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[54] CENTRAL CHECK CLEARING SYSTEM

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 203,489, Jun. 7, 1988, abandoned.

[51] Int. Cl.⁵ **G06F 15/20; G06G 7/52**

[52] U.S. Cl. **364/408; 235/379**

[58] Field of Search **364/406, 408; 902/24, 902/39, 40; 235/379**

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ABSTRACT

[57] A central check clearing association by which different member banks and financial institutions can each settle debit and credit balances with respect to other member institutions on a predetermined periodic basis and methods and systems by which the association is operable. The system and method is independent of conventional central bank district geographic and institutional boundaries and time zones.

6 Claims, 1 Drawing Sheet

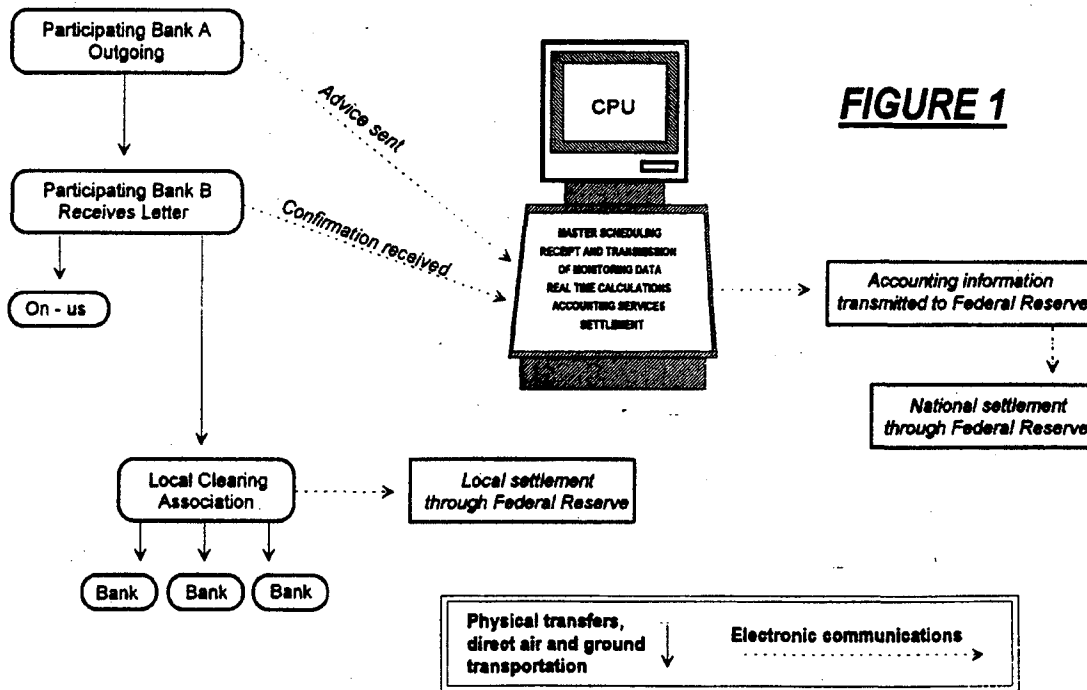
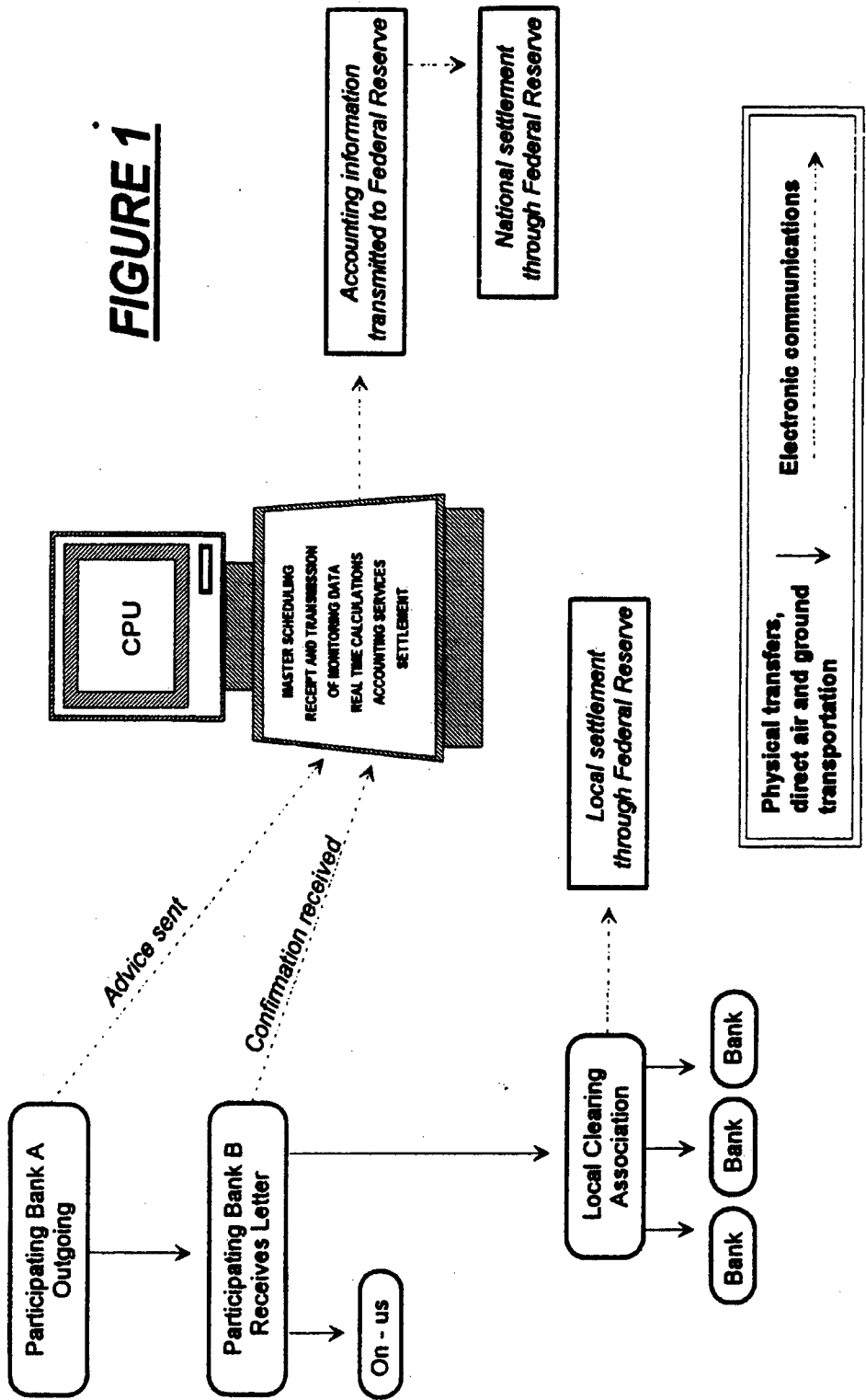


FIGURE 1



CENTRAL CHECK CLEARING SYSTEM

RELATED APPLICATION

This is a continuation-in-part of our copending application Ser. No. 07/203,489 filed on Jun. 7, 1988, now abandoned.

FIELD OF THE INVENTION

This invention relates to an exchange and settlement system to be used by banks for financial instrument clearings. More particularly, the invention comprises a central check clearing association and a control system therefor by which different member banks and financial institutions can each settle by debit and credit entries for checks drawn on other member institutions and certain non-member institutions on a predetermined periodic basis and means by which the association and the control system for the association is operable. The system and method is independent of conventional central bank district geographic and institutional boundaries, and time zones. In the system, checks can also be sent to members for clearing on behalf of non-member correspondent banks. As used herein, "checks" includes standard banking checks and other "cash items" as that latter term is conventionally used in the banking industry.

BACKGROUND OF THE PRIOR ART

Check clearing systems are well known in the banking industry and generally operate locally or through the Federal Reserve Bank settlement system. On a predetermined periodic basis, checks and other financial instruments drawn against a payer bank are submitted for payment and collection. Where, in a system, there are multiple institutions on which checks are drawn and which checks are in the possession of multiple members, clearinghouse systems are known in which the debit/credit balances of members with respect to the others are reconciled on a daily basis and payments to reconcile a net zero balance are made.

OBJECTS OF THE INVENTION

It is an object of this invention to provide means whereby an association composed of participating banks in major cities is formed, and a national clearinghouse system is maintained. At least one institutional participant in each city would have access to the local clearinghouse. Participating member banks would each agree to receive items drawn on the individual participant and on other members of its local clearinghouse in that city. The members of the local clearinghouse need not be members of the national clearinghouse, and items cleared by the national association include items drawn on local clearinghouse members who do not belong to the national association. As used herein, reference to "national clearinghouse" may also include a system having participants in different nations joined in a single association according to the system described herein. A "national" association, however, because of currency uniformity in a single nation is most feasible.

In its function, the association would provide a central accounting means such as a conventional programmable computer or other central processing unit for the computation of the settlements among participating banks. Physical delivery of items would be accomplished through air and ground transportation, and real time electronic tracking of cash letters transmitted

through the transportation system is permitted. Advice of the sending of cash letters would be received electronically by the association's central accounting means from the participating institutions sending such cash letters, and confirmations of receipt would also be electronically transmitted by participants receiving such cash letters. Preferably, the electronic information transmitted through the system would be encrypted.

The detailed accounting entries required to accomplish a net settlement among participants on a periodic basis (typically daily) would be prepared by the central accounting means of the association. In the United States banking system, national settlement would be completed by debit and credit of the participant's accounts, or wire advice to the participant's accounts through the Federal Reserve settlement system.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows an overall flow chart of operations in a national clearing association in the United States which includes: (1) the centralized monitoring and control means necessary for the association operations; and (2) the linkages of the various elements of the system by physical transfer and electronic communications.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In its preferred embodiment applicable to the United States banking system, this invention comprises a centralized clearinghouse system including an association of selected member financial institutions. A clearing system is maintained by a central control means in which debits and credits owing from one member to another are calculated on a predetermined periodic basis without regard to Federal Reserve System district settlements, in which the participants report the value and transit status of items to be cleared to the central control means; and in which the central control means monitors on a real time basis the actual sending and receipt of, and the dollar amount of items being cleared, as reported by the participants, and records the sending and receipt of the aggregate amount of the actual financial instruments transported, as reported by the participants, (subject to timely reporting of adjustments, returns and the like) and thereafter calculates the net settlements among the participants and initiates the corresponding debits and credits necessary to effect settlement among members in the Federal Reserve settlement systems. In the system, before the calculation of the net settlement, the receiving bank records and enters into the central control means any adjustments and any return items after transmission of the items which may affect the net settlement.

In the system of the invention, physical transport of financial instruments between and among the members is controlled by a predetermined time schedule, and the national settlement of the individual members of the association is achieved at a time not later than local settlements by members of the national association are completed.

Organization of the system requires strict maintenance of predetermined association parameters. The clearinghouse is independent of conventional geographical and institutional boundaries such as Federal Reserve districts, as well as time zones. In the association, all participants must be members of the national clearinghouse association, and all member banks must agree

to accept and process items drawn on themselves and on banks within the local clearinghouse of which they are also a member. The local clearinghouse rules, means of exchange and procedures are entirely separate from that of the system. All member banks of the national association must agree to use the central settlement system, and all settlements would be either same day settlements or based on some other acceptable periodic or predetermined time schedule. In the United States Federal Reserve System, settlements accomplished by the national association described herein would preferably occur after the daily scheduled local clearinghouse settlements are accomplished. Strict adherence to a time schedule prescribed by the association for providing debit and credit advice and the physical exchange of items is required.

A high dollar return notification (i.e., \$2,500.00) is mandatory, as is high dollar adjustment notification. All cash letters received must be confirmed by the receiving bank through the association's accounting system. Members typically should be able to guarantee minimum dollar amounts and transaction volumes to be able to participate in the association's clearinghouse system. Selection criteria for members may consider geographic locations, time zones, commercial standing and membership in other banking associations, as well as other criteria appropriate for a coordinated clearinghouse system.

In a central accounting means, all national settlements among participants in the national associations will be posted from the association's accounting system to the accounts of the participants at the Federal Reserve System (or a pass-through bank). The net of the day's activity for each institution will reflect the bank's position in the system with respect to other members. By means of the central accounting system, each member will be able electronically to inquire into the accounting system throughout the day, on a real time basis, to manage and reconcile funds in anticipation of settlement. In accordance with a strictly defined time schedule, all activity must be confirmed by the receiving bank prior to final settlement. If a member or members cannot settle, an unwinding mechanism is provided by a control means in the accounting system; and the system would recompute the settlement without the inclusion of the items sent to the non-settling member or members. The national clearinghouse association does not itself effect settlement among the members; member settlement occurs through the Federal Reserve System based on computations made by the control means which are transmitted to one of the Federal Reserve Banks. That one Federal Reserve Bank, in turn, will send entries to other Federal Reserve Banks to effect "nationwide" settlements in other districts.

A principal object of and advantage achieved by the proposed clearinghouse association is to expedite the forward collection of items and the return of items. When forward collection is expedited, float is reduced, the speed of availability of funds is increased and costs are reduced.

Another advantage is the overall adoption of a uniform set of standards among members to cover all legal and operational aspects of the system. By agreeing to be governed by the association's bylaws, many existing agreements between clearing banks can be standardized and greater operational efficiencies achieved as a result. Further, the proposed clearinghouse association will reduce overall risks in the payment system by reducing

the risks associated with daylight overdrafts and by minimizing the disruption to the overall system which would result if a member cannot settle.

The status of participant's accounts in the national clearinghouse association is recorded and displayed instantaneously as soon as information is received by the central control means. Account reconciliation occurs at a predetermined time each day when the net settlement is calculated after each member completes its reports. However, with reference to the sequence depicted in FIG. 1 in the United States system, the critical timing element of the system is that national settlement through the Federal Reserve System occurs not later than the settlements of local clearinghouses.

FIG. 1 shows an illustrative linkage of participants in the clearinghouse as presentation and payment functions are connected by physical transfer by air or ground transportation of the actual checks or drafts that are to be cleared and by electronic communications between the participants, concerning information about the value and status of transport of the items sent by member banks. In the example of FIG. 1, the relative position of participating banks A and B with respect to each other are monitored by the central control means of the National Clearing Association. Bank B may participate in a local clearing association that includes a number of banks that are not members of the National Clearing Association. The "On us" reference in FIG. 1 denotes items drawn on Bank B and payable by Bank B that are not exchanged in the local clearinghouse. After local settlement by Bank B and the physical transfer of items in the local clearing association, the National Clearing Association will calculate the respective debit/credit balances of Bank A and Bank B (not only to each other but to all other participating banks) and transmit the same information to the Federal Reserve for the national banking system settlement. Settlement in the National Clearing Association is wholly independent of settlement or liability of settlement in the local clearinghouses.

In the preferred embodiment, sorting of checks between member and non-member local clearinghouse banks is done by the receiving bank. This permits the sending bank to assemble checks for sending without sorting, except for a first sort by member locality, and permits the receiving bank thereafter to sort its local checks when its sort machines would otherwise not be in peak use. Presentation of checks for payment is thereby expedited.

Each participant in the proposed association will be better able to monitor its net settlement position throughout the banking day. On a daily basis, local clearinghouse settlements will occur before settlement by the national clearing association. In addition, reliance upon large wire transfers through the Federal Reserve Bank wire network, which is created by the present environment in which many reciprocal clearing arrangements exist, will be reduced. Wire transfer fees between banks are significantly reduced or eliminated. The need for reciprocal private correspondent balances with other financial institutions for the purpose of check clearing will also be eliminated for members of the system with respect to other members.

The association will also establish a procedure in the event that a participant is unable to settle. In this event, the non-settling member's payments will be excluded; the accounting system of the association will revise the settlement entries to include only the deposits of the