1970

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W. Putnam Livingston

Recommended Citation

Tempo, Vol. 16, no. 1 (1970, spring), p. 10-15

BANKS, COMPUTERS, AND OUR PAYMENT SYSTEMS

by W. Putnam Livingston

Commercial banks in the United States are undergoing a change in character. A dynamic quality has crept into the industry. Today a young man who is anxious to move ahead can find a piece of action waiting for him in banking. This is largely the result of strategic planning. It is mandatory for banks to have staffs that can develop new concepts and implement them for the benefit of society.

Banks keep up to date with local, national and international affairs, and they know they have to do this to survive. In fact the way bankers have plunged so enthusiastically into market studies, E.D.P. services, and credit cards, reminds me of the remarks of the English economist Barbara Ward. In characterizing an American business man, she said he was like the fellow who maintained nine wives with the certainty that he could eventually produce a child in one month.

Enlargement of the banking concept from the old counting house days to those of scientific planning has brought about many painstaking analyses by bank executives. One was to digest the possibility that the use of a computer as an extension of the mind was important to bank management.

Can a computer actually contribute to, and possibly improve, the manner in which executive decisions are made? At my bank we began to explore this possibility ten years ago. Of course there were those die-hards in the industry that said: "Banks can't be run by eggheads; they have to be run by bankers." But this was not the thinking of enlightened chief executives. From the beginning they knew instinctively that new approaches were mandatory in the changing world ahead.

One problem always faces new endeavors—receptivity. Would any bank accept experimental thrusts into its inner workings? What success would a college professor have in developing mutuality at the highest level of an awakened, but still somewhat staid, financial institution?

The possibility of banks' finding these techniques helpful drew the interest of the academic world, and soon it was recognized as an important ingredient in the pursuit of better management. Banks found that the scientists' philosophy—the never-ending search for improved solutions to complex problems—was a valuable contribution to executive thinking.

In the last decade management science has grown into a major staff function for those banks that have recognized its potential and are large enough to finance its research in terms of hundreds of thousands of dollars yearly. The projects of management of assets, liabilities and capital; trust portfolio selection; marketing research; municipal bond coupon scheduling; numerical credit scoring for small consumer loans; and analyses for economics departments have proved successful.

Altogether scores of projects have been identified. Some are still untouched, but many of the projects have proven to be provocative as the accumulation of experience has opened up new areas of exploration. The most advanced management science groups today are using the largest computers as their tools.

Industrial companies using operations research were ahead of the banks in applying these new techniques. They used them on cash flow, leasing and other financial areas so it became necessary for bankers to be able to use the new terminology. A new type of banker came on the payroll, one more scientifically trained, to allow communications with corporate customers to take place on a mature level.

The ABA in conjunction with the Carnegie-Mellon Graduate School of Industrial Administration established seminars to spread the knowledge of operations research throughout the banking industry.

One of the most exciting areas of change in our banking world is the one that has to do with the payment systems. The term "checkless society" has been beaten to death, but what we do mean is that a paper check is not the do-all and end-all of how to pay a bill.

Here we can borrow heavily from European and British automated GIRO systems which have already automated and are capable of distributing payment entries by computer to their various destinations.

The way we move money today in the U.S. does not reflect to a great degree the potential of computers. We have temporarily settled for a machine-readable check and a computerized bookkeeping department. We must guard against the danger of lulling ourselves into a state of complacency, or we may find that while time marches on we are tabling technological advances.

Our consumers still draw 12 checks a month to pay the same names: utilities, telephone companies, retailers and professional services. A corporation still draws hundreds or thousands of payroll checks each week to pay the same amounts to the same people.

We are therefore re-examining the effort expended in making these billions of payments and asking ourselves if we are giving our customers and ourselves all the payment choices that could be made available.

It is with this in mind that the ABA has set up a prestigious new monetary and payments-system committee. The committee, under Richard P. Cooley, president of Wells Fargo Bank, is supported by four task forces already hard at work in the areas of economics, marketing, legal and legislative, and operations technology. These groups are working with committees of the Bank Administration Institute, Bank Public Relations and Marketing Association, and the Federal Reserve System. It is the intention of the committee to delineate and implement surveys concerning the payments system to provide reliable data and information for decision making by the banking industry.

Some of these services are under way and others will be undertaken by consulting firms. They will cover marketing aspects and the potential of the paper check in the future.

We have been dealing for years with our payments system in old terms; terms of the paper-shuffling past. What we must do now is examine the total system needs of our country in terms of money movement. We need to segment the various payment requirements. We need to design for each segment its optimal system in terms of today's technology.

I will suggest a few of these segments and mention some of the characteristics which make them unique and, therefore, entitled to specific treatment.

One segment is at the grass-roots level: welfare payments. These presently are in the form of checks issued by a city mailed to welfare recipients twice a month. The recipient cashes the check, pays the landlord, and sustains the family with the remaining funds.

The characteristics of this segment are such that our current manner of handling it is most unsatisfactory. For instance:

1. The check may be delayed in the postal system.
2. The check may be stolen from the postman or mailbox and a duplicate required with consequent delay and hardship.
3. A check casher may require a fee.
4. The cash resulting from cashing the check may be stolen from the recipient.
5. There may be collusion among certain welfare recipients causing duplicate payments through lack of a positive identification system.

6. Merchants in the district may encourage purchases to be charged against future checks, thus establishing a credit system offset by an increase in the price of goods. This also ties the recipient to that particular store and thus makes him to some extent a captive customer.

In New York City, the check system that has been traditionally used to make welfare payments has today displayed weaknesses that are extremely serious.

News that last winter $1 million in welfare checks were stolen each month in New York City with two-thirds of them cashed wtih a consequent loss of over $600,000 a month by merchants, check-cashing services, and banks is an indication of trouble in the payment system. To be fair, the situation has greatly improved, but the results still don't meet the standards that are possible. Furthermore, the problem is nationwide.

The New York Commissioner of Social Services is working with the banks to relieve this situation. A partial solution has already been found. A few dozen fences who bought stolen checks from drug addicts have been thrown into jail. The next step will be to change the system by degrees until a final solution is reached. But right now the check does not receive a passing grade as the best way of making payments in this segment of our society.

We can envisage the final system geared to banking accounts activated by an identification of the welfare recipient at each phase of money movement. It would be a custom-designed credit system keeping the cash in banks where it belongs. Paper documents would not be needed and the incidence of thefts, robberies and fraud would decrease to an endurable level.

Another segment would embrace that large area of check writers who create an enormous movement of paper documents, some 20 billion checks yearly, to say nothing of our growing credit-card invoices.

Furthermore, for these check writers, we persist in trying to complicate matters by developing new ways to move money or handle credit until even a banker becomes confused. Do we want to make available for our customers a universal credit card, a local shopping credit card, a check guarantee card, an advance credit system, a special checking account, a prestige checking account and a regular checking account? Do we want to reconcile checks for our customers, hold them in safe keeping, and do we favor the traditional letter of credit or some of the new systems that are related to it?

These many special services are designed to solve payment requirements with the best intentions in the world, but let us look at them in a somewhat different light.

If we examine this large check-user segment we find its purpose is to provide an organization and an individual who has a job or reliable income with a convenient way of moving funds to settle obligations.

This segment can be handled then by:

A machine-readable identification card with a built-in verification factor of sufficient reliability.

A credit rating with overdraft privileges.

A pre-authorized system of handling payrolls and other redundant payments.

An on-line terminal at each place where payments might be made.

With this important second segment handled in this manner, we can eliminate paper and the many complex systems built on it, to a major degree. Paper documents then will become so costly as opposed to movement of funds electronically that their use will prove a painful luxury.

These two examples of breaking the payment system into segments and treating each one according to its optimal solution can be extended to other levels. These would include Social Security checks, that have the interesting characteristic of payments possibly being made to a name found only on a tombstone, and even at that, not too recently engraved.

Other segments could include the military, students, teachers and hospital interns.

We have been hypnotized into hoping that an all-purpose identification system for people has been in the wings ready to play a major role when the curtain rises. I suggest this is not only a dream, but not even a necessity. The type of identification needed for a welfare recipient may be entirely different from that for an executive, suburban housewife or professional man. The degree of identification and its technique should be part of the system designed for the segment-of-payment system involved.

The important factor is that we have long known the fantastic capabilities of the computer, but we are still reveling in watching it do the horse-and-buggy job at unbelievable speeds instead of matching its potential to requirements of our times.

Our payments system in the U.S. is so large that to cram every type of money movement into a paper-check vehicle—and then feel virtuous by adding a credit card to generate still more paper—does not ring true. No wonder the ABA MAPS Committee and its staff are burning the midnight oil.

We are sometimes confused by another form of making payments—our currency system. It is very old but still the most cumbersome and unsatisfactory of all systems. This may sound ridiculous at first blush, so let us examine its characteristics. In the first place currency knows no master. Let it loose, and it is gone. It has an anonymity so wanton that it will reside as readily with either a crook or a clergyman.

According to the Opinion Research Corporation study for the American Express Company about $2 billion in American currency disappears each year just because people are careless. Any lady who has ever been guilty of laying her handbag on a store counter may know what this means.

An obvious characteristic of currency is that it requires protection by the individual. Even your own pocket will not be good enough if a team of pickpockets mark you for their prey. Many a jostle means a slit pocket and a lost wallet.

Security requirements for currency are extensive and expensive. Some bank vaults have paper money stacked like cordwood and mountains of coins stuffed in canvas bags.

The next problem of currency is that it has to be counted thousands of times during its lifetime. I hesitate to guess how many carefully controlled handlings a bill or coin must endure before it is ready for redemption. Even then it must go through the final rite of an expensive funeral ceremony.

As a final indictment of currency, its employment reduces the balances in our banks. The more currency the public carries, the less deposits are in our banks. Familiarity has reduced this fact to a low level of attention. Let us look at it another way. There is about $6 billion in currency in the commercial and Federal Reserve banks. This is productive currency. However, over seven times that amount, $44 billion, is unproductive. It does not appear in the demand and time deposits of banks and no one knows where it is. Some of it may have been destroyed or lost. It is also possible that some of it is in the hands of people who have never learned to use a bank as a business partner and accordingly hope for safety in a mattress or coffee can. Wherever it is—even in safe-deposit boxes—it is still $44 billion not registered on our banking books.

Currency has become something of a sacred cow. Even today banks in England, Europe, and the United States are reaching out for expensive robots to dispense bills to currency-prone customers.

The reduced needs for pocket currency as a direct result of credit cards is an effort in the right direction toward retaining currency in our banks. The next step should be development of a strategy that will capture part of those billions in the nation's mattresses.

Let us turn next to pre-authorized payments—the automatic handling by a bank of such repetitive monthly bills as the mortgage, installment loans and insurance premium payments. Their potential is fantastic. They appear to have thrived better in other countries than in the U.S. They are extremely important to reducing money movement costs. Interestingly enough, we find certain areas in the U.S.A. where they have been quite well developed. They go hand in hand with an understanding of the time value of money and its effect on the habits of consumers as well as corporate treasurers.

In Pittsburgh, Pennsylvania, for instance, we find extensive use of the time value of money. The county treasurer sends the homeowners a bill for the assessed valuation tax allowing a 5 percent discount if paid that month.

The city issues its bills in a similar manner with an initial 2 percent discount if paid during the first month.

The gas company allows a 3 percent discount if the bill is paid within three weeks of the meter reading.

The water company shows a 2 percent discount if paid by the tenth of the month.

The light company adds 3 percent as a penalty if its bill is not paid three weeks after meter reading.

The sanitary authority adds a 5 percent penalty ten days after the meter-reading date.

The common characteristic in the Pittsburgh area is an acknowledgment that a dollar today is worth more than the promise of a dollar tomorrow; that the time value of money is a significant part of bill paying whether reflected by a discount or a penalty charge.

Not all municipalities or utilities use this manner of billing, but the technique is important and we may safely conclude from experience so far that the consumer is interested in discounts as well as convenience. He is also interested in protection against failure to settle bills that relate to his own security and happiness.

If we think of pre-authorization as a paying system that has three favorable characteristics—a monetary reward, convenience and security—transactions that have these in common should be attractive to corporations and consumers. Furthermore, because a preauthorized payment is rather simple to handle, the cost is minimal.

So what are we doing in the U.S. to develop a more sophisticated, yet simpler, payment system?

We look to the California banks now to start testing the concept of moving money by electronic impulse. They are well along in their planning and the first step of passing payroll entries without benefit of check will be taken before the end of this year. This is known as the SCOPE (Special Committee on Paperless Entries) Project and will embrace the services of the Federal Reserve Bank of San Francisco to manage the computerized claims necessary to distribute the entries to the designated banks.

The system will be developed carefully to embrace standard formats compatible with laws in our 50 states.

As this promising pilot appears on the horizon we also realize that it could wither away if it is not treated seriously by the 14,000 commercial banks, the Federal Reserve System, ABA, BAI, BPRMA, and the many clearing houses. By taken seriously I mean that beyond lip service, which is an easy way to feel something has been accomplished, support should be promptly available to the pilot in the form of committed dollars laid on the line. The experiment is too significant to be allowed to fail from lack of support.

Check volume grows at a 7 percent rate annually in the United States. There seems to be no indication that the credit card taken on by so many banks will decrease check usage. In fact it looks as if they face a double possibility of being submerged by paper. This may be the future, but if there evolves an easier way to settle payments than paper shuffling and the banks do nothing about it, they stand the risk of losing their financial leadership.