounts and cash memorandum accounts of all involved settlement banks, clearing members and PM account groups will be debited / credited.

The new current settlement headrooms will apply when the pre-settlement checking of instructions commences with respect to the secondary market.

Any transaction instructions relating to those securities where redemption has been executed and which have not been marked 'ready to settle' in the interest and redemption process, will be excluded. Issuing instructions from the same issuer, that have not been given 'ready to settle' marking in the redemption process will once again be pre-settlement checked in conjunction with the pre-settlement checking of instructions for the secondary market.

5.8 Preparations and follow-up

Settlement banks and clearing members should conduct a thorough review before day S in order to prepare the necessary liquidity and limits. For settlement banks and clearing members/issuing agents, there will be specific transactions relating to liquidity reviewing of interest payments and redemptions. These will function both as liquidity forecast prior to day S and liquidity review during and after day S.

It is important to realise the significance of the availability of requisite limits and liquidity for all parties concerned when the interest and redemption process commences, since a shortcoming at any one party may lead to an inability, at the first attempt, to execute the redemption. The process will then have to be repeated on a subsequent occasion during the day.

6. The settlement process up to day S

This section deals with events and measures in NewClear from the moment when a trade has occurred and up to settlement day.

6.1 Reporting of instructions relating to securities

The same transactions as exist today will be possible to use for the registration of instructions in NewClear. Some of the existing instructions will disappear and amendments will be made in some of the others.

In NewClear, the input of instructions against payment may be made on day S up to a time just before the final settlement against payment.

Instructions free of payment may be entered until just before 18.00 hours, which is when the final settlement free of payment takes place.

Prior to S, the input of instructions may be made up to the time when the system closes, which is at present 21.00 hours.

6.1.1 Free of payment instructions

The following existing transactions will continue to be available in VPC:

ATOV, transfer register

ATMO, transfer several holdings, register

ATOP, transfer premium bonds, register

PTOV, transfer between PM accounts at the same office, register

PTOL, transfer paid holding, register

The first three have been developed for use in AM settlement and the fourth for PM settlement. The last one is used in the transfer of securities between AM and PM.

ATSO, which is used today for the transfer of holdings between VPC accounts free of payment on that same day, will be removed. Instead, ATOV has been modified so that even the same, current day can be specified as settlement day. ATMO will be modified in the same way.

For immediate transfer, the RTGS functions can be used.

The RTGS function in NewClear will also be available for use when transferring securities between VPC accounts between AM and PM.

6.1.2 Transactions relating to AM settlement

Those transactions used today for clearing in the AM sub-market will remain the same in NewClear:

ATLE, delivery

ATBE, order

ATAU, commercial withdrawal

ATAI, commercial deposit

In principle, the only difference in these registration functions is that it will be possible to specify the same, present day as settlement day, which is not possible today.

It will also be possible to use these transactions, with zero liquidity, up to the final settlement of the day.

6.1.3 Prematch instructions

Those transactions used today for reporting to the Prematch system will remain in place.

FTBE, prematch order
FTLE, prematch delivery

Even where these transactions are concerned, it will be possible to specify that same day as settlement day.

It will also be possible to use these transactions, with zero liquidity, up to the final settlement of the day.

6.1.3.1 Transfer from prematch to NewClear

According to current handling procedures, holdings must be in the seller's possession for the instruction to fulfil the requirements for transfer to the clearing system.

With NewClear, all matched instructions in Prematch will be transferred to the clearing system on the night before day S. Instructions that are matched on day S, will be moved over directly at the matching moment. The instructions will be given a pending status in the clearing system and will subsequently be treated in accordance with the rules for the clearing system during day S.

6.1.3.2 Postponement of settlement day in prematch

In the current handling process, an automatic postponement of settlement day in Prematch occurs in the case of instructions that have a settlement day on the following day and have not been transferred by the closing of the VPC system on S-1. This applies to both matched and unmatched transactions.

An automatic postponement of the intended settlement day is made in NewClear for those matched instructions that, following transfer to the settlement system, have not been settled. For orders against payment, this occurs at the final settlement occasion against payment. For instructions free of payment, this occurs at the final settlement occasion free of payment. Where matched instructions have had their settlement day postponed in Prematch, deletion and amendment rules relating to Prematch come into force. Deletion and amendments may then be made until the system closes (21.00 hours), at which time the instruction is once again transferred to the commercial system. Unmatched instructions remaining in Prematch will automatically have their intended settlement day postponed at the same times.

The function for postponement of intended settlement day will, just as today, check and delete prematch orders and deliveries in which the settlement day has been postponed 20 days ahead. In NewClear, the removal of instructions will therefore take place on day S.

Just as before, an automatic notation of cum is made in conjunction with the postponement of the intended settlement day.

6.1.4 Premium bonds

Premium bonds are bought and sold as normal quantity securities and the payment between clearing members is handled together with other securities in AM clearing.

The only transaction which differs from other securities transactions is a withdrawal. The transaction ATAP, i.e. withdrawal premium bond, register, is used instead of ATAU.

Today, a withdrawal instruction (ATAP) can never be 'pending'. This will be different in the case of NewClear. In NewClear, instructions are not examined for 'ready to settle' marking until day S, and this will also apply to premium bonds. Today the number

specification on the account is removed in conjunction with the entry of a withdrawal and is stored in the daily journal. The same will apply in NewClear, but it will be assigned the status 'pending'. On the other hand, just as today, the withdrawal order will be rejected if the specified quantity exceeds the quantity available on the withdrawal account.

Where withdrawal instructions are concerned, the current number specifications are deleted from the VPC account and stored. Should a withdrawal cancellation occur, the number specifications are replaced on the original VPC account.

The registration of deposits, orders and deliveries will take place, just as today, without any link to number specifications.

In the existing system, deposits registered on VPC accounts receive serial and order numbers in the evening, a procedure which will continue to apply even in NewClear. The point of this is that premium bonds that are purchased and settled are available for further trading the day after settlement day. This is an improvement, since in today's system it is not possible to trade a premium bond until two days after the previous settlement.

6.1.5 Transactions relating to PM settlement

In VPC it will be possible, just as before, to register and match instructions relating to PM settlement up to 360 days before the intended settlement day.

"Financial transactions", the term used up to now for instructions registered on settlement day, will be abolished.

Those transactions that will be possible to use in PM settlement are:

PTSA, sell register
PTKO, buy register

6.1.6 Transactions relating to real time gross settlement (RTGS)

The same RTGS transactions as are used today will continue to apply, namely:

BTKO, buy gross settlement, register
BTSA, sell gross settlement, register

All RTGS payments will be settled in the RIX system and securities will be settled in VPC in accordance with the existing structure for RTGS settlement. This procedure will, however, be altered in that VPC will make a direct debit, which means that it will send a SWIFT message to the Riksbank constituting an order to credit the selling settlement bank and to debit the purchasing settlement bank. No cash memorandum account or liquidity settlement account will be affected by RTGS transactions in NewClear.

In order to be able to register an RTGS transaction (sell), a holding is required which has not been blocked as collateral for an intraday credit from the Riksbank.

6.2 Cancellations

As in today's system, it will be possible to correct inaccurate instructions that have been made in NewClear. This is achieved by means of an instruction that "nullifies" the incorrect instruction, a cancellation, together with a new instruction with the correct details.

A cancellation creates a new instruction which is a copy of the incorrect one, but with a "reversed sign". This means that if the incorrect instruction increased the VPC holding, the cancellation will reduce the VPC holding, and where the incorrect instruction reduced the VPC holding, the cancellation will increase the VPC holding. A cancellation does not

therefore delete the incorrect instruction as such, but it eliminates the original effect of the incorrect instruction.

In principle, for every type of transaction, there is a cancellation transaction, used to nullify an incorrect transaction. The cancellation always has the same settlement day as the original instruction. One difference compared with today is that it will be possible to cancel an instruction settled earlier on that same day. This is made possible by the fact that a cancellation instruction is considered as a new instruction referring solely to the previously settled incorrect instruction.

When registering a cancellation instruction, basically the only change is that the second letter in the transaction code is change to an M compared with the original transaction code.

Example:

PTSA = sell	PMSA =	cancel sell
ATAU = withdrawal	AMAU =	cancel withdrawal
ATLE = delivery	AMLE =	cancel delivery
ATOV = transfer	AMOV =	cancel transfer

With respect to premium bonds, the same still applies, namely that a withdrawal (ATAP) is cancelled using the transaction 'cancel withdrawal' (AMAU). The transaction (AMOV) is used to cancel a transfer relating to premium bonds (ATOP).

6.3 Status handling

Immediately upon registration, instructions registered before day S are given the status VÄ (= pending) in AM settlement or RE (= registered) in PM settlement. Instructions that require matching are given, in addition, a counterparty status. The following counterparty status codes are used in NewClear:

- UM = without counterparty, i.e. matching not achieved
- MM = with counterparty, i.e. matching is achieved
- MK = allegement, will remain in place with the same meaning as today, that is, that the counterparty has an allegement, a delivery requirement or an order requirement that has not been met. Just as today, it will be indicated whether the allegement refers to an order or a delivery. Thus, for example, a BE MK would mean another order allegement, which would require a delivery from the clearing member.

All instructions will be given an additional status, which may be:

- FR – pre-registered (used only for forward trades on the fixed income market)
- RE – registered (used only in PM settlement before day S and on S referring to preliminary instructions that have not been approved)
- VÄ
 - pending
 - the instruction has not yet been pre-settlement checked for 'ready to settle' marking in PM settlement (before day S), or
 - the instruction has been pre-settlement checked but does not fulfil all the conditions for 'ready to settle' marking (such as, for example, the holding is not available)
- KL - ready for settlement
- EX – instruction pending, cancelled
- EB – not registered. An instruction is marked 'EB' in the final settlement of the day, if still not settled.

In Prematch, counterparty status only is used.

"Delivery capacity exists without counterparty", TF UM, will not remain as a status designation. This is because pre-settlement checking will not take place where instructions are unmatched in NewClear³

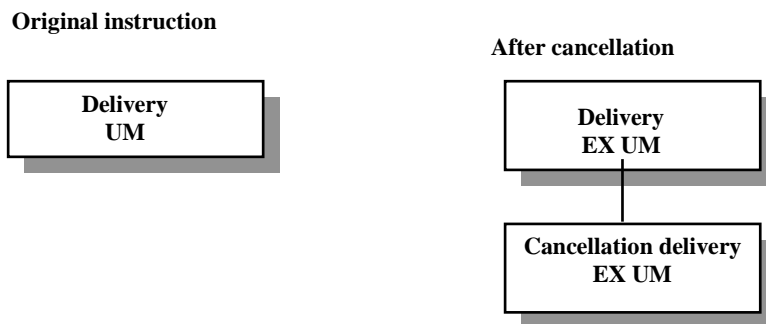
6.3.1 Status of cancellation transactions

Where the registration of a cancellation is concerned, if the incorrect instruction has a 'pending' status, the effect of the cancellation instruction is that both instructions are given the status 'excluded'. 'Pending' instructions that are matched will only be excluded if both parties agree.

An instruction that has been given a 'ready' status will always be registered, even if it is cancelled. The cancellation of such an instruction is treated as an instruction in its own right and will also be given a 'ready' status on condition that there is sufficient delivery and payment capacity for the cancellation, i.e. the reverse transaction. To enable the cancellation of an instruction against payment to be marked 'ready to settle' in NewClear, it is therefore essential that adequate settlement headroom is available.

Fig.20: Example showing cancellations in AM settlement

Upon cancellation of an order or a delivery with the counterparty code UM (without counterparty), both the original instruction and the cancellation receive the status EX (excluded).



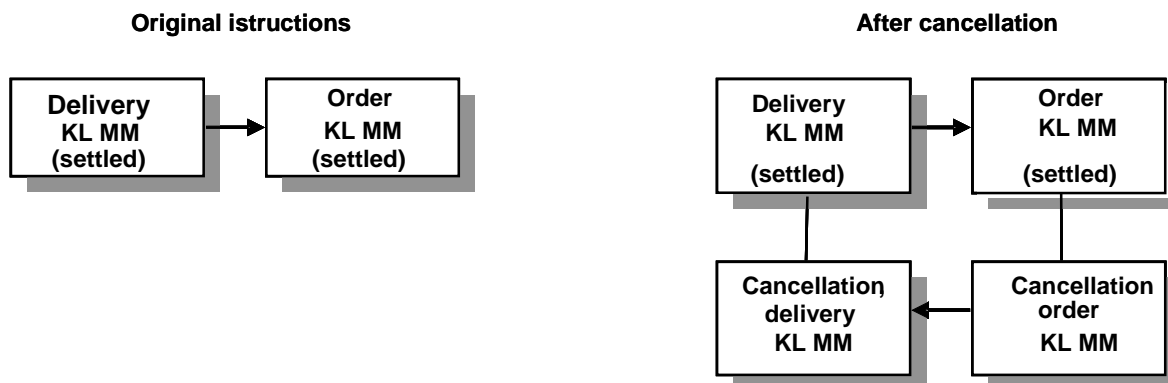
Where an order and a delivery have the status MM (with counterparty), both parties are required to register and match the cancellation.

Where the original registrations have the status VÄ (pending), both these and the cancellations are given the status EX (excluded).



³ In NewClear I (Holding is available) and R (Reservation of payment, i.e. both delivery and payment capacity is available) will be used instead to mark instructions in follow-up displays

Where the original instructions have the status KL (ready) or have been settled, the cancellations receive either a 'ready to settle' (KL) status or 'pending' (VA) depending on whether or not cover for the cancellation exists. Delivery and payment capacity must be available for both securities and settlement headroom.



6.4 Preparing for S

Although a pre-settlement check will be made prior to 'ready to settle' marking on day S, a number of steps in the settlement process are taken even before day S. Some of these activities are shown below.

6.4.1 Dealing with unmatched instructions

An important part of the work prior to day S is the matching of all buy and sell instructions and all deliveries and orders. Unmatched instructions will not be checked for 'ready to settle' marking. For those accustomed to working in today's PM clearing and settlement, this is no novelty, but it represents a change as regards AM clearing.

In order to achieve an optimal effect of the nettings created in the system, it is necessary for as many as possible of the instructions to be matched.

6.4.2 Matching

The same matching criteria as today will also apply in NewClear, that is.:

- Counterparty
- Trade date
- Settlement date
- Quantity / nom amount
- Security / ISIN
- Payment amount and settlement currency
- Where appropriate, event code (does not apply to Prematch)/ trade ID

In Prematch, Cum/Ex, i.e. including or excluding dividend, and customer reference are also matching concepts.

6.4.3 Dealing with negative positions and discrepancies

A further important part of the work before settlement day is the handling of discrepancies on clearing accounts and negative positions on VPC accounts.

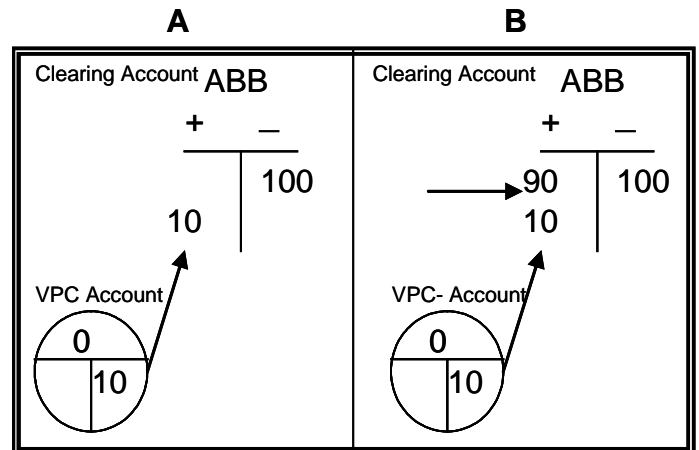
A discrepancy may arise on a clearing account in AM settlement and may result in the quantity of securities on the credit side differing from the debit side. The concept 'discrepancy' does not occur in PM settlement.

In PM settlement, however, the concept “negative positions” exists today, which simply means that the net of registered instructions, not yet marked ‘ready to settle’, exceeds the booked holding on the PM account. In NewClear, the concept will also be introduced in AM clearing relating to VPC accounts.

Fig. 21: Example AM clearing. Discrepancy on clearing account and negative position on VPC account

A clearing account in AM settlement may actually be negative in the sense that the sum of deposits (+10) is lower than the sum of withdrawals (-100), which means that the clearing account does not balance (A).

If all discrepancies are dealt with, no “negative” clearing accounts remain, though some VPC accounts may still have one or more negative positions (B). In this case, the discrepancy on the clearing account has been dealt with by making a deposit of 90. The VPC account nevertheless has a negative position (-10), i.e. the holding registered or the deposit is not sufficient for the withdrawal on the VPC account. It is important to note that a VPC account can never have a negative balance.



By introducing the concept ‘negative positions’ and possibilities for following up in AM clearing, it is possible to detect, quite simply, those VPC accounts where negative positions exist. The figure below illustrates how this can appear.

Fig.22: Example of a follow-up screen display of negative positions

Securities	VPC Accounts	Calculated balance
S ABB LTD AK	0000 6800 1235	-10
ELEKTRONIK AK B	0000 9801 7155	-1.000
ERICSSON AK B	0000 5498 5491	-1.800

This clearing member has registered withdrawals on three VPC accounts and there is insufficient cover for these withdrawals. There are three negative positions on three different securities. Amongst these is the negative position (-10) which was used in the previous example. From this enquiry screen, it is possible to select more specific information to reveal the underlying instructions.

6.4.4 Preparing payment capacity for clearing members

6.4.4.1 Registration of limits

Limits are set on two levels in the system

- Clearing member
- Clearing identity/PM account group

- Clearing member

The limits are set on the cash memorandum account. Since a limit must be set per cash memorandum account, currency and settlement category, this means that a clearing member may have up to four limits: AM SEK, AM EUR, PM SEK och PM EUR

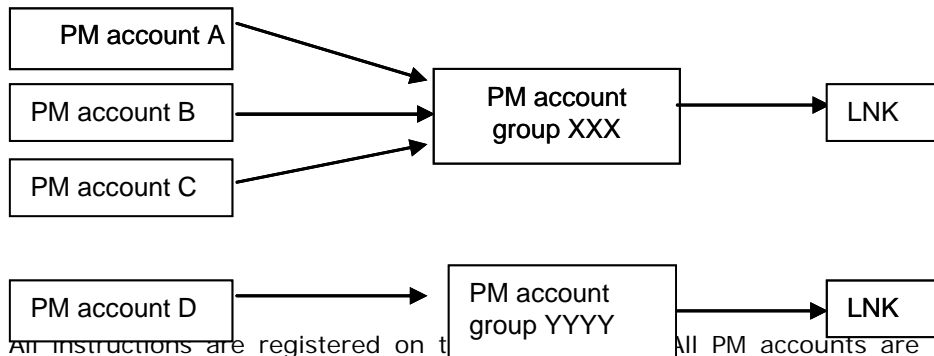
A clearing member's limit is registered by its settlement bank and is that part of the settlement headroom that the settlement bank undertakes to pay on the clearing member's behalf in a specific currency and sub-market without it being guaranteed within the framework of the VPC system. It is possible to specify whether the limit shall apply for a period ("standing limit") or only during that particular settlement day ("limit")

- Clearing identity/PM account group

The same procedures apply to clearing identity as to clearing member, with respect to the handling of limits for AM. The limit for clearing member identities is registered by the clearing member.

As to limits regarding PM account groups, the handling is somewhat different. In the PM settlement each PM account is linked to a cash memorandum account (LNK). To establish this link, the clearing member has to specify a PM account group for each PM account. Each PM account group is, in turn, linked to a cash memorandum account. It is possible to link several PM accounts to the same cash memorandum account. This can be illustrated as follows:

Fig. 23: Linking PM accounts to PM account groups and cash memorandum accounts.



All instructions are registered on the clearing member's side. All PM accounts are assigned to a particular PM account group, and thus also to a particular cash memorandum account. Where a clearing member has several account groups, it must specify which PM account belongs to which group. It is possible to specify the same PM account group for several PM accounts.

It is up to the clearing member to use the model that best suits its administration and to register the desired limits.

Below is an example of how clearing member CM1 registers a temporary limit on cash memorandum account ABC 123.

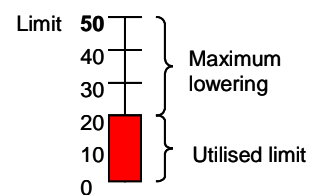
Fig. 24: Register limit for clearing member

LIMIT INFORMATION, REGISTER		02-03-08 10:10:08	
VPXLAON XXXXP999 /01		VPXLAON	
CM: CM1	Payment day 020308		
	From		
Automatic decrease (J/N)	N		
Uncapped limit (J/N)	N -----		
	- -----		
Minimum limit	0,00		
	From date To date		
Current standing limit	40.000,00 020201 020601		
New standing limit:	-----		
Current limit	40.000,00		
New limit:	<u>50.000,00</u>		
PF1=HJÄLP			
XXXX Åk UP Nyckel ABC123,SEK,PM			

Cash memorandum account ABC 123 has a standing limit of 40.000,00 but needs a higher limit for the day. The clearing member specifies in the key which cash memorandum account is concerned (ABC123), plus the currency and sub-market. From the registration screen, it is apparent what the current standing limit is as well as the current limit for day S. The clearing member registers the new (temporary) limit on the cash memorandum account at 50.000,00

Fig. 25: Maximum lowering of limit

A limit may be changed in real time, both upwards and downwards. Note that an increase or decrease of a limit is obtained by registering a new limit. The settlement bank or the clearing member registering the limit determines how large the raising or lowering shall be. It is important to note that it is only possible to lower to the utilised level. Where the clearing member has a limit of 50, and 20 of this is already utilised, it may only be lowered by 30, i.e. down to 20.



7. The settlement process in day S

This section deals with events and measures in NewClear on settlement day, S.

7.1 Queue handling

A number of different queues are created for the order in which the pre-settlement check takes place; one payment queue and two quantity queues for securities in the AM settlement and one quantity queue for securities in the PM settlement. The fact that there is only one quantity queue for the PM settlement is because there are no separate clearing accounts in this sub-market.

In the payment queue, there are instructions to be checked as regards settlement headroom, and in the quantity queues there are instructions that are to be checked as regards holding, on the clearing account and the VPC account. Before an instruction is placed in any of these queues, it must be matched.

In contrast to today, instructions will not be checked until settlement day S. As a result, the stoppages that can occur today in AM clearing, where securities may be blocked for several days before settlement, will be eliminated.

In simple terms, if delivery capacity is available, the checking will proceed in order to confirm that the payment sum is available in the purchasing/ordering party's settlement headroom. Where the payment sum in the instruction is not available, the status 'pending with counterparty' will remain in place. In those cases where there is delivery capacity and the payment sum is available in the purchasing/ordering party's settlement headroom, both instructions are given the status 'ready with counterparty'.

Where delivery capacity is lacking, no check will be made as to whether the payment sum is available in the settlement headroom or not.

Accordingly, as the instructions are marked 'ready to settle', the incoming holding may be used for the 'ready to settle' marking of other registered instructions, just as today.

7.1.1 Quantity queuing – VPC accounts

This queue is comprised of all pending sales and trading and transfer withdrawals from a VPC account. They are placed in the same queue since they make claims on the holding on the same VPC account.

Sales and withdrawals related to an instruction against payment have a higher priority than withdrawals related to free of payment transfers. This means that sales and withdrawals related to an instruction against payment are checked before transfer withdrawals. Within each withdrawal group they are then sorted according to quantity of securities in descending order.

7.1.2 Quantity queuing – clearing accounts (applies only to AM clearing)

Here only matched deliveries, not marked 'ready to settle', and pending deposits are to be found. This queue is divided up by clearing member identity, security, event code and event identity.

Deposits and deliveries are placed in the same queue, since they make a claim on the same holding on the clearing account. Deposits have a lower priority than deliveries, which means that the deliveries are checked first, followed by the deposits. Within the respective groups they are then sorted according to quantity of securities in descending order.

7.1.3 Payment queuing

Only matched purchase/orders, not marked 'ready to settle', are found in this queue. One queue for each clearing member identity/PM account group, cash memorandum account and currency. All purchase/orders in one currency, regardless of security, are placed in this queue, which means that different securities are found in the same queue. The sorting order is according to the size of the payment sum in descending order, that is the purchase/order with the highest payment is checked first.

7.2 The provision of liquidity

Settlement banks must ensure that sufficient central bank funds are available before the pre-settlement check starts on day S. This is done by transfer from the regular account in RIX to the liquidity settlement accounts concerned, as well as any adjustments in the clearing members' limits. It is of particular importance that liquidity is available for the interest and redemption process for all parties concerned, i.e. settlement banks, clearing member/issuing agent and issuer.

7.3 Pre-settlement check

The pre-settlement check involves an examination of whether a seller has securities and the buyer has sufficient settlement headroom. If the securities and the settlement headroom are available in adequate amounts, the transaction can be given a 'ready to settle' marking prior to settlement.

Before the pre-settlement check in NewClear starts, it is essential that NewClear has information concerning which balance the respective settlement bank has made available for the settlement process, and also that limits have been registered. Where no limit has been specified, the pre-settlement check will assume a headroom of zero.

The pre-settlement check starts with a check of all interest and redemption amounts. See Section 5 for further description of this process. After that, the pre-settlement checking of other transactions on the secondary market commences.

Today, trading instructions are pre-settlement checked in chronological order according to registration, which means that even an unmatched delivery is pre-settlement checked, assigned a status and the holding blocked (if it exists), with the result that instructions registered subsequently (even matched ones) cannot be given a 'ready to settle' marking. In the event that a holding is not available, the instruction will lay claim to any incoming securities since it was registered first. In NewClear only matched instructions will be pre-settlement checked.

7.3.1 Netting functions

A number of different netting functions have been developed in NewClear in order to be able to mark as many instructions as possible with a 'ready to settle' status. A major netting of all instructions that fulfil the requirements for netting will be run once a day.

It is fully possible to send in instructions at the same time as the running of the major netting is in progress, but these instructions will not be checked until after the netting is completed.

In an attempt to assign a 'ready to settle' marking to as many instructions as possible, a number of other netting functions will be developed in NewClear, over and above the one already described above. The aim of these nettings is to be able to cope with simpler cases of "knots" and "chains" directly as they arise. The introduction of these functions will mean that the running time for the major procedure for unravelling knots can be cut down as it will only have to deal with more complicated variations of these.

Four different netting functions will be running continuously during day S:

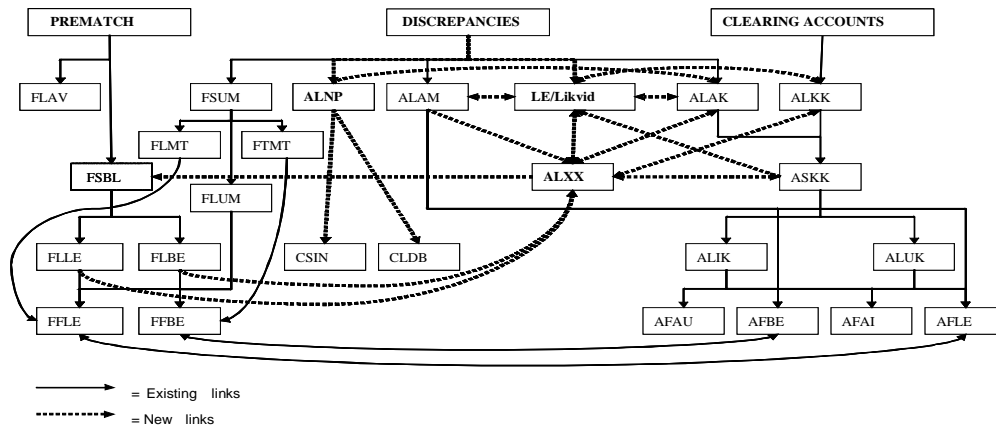
- *Netting of clearing account*, which, by means of a netting on the clearing account, unravels knots which may arise. For example, where a clearing member buys without having sufficient settlement headroom and then immediately resells the purchased holding.
- *Netting of a clearing member's trades in a security*, which, by means of a netting of the clearing account involved, unravels "knots" that may arise. For example, if a clearing member buys from its "normal" clearing account (without an event code) and without having sufficient settlement headroom and then resells via a special clearing account (with event code).
- *Netting of trades between two clearing members*, which nets payments between two parties where the holdings are available in different trades, but the settlement headroom is lacking.
- *Netting of chains in a security*. This procedure works in the same way as the major procedure for the breaking up of chains, though with the difference that the process is carried out for each security. This allows chains in the same security to be dealt with, (where, for example A sells to B who sells to C who sells to A), whereas more complicated chains (primarily payments), which cover several securities, cannot be dealt with.

7.4 Reconciliations and follow-up

The reconciliation and follow-up screen displays that are used today will be kept with the same names and transaction codes. In most cases, they will show basically the same information as today. In addition to these, a number of new enquiry functions will be available and new search paths and selection options for the different screens will be developed. Some examples of payment follow-up transactions are shown below, as these are completely new enquiry functions.

Furthermore, today's "menu tree" will be changed to the extent that considerably more extensive selection options will be made available. The significance of this is that, from a payment enquiry, for example, a clearing member will easily be able to select an item to extract information about a securities instruction. The figure below is an example of how different options can be used for obtaining information concerning the AM sub-market.

Fig. 26: Menu tree, sub-market AM



7.4.1 Settlement banks

New enquiry functions for settlement banks comprise both a series of forecasts for S, which can be produced before S, and different general enquiries that can be made on S.

Before pending settlement days, a settlement bank needs to plan the liquidity that can be required for securities settlement.

The following enquiry functions can be used before S

- Liquidity forecast list
- Liquidity forecast, AM
- Liquidity forecast, PM

During day S the settlement bank can follow its settlement headroom in real time and the balance on the liquidity settlement accounts in the VPC system.

The following enquiry functions can be used on S

- Liquidity overview list
- Liquidity overview pending, AM
- Liquidity overview pending, PM
- Liquidity settled
- Liquidity settlement account

An enquiry function is presented below for the settlement bank, which gives it a liquidity forecast over the net of all its clearing members. The enquiry can be made for any day, sub-market in the VPC system and currency containing registered instructions. The enquiry shows the settlement bank on the chosen day and for the chosen currency:

Fig. 27: Liquidity forecast - settlement bank

LIQUIDITY FORECAST, LIST 02-03-07 10:10:08 VPXLAON			
XXXXP999 /01 VPXLAON			
Settlement day 2002-03-08			
	Unmatched	Matched	Total
LB: LB1	500.000,00	1.000.000,00	-1.500.000,00

CM: CM1		Limit:	5.000.000,00
	-500.000,00	-1.000.000,00	-1.500.000,00
CM: CM2		Nolimit	0,00
	1.000.000,00	3.500.000,00	4.500.000,00
CM: CM3		Limit:	3.000.000,00
	-1.000.000,00	-3.500.000,00	-4.500.000,00
CM: CM4		Limit:	0,00
	0,00	0,00	0,00
PF1=HJÄLP PF7=FÖREG SIDA PF8=NÄSTA SIDA			
XXXX Åk Nyckel SEK,AM,020308			

- During day S a settlement bank can follow its settlement headroom and balance in real time on the liquidity settlement accounts in the VPC system. The enquiry below allows the settlement bank to detect a possible need for increased settlement headroom (liquidity).

Fig. 28: Liquidity overview - settlement bank

LIQUIDITY OVERVIEW, LIST 02-03-08 10:10:08 VPXLAON			
XXXXP999 /01		VPXLAON	
LB: LB1	Settlement day 2002-03-08	AM	PM
Balance carried forward	0,00		0,00
Net withdrawal/deposit	10.000.0000,00		50.000.000,00
Net settled	-5.000.000,00		-30.000.000,00
Final balance	5.000.000,00		20.000.000,00
BE / KÖ KL	-20.000.000,00		-60.000.000,00
LE / SÄ KL	16.000.000,00		50.000.000,00
Settlement headroom	1.000.000,00		10.000.000,00
BE / KÖ MM	-5.000.000,00		-50.000.000,00
LE / SÄ MM	2.000.000,00		20.000.000,00
Est.settlement headroom	-2.000.000,00		-20.000.000,00
BE / KÖ UM	0,00		0,00
LE / SÄ UM	0,00		0,00
Est.settlement headroom	0,00		0,00
PF1=HJÄLP PFxx=LIKVIDAVVKTO AM PFxx= LIKVIDAVVKTO PM			
PFxx=LIKVÖVERSIKT DETALJ			
PFxx= BEGÄRAN OM ÖVERFÖRING			
XXXX Åk Nyckel SEK			

Below is an example of an enquiry function concerning the settlement bank's liquidity settlement account. Here the settlement bank can trace the transactions recorded on the account. It is possible to list several days or to select a specific day.

Fig. 29: Liquidity settlement account

LIQUIDITY SETTLEMENT ACCOUNT, LIST		02-03-07 15:15:08
VPXLAON		
XXXXP999 /01		VPXLAON
LB: LB1	Settlement day <u>020307</u> - <u>020307</u>	
02-03-07	Balance brought forward	0,00
	Manual deposit	6.500.000,00
	Settled 10.00	-1.500.000,00
	Settled 12.00	-3.600.000,00
	Settled 14.00	2.400.000,00
	Automatic withdrawal	-3.800.000,00
	Balance carried forward	0,00
PF1=HJÄLP PF7=FÖREG SIDA PF8=NÄSTA SIDA		
PFxx=LIKVIDITETSÖVERSIKT		
XXXX Åk Nyckel SEK,AM		

7.4.2 Clearing members

A clearing member may also review in the same way as a settlement bank.

Forecasts for a clearing member comprise:

- Liquidity forecast list
- Liquidity forecast, AM
- Liquidity forecast, PM

During day S, the following enquiry functions, amongst others, may be used

- Liquidity overview list
- Delivery/payment lacking
- Matched payments pending total, AM
- Matched payments pending list, AM
- Delivery/payment lacking, PM
- Matched payments pending total, PM
- Matched payments pending list, PM
- Liquidity settled
- Cash memorandum account

Prior to pending settlements, the clearing member will receive, amongst other things, a liquidity forecast over all its clearing member identities / PM account groups, as illustrated below.

Fig. 30: Liquidity forecast – clearing member

LIQUIDITY FORECAST, LIST		02-03-07 10:10:08 VPXLAON	
XXXXP999 /01		VPXLAON	
Settlement day 2002-03-08			
	Unmatched	Matched	Total
CM: CM1		Limit:	2.000.000,00
	-500.000,00	-1.000.000,00	-1.500.000,00
CID: CD1		Limit:	6.000.000,00
	-500.000,00	-1.000.000,00	-1.500.000,00
CID: CD2		Nolimit	0,00
	1.000.000,00	3.500.000,00	4.500.000,00
CID: CD3		Limit:	3.000.000,00
	-1.000.000,00	-3.500.000,00	-4.500.000,00
PF1=HJÄLP PF7=FÖREG SIDA PF8=NÄSTA SIDA			
XXXX Åk Nyckel SEK,020308			

7.4.3 Clearing member identity/PM account group

There are follow-up transactions even at the lowest level, clearing member identity (CID) and PM account group. These enquiry transactions are at a lower level of detail, since all trades are found at this level.

Forecasts comprise

- Liquidity forecast, AM

Enquiry functions that can be used on day S are

- Delivery/payment lacking, AM
- Matched payments pending list, AM
- Delivery/payment lacking, PM
- Matched payments pending list, PM
- Cash memorandum account

The example below shows a follow-up enquiry at the lowest level. "Enquiry delivery/payment lacking".

Fig. 31: Delivery/payment lacking – clearing member identity

DELIVERY/PAYMENT LACKING, LIST		02-03-08 10:10:08 VPXLAON	
XXXXP999 /01		VPXLAON	
CID: CD3	Settlement day 2002-03-08	Est. Settlement	
headroom			
Limit	10.000.000,00	10.000.000,00	
Net incr./decr.	0,00	0,00	
Net settlement	-5.000.000,00	5.000.000,00	
LE KL	16.000.000,00	21.000.000,00	

BE KL	-20.000.000,00		1.000.000,00
Pending MM	FM	DJ	
BE IF RES	0,00	0,00	0,00
BE IF	-2.000.000,00	-3.000.000,00	-4.000.000,00
BE	0,00	0,00	0,00
LE IF	0,00	0,00	0,00
LE	1.000.000,00	1.000.000,00	-2.000.000,00

BE UM	0,00	0,00	0,00
LE UM	0,00	0,00	0,00
PF1=HJÄLP PFxx=VÄNTANDE MM LIKV TOTALT PFxx= VÄNTANDE MM LIKV XXXX Åk Nyckel SEK			

In a similar fashion, as in many of the enquiry functions available in NewClear, it is possible to make further selections to gain more detailed information.

7.5 Settlement

7.5.1 Settlement against payment

This is the final stage in the settlement process. Only instructions that have been given a 'ready to settle' status will be settled. Settlement is obtained by debiting or crediting those VPC accounts specified by the clearing member. At the same time, a debit or credit is made on the relevant liquidity settlement accounts and cash memorandum accounts.

In conjunction with settlement, the settlement headroom is seen as a definite balance. As a result, any funds in the liquidity settlement account become available for the settlement bank to dispose of at will.

The clearing members will receive information of settled transactions and cash amounts after each settlement cycle. The settlement bank also receives information regarding net payments for its clearing members.

7.5.1.1 Final settlement against payment

In conjunction with the final settlement cycle against payment, all cash balances must be transferred to RIX.

VPC will make a final account to settlement banks of the balance recorded on the liquidity settlement accounts of each respective settlement bank. This is done by means of an automatic transfer to the regular RIX account.

7.5.2 Resetting to zero of intraday credits

In conjunction with the final settlement against payment, VPC will take care of the repayment of outstanding intraday credits, as long as sufficient headroom is available on the liquidity settlement account. In the event that the headroom on the liquidity settlement account is insufficient for the resetting to zero, the settlement bank itself is required to initiate a transfer to VPC before 15.00 hours for the repayment of outstanding intraday credit from the Riksbank.

7.5.3 Settlement free of payments

7.5.3.1 Transactions without payment

It will still be possible, even after 14.00 hours (the time for the final settlement against payment), to register instructions free of payment, even prematch instructions. These

instructions will be settled at the final settlement free of payment, which is the last settlement cycle on settlement day S.

7.5.3.2 System-generated deposits (SIA)

In NewClear, system-generated deposits (SAI) will not be made at each separate settlement, but at the final settlement cycle instead. This means that an SAI will be created at 14.00 hours in the final settlement cycle against payment and at 18.00 hours in the final settlement cycle free of payment.

However, in NewClear, a change will be made concerning instructions from Prematch, on condition that these fulfil certain requirements. This is due to the changed functionality in Prematch. Instead of making the system-generated deposit on the surplus account, it will be re-entered on the VPC account from which the withdrawal was made.

A check will be made as follows on the clearing account regarding instructions for Prematch:

- A withdrawal and a delivery with the same quantity of securities => SAI back to the VPC account from which the withdrawal was made.
- More than one withdrawal or more than one delivery or different quantities of securities on a withdrawal and delivery => SAI to the surplus account.

8. Definitions

AM settlement – the sub-market in the VPC system, mainly for equities

Balance on CBK – a settlement bank's debt to the central bank.

Balance on liquidity settlement account – a settlement bank's current claim on the Riksbank with regard to securities settlement.

Cash memorandum account – Account at VPC for calculating settlement headroom

Central bank credit – see balance on CBK

Central bank credit account (CBK) – account for recording utilised central bank credit in one currency in respect of a settlement bank

Clearing account – a compilation of rights and obligations relating to the delivery of securities.

Clearing member – participant in VPC's settlement that delivers securities and makes payments in the settlement.

Clearing member identity – identity linked to a clearing member, which is intended to differentiate commercial transactions. Also known as **clearing identity**.

Collateral account – a PM account specified by a settlement bank, the holdings of which are pledged to the Riksbank

Collateral value – basis for calculating the maximum credit limit. May be expressed as collateral value per ISIN or per collateral account. Collateral value per ISIN is calculated according to the formula: nominal amount x price x (1 - margin). The collateral value of a collateral account is calculated as the collateral value of all ISINs on the collateral account.

Credit-creating transaction – function for creating increased settlement headroom in conjunction with pre-settlement checking, such as pledging for increased settlement headroom.

Day S - settlement day.

DvP (Delivery versus Payment) – a final and irrevocable delivery of securities against a final and irrevocable payment obligation.

End-of-Day – procedure for the resetting to zero of liquidity settlement accounts and central bank credit accounts after the final settlement against payment.

Internal disbursement – settlement bank's payment to underlying clearing members and clearing member's payment to underlying PM account group.

Intraday credit – credit, for those settlement banks that wish, against the holding on a collateral account administered by the Riksbank in conjunction with pre-settlement checking on PM sub-market. The credit must be repaid by 15.00 at the latest on S.

Limit for clearing members – clearing member's maximum intraday credit at the settlement bank relating to VPC settlement, which can not be guaranteed within the framework of securities settlement. It specifies the highest debit balance allowable on the cash memorandum account.

Limit for clearing member identity – the maximum net amount allowable with regard to payment on a cash memorandum account linked to a clearing member identity.

Liquidity settlement account – a settlement bank's account at the Riksbank for securities settlement which is administered by VPC.

Liquidity-saving functions - functions for reducing the need for central bank liquidity and limits such as technical netting.

Margin – See valuation margin.

Marked 'ready to settle' – status of an instruction, where the payment capacity and delivery capacity have been ensured.

Maximum intraday credit – maximum balance allowed on a central bank credit account. The highest amount specified by the settlement bank.

Minimum limit - lowest level for a limit. Determined and registered by VPC.

Minimum liquidity – lowest holding available on a liquidity settlement account when the settlement process commences and which must not be allowed to fall short when payment to the settlement bank occurs. The amount is registered by VPC.

Netting - function for the simultaneous processing of several instructions with the aim of reducing the need of securities holding and/or liquidity. Used to optimise the process of 'ready to settle' marking.

NewClear - the new version of VPC:s settlement system

Offsetting – netting of previous issue transactions not preliminarily blocked against interest and redemption amounts from the same issuer.

Payment in the interest and redemption process – recording on a liquidity settlement account and cash memorandum account, which is the result of all activities in the interest and redemption process.

PM account group - a group consisting of one or more PM accounts (on the fixed income market) linked to a specific cash memorandum account.

PM settlement – sub-market in the VPC system, mainly for fixed income instruments

Preliminary blocking – temporary reservation of settlement headroom and/or securities.

Pre-settlement check – a check of delivery and payment capacity (which may lead to a status change in the instructions)

Redemption - repayment of loan from an issuer.

Registration account – securities account where the issued securities are created and from which they are distributed to buyers in the primary market.

Repayment of credit – debiting of a liquidity settlement account (LAK) and crediting of a central bank credit account (CBK).

Reservations at the Riksbank option for a settlement bank to reserve funds on its regular account in RIX for a special purpose. It is used at the end of the day, in the event that a settlement bank has not regulated its debt to the Riksbank before a certain point in time. Also used in RTGS transactions.

RIX/VPC account – an Riksbank account at the Riksbank for VPC settlement.

Settlement – the completion of delivery and payment obligations.

Settlement at certain pre-determined times – simultaneous settlement of all instructions marked 'ready to settle' according to a determined settlement timetable with several settlement cycles.

Settlement bank – participants in the central bank that make and receive payments on behalf of clearing members.

Settlement cycle – those phases in the settlement process that constitute the assuring of delivery and payment capacity and actual settlement.

Settlement headroom – the payment capacity against which payment instructions are pre-settlement checked prior to 'ready to settle' marking

Settlement headroom for clearing members (CM) – the clearing member's current limit, the net total of the clearing member's 'ready to settle' instructions, together with any changes in the settlement headroom as instructed by the settlement bank.

Settlement headroom for settlement banks (LB) – the settlement bank's current holding in the Riksbank, which has been separated for securities settlement by transfer to a liquidity settlement account, together with the net total of the 'ready to settle' instructions of the underlying clearing members.

Settlement process – the different steps leading up to and including the settlement stage. (The different stages are: registering, matching, pre-settlement checking, settlement and follow-up).

Settlement timetable – specifies the times for settlement cycles during a settlement day.

Standing limit - the amount used by VPC as a limit, if none is otherwise specified, on the settlement day in question. The change in standing limit does not come into effect until the following day.

The interest and redemption process – applies to instruments on a PM account (fixed income market). It consists of the following stages: pre-settlement check of instructions relating to securities subject to redemption, search and redemption calculation, pre-settlement check of issue, other liquidity-saving measures, final pre-settlement check and payment. ?

The Riksbank's valuation rules – Used for the calculation of collateral value. Made up of securities approved by the Riksbank, price plus margin.

The RIX system – payment system in SEK and EURO administered by the Riksbank.

Total collateral value – the collateral value of the holdings on all collateral accounts held by a settlement bank.

Unutilised collateral value – total collateral value, less balance on central bank credit account.

Valuation margin - deduction on the specified price relating to an ISIN.

Valuation profile – specifies how the pledge value is to be calculated for a particular settlement bank (beneficiary) ?

VPC account – an account at VPC for the registration of beneficial rights of ownership and other rights to securities.