TITLE

An automated method and a system for clearing and settling trades in a CSD-system.

TECHNICAL FIELD

The present invention relates to a method and a system for use in a so called Central Securities Depository, commonly abbreviated as CSD. By means of the invention, the clearing and settlement of trades in such a system is facilitated, and settlement can be standardised.

BACKGROUND ART

After World War II, many financial (and other) markets were forced to create so called Central Securities Depositories (CSD:s) in order to be able to handle soaring volumes of trade. A Central Securities Depository may be defined in the following manner: a facility (or an institution) for holding securities, which enables securities transactions to be processed by book entry. Physical securities may be immobilised by the depository, or securities may be dematerialised (i.e. they will exist only as electronic records). In addition to safekeeping, a central securities depository may incorporate comparison, clearing, and settlement functions.

Early examples of CSD:s are Frankfurter Kassenverein, DTC (New York), Sicovam (Paris) and Euroclear (Brussels).

Early CSD:s were based on the principle of joint centralised storage of certificates (immobilised securities). Holdings of securities were recorded in a book-entry system. Physical delivery of securities from

seller to buyer was replaced by book entry transfer of the securities from seller's bank's account in the CSD to the account of buyer's bank. Participants in a CSD are market participants, e.g. brokers and banks, and in some cases also institutional investors.

Later CSD:s have in some cases handled dematerialised securities, i.e. issues that only exist in electronic form. The Nordic countries are examples of markets where securities - bonds and shares - in paper form no longer exist. The systems and procedures in a dematerialised CSD are similar to those of an immobilised CSD as outlined above.

Today more than 150 CSD:s exist around the world. Globalisation has led to an increase in cross-border trading, as well as consolidation of securities markets and the underlying infrastructure such as CSD:s. This means that more and more CSD:s serve not only the securities and the participants of a single particular market.

The main functions of a CSD are:

- Registration of securities and ownership to securities
- Clearing and settlement of trades in securities
- Asset services (also sometimes referred to as corporate actions), e.g. payment of dividend or interest
- Other services, e.g. collateral management for participants.

Clearing (or clearance) can be defined as the process of transmitting, reconciling, and, in some cases, confirming payment orders or security transfer instructions prior to settlement, possibly including the netting of instructions and the establishment of final positions for settlement.

Settlement can be defined as an act that discharges obligations in respect of funds or securities transfers between two or more parties.

CSD:s are based on automated Information Technology (IT) systems - most of which systems are tailored to the traditions and procedures of their home market. Globalization, consolidations among market participants and changes in investment patterns have resulted in a number of add-ons to these systems due to new requirements, for example new types of securities with special functions, or payments in foreign currency.

Clearing and settlement can take place in a number of different ways. Trades can be settled trade for trade (gross settlement), or in a batch where some sort of netting is described. An important principle that is often used is the principle of delivery versus payment (dvp). This means that if payment is made, the buyer can be absolutely certain that the securities are delivered.

The many changes and additions to settlement systems cause problems for CSD:s because it is difficult to change the IT systems to a structure that differs significantly from the original system requirements.

SUMMARY OF THE INVENTION

There is thus a need for a method and a system by means of which trades can be settled within a CSD-system in an easier and more generalized and flexible manner than previously. This need is addressed by the present invention in that it discloses a method and a system for carrying out clearing and settlement in a Central Securities Depository, the clearing process comprising

- selecting a settlement rule to be followed in the clearing process, the rule defining how the transaction is to be settled,
- defining a settlement obligation group, said group comprising a number of settlement instructions that all have to be settled at the same time,
- "locking in" of the assets which the transaction concern, the locking-in having the effect of reserving said assets for a specific settlement instruction.

By adding the automatic functions of selecting a "settlement rule" , defining of "settlement obligation group", and "lock-in of assets" to the clearing process, as disclosed by the invention, it has been possible to arrive at a simplified and generally applicable settlement process comprising:

- automatically selecting transfer instructions for all settlement obligations belonging to said settlement obligation group, said transfer instructions being irrevocable instructions to transfer (the locked-in) assets between participants in the CSD,

- automatically checking that all transfer instructions are carried out successfully,
- automatically reporting the result of the settlement to the participants involved.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be described in more detail below, with reference to the appended drawings , in which ,

Fig 1, in order to facilitate the understanding of the background of the invention, shows some of the major functions in a CSD, and

Fig 2 shows some of the major steps in the clearing process - these steps leads up to the point where everything is confirmed and ready to settle. The settlement process is then reduced to the act of issuing irrevocable transfer instructions and to checking that they are successfully executed, and

Fig 3 shows a flowchart of some major steps in the invention

EMBODIMENTS AND DISCLOSURE OF THE INVENTION:

Below there is a description of a simplified automated clearing and settlement routine according to the method of the invention. The routine makes it easier for a CSD to adapt to changing market requirements and include new types of securities and new types of settlement. At the same time, the routine can be used for other CSD functions, such as collateral management and so called "corporate actions", e.g. payments of dividend or interest.

In order to simplify and generalise the settlement process, a number of concepts are introduced for use by automatic sub-processes or functions comprised in the invention in the clearing of transactions to be settled:

- Settlement rule: a settlement rule describes how a specific transaction or group of transactions is to be settled. For example, Swedish shares can be settled using the so called BIS model 2, i.e. gross settlements of securities followed by net settlement of funds transfers, also known as Delivery versus Payment in Securities Settlement Systems, and money market transactions are settled trade for trade using "RTGS" - Real Time Gross Settlement, i.e. gross, simultaneous settlement of securities and funds transfers

- Settlement obligation group: A group of settlement instructions that have to be settled together: either all instructions will settle or none of them will. For example, in a single dvp ("delivery versus payment", as explained above) transaction, the settlement obligation group consists of two instructions: The buyer's obligation to pay for a certain set of securities, and the seller's obligation to deliver those securities. In what is known as a batch settlement, a settlement obligation group can consist of thousands of instructions that have to be settled simultaneously.

- Lock-in of assets before settlement. Where assets can be money or securities. The assets are reserved for the purpose of a specific settlement instruction.

- X versus Y: In the normal case a settlement routine is required to settle securities trades: delivery of securities versus payment for the same securities. But there are other situations which are very similar, that could be handled by the same settlement routine according to the invention:
    - Delivery of liquidity versus collateral (dvp) i.e. to provide funds against collateral
    - Payment of Euros (€) versus payment of US Dollars ($), i.e. pvp, payment versus payment.
    - Exchange of one type of collateral versus another type of collateral, known as dvd. (Delivery versus delivery)
    - Delivery of a new issue of securities versus payment for those securities (also a dvp operation)
    - Delivery of securities free of payment
    - Payment of interest or dividend to all holders of a certain security.

In order to facilitate the understanding of the invention, a brief description of some of the major functions in a conventional CSD will now be given. This description is given with reference to fig 1, in which a brief outline of a CSD system is shown, comprising the following automated functions:

- Gatekeeper

- Issuer CSD
- Investor CSD
- Clearing
- Settlement

Briefly, the main purposes of each of the functions in a CSD, as shown in fig 1, are:

Gatekeeper: checks system security and authorisations, such as e.g. access and access rights for the participants of the CSD.

Issuer CSD: defines securities in the system, and checks on the total amount of instruments in the system and other associated CSD:s. Also defines corporate actions for individual instruments. The term "corporate action" will be defined below.

Investor CSD: registers ownership and other rights. Executes corporate actions.

Clearing: receives and registers trades in instruments , and makes the trades ready for settlement.

Settlement: executes deliveries and payments in connection with trading.

Figure 2 is a simplified illustration of the clearing routine according to the invention. Suitably, the steps are carried out in a computer or other such automated machine means, with a minimum of intervention necessary by an operator of a CSD. However, any combination of

automated and manual actions which would comprise the steps of the invention are within the scope of the invention. In addition, fig 3 shows a traditional flow chart of the routine described below, the major steps of the routine being referenced with numbers in the flow chart, said numbers being shown below in parentheses for ease of reading

- The instructions of the participants are received and checked to ensure that all the necessary information is there. If necessary, additional information can be added for the participants' back-office functions. (310)
- If the instructions are received from the participants (instead of direct trade capture from a stock exchange trading system) then the instructions are matched (trade comparison) to ensure that the participants agree on the basic conditions (e.g. the securities to be traded, volume, price, and settlement time). This step as well as the previous step is found in most clearing routines. (320)
- The instructions are transformed into settlement obligations. (330)
- The proper settlement rule is selected (340), and
- Instructions that are ready for settlement are joined in one or more settlement obligation groups. (350)
- The assets (securities to be delivered and/or money to be paid) are locked in, i.e. reserved for settlement. (360)

Following the steps outlined above, a generalized settlement routine is ready to take over.

Based on these concepts, the automated settlement routine or "engine" becomes very simple, flexible and applicable to the settlement of a very wide range of securities and market practices:

- Select settlement obligation group
- Issue irrevocable transfer instructions for the entire group
- Check that all transfer instructions are carried out successfully
- Report the successful settlement result.

Transfer instructions can be instructions to a connected payment system to transfer money from one participant in the system to another participant in the system. It can also be an instruction to the current CSD (or to another CSD connected to the current CSD) to transfer securities from one participant to another. Since all assets have been locked-in by the clearing function, one can be sure that the instructions will not be revoked.

Settlement of different types of securities, including settlement in foreign currency, so called cross systems settlement can be handled by such a generalised settlement engine without systems changes.

It is possible to structure so called corporate actions (e.g. dividend payments) so that the settlement engine of the present invention can be used. The same goes for a number of collateral management functions (e.g. change of

collateral). This is important since systems maintenance becomes easier, and since all routines in a CSD that involve payments or transfer of ownership to securities have considerable audit and security requirements due to the large values handled by many CSDs.

The addition to the clearing process of the concepts of settlement rule, settlement obligation group and lock-in of assets makes it possible to build a simplified settlement process with very wide applications for CSD settlement and related functions:

- Select settlement obligation group
- Issue irrevocable transfer instructions for the entire group
- Check that all transfer instructions are carried out successfully
- Report the successful settlement result to the participants.

CLAIMS

1. An automated method for carrying out financial transactions within a Central Securities Depository, comprising an automated clearing process and an automated settlement process, the clearing process being the process of preparing the transactions for the settlement process, the clearing process comprising the following automated sub processes:

- selecting a settlement rule to be followed in the clearing process, the rule defining how the transaction is to be settled,
- defining a settlement obligation group, said group comprising a number of settlement instructions that all have to be settled at the same time,
- "locking in" of the assets which the transaction concern, the locking-in having the effect of reserving said assets for a specific settlement instruction,

and the settlement process comprising the following automated sub processes:

- selecting transfer instructions for all settlement obligations belonging to said settlement obligation group, said transfer instructions being irrevocable instructions to transfer (the locked-in) assets between participants in the CSD,
- checking that all transfer instructions are carried out successfully,
- reporting the result of the settlement to the participants involved.

2. An automated system for carrying out financial transactions within a Central Securities Depository, said system comprising an automated function for a clearing process and an automated function for a settlement process, the function for the clearing process being arranged to prepare transactions for the settlement process, with said function for the clearing process comprising:

- an automated sub-function for the selection of a settlement rule to be utilised in the clearing process, the rule defining how the transaction is to be settled,
- an automated sub-function for the definition of a settlement obligation group, said group comprising a number of settlement instructions that all have to be settled at the same time,
- an automated sub-function for the "locking in" of the assets which the transaction concern, the locking-in having the effect of the system reserving said assets for a specific settlement instruction,

with the function for the settlement process comprising:

- an automated sub-function for selecting transfer instructions for all settlement obligations belonging to said settlement obligation group, said transfer instructions being irrevocable instructions to transfer the locked-in assets between participants in the CSD,
- an automated sub-function for checking that all transfer instructions are carried out successfully,
- an automated sub-function for reporting the result of the settlement to the participants involved.