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NATIONAL POLICY CONSIDERATIONS FOR
THE DEVELOPMENT OF EFTS

Remarks of

GEORGE W. MITCHELL

Vice Chairman
Board of Governors
of the
Federal Reserve System

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THE DEVELOPMENT OF EFTS**

As the announcement of the activation of the National Commission on Electronic Fund Transfers is anticipated shortly, speculation grows as to how the issues confronting the Commission will be sorted out. A conservative view, based on past practices in money payment, would look for the commercial banking system, the Treasury and the Federal Reserve to continue to supply the major ingredients of money services. Thus, the spectre, to bankers, of a large penetration of this service market by thrift institutions, retail establishments, non-bank or bank credit card companies, or independent contractors would not be raised.

It is likely, however, that the Commission--when it gets under way--will be confronted by other interests eager to develop shares in the money transfer market. Some of them will be parties heretofore non-participants or, at most, to have been marginally involved. Among them several will be able to advance substantive public interest reasons to justify their participation. Thus, it is far from certain that the issue of who is to be in the money business will be settled on grounds of precedent or prevailing practice.

Money is an important tool common to all organized societies. But when the word, "money," is used to describe the cowries of primitive tribes, the gold and silver coins of sovereign kings, the state and national bank notes in our past and the deposit money of today, it carries an inheritance of associations that is a throwback in

understanding. Thus, it contributes to our failure to grasp the essential characteristics and capability of present-day deposit money.

Today's money is an electronic entry in a commercial bank's recording of the balances in its customers' demand deposit accounts. It can instantaneously be reduced by debits since it stands as a balance payable on demand, duly made. It can, of course, be similarly augmented by credits.

The technique for transmitting these debit and credit advices from the bank of the payor to the bank of the payee is what is known as the payments mechanism. And the competitive furor over the payments mechanism has to do with the variety of ways in which such credits and debits can be initiated and processed and what qualifications the participants in this operation should have in order to play a role.

The problems involved in sorting out the most cost-effective ways of handling money are, of course, complicated by money holders' attitude toward their money. That, too, has been changing. Money has a long tradition as a "storehouse of value" associated with coins of gold and silver. These have disappeared from coinage and the attitude which went with such money is also disappearing. Nowadays the "storehouse" consists of interest-earning deposits and other near moneys; these assets have become pervasive in both business and personal finance the more so as inflationary surges have visibly encroached on money's purchasing power.

Money and savings habits change slowly and patterns which were sensible in the past are anachronistic today, but the trend toward economizing on demand deposit balances in commercial banks is long established and should be clearly discernible to everyone. There is no need, therefore, on this occasion to do more than refer to the demand balance minimization policies of corporate treasurers or the popularity with consumers of no-minimum-balance, unlimited checking accounts.

A modern man's concept of money, whether he is the head of a household or a business, is that money is no longer an asset which he can afford to hold in amounts beyond his current level of expenditure. True, he needs certain assets he can quickly convert into money--but money per se is only needed for disbursements. Thus, what was formerly conceived of as a reserve stock of purchasing power has become to the modern man a stock of interest-yielding near moneys and a flow of receipts and disbursements. The good manager is the one who can time these flows in such a manner as to reduce unused money balances to a minimum.

In the context of this attitude, for example, when a vendor in connection with a sale offers convenience or extended credit--whatever his business motives may be--he makes it easier for his customers to arrange their payment flows, in size and frequency, to their income flows. Thus, he is in direct competition with a bank: he provides credit, he provides a money service which is a substitute for a

larger demand deposit holding, and he may also free his customers from the inconvenience of frequent cash or check disbursements by accumulating transactions during the billing period.

At present, the major interests, apart from vendors, seeking a larger role in the payments mechanism are the thrift institutions and non-bank data processing companies, including credit card companies. The reasons for their interest are clear if we look more closely at the nature of the payments system.

Prior to electronic data handling the check which contains the vital information to a money transfer--payor, payee, the banks involved, and the amount of the payment--was the vehicle for passing information through the successive stages of the payments mechanism and ultimately authorizing the actual movement of funds. The check served, in effect, two functions: as an official authorization and as a continuing source of the essential facts about the transfer. Authorization and information were locked together in accounting, proofing and verification operations.

The electronic gear in use today makes it possible to completely segregate the movement of funds between banks from the movement of information relating to specific transfers. For example, a Federal Reserve Office receiving 1000 items moving from Bank A to Bank B needs only to know the aggregate dollar value of these items in order to charge Bank A's reserve account and credit the account of Bank B. Since present-day electronic equipment permits a segregation of the

movement of money and information, it is possible for any competent electronic data processing enterprise, bank or non-bank, to engage in the business of assembling, transmitting and disassembling money transfer information and feeding into the Federal Reserve clearing system only the aggregates of debits and credits to the accounts of member banks.

In saying this is possible, I do not mean to pass judgment on its practicability or on its comparative cost effectiveness if it occurs outside of the banking system. A considerable amount of coordination and accounting control is involved when such operations take place outside of the well-established channels of verification which make possible the high standard of accuracy prevailing within the bank-operated network. But it is also possible that segments of essential processing activity at the end or at the beginning of the transfer process may take place with a minimum of disturbance to the essential character and responsibilities assumed by banking interests for the existing system.

Given the minimum possibility of marginal or fringe entry, non-bank credit card companies and data processors have become aggressive competitors for much of the real substance--costwise and employment-wise--of the money transfer business, namely, the accounting and data handling that goes with it. Shearing off the accounting and data processing functions needed to assure that each of the 100 million daily transfers finds its way into the deposit account of the designated payee from the account of the designated payor is a major entrepreneurial

challenge. It is small wonder that those qualified to operate data factories are attracted by it.

The public interest in how money transactions are handled is very much at stake, too, for while "back-room" operations tend to be invisible, they can be deeply affected by the capabilities, innovativeness and efficiency of those who perform them. By the same token the public can also be exposed to discriminatory practices or monopoly pricing in such operations should they not be subject to competitive disciplines or rigorous regulatory surveillance.

The real costs to the economy of money transfers are widely dispersed and for the most part hidden in public and private record-keeping systems. In the household sector, most such costs must be gauged in terms of inconvenience--writing checks, addressing envelopes going to the bank to make a deposit or a withdrawal. Postage, the loss of interest on a demand deposit balance and service or penalty charges made in connection with the demand deposit account are out-of-pocket costs to the consumer but they are usually of lesser importance to him than inconvenience considerations.

In the balance of my remarks today I want to emphasize the cost effective considerations involved in the payments system. In doing so I do not infer that other considerations do not also need close scrutiny. But I regard the cost effective considerations as crucial because they lead to a simple, more convenient, and more certain system as well as a more efficient one. And because the present

payment process is so highly labor and paper intensive, a change in technique is needed which can produce very large savings in these real resources.

To appreciate the difference between an electronic and a paper-labor based system, we need to have a common understanding of the superficially simple process of money payment rid of underlying mystique and vested interests--some of which hark back to non-par banking. There are only two principals to a payment--the payor and the payee--but there may be several intermediaries. Since the payor's money is involved he must in one way or another initiate the transactions. He has a variety of alternatives but the most common practice in this country is for the payor to write a check on his account and hand it or mail it to the payee. The other basic alternative to initiating a transaction is for the payor to instruct the institution in which he has an account to transfer funds from his account to that of the payee. In the U.S. this form of payment is by wire transfer and up to now has been pretty much confined to large dollar payments. But in Europe transfers of this type are common and are handled through public or private giro systems. It is instructive to our purpose to visualize how these two systems operate. For this purpose I have four charts covering both systems for two very common types of money payment.

This first chart shows the typical flow of information and flow of funds in the life cycle of an income payment handled by check. The income payment could be for wages, dividends, social security payments, annuities and the like. The chart outlines the major steps involved in the process and the many physical operations required at each step as the check moves, for example, from an employer to an employee, through various financial organizations, and back to the employer.

Several characteristics of the check processing system can be noted from this overview. First, a check is not money in the sense of being "good money" capable of immediate use. It is basically an information item which, after processing through the check collection system, causes credit in "finally collected funds" to be made available to the depositor. Second, movement of the funds represented by the information on a check can lag the movement of the information by several days. The critical time element associated with the movement of funds is the point at which the Federal Reserve guarantees availability, a maximum of two days after deposit with it. Today, due to the operation of the RCPC's, approximately 60 per cent of items deposited with the Federal Reserve are available that day or the next. Third, the flow of information, that is, the check itself, can and often does take a different path than the flow of funds. For example, the check may be delivered to a non-member bank for collection, but settlement of funds occurs through the reserve account

of a member bank and through correspondent balances. This is shown by the dotted lines on the chart, representing the flow of information, and the solid lines representing the flow of funds.

Chart 2 shows the same type of payment handled electronically. The dotted lines again show the flow of information and the solid lines the flow of funds. When contrasting this chart with the first one, a number of important differences become evident. First, the number of steps required in the "life of the payment"--from initiation of the electronic item to final payment--is telescoped in time and movement. Whereas, in the check payment six steps are required, the electronic payment requires only four. Second, both the amount of processing and manual handlings required are greatly reduced--as shown by the relatively few processes required under each of the four major steps on this second chart. Third, unlike the check payment where the movement of funds lags the flow of information and is in the opposite direction to the flow of information--with the electronic payment, funds move in the same direction as the flow of information, and may accompany the flow of information--as on the Reserve System's wire network.

Furthermore, the electronic payment provides for the concept of "post-dating," wherein the information may flow in advance, specifying an activation date. On that date, the flow of funds may occur at any scheduled point in time thereby eliminating the deferral of credit which occurs in the check payment. Fourth, as in the check payment, the

flow of information may take a different path than the flow of funds. The information may be delivered to member or non-member institutions through various arrangements. However, settlement for the funds is made through the reserve account of a member bank.

Now let me turn your attention to a check payment made at the point of purchase or sale. As shown in Chart 3, after a business accepts a check from a customer and deposits it in its bank for collection, the processing is identical to that for an income payment handled by check and the payment has identical characteristics.

Most businessmen accept checks from customers in payment for goods or services. Some businessmen, in order to engender customer good will, also dispense cash for customer checks. Despite the element of risk in accepting checks, the business community generally views this as an essential practice and deals with losses from bad checks as best it can.

Chart 4 shows what this same payment made at the point of purchase may look like when handled electronically. While such systems, commonly known as "point-of-sale" (POS) systems, are new and the roles of various organizations, including the Federal Reserve, are unclear, certain attributes common to their operation can be identified. First, the systems are capable of consummating the transaction on the spot, that is, goods and services are exchanged for collected funds. Second, the systems to be efficient must have access to the deposit money of a large consumer population, which is to say, to the deposit

accounts in all or most of the eligible financial institutions in the market area. And third, the systems must have an integral settlement mechanism for the movement of funds between financial institutions. When contrasting Charts 3 and 4, it is evident that substantial efficiencies can be realized from electronic payments at the point of sale.

In the past three years, the automated clearing house concept has materialized into a nationwide plan for automating recurring payments, such as wages, annuities and dividends--and in many regions of the country--payments for utilities and other money settlements where repetitive payees are involved. There appears to be little controversy associated with this development other than the thrift access question.

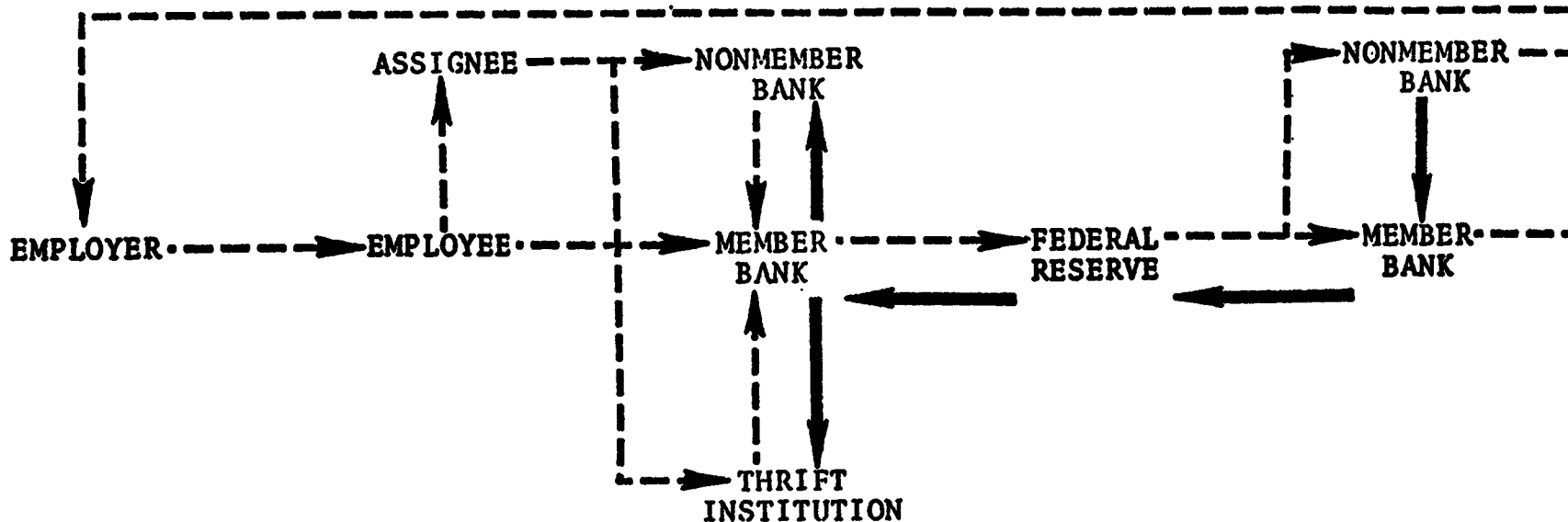
However, the concepts now being put forth with respect to automating non-recurring consumer payments at the point of purchase, including the disbursement of cash and other off-premise money services to customers of financial institutions, raise many competitive and structural issues that have far-reaching implications. The attendant questions are complex and interrelated, and, in my opinion, of a priority nature if the benefits expected from such developments are to be realized within a reasonable time period.

As is often the case, science and technology have provided us with the means for meeting our needs well in advance of our capacity to see how we can utilize such technology. Electronic techniques put

very large social savings in clear view provided economies of large scale can be achieved. The degree of cooperation and coordination needed to reach such volumes is considerable. "Going it alone" is beyond the capabilities of all except the very largest of our financial institutions and a very few are inclined in that direction. Thus, bringing technology into play is probably going to involve levels of coordination among financial institutions which could expose the public to pricing and service practices inimical to its interest. To achieve the needed cooperation and to avoid the risk of that eventuality is the challenge to public policy.

CHART 1

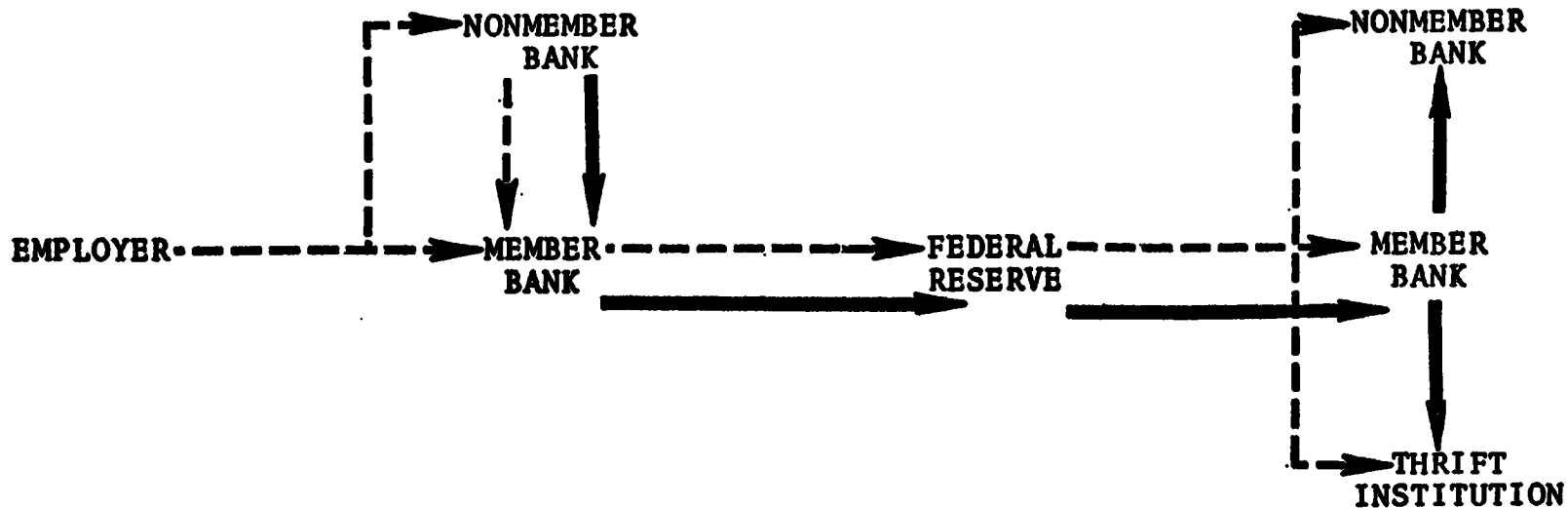
INCOME PAYMENT MADE BY CHECK



- | | | | | |
|---------------------------------|---|--|---------------------------------|--------------------------|
| ● Prints Checks | ● Receives check | ● Check Deposited or Deposited or Cashed | ● Cash Letters Deposited | ● Cash Letters Deposited |
| ● Balances Payroll | ● Makes trip to Financial Institution | ● Credit to Employee | ● Batching & Blocking | ● Batching & Blocking |
| ● Mails Checks | ● Assigns Check to Vendor or Other Person | ● Nonmember Institutions Deposit with Member | ● Transit Processing | ● DDA Processing |
| ● Physically Distributes Checks | ● Check lost or Destroyed | ● Checks: Collected from Branches | ● Balancing | ● Balancing |
| ● Balances Payroll | ● Check stolen and fraudulently cashed | ● Amount: Encoded | ● Listed but not Sent | ● Listed but not Sent |
| ● Stop Payment Orders | | ● Batching & Blocking | ● Sent but not Listed | ● Sent but not Listed |
| ● Outstanding Items | | ● Transit Processing | ● Reject Item Processing | ● Stop Payment |
| | | ● Balancing | ● Exception Item Processing | ● Forged Endorsement |
| | | ● Exception Item Processing | ● Credit Availability Scheduled | ● Adjustments |
| | | ● Adjustments | ● Adjustments | |

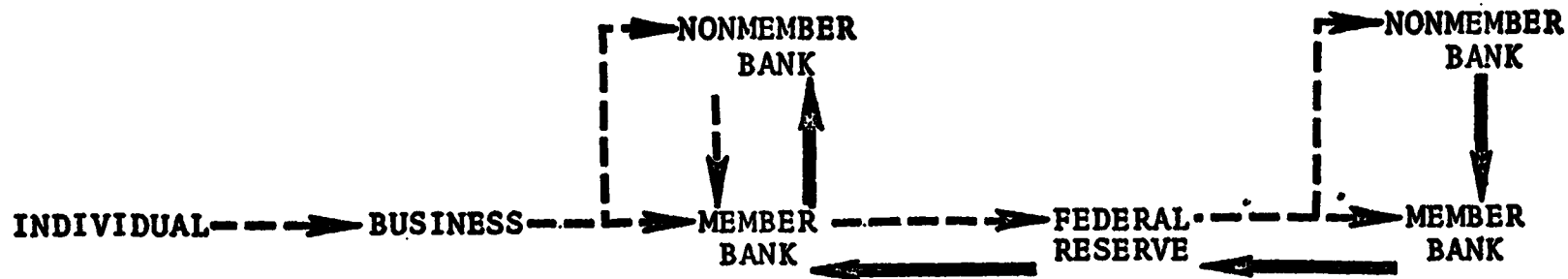
CHART 2

ELECTRONIC INCOME PAYMENT



- | | | | |
|---------------------------|------------------------------------|---|---|
| ● Creates Payroll Tape | ● Tape Deposited | ● Tape Deposited | ● Tape Balanced & Electronically Sorted |
| ● Balances Electronically | ● On-us Removed | ● Sort to Receiving Institution | ● Credit Passed to Institution and Employee on Payment Date |
| | ● Balance Electronically | ● Balances Electronically | |
| | ● Debit Scheduled for Payment Date | ● Debit & Credit Scheduled for Payment Date | |

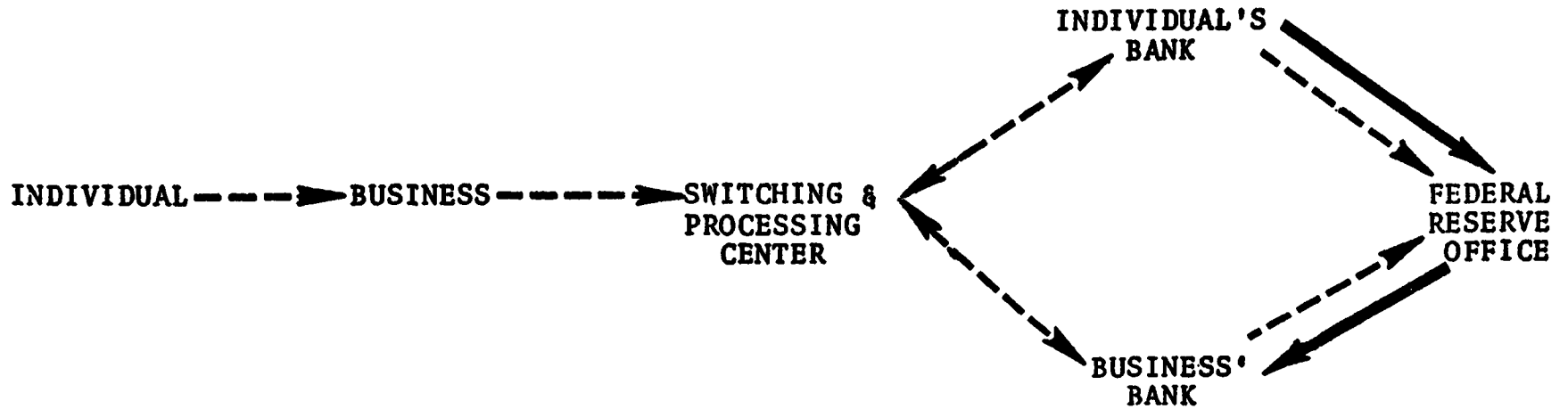
PAYMENT MADE AT THE POINT-OF-PURCHASE BY CHECK



- | | | | | |
|--|--|---|---|---|
| <ul style="list-style-type: none"> ● Writes Check ● Receives Merchandise and/or Cash | <ul style="list-style-type: none"> ● Accepts Check ● Creates Deposit Ticket ● Attempts to Collect Returned Item | <ul style="list-style-type: none"> ● Check Deposited ● Credit to Business ● Nonmember Institutions Deposit with Member ● Checks collected from Branches ● Amount Encoded ● Batching & Blocking ● Transit Processing ● Balancing ● Exception Item Processing ● Adjustments | <ul style="list-style-type: none"> ● Cash Letters Deposited ● Batching & Blocking ● Transit Processing ● Balancing ● Listed but not Sent ● Sent but not Listed ● Reject Item Processing ● Exception Item Processing ● Credit Availability Scheduled ● Adjustments | <ul style="list-style-type: none"> ● Cash Letters Deposited ● Batching & Blocking ● DDA Processing ● Balancing ● Listed but not Sent ● Sent but not Listed ● Stop Payment ● Forged Item Adjustments |
|--|--|---|---|---|

CHART 4

ELECTRONIC PAYMENT AT THE POINT-OF-PURCHASE



- | | | | | |
|--|--|---|---|---|
| <ul style="list-style-type: none"> ● Presents Cash Card ● Receives Merchandise and/or Cash | <ul style="list-style-type: none"> ● Initiates Transaction ● Receives Verification | <ul style="list-style-type: none"> ● Requests Debit from Individual's Account ● Receives Acknowledgement ● Notifies Business' Bank of Credit ● Verifies transaction to Business | <ul style="list-style-type: none"> ● Bank Debits Individual's Account ● Forwards settlement Credit to Business' Account | <ul style="list-style-type: none"> ● Debits Individual's Bank ● Credit Business' Bank |
|--|--|---|---|---|