EFTS: Public Policy Problems

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EFTS: Public Policy Issues

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EFTS: Public Policy Issues

Introduction

The term electronic funds transfer (EFT) is generally used to refer to the electronic processing of payments and receipts for financial transactions or of records of financial accounts. At first glance, the term "electronic funds transfer" would seem to be applicable to a much narrower range of activities--those involving the transfer of balances at financial institutions between customers, between types of accounts, and between geographic locations, and the conversion of deposit balances into currency. However, since computer technology is now being applied to a wide range of financial services, the term EFT has been defined to encompass these applications and is used to designate all electronic processing of payments or information about financial transactions whether in-house or external to a company. The companion term, electronic funds transfer system (EFTS), usually refers to regional, national, or international systems for electronically transferring funds or financial data.

A brief summary of EFT processes may prove useful background for understanding the problems surrounding EFTS development. Several electronic facilities are now processing financial data, transmitting financial information or transferring funds between financial institutions (or their customers) across extended geographic areas. In the broadest sense, the Fed Wire, Bank Wire I, and the proposed Bank Wire II, all of which are national computerized communications systems transmitting funds and financial information, are part of EFTS. Automated Clearinghouses (ACHs), which provide services similar to those of the

traditional bank clearinghouses, are computerized facilities which process only machine-readable payment orders. The regional Automated Clearinghouses (ACHs) are generally regarded as the precursors of future EFTS developments. The New York clearinghouse banks' Clearinghouse Interbank Payments System (CHIPS) for intracity transfer of international funds is part of EFTS. A more ambitious EFTS project by the Society for Worldwide Interbank Financial Communications (SWIFT) is scheduled to begin operation in the fall of 1976--the SWIFT system will electronically transfer international payments among 300 banks in North America and Europe.

EFTS directly affects consumers by providing new methods of making and receiving funds by automating certain financial services and by the swiftness with which it performs these services. Many individuals are now receiving their income the "paperless" way--by means of direct deposit of their payroll or social security check. Individuals can also preauthorize "paperless" payment of many recurring bills--mortgages, insurance premiums, utility bills, etc.--letting the recipient firms initiate the electronic transfer of payment. Individuals in some places--Minneapolis is one--can also make "paperless" payments of bills through telephone instructions to depository institutions.

Credit cards, issued by banks, retailers, and firms in the travel and entertainment industry, also have an EFTS role. Credit card issuers are using advanced computer techniques to process and aggregate financial information--payments due or credits extended--on a national basis. Bank credit card companies are developing computerized cash dispensing and third-party direct payment functions for their cards when used in conjunction with consumer electronic terminals nationally.

A variety of financial services are being offered through three basic types of consumer electronic terminals:[1/]

1. Cash dispensers--machines through which bank customers can withdraw cash from demand or savings accounts or upon an agreed line of credit.
2. Automated Teller Machines (ATM)--machines capable of several functions including: verification of funds, accepting deposits or making withdrawals from checking and/or savings accounts, transferring funds between customers' checking and savings accounts, and transferring one customer's funds to another account holder at the same or a different depository institution.
3. Point-of-Sale (POS)--machines located in retail stores which are capable of several functions including: check and/or fund verification, cash dispensing, or direct funds transfer from customers to merchants.

Determining all the potential economic effects of EFTS is virtually impossible at this stage, due both to the evolutionary state of EFTS and to the broad scope of activities falling under the EFTS umbrella. Since the eventual impact of EFTS on the economy is ambiguous, the role of economic policy makers with regard to EFTS is uncertain.

[1/] Consumer electronic terminals are referred to by a bewildering variety of names. In addition to the names and acronyms for specific types of machines given in the text, the other two most frequently used terms are: (1) CBCTs--customer-bank communications terminals. Used in reference to any machine located off bank premises which provides financial services to bank customers, and (2) RSUs--remote service units. The off-premise machines operated by savings and loans to provide consumer financial services.

Despite these caveats, some economic policy issues related to the evolution of EFTS have already emerged. These issues are likely to require public policy decisions now or in the near future. The purposes of this paper are twofold: (1) to survey the major public policy issues which are likely to be raised by the development of EFTS, and (2) to identify those government institutions which have the power to affect the development of EFTS. This process will identify the EFTS issues in which the Federal Reserve System has a policy-making role. Knowledge of the Federal Reserve System's potential impact on EFTS may suggest future EFTS research.

For the purposes of this paper, the public policy issues related to EFTS have been organized under four major topic headings: (1) Ownership/Regulation; (2) Competition; (3) Central Bank Issues; and (4) Other Economic Policies. These four topic headings correspond to the columns of the summary matrix which appears at the end of this section. The government institutions which have the power to determine public policies effecting EFTS are listed on the left-hand side, forming the rows of the summary matrix. An "X" in any box of the matrix indicates that the government agency in that row can make public policies affecting the outcome of the particular issue raised by EFTS--for instance, the Federal Reserve System could revise open market operations in response to EFT developments.

The specific issues which have evolved in each of the four major areas are addressed in Sections II through IV of this paper. In addition to an explanation of the issue, the arguments advanced by supporters of conflicting positions are described. The final section of

the paper identifies areas where future research would seem to be most beneficial to policy-oriented officials.

The state and federal courts are not considered to be policy-making institutions in this paper. It is recognized that the courts will play an important role in the development of EFTS--indeed, there are already several important cases pending which are crucial to the future direction of EFTS. However, these court cases concern regulations made by government agencies or EFT projects initiated by regulated financial institutions, and therefore the role of the courts is seen to be one of interpreting the legality of existing regulations or practices.

SUMMARY

POLICY-MAKING ORGANIZATIONS	PUBLIC POLICY AREAS OF EFTS			
	I. Ownership/ Regulation	II. Competition	III. Central Issues	IV. Other Economic Policies
I. Federal Government				
A. Congress	X	X	X	X
1. Government Accounting Office				X
B. Executive Office (President)	X		X	X
1. Federal Departments				
a. Department of Justice	X	X		X
b. Treasury				X
2. Federal Agencies				
a. Federal Reserve System (FRS)	X	X	X	X
b. Federal Home Loan Bank Board (FHLBB)	X	X		
c. National Credit Union Administration (NCUA)	X	X		
d. Comptroller of the Currency	X	X		
e. Federal Trade Commission (FTC)	X	X		
II. State Govenment				
A. Legislatures	X	X		X
B. Governor	X			X
1. State Bank Administrator	X	X		

I. OWNERSHIP/REGULATION. The issues of ownerships, regulation, access, and their antitrust implications are fundamental. Decisions in these areas appear to be crucial in determining the future direction of EFTS development. Moreover, these issues are so closely related that they have become difficult to disentangle. This is particularly true in the case of centralized switching and processing centers where the ultimate issue is whether or not such facilities constitute natural monopolies. The ownership/regulation questions applicable to consumer electronic terminals are of a different nature. For this reason, the Ownership/ Regulation issues are discussed in two parts: first, as they relate to central switching and processing facilities; and secondly, as they relate to consumer electronic terminals. This division is reflected in Matrix I. Ownership/Regulation which appears at the end of this section.

A. Switching and Processing Centers. The pivotal ownership/ regulation issue for switching and processing centers is whether these facilities are or are not natural monopolies. The nature of the other issues changes significantly depending upon the resolution of the natural monopoly issue. If switching and processing facilities are natural monopolies, the justifications for government determination of ownership and regulation of operations are greatly enhanced. If, on the other hand, switching and processing facilities do not constitute a natural monopoly, a very different economic argument must be made for government interference with the private market. The ownership/regulation issues regarding switching and processing facilities are connected in a logical sequence--resolution of issues in each step partially determine the relevant issues in the succeeding step. The outline form of Matrix I is based on this progression.

1. Natural Monopoly. A natural monopoly can be described as:

> "A natural condition that makes the optimum size of the firm so large in relation to the market that there is room for only one firm. The crucial criterion for the existence of a natural monopoly is that the market demand must be sufficiently small so that it can be satisfied by a single firm which is operating in the area of decreasing costs. It is not feasible for a second firm to enter the industry because one firm alone could produce the potential output of both firms at a lower total cost than the two firms would incur . . . this is a direct result of the indivisibilities of the production function for [such] services . . . Economic growth can destroy natural monopolies because demand also grows, and the natural monopoly is broken when the monopolist no longer operates in the limited area of decreasing costs."[2/]

Despite empirical difficulties, it seems important to attempt to ascertain whether or not regional and national switching and processing centers meet these requirements for a natural monopoly.

Some EFTS-related policies have been based on the assumption that these computer centers constitute a natural monopoly, and this assumption has been used in turn to justify the Federal Reserve System's heavy involvement with the development of the regional ACHs.[3/] This raises the question: Is the Fed trying to create a monopoly where no natural monopoly exists? The Antitrust Division of the Department of

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[2/] McGraw Hill Dictionary of Modern Economics, McGraw Hill Company, 1973.

[3/] Eisenmenger, Robert, W.; Munnell, Alicia H.; and Weiss, Steven J. "Pricing and the Role of the Federal Reserve in an Electronic Funds Transfer System" in The Economics of a National Electronic Funds Transfer System, Conference Proceedings, Federal Reserve Bank of Boston, October 1974.

Justice has argued that the case for a natural monopoly has yet to be established.[4/]

(a) Ownership/Antitrust. Even if switching and processing centers are natural monopolies, a separate case must be made for government ownership and/or operation of such facilities. Most natural monopolies--the railroads and telephone and telegraph industries come to mind immediately--are privately owned and operated under government regulation. If such facilities are not natural monopolies, can private markets be relied upon for economically efficient and socially desirable solutions to all problems or is some amount of government regulation desirable? Most regional ACHs are joint ventures in which the private depository institutions are the members and owners of the association, but the Federal Reserve Banks invested the initial capital in the venture and own and operate the processing equipment. These joint ventures also raise antitrust questions. Are the Federal Reserve Banks' involvement with regional ACHs an impediment to competition from private industry in this field?

The Antitrust Division of the Department of Justice has questioned the appropriateness of the Federal Home Loan Bank Board's establishment of regional switching and processing centers because of these issues. In recommendations to the FHLBB, the Department of Justice said:

> "It does not make any difference, at least from the point of view of competitive effects, whether the discriminatory monopolist is a government entity or

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[4/] Baker, Donald I. "Competition, Monopoly and Electronic Banking," ibid., and letter from the Assistant Attorney General Antitrust Division to the Chairman of the Federal Home Loan Bank Board, October 16, 1975.

> a private corporation . . . . But discrimination can occur even when the monopolist has no personal financial interest in the affected industries or even in the industry that it controls--as when the monopolist is a government agency . . . . The mere presence of the Home Loan Banks as competitors may deter private businessmen from risking their capital--they may fear that the government agencies might soon preempt the field, either by pricing their services without regard for costs or by imposing an unduly strict regulatory scheme on private competitive systems in order to encourage use of the government operated ones."[5/]

(i) Technical Standards. When a government agency engages in the basic research and development that creates the technological basis for a new industry, government decisions have a powerful influence on private industry participation in the growth of the new industry. In the present development of EFTS, the Federal Reserve System's involvement in ACHs and regional check processing centers (RCPCs) may be having an anticompetitive effect. The System's choice of supplier for ACHs or RCPCs equipment may determine the supplier for all components of EFTS that may ever need to interface with the System's operations. Would a different spectrum of equipment be available or be in the developmental stage in the absence of Fed involvement in regional processing and switching centers? And, if private enterprise had become involved in this field earlier, would equipment today have any better competitive properties?

(b) Access. At issue here are the questions of which financial institutions can have access to electronic switching and processing centers, at what price and on what terms. If such facilities are natural monopolies--whether owned and operated by government agencies,

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[5/] Letter from the Assistant Attorney General, Antitrust Division to the Chairman of the FHLBB, ibid.

private firms, or a joint venture of both government and private enterprise--who decides which institutions have access? If a government agency is the owner/operator or a partner in a natural monopoly facility, are the access regulations established and supervised by that same government agency or yet another government body? If these facilities are not a natural monopoly, will competition result in an economically and socially optimal solution to the access question?

Two of the fifteen operating ACHs are privately owned and operated, and access and pricing policies are determined by the owner/members. Public policy with regard to access to existing ACHs in which the Federal Reserve System is involved has undergone change over the last year. Originally, the Federal Reserve restricted access to depository institutions with third-party payment powers, i.e., commercial banks and those thrift institutions with NOW accounts or similar powers, most of which were located in the eastern part of the United States.

In early 1976, the Fed announced that access to the Fed's electronic clearing facilities would be granted to all members of ACHs. This would apparently shift responsibility for determining access back to the commercial bank members of ACHs.

The Federal Reserve has also announced that it is studying future changes in its access and pricing policies on ACHs. The Fed's access and pricing policies have been criticized by the Department of Justice, Antitrust Division as being discriminatory to thrifts, small banks, and nonmember banks. A complicating feature of the access and pricing issues in Fed operated ACHs is that the Federal Reserve System seems to want to tie these policies to enhancing membership in the Federal Reserve System.

B. Consumer Electronic Terminals.

1. Ownership/Antitrust. This issue relates to consumer electronic terminals, the RSUs or CBCTs, and who owns and operates them. Do joint ownership or cooperative use of these machines violate antitrust rules? A system in which all competing financial institutions or providers of financial services (several local commercial banks, savings and loan associations, BankAmericard, American Express, etc.) attempt to install their own machines in as many retail outlets as possible appears neither economically feasible nor appealing to either retailers or customers. However, if one or a few RSUs are to be used by many different providers of financial services, how and by whom should access to these machines be determined?

In the Chicago area, the two largest commercial banks are already competing for the RSU business of the area's savings and loan institutions.[6/] Is the contract between the Continental Illinois Bank of Chicago and the FHLBB of Chicago an agreement in restraint of trade? Must Continental Illinois Bank's terminals be made available to all interested parties (local credit unions, bank card systems) on the same terms as those provided FHLBB?

a. Access. Is regulation of privately owned and operated consumer electronic terminals necessary to ensure nondiscriminatory access to these machines? Will competition result in access to these machines by all depository institutions, large and small, bank and nonbank at a "fair" price? Despite the fears of small banks and nonbank

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6/ "Chicago EFT Battle Heats Up with Continental Illinois-FHLB Sharing Pact," American Banker, January 7, 1976.

financial institutions that they will be denied opportunities to participate in EFTS developments, it is difficult without further research to establish a case for government regulation of consumer electronic terminals.

I. Ownership/Regulation

POLICY-MAKING ORGANIZATIONS	A. Switching and Processing Centers						B. Consumer Electronic Terminals	
	1. Natural Monopoly	a. Ownership/ Antitrust	(i) Technical Standards	b. Access	(i) Which Institutions	(ii) On what terms- (price, volume, etc.)	1. Ownership/ Antitrust	a. Access
I. Federal Government								
A. Congress	X	X		X	X	X		
B. Executive Office (President)	X	X		X				
1. Federal Departments								
a. Department of Justice	X	X	X	X	X	X	X	X
2. Federal Agencies								
a. Federal Reserve System (FRS)	X	X	X	X	X	X	X	
b. Federal Home Loan Bank Board (FHLBB)	X	X	X				X	
c. National Credit Union Administration (NCUA)							X	
d. Comptroller of the Currency							X	
e. Federal Trade Commission (FTC)								X
II. State Government								
A. Legislatures	X			X			X	X
B. Governor	X							
1. State Bank Administrator	X			X			X	X

II. COMPETITION

These issues result from the impact EFTS is having or may have on the competitive relationships among suppliers of financial services. EFTS could affect some depository institutions ability to attract deposits and/or provide some types of customer services. EFTS may also significantly effect the provision of credit. Since many firms offer credit incidental to their main business activity, EFTS-induced changes in the market shares of credit suppliers could have far-reaching implications.

Some government regulatory agencies have issued guidelines specifying the manner in which institutions under their jurisdiction may participate in EFT. However, since such rules are bound to effect competition in the financial industry, both the regulators and the initiators of individual EFT projects have been sued. Several court cases now in progress seek an interpretation of banking statutes and the authority of specific government regulators.

A. Are Consumer Electronic Terminals Branches? The background of events leading up to the current court cases testing whether or not consumer electronic terminals are or are not branches helps to clarify this issue. In January 1974, the Federal Home Loan Bank Board authorized federally chartered savings and loan associations to establish RSUs. Since federally chartered savings and loan associations are permitted to establish branches, the question of whether these electronic terminals constituted branches did not arise. The FHLBB regulation was very liberal in terms of geographic limitations, types of financial service functions permitted, and location of RSUs. Many savings and loans throughout the country took advantage of these provisions--the establishment

of sixteen RSUs in Hinky Dinky supermarkets by First Federal Savings and Loan of Lincoln, Nebraska, was one of the earliest and best known EFT projects under the FHLBB's ruling.

Commercial banks feared the savings and loan industry would gain a competitive advantage in developing consumer-oriented EFT services under the FHLBB's regulation. It was in this environment that the Comptroller of the Currency issued his interpretative ruling of December 1974 that CBCTs were not branches. This ruling meant that the McFadden Act's provision that national banks may branch only as state law permits would not apply to the establishment of consumer electronic terminals. Therefore, national banks would be able to install such terminals in states prohibiting branch banking. The Comptroller's ruling was amended in May 1975 to restrict the location of CBCTs to within fifty miles of the head office or chartered branch of a national bank unless the unit was available for sharing with other depository institutions in the area at a reasonable cost. The geographic limit did not, however, prohibit interstate establishment of CBCTs.

The Comptroller's ruling has been the subject of several court cases. A federal district court in Washington, D.C., ruled that CBCTs were branches, and this decision was subsequently upheld on appeal. Meanwhile, a federal district court in Oklahoma ruled that CBCTs were not branches, and an appeal is pending in this case. It seems likely that this issue will ultimately be appealed to the Supreme Court.

Resolution of the issue of whether or not CBCTs are branches is important to the competitive relationship between commercial banks and savings and loan associations in the development of EFT. Currently, S&Ls are proceeding to establish RSUs wherever market conditions make it profitable to do so. Most commercial banks are understandably reluctant

to invest in CBCTs until the legal issue is resolved. There are a few exceptions leading to some peculiar situations. In Chicago, the two largest commercial banks have established a number of consumer electronic terminals and are sharing the terminals with local S&Ls under a contract with the FHLBB--however, the S&Ls' customers can use the terminals for a much wider variety of financial transactions than can the banks' own customers. A large New York commercial bank has installed 120 electronic terminals in retail outlets in neighboring New Jersey--to date, the machines provide only account balance and check verification. However, the machines could be used to perform other financial services if the legal environment permitted.

If the courts decide that CBCTs are not branches, both commercial banks and S&Ls could participate in the development of consumer electronic terminals on an equal footing. If the courts determine that such terminals are branches, the savings and loan industry would apparently have a substantial advantage over commercial banks in establishing these units. Should such a situation be considered undesirable, legislature remedies would be needed.

B. Banks vs. Other Financial Institutions. There have been some attempts to evaluate the possible impact of EFTS on the competitive position of commercial banks relative to that of other providers of financial services. As a result of EFTS, will commercial banks improve their competitive position at the expense of all other financial institutions? Of all providers of financial services? Of only some types of financial institutions? Which ones? Which financial institutions are likely to suffer the greatest decline in their competitive position?

To some extent, the relative competitive position of banks after development of EFTS depends upon how the issue of CBCTs as branches is resolved and whether the banks in question are located in a unit or branching state. The relative competitive position of various financial institutions once EFTS is fully operational would also seem to depend on solution of the issues of accessibility of terminals and ownership and sharing of EFTS components. Scenarios can be constructed for the competitive position of banks under different combinations of circumstances, although the lack of data may make definite conclusions impossible. Similar studies can be conducted to ascertain the relative competitive position of other financial institutions--credit unions, finance companies, etc.--or other providers of financial services--retailers, national credit card companies, etc.

It is frequently assumed in EFT literature that large commercial banks will benefit at the expense of all other financial institutions. On the other hand, smaller commercial banks at least, have felt sufficiently threatened by the savings and loans industries' development of EFTS to take legal action. The Independent Bankers Association, which is composed chiefly of small banks, has brought suit against the FHLBB in federal district court in Washinton, D.C. for "invading the field of commercial banking" through regulations permitting federally insured savings and loan associations to set up electronic terminals.[7/]

EFTS is commonly expected to produce several other changes in financial institutions' competitive positions. Finance companies are generally expected to suffer the greatest loss of market share due to

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7/ "IBAA Suit Charges FHLBB Invades Banking in Granting S&L Electronic Terminals," American Banker, January 21, 1976.

the advent of EFTS--indeed, many authorities anticipate the demise of of consumer finance houses which are not bank affiliated. Credit unions apparently have an uncertain future in a fully operational EFTS environment. Although credit unions are participating in EFT projects throughout the nation--the direct deposit of payrolls to credit union accounts in Duluth is one regional example--EFTS is usually considered detrimental to the credit union movement.

National bank credit card companies, primarily because of their leadership in aggregating and processing transaction and credit data, are frequently thought to have a prominent role in future EFT development. The whole area of changing competitive relationships among suppliers of financial services both to consumers and to companies is a fertile one for investigation, the more so because it is riddled with unproven and emotionally charged assertions.

C. Large Banks vs. Small Banks. This issue addresses the possibility that EFT will develop in a way that improves the competitive position of large financial institutions, particularly banks, at the expense of small financial institutions. Although the large vs. small controversy applies to all types of financial institutions, most discussions of the issue concentrate on banking. The following arguments are frequently made to support the contention that small banks will suffer a loss of market because of EFTS:

(1) EFT projects are so expensive that they are beyond the means of most small banks;

(2) EFT projects will produce substantial economies of scale for large banks, leading to cost and price reductions which small banks will be unable to match;

(3) Sharing, joint ownership, and cooperative EFT projects by small banks will be inadequate to offset the advantages cited in (1) and (2); and,

(4) EFTS will reduce the importance of geographic location or proximity to customers--i.e., the geographic monopoly element--as a significant element of competition, eroding a significant competitive advantage of small banks. Although this is one of the most interesting questions raised relative to EFTS, the sparse data available at this stage of EFTS development makes the proposition difficult to substantiate or refute.

D. Financial Institutions vs. Retailers. The most frequently discussed issue in this area is how EFTS will affect the competitive position of financial institutions, particularly banks and savings and loan associations, relative to the credit operations of major retailers. Representatives of both industries have expressed fears that the position of their competitor in the field of consumer credit will be enhanced by EFTS. No definitive study of this question appears to exist.

The Federal Reserve System is considering applying to banks the recent Federal Trade Commission ruling assigning consumer protection responsibilities to creditors, as distinct from sellers. If banks become subject to this proposal, it could have an important bearing on the banking industries' development of EFT credit services as opposed to transaction services.

A less frequently discussed issue is whether financial institutions will attempt to compete with retailers as suppliers of consumer goods. Although present regulations for banks and nonbank thrift institutions

would not permit such activity, the introduction of catologue sales of consumer goods by major credit card companies (American Express, oil companies, etc.) has raised this as a potential issue.

II. COMPETITION

POLICY-MAKING ORGANIZATIONS	A. Are Consumer Electronic Terminals Branches	B. Banks vs. Other Financial Institutions	C. Large Banks vs. Small Banks	D. Financial Institutions vs. Retailers
I. Federal Government				
A. Congress	X	X		X
B. Executive Office (President)				
1. Federal Agencies				
a. Federal Reserve System (FRS)	X	X	X	X
b. Federal Home Loan Bank Board (FHLBB)	X	X		
c. National Credit Union Administration (NCUA)		X		
d. Comptroller of the Currency		X		
e. Federal Trade Commission (FTC)				X
II. State Government				
A. Legislatures	X	X	X	
B. Governor				
1. State Bank Administration		X		

III. CENTRAL BANK ISSUES

EFTS poses problems for the monetary authority, the Federal Reserve System, in determining what actually constitutes the money supply (the means of payment), how to control this variable, and how best to promote an efficient payments mechanism.

A. Money Supply. As EFTS evolves, the definition of the money supply will have to change and so will such concepts as the velocity of money and reserveable funds. Traditionally, currency and checks on demand deposits have been the primary medium of exchange in the U.S. Time and savings account balances were regarded as "near money" or "liquid balances" because they could not be used directly as a means of payment--savings deposits had to be converted into either currency or demand deposit balances to be used as a means of payment.

This is no longer true. Payments are now being made by electronically transferring savings account deposits to third parties. Moreover, paperless--no checks, no currency--payments are now taking place in a variety of EFT projects discussed previously. EFT changes in the payments system make it difficult to propose a working definition of the money supply. The ability to control the "new" money supply is yet another problem.

Since not all commercial banks are required to be members of the Federal Reserve System, part of the money supply has long been outside the direct control of the U.S. monetary authority. The extent to which this situation has impaired the Fed's ability to conduct monetary policy is the subject of considerable debate. However, the impact of EFT seems likely to compound the problem. EFT projects are apparently

expanding the types of funds used for payment and increasing the number of non-Federal Reserve member institutions providing third-party payment services. If the situation becomes undesirable as EFT advances, legislation will be required.

As a new concept of the money supply evolves, all kinds of relationships between this "new" money and other monetary, financial, and real economic variables will change--some old relationships disappearing to be replaced by entirely new relationships. Problems with the relationship between the growth of the money supply, narrowly defined, and the growth in real economic variables during 1975 may indicate that such structural changes are already underway. Probably because of uncertainties about the type of EFTS that is evolving, there is little published analytical research into the impact of EFTS on the money supply.

B. Instruments of Monetary Policy. There are a number of interesting speculations on the effect EFTS may have on the instruments of monetary policy. Flannery and Jaffee envision only minor modifications in the use of the traditional qualitative instruments of monetary policy, but suggest that EFTS may have a significant impact on the lag structure of monetary policy and on the mix of monetary policy instruments.[8/]

These authors also think EFTS may necessitate the renewal of quantitative or selective instruments of monetary policy, particularly in the area of consumer credit. Their argument is based on some debatable assumptions about the impact of EFTS on consumer credit: (1) EFTS will

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[8/] Flannery and Jaffee, The Economic Implications of an Electronic Monetary Transfer System, 1973, p. 182-189.

significantly increase the total volume of consumer credit, and (2) consumer credit in an EFTS environment will tend to be procyclical.

A more generally held view is that EFTS will greatly increase disintermediation of financial flows by both the household and business sectors. Flow-of-funds data may prove useful for empirical research into the disintermediation impact of EFTS to date.

C. Central Bank Conflicts. In addition to controlling the money supply, the Federal Reserve System also has responsibilities as a bank supervisor and regulator and is concerned with the efficient operation of the nation's payments mechanism. At times, the objectives of monetary policy, bank regulatory policy, and payments mechanism efficiency may not be compatible. In recent years, there has been considerable debate about the degree to which the Federal Reserve System's responsibility to preserve the soundness of the banking industry has acted as a constraint on the monetary authorities' ability to control inflation.

EFTS seems to be raising many issues in which Federal Reserve objectives may conflict. Through the Fed's pivotal role in the development of ACHs and RCPCs, the Fed may be adopting an overly protective role toward commercial banking in the banking industry's competition with other financial institutions. In discussing the natural monopoly issue earlier, it was pointed out that the Federal Reserve may be entangled in a conflict between pricing ACH services optimally to promote the most efficient payments mechanism and pricing these services to benefit member banks for money supply control objectives. Another issue is the degree to which competition in the provision of EFTS can be encouraged without impinging on the stability of the financial industry. These issues seem likely to become more pronounced as EFT proceeds. It is

important that early public policy decisions which could affect the entire course of future EFTS developments not be made without recognition of the possible trade-offs between conflicting objectives.

III. Central Bank Issues

POLICY-MAKING ORGANIZATIONS	A. Money Supply	B. Instruments of Monetary Policy	C. Central Bank Conflicts
I. Federal Government			
A. Congress		X	X
B. Executive Office		X	
1. Federal Agencies			
a. Federal Reserve System (FRS)	X	X	X

IV. OTHER ECONOMIC POLICIES

The miscellaneous economic issues related to EFTS are collected under this heading. To a great extent, these issues do not represent new problems for policy makers, but rather reflect EFTS' impact in increasing the importance of existing problems. These issues relate to almost every aspect of finance, and so regulations or changes in laws could emanate from several sources.

A. Security. Security questions cover a broad range of topics including the physical security of electronic terminals, particularly cash dispensing machines; fraudulent activities either by illegal use of cards or by interference with the system's programming; the responsibility for breakdowns in the computer system and responsibility for accounting accuracy.

Certainly the Federal Reserve System has responsibilities in the area of security under Regulation P, and other regulatory agencies are also concerned about appropriate security measures for institutions under their authority. EFTS appears likely to make significant changes in security measures, as the emphasis shifts from traditional robbery of cash or negotiable securities to prevention of theft or fraud by computer interference.

Regulators of financial institutions will probably be required to issue guidelines for adequate in-house security precautions to their constituency. Regional and national switching and processing centers may be particularly vulnerable to computer crimes, and the owners, operators, and regulators of these EFT centers will have great security responsibilities.

B. Privacy. Concern about the issue of privacy of an individual's financial records is not new. Indeed, banks and their customers have both engaged in legal contests to protect the privacy of individual's financial records from government agencies and private business. However, EFTS is increasing the urgency of the privacy issue for a number of reasons. Once EFTS is operational, more financial information about individuals will be consolidated and stored in central computers than has previously been the case. The ease and low cost of retrieving this aggregated information represents the perceived threat to privacy.

There are any number of possible uses of individuals' financial records by credit bureaus, credit grantors (banks, retailers, etc.), market researchers, and, not least, government agencies seeking to establish criminal activities, prevent fraudulent use of welfare funds or prove income tax evasion. The possible abuses of consolidated individual financial records are so numerous, and consumers fears of the potential for invasion of privacy so great, that this issue may well be the greatest obstacle to consumer acceptance of EFTS.

The President's Office of Telecommunications commissioned a study of the privacy implications of EFTS. The resulting report by James B. Rule, "Value Choices in Electronic Funds Transfer Policy" regards the potential abuses of individual's privacy as a very great social cost inherent in EFTS.[9/]

The privacy issue is of such paramount importance that it is likely that government regulatory agencies will find it necessary to

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9/ Rule, James B. "Value Choices in Electronic Funds Transfer Policy," Office of Telecommunications Policy, Executive Office of the President, Washington, D.C., October 22, 1975, GPO 986-311.

implement regulations governing access to individual account information. This may involve conflicts between government agencies. The recent confrontation between a congressional committee and the bank regulatory agencies--in which the bank regulatory agencies refused to submit to Congress financial records of individual commercial banks showing specific customer relationships--may be a forerunner of EFTS issues.

C. Fiscal Policy. An operational EFTS may result in several changes in fiscal policy, in revenue and expenditure policies, administration, and in debt management. If the distribution of income in the United States is changed by EFTS, as some assert, the tax structure of the federal government (and perhaps the states?) may need to be adjusted. If EFTS changes customary payment periods, the Treasury might change the methods and/or timing of tax collection. Would it be feasible with EFTS for income taxes to be collected on a cash basis rather than the present accrual basis? This would eliminate a source of "float" for employers, and surely be resisted by them. EFTS may cause many changes in the Treasury's debt management procedures, which could in turn impact on Open-Market-Operations, but such changes are difficult to ascertain at this point in the evolution of EFTS.

The direct deposit of payrolls through EFTS is being encouraged by the congressional Government Accounting Office (GAO) in order to reduce government expenditures. Other cost savings will undoubtedly become feasible as EFTS develops, and GAO is almost certain to encourage their use. How will such changes effect the whole structure of government revenues and expenditures, the concept of fiscal policy, and the debt management impact on financial markets? Issues in this area may not be researchable until EFTS reaches a more advanced state of development.

D. Allocation of Capital. It has been asserted[10/] that EFTS will allocate capital more efficiently and therefore will increase inter-regional and interindustry capital flows. International capital flows would also increase, if this assertion is correct and EFT projects like CHIPS and SWIFT are part of a fully operational EFTS. To the extent that changes in the allocation of capital do not correspond to politically determined goals, change in capital flows may stimulate economic policies to offset, mitigate, or otherwise reallocate capital.

Arguments about "capital deficient" regions or sectors are likely to gain currency. Will the agricultural sector or residential construction be less able to obtain capital when EFTS is developed? Will the Ninth District's share of the nation's capital resources be smaller after EFTS is operational than previously? Issues of this nature may not yet be researchable, but as additional EFT projects come on stream, flows-of-funds data could provide valuable insight into these questions.

[10/] Flannery and Jaffee, op. cit.

IV. OTHER ECONOMIC POLICIES

POLICY-MAKING ORGANIZATIONS	A. Security	B. Privacy	C. Fiscal Policy	D. Capital Allocation
I. Federal Government				
A. Congress		X	X	X
1. Government Accounting Office			X	
B. Executive Office (President)		X	X	X
1. Federal Departments				
a. Department of Justice	X			
b. Treasury			X	
2. Federal Agencies				
a. Federal Reserve System (FRS)	X	X	X	X
b. Federal Home Loan Bank Board (FHLBB)	X	X		
c. National Credit Union Administration (NCUA)	X	X		
d. Comptroller of the Currency	X	X		
II. State Government				
A. Legislatures				X
B. Governor				X
1. State Bank Administrator	X			

CONCLUSIONS

Many important issues are being raised by the emergence of EFTS, and the Federal Reserve System appears to occupy a key public policy-making position with regard to several of these issues. Moreover, it seems important to resolve some of these issues in the near future, before undesirable developments become entrenched.

Whether or not switching and processing centers constitute natural monopolies is the EFTS issue which stands in most urgent need of resolution. As discussed in Section I, decisions on ownership, regulation, access, and the terms of access (including pricing) to central computer facilities all hinge on first determining if the facilities are natural monopolies. Since the Federal Reserve System currently operates ACHs and RCPCs--and makes decisions regarding access to and pricing for the services of such facilities--it is clear that the Fed has an important policy-making role in this area.

As an operator and developer of ACHs and RCPCs, the Fed is also involved in the antitrust issues related to these EFT components. Moreover, the possibility of conflicts of interest in central bank objectives discussed in Section III C of this paper also stem largely from the Fed's participation in ACHs and RCPCs. Since so many EFTS policy issues are linked to the Federal Reserve System's involvement in switching and processing centers, it seems appropriate to reevaluate the Fed's policies with regard to ACHs and RCPCs in the light of the issues raised in this paper.

EFTS is almost certain to have a significant impact on competitive relationships in the financial industry. Some regulatory agencies--most notably the Comptroller of the Currency and the Federal Home Loan Bank

Board--have adopted EFTS policies which are apparently designed to secure the maximum competitive advantage for institutions under their jurisdiction. The policies of these regulators have led to court cases to interpret the applicability of existing law to EFTS devices. Unfortunately, current bank laws were not written to accommodate EFTS, and therefore, regardless of how the courts interpret them, may not represent an adequate framework for EFTS development. Certainly, competition in regulation would not seem to create the best atmosphere for EFTS. The Federal Reserve System, with its broad responsibility for the soundness of the nation's financial structure, could make a major contribution in this area through policies which recognize the interests of all parties to EFT transactions.

The remaining EFTS issues appear less pressing--although it would be useful if policy makers would thoughtfully consider these issues before abuses precipitate action. Safeguarding the privacy of individual's financial information is one area in which such foresight would be very beneficial. In general, equitable resolution of the intricate EFTS policy issues seems to require an aggregate public welfare perspective.

Bibliography

Arthur D. Little, Inc. "The Consequences of Electronic Funds Transfer," prepared for the National Science Foundation under contract NSF-C844, GPO 038-000-00249-0, June 1975.

"Bankers Must Decide If They Want Active Government Role in EFTS Field," American Banker, November 21, 1975.

Bochnak, Mary and Jessup, Paul F. "Consumer Banking Facilities in Minnesota: A Preliminary Evaluation" Working Paper No. 27, Graduate School of Business Administration, University of Minnesota.

Brooke, Phillip. "San Francisco Fed to Test Two-State Electronic ACH Exchange," American Banker, December 8, 1975.

"Chicago EFT Battle Heats Up with Continental-Illinois-FHLB Sharing Pact," American Banker, January 7, 1976.

Cohan, Sandra B. and Longbrake, Wm. A. "The Now Account Experiment," Journal of Bank Research, Bank Administration Institute, (Vol. 5, No. 2), Summer 1974.

Conover, Lynn. "Nader Charges BHCs Seek Nationwide EFT System Through Out-of-State Acquisitions," American Banker, December 15, 1975.

Dowling, Robert. "Justice Asks Fed Impose ACH Fees; Sees Bias Against Thrifts, Nonmembers," American Banker, November 21, 1975.

Dowling, Robert. "Justices Kauper Urges Major Overhaul of Banking Regulation," American Banker, December 5, 1975.

Dankelberg, Wm. C. and Johnson Robert W. "EFTS and Consumer Credit," Working Paper No. 2, Krannert Graduate School of Industrial Administration, Purdue University Credit Research Center, 1975.

"EFTS Creates New Consumer Services and Increased Competition," American Banker, December 15, 1975.

Flannery, Mark J. and Jaffee, Dwight M. The Economic Implications of an Electronic Monetary Transfer System, Lexington Books, D.C. Heath & Company, Lexington, Massachusetts, 1973.

Goldman, Thomas A; Levitt, Leonard; Oran, George, S.; and Thompson Robert C. "Consumer Attitudes Toward Funds Transfer Services," Federal Home Loan Board Journal, November 1974.

Gordon, Daniel. "Credit Unions and EFTS," Working Paper No. 1, National Credit Union Administration, August 1975.

"IBAA Suit Charges FHLBB Invades Banking in Granting S&L Electronic Terminals," American Banker, January 21, 1976.

Kauper, Thomas E., Assistant Attorney General. Letter to Garth Marston, Acting Chairman, Federal Home Loan Bank Board, October 16, 1975.

Kleinschmidt, Thomas. "A Survey of Significant EFT Developments in the Nation and the Ninth Federal Reserve District," Office of Public Information, Federal Feserve Bank of Minneapolis, draft paper, February 1976.

Nadler, Paul S. "In Fighting Big Banks, Independents May Be Overlooking Real Enemy," American Banker, January 6, 1976.

Roelle, William H. and Walker, David A. "A Survey of Some Major Issues on Electronic Funds Transfer Systems," Working Paper No. 74-19, Federal Deposit Insurance Corporation.

Rule, James R. "Value Choices in Electronic Funds Transfer Policy," Office of Telecommunications Policy, Executive Office of the President, Washington, D.C., October 22, 1975. GPO 896-311.

"The Economics of a National Electronic Funds Transfer System," Proceedings of a Conference-Federal Reserve Bank of Boston, October 1974.