

Issues Facing the Development
of an Electronic Payment
Infrastructure

by Martin Mayer

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CITI "presentation"

I am going to operate from two premises, neither of which is watertight.

The first is that in a capitalist economy which at least pays lip service to competition and ease of entry, a major unnecessary cost wedge will eventually yield to entrepreneurship. The Federal Reserve still rents 47 aircraft five nights a week to fly 200 missions carrying checks around the country so the information already taken from their MICR numbers on at least one pass through a check-reading machine can be taken from at least two more such machines in other cities. Same information in every detail. Total waste of time and money.

Check volume is roughly 63 billion a year, meaning an expenditure of something like \$45 billion--quite apart from the cost of sending out bills, the opportunity cost of the payor's time writing checks, the postage for bill preparer and payor, and the payee's cost of registering the payment. Processing any substantial part of this information with modern technology would save tens of billions of dollars a year. Interestingly, the Treasury Department is now in train to require all corporate taxpayers to make their payments by electronic means. The reason for that requirement is that the enabling legislation for NAFTA reduced the government's

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revenue from tariffs, and by the terms of the budget reconciliation acts, that lost income had to be made up somewhere either with new revenues or with cuts in expenditures. Moving from paper-based to electronic payment of corporate taxes at the Treasury would save some hundreds of millions of dollars, so Congress required it.

That our increasingly expensive debit-transfer payments system must yield to something much faster and much cheaper is an obvious proposition that has been part of the intellectual landscape for at least twenty years. Sears announced about a decade ago that it would pay all vendors through an Automated Clearing House on a Corporate Trade Payment format, and it hasn't happened. The Group of Thirty and various big-time sophisticated worriers about systemic risk have insisted on securities settlements on T+3 instead of today's T+5, and that's going to happen, but it has been years, and it's not yet. Meanwhile, the foreign exchange committee of the New York banks has reported back rather grimly that the big delay in settling forex transactions occurs in the back offices of the banks. So the premise that in a capitalist economy people take care of their own interests is less than watertight.

Of the several reasons why the payments system has remained so obdurate, the most important is probably that making the shift to an electronic credit-transfer system costs money to do, and the way the change pays out is not by

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producing income, but by reducing costs. A fair amount of sunk cost will be required, especially in terms of building the file of payees to permit automatic deposit of payment, which means that from the point of view of the proprietors of the existing businesses, costs will have to go up before they go down. Citicorp has benefitted hugely by the losses it took on its file-building work in the credit-card area in the late 1970s and the early 1980s, but there were several board members who never did acquire the stomach for the investment.

My second premise is that when you make major changes in the plumbing of the system, you inevitably make significant changes in what the system does and seeks to do. This is not quite commonsense, and derives from experience. Some years ago I got stuck trying to write a book for a computer wonk who didn't have a book in him, because at our first meeting he told me about a lunch he'd had with a publisher, who wanted to know how a computer would set type. It didn't occur to the publisher, and it hadn't occurred to me until the computer wonk bought me a truly lovely lunch that the computer was among other things a way to displace typesetting. Similarly, somebody at the Fed said the other day that the \$290 million the system is spending to build imaging facilities that can "safely" truncate checks will eventually pay for itself because it will become possible to truck rather than fly the checks back to their bank of issuance. It is possible for a long time--not, I think, forever--to

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One of the awkwardnesses of today's situations is that the banks that offer PC-based bill-paying services to their customers have to write checks for three-quarters of all the payments processed, because no file for electronic payment of payees exists. They don't write the checks themselves, they hire third-party vendors to do it for them. When these things get to the assembled multitudes of key-punch operators who take the numbers from the checks and bills and input them to the computer, they are exception items because they don't have their usual bills attached. And just finding the exception items department in a public utility can be a full-time job. In self-defence, payees should be gearing up to receive electronic payments and electronic data interchange that credits these payments to the right account--but they're not. Which doesn't mean they won't, once some private sector equivalent of the Congress decides that spending the money to automate the process will more than pay for itself in a company as well as at the Treasury.

Now, when we say there's a cost wedge, what we usually mean is that there are too many people being paid to do a job less well that it can be done by fewer people. When we talk about the impact of electronic money, then, let's start with the employment concerns. The Fed hates to hear me say it, but I think one of the most important reasons Reg E has

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become a monster is that empire's felt need to protect the major fraction of the system's employees who work processing checks. Leave the Fed out of it. Seventy per cent of the employees at the Postal Service handle bill-related matters, and well over half of them would lose their jobs. Now people are needed in the banks--not so many as used to be needed, because the computer does such a great job of setting type--to pass the checks yet again through the giant sorting machinery. And in the offices of the corporations that receive the bill payments, many many thousands of very narrowly trained clerks see that payments are credited to the right accounts. By no means all of these people will be easy to employ.

The growth of electronic payments will, in short, have a considerable employment impact--in the post office, at the Fed, at the banks, and at the public utilities. I am prepared to accept that we will eventually find jobs for many of these people in the health care delivery system, but somebody will have to think about the problem, and move to get us from here to there.

Greatly increased use of electronic payments and digital cash is likely to speed the consolidation of the banking system. Most observers seem to think that's a good idea, but most observers are one way or another commissioned to make their observations by the larger banks. There are still few economies of scale in banking, and it is still true that

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middling small banks with assets between half a billion and a billion dollars have the highest return on assets in the business. Various studies will tell you how much the banks can save if they operate nationwide on a much larger scale, but when you look carefully at them the largest source of savings turns out to be the increase in the on-us items that can be processed within the bank's own operations department, and these savings will essentially be available to all once we have a more modern payments system.

But not all will be able to take advantage of them, and it looks to me as though the spread of electronic payments will indeed, for the first time, create economies of scale and scope in the banking business. Tip O'Neill used to say that all politics is local, and to the extent that the 1994 election changed that rule we are going to pay a hell of a price for it in social disruption. All banking is local, too. The social and economic function of the banking system is that it makes the second, early cut, right after the initial venturer, in supplying capital to enterprise. It is only because the lending officer weeds out the worst that the law of large numbers works.

Historically, it has been the transaction balances of smaller banks that funded much of the small-business lending in the United States, and if we get both a reduction in transaction balances and a consolidation of banking enterprise from the growth of electronic banking, we could impair

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the performance of a key function in the economy. David Apgar of the OCC told the Levy conference the week before last that the more sophisticated larger banks are in measuring the opportunity cost of lost liquidity from small business lending, the more likely they are to withdraw from the market. Standardized lending to fit the needs of the securitizers is not what the country needs. Yes, the GEs and other finance companies may fill the gap: you've got to admire GE Capital's ability to make money on businesses the banks shun, and do it with an equity ratio more than double that imposed on the banks. But it's hard not to be itchy about a centralized system replacing the great diversity of banking enterprise we have enjoyed in this country. And that may well be an unintended consequence of a more efficient payments system.

Another unintended consequence could be a shift of control of the payments system itself from the Fed to some congeries of private ventures, with a significant decline in the fraction of the money supply that the Fed controls. Some of this has already happened, by the way, with the introduction of cash management accounts and home equity accounts that permit individuals to monetize at will the contents of their securities portfolios and the unmortgaged value of their home. A consultant said to me the other day that he was doing six payments system studies, three for non-banks and three for banks. The non-banks, he said, were eager

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systems providers; the banks were looking for ways to protect their turf. This is not promising. We are looking at the possibility of a truly drastic acceleration of velocity in the classic Irving Fisher tautology of $mv=pt$, with consequences by no means easy to calculate.

The cost of establishing payor-to-payee electronic links is largely the cost of building the files. For any one bank, that's a huge burden. Even Bank of America, which I am told already can slot four-fifths of the PC-based payments into an on-us category, can't make that kind of investment alone. But Visa and Mastercard have files of something like five million merchants who subscribe to the Verifone system that automatically confirms the usability of your credit or debit card, and a few people with screwdrivers can shift that system to a payments system. Indeed, the credit card slip you sign today, so different from what you signed a few years ago, is merely evidence of an electronic message sent from the store or restaurant or hotel to the card processor. Visa clears its system several times a day, and is about to offer home electronic payments. Master has a deal with Checkfree. They own the files. The idea that the banks in any significant sense own the credit card companies or the ATM networks is a little old-fashioned: Dee Hock took care of that years ago.

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roll. Do not forget that the banks abandoned the direct deposit business because ADP did it cheaper than they could. ADP has avoided involvement in the payments system because there you can lose money, but the word on the street is that the sleeping giant has roused himself. ADP got files, and has great experience in the inexpensive creation of files.

And that log beside the lake is not a log: it is Microsoft. Intuit has purchased National Payments Clearing House, Inc., which is the outfit that writes most of the checks for the banks that offer PC-based payments; and now Microsoft, subject to Justice Department approval, has purchased Intuit. For about a billion and a half dollars. We do not know the Grand Design, but this has not happened by accident.

Electronic payment presumably will greatly reduce the need for balances, because cover can be wired in at need. This is why the wholesale market can trade two billion dollars a day (the entire GDP every three days, as some wag puts it) through FedWire and Chips. As the costs for retail electronic payments go down, we may find a sea change in the remarkable American attitude toward financial intermediation, in which, as Henry Wallich liked to put it, households themselves are financial intermediaries, owing money and commanding cash resources at the same time. In any event, there's a lot of thinking to be done, and presumably a conference like this one is one of the ways such thinking is inspired. Let us pray.

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