UIC John Marshall Journal of Information Technology & Privacy Law

Volume 2
Issue 1 *Computer/Law Journal - 1980*

Article 7

1980

Is Corporate EFT Coming of Age?, 2 Computer L.J. 87 (1980)

James W. Trotter

Is Corporate EFT Coming of Age?

by JAMES W. TROTTER*

INTRODUCTION

The checkless society heralded in the sixties has been something of a disappointment. After over fifteen years of fanfare, consumers have yet to fully accept the concepts,[1] banks are still reluctant to make an all-out commitment,[2] and corporations are largely indifferent. With the exception of a few flurries of excitement, progress can only be described as rather "ho-hum."

A number of events and factors, however, appear to be sparking renewed interest in EFT alternatives for corporations. These include the enhanced systems and operations capability of the automated clearing houses (ACHs), the cooperation-oriented posture of the Federal Reserve Board, technical developments in telecommunications, and the maturing of cash management as a corporate treasury office discipline. Cash management is extremely important in view of the high cost of money.[3] This article provides a general defi-

* B.A. Political Science and Philosophy, Grinnell College, Grinnell, Iowa; M.A. Human Resources Management, Pacific Lutheran University; M.B.A. Finance and Accounting, Northwestern University. Mr. Trotter is a senior systems specialist with the Bank Administration Institute (BAI) and is responsible for BAI activities in the areas of electronic delivery systems and corporate banking services, including customer-based EFT and corporate-to-corporate EFT. Mr. Trotter conducts the annual ATM conference and coordinates programs and organizations for bank cash management personnel in operations, systems and marketing. In September 1979, Mr. Trotter was named Director of BAI's newly formed Center for Cash Management Studies.

1. See the compilation and summary of consumer opinion surveys in Greguras & Wright, *How the New EFT Act Affects the Financial Institution/Consumer Relationship*, 11 U.C.C.L.J. 207 (1979).

2. This inattention to business needs is partly attributable to the difficulty that banks have had in identifying and measuring those needs. Businesses are so numerous and diverse in size, organization and function, and the operating practices so divergent within and among industries, that general conclusions have proved elusive. *EFT: Current & Prospective Corporate Applications,* Jan.-Feb. 1979, at 1 (Coopers & Lybrand Newsletter, Special Report) [hereinafter cited as *C & L Report*].

3. *Id.* at 5. For early commentary on the status of corporate EFT, *see* Simpson, *The Future of Corporate Money Services,* BANK AD., Aug. 1976, at 29; *New EFT Capa-*

nition of corporate EFT, sets forth an overview of various working networks, and identifies the events which are improving the feasibility of corporate EFT. It concludes with a brief discussion of the major regulatory obstacles yet to be overcome.

I. WHAT IS CORPORATE EFT?

In the broadest sense, corporate electronic funds transfer refers to any payments or movement of funds from, to or among corporate bank accounts occuring by electronic means.[4] Under this general definition, the following transaction types would be included:

- payments between corporations and individuals
- payments between corporations and banks
- payments between corporations and governments
- payments between a corporation and itself
- payments between a corporation and another corporation

Each of these transaction types is in use today using EFT. Opportunities in these areas have not been fully exploited, however, largely because of differing operating requirements and a lack of industry agreement on standard message content for data transmission. Further, corporations are not yet fully convinced of the cost effectiveness of EFT. While this article will focus only on payments between corporations, most of the underlying problems, practices and principles hold true for other payment types.

Any electronic funds transfer system must carry supporting information. Supporting information must include, at a minimum, routing and account information for both the sending and receiving accounts (*from* and *to* addresses). Other descriptive information such as invoice numbers may also be required to assure that receivables and/or payables ledgers are properly posted by the companies involved in the transaction.

Electronic funds transfer systems differ from paper-based systems in that both funds and information flow along the same lines. A schematic approach illustrates this concept. Figure 1 shows the flow of funds and information that occurs in the current check payment system. In this example, Customer Company A has received an invoice from Supplier Company B. A check is prepared and sent to Company B (or a lock box) along with invoice copies. Company A reduces accounts payable outstanding. Upon receipt, Company B

---

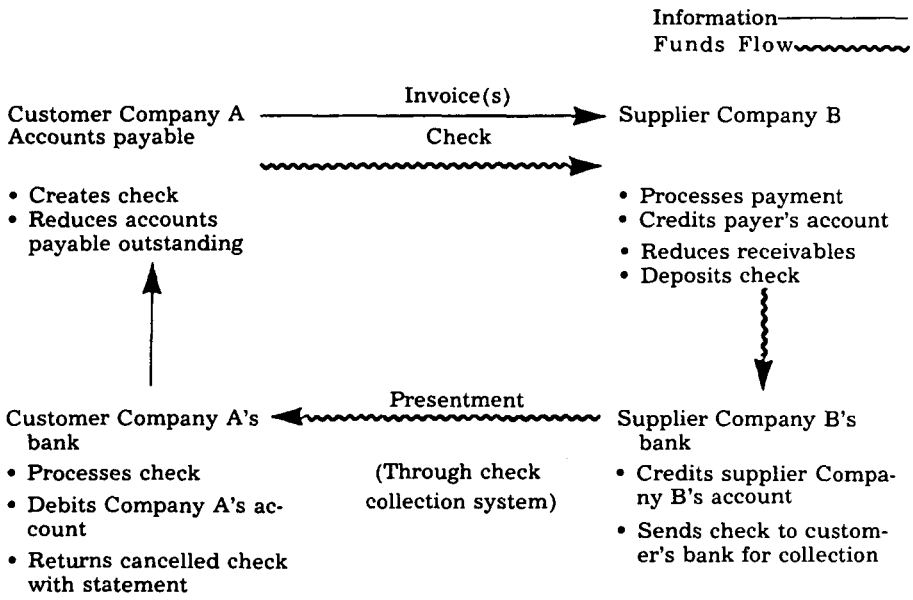
bility for Corporate Treasurer, BANK AD., Nov. 1976, at 68; Lewin, *EFT Makes Direct Settlement Between Corporations More Feasible*, Am. Banker, June 6, 1977, at 4, col. 3.

4. The *C & L Report, supra* note 2, defines corporate EFT as "the maximum possible use of electronic media in the payments mechanism as it relates to corporations, banks and individuals." *Id.* at 1.

processes the payment, credits the payer's account (reducing accounts receivable) and deposits the check. Company B's bank credits the company's account and sends the check to Company A's bank for collection. Customer Company A's bank processes the check, debits Company A's account and returns the canceled check with the statement.

Figure 1[5]

The Current Check Payment System



A number of events occur, however, which can result in time delays in completing the transaction. In intercorporate payments, the supplier extends credit to the customer company. Discount incentives are often offered to the customer company for prompt payment, *e.g.*, "2/10 net 30."[6] The reliability and control of the timing of credit terms suffers enormously in today's paper-based system in two ways: (1) mail time from Company A to Company B, and (2)

5. W. LEWIN & J. BERGSTROM, AUTOMATED BUSINESS PAYMENTS: A PROBLEM DEFINITION 7 (1977).

6. The phrase "2/10 net 30" describes a credit arrangement whereby a two percent discount is given if the invoice is paid within ten days. The invoice is due in full within thirty days.

check clearing time from Company B's bank to Company A's bank. If Company B is using the postmark on the payment envelope to determine eligibility for a trade discount, as is the common practice, it is actually extending discount terms beyond the specified time frame. Assuming that the postmark is an accurate reflection of the payment date, which it often is not, several days may elapse between the mailing date and the date of receipt by the supplier company.

The situation is worsened by the unreliability of a postmark as an indication of the mailing date. In a recent study conducted by Phoenix Hecht (a firm specializing in mail time and check clearing studies) postmark errors were found in over twenty-five percent of their sample of 185,000 envelopes.[7] These errors include (1) envelopes not cancelled; (2) cancellation illegible; (3) cancelled in the wrong city; and (4) cancelled on the wrong date. Further, a company can easily alter the cancellation date by "forgetting" to adjust its postage meter.

In addition, other delays can occur in the process of clearing a check from the supplier's bank to the customer's bank. Though a check has been deposited, the funds are not necessarily available for use until the clearing process is complete. Hence, credit terms are extended even further. The situation is aggravated if a check is drawn on a bank which is remotely located or hard to reach for check presentment.

The payor enjoys a number of advantages in the "float" gain. Most obviously, he is able to utilize discount terms to which, strictly speaking, he is not entitled. Second, he has the use of the funds until his check finally reaches his bank. The rewards for extending the time to ultimate collection are real. If a payment of $1,000,000 can be delayed for five days, the money can be invested. At an eight percent investment rate, a company could earn slightly under $1,100.[8] For the payee, this is an opportunity cost.

The supplier company, besides finding the system slow in providing available funds, experiences other disadvantages. It is often

7. The following irregularities were found in a review of coded envelopes used in Phoenix-Hecht's Lock Box Mail Studies. The studies are conducted by mailing envelopes from and to over one hundred locations.

	1977	1978
Envelope not cancelled	3.5%	6.2%
Cancellation illegible	5.8	9.5
Cancelled in wrong city	2.2	2.1
Cancelled on wrong date	9.5	7.3
	21.0%	25.1%

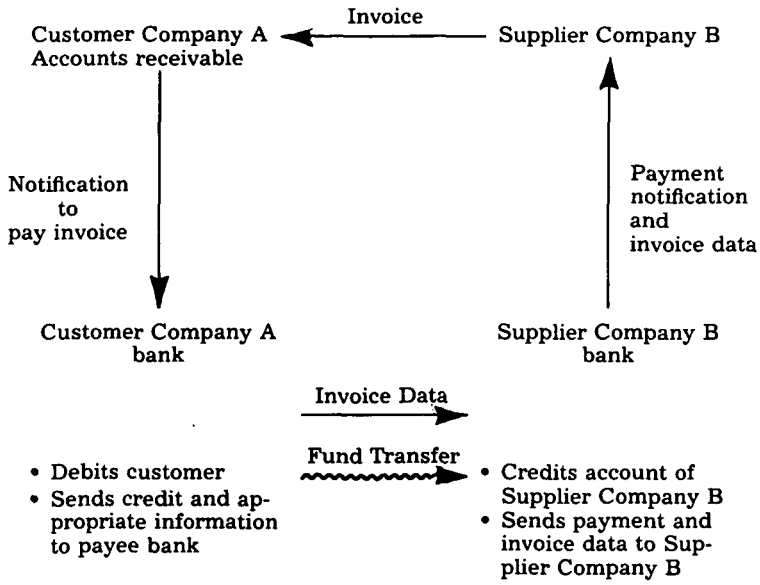
8. ($1,000,000 x 8% ÷ 365 days) x 5 days = $1095.89.

burdened with the labor intensive tasks of extracting information from invoices for receivables posting, credit management, and the determination of its own cash position. Further, the supplier cannot know if the payment check is "good" until it has cleared through the entire system. This exposes the seller to an additional credit risk. An unfortunate example occurred in a case involving American Beef Packers, Inc. American Beef Packers paid for cattle purchased from midwestern farmers using a remotely located bank. When the company went bankrupt, the payments were dishonored, resulting in losses to the suppliers. The length of time required for check clearance was considered a major factor in the magnitude of losses incurred by suppliers.

In the corporate EFT environment, however, the situation changes dramatically. Figure 2 illustrates what happens in any EFT credit transfer system.

Figure 2[9]

The Credit Transfer System



The flow of funds is the reverse of that in a paper-based system. The transfer mechanism allows information and dollars to follow the same paths. Having received an invoice, Customer Company A submits a tape, or otherwise transmits, instructions to his bank. In the

9. W. LEWIN & J. BERGSTROM, *supra* note 5, at 11.

process of tape preparation, its payables ledger is updated. The bank debits Customer Company A's account and sends the credit, along with supporting information, to Company B's bank. Supplier Company B's bank credits B's account and sends payment and invoice data to Company B. Company B can then update its receivables ledgers and other records using the same machine-readable medium.

In the EFT system, the payor loses the float advantage inherent in a paper-based system. However, the payor may perceive a gain in control over his disbursements because settlement (payment) dates are known with certainty and, in fact, are specified by the payor. The payee also derives a number of benefits. Payment settlement is in "good" funds and the time of credit is known with certainty. Management information is obtained sooner and, because the process is more fully automated, probably at a lower cost.

II. Supporting Networks

Presently, corporate EFT can be supported by any of five major networks, each having its own operating rules and capabilities. This is appropriate since transaction types differ according to the dollar amount to be transferred, whether the payments are recurring or irregular, and the ability to forecast precisely far enough in advance of settlement. For example, payroll disbursements are recurring payments, normally involving relatively small dollar amounts, usually made to the same individual accounts, and occurring on a regularly scheduled basis. As such, these transfers are a prime candidate for payment through an automated clearing house (ACH).[10] Payments to corporations, on the other hand, often involve high and varying dollar amounts, may occur only a few times to any particular company, and are usually made at irregular intervals.

The information which must accompany the payment message may be simple or complex. A payroll disbursement, for example, may require only that the "addresses" (bank and account numbers) of the sender and receiver be known. For an invoice payment, on the other hand, supporting invoice data is also required.

The major operating networks are[11]: Fed Wire, Bank Wire II (formerly Bank Wire, a cooperative bank telecommunications net-

10. The direct deposit of payroll disbursements is an important entry point into corporate EFT. *C & L Report, supra* note 2, at 11.

11. For contemporary status reports on the various transfer mechanisms see Simpson, *supra* note 3, at 29; Barna, *EFT Means More Bang for the Corporate Buck*, Computer Decisions, July 1978, at 32; *C & L Report, supra* note 2, at 2.

work),[12] CHIPS, SWIFT,[13] and NACHA.[14] These are described in Figure 3.

Figure 3

Network Name	Definition	Participating Institutions	Comments
Fed Wire	The Federal Reserve System network for transferring Fed funds or cash transactions among the reserve accounts of Fed members	5,621 Federal Reserve Member Banks	Limited message carrying capability; immediate settlement; U.S. dollars only
Bank Wire	A commercial bank-owned system transferring funds using correspondent bank accounts for settlement, operating as a private service corporation entitled Payment and Telecommunication Services Corporation. Replaced by Bankwire II		
Bank Wire II	Extended service capability of Bank Wire (described above) which offers expanded information and reporting capability	188 banks	Expanded message carrying capability; next day settlement; provisions for immediate settlement under development; U.S. dollars only
CHIPS	Clearing House Interbank Payments System operated by a consortium of New York Banks	80 New York banks	Limited message carrying capability; next day settlement; U.S. dollars only although designed as an international settlement mechanism.
SWIFT	Society for Worldwide Interbank Financial Telecommunications which permits funds transfers between countries in specified local currencies	600 member banks in 17 countries	Free format message carrying capability; value dated settlement also has provisions for delayed settlement; international currencies
NACHA	National Automated Clearing House Association which permits batch transmissions among member banks through 32 regional Automated Clearing Houses (ACHs)	9,722 banks 2,169 thrifts	Some message carrying capability; two-day lead time required for settlement on most transactions; limited next day settlement to be offered in 1979; U.S. dollars only

12. For a description of the difficulties in implementing Bank Wire II, *see Bank Wire 11 Months Delayed, is Set to Handle First Centerbank Transfers*, Am. Banker, May 17, 1978, at 8, col. 1.

13. *See generally* Kutler, *SWIFT Codifies Liabilities*, Am. Banker, June 28, 1979, at 1, col. 2; Berenyi, *SWIFT International Bank Network to Expand*, Computerworld, Jan. 22, 1979, at 34, col. 1.

14. For a status report on the National Automated Clearing House Association (NACHA), *see* NACHA SUREPAY UPDATE (newsletter of the NACHA). *See also* White, Impact of ACHs on Corporate Payments (paper presented at the INTELCOM

Certain other groups have been organized to facilitate the electronic movement of funds within a particular industry. Examples include the Petro/Clear organization for the oil industry and Airline Clearing House for air carriers.[15] Because these various clearing mechanisms are industry specific, they do not accomodate transfers with companies outside of the particular industry.

Depending on the type of payment or movement of funds to be made, a corporation can use one or another of the various networks. The movement of large dollar amounts among a corporation's accounts at several banks is most often accomplished using Fed Wire. Though this system is more expensive in terms of bank service charges, the immediate availability of funds is the overriding factor in the use of this system. International transactions are best accomodated using SWIFT or CHIPS. For high volume, low dollar transactions, such as payments from or to consumers, *e.g.*, telephone bill payment or the direct deposit of payroll disbursement, lead times are less critical, and the lower costs associated with automated clearing house payments make NACHA a more appropriate mechanism. Because of its greater message carrying capability, and its ability to affect next day settlement, Bank Wire II is currently the most appropriate system for intercorporate payments.

III. TODAY'S ENVIRONMENT

A number of events are occurring which point to a renewal of interest in corporate EFT. Credit managers are beginning to seriously address issues related to the standardization of invoice data. The current situation is analogous to a room of individuals attempting to communicate, but with each using a different language and the group operating without a chairperson. The Credit Research Foundation (CRF) has been sanctioned by the American National Standards Institute (ANSI) to develop a recognized standard.[16] This is a particularly important step, which will permit corporations to communicate with one another without regard to the type of industry in which each operates. The objectives of the standardiza-

Conf., 1979); Hamilton, *An Update on the Automated Clearinghouse*, FED. RESERVE BULL. 525 (1979).

15. *See* Barna, *supra* note 11, at 32, for a description of Petro/Clear. *See also Case Studies of Successful Settlement Systems*, in PROC. INTER-INDUSTRY CONF. ON CORPORATE-TO-CORPORATE EFT 121-50 (1977).

16. *See CRF to Coordinate Standard Effort*, Am. Banker, May 1, 1979, at 16, col. 1.

tion effort are to create a common language *e.g.*, record layout, formats) and to promulgate operating rules for data transmission.

The National Automated Clearing House Assocation (NACHA) is taking major steps to make the ACH network more useful in the corporate payment arena. In September 1978, NACHA became capable of interregional exchange, thereby allowing EFT payments on a national scale. Until then, ACH payments had been permitted only within limited regions. In the latter part of 1979, NACHA expects to be capable of providing next-day settlement (as opposed to the current two-day settlement) for certain types of "time critical" transactions. This reduction of lead time will allow corporate treasurers to repond more quickly and to move funds from one point to another using the automated clearing house network. Additionally, certain data transmission fields have been realigned to expand the available space for the information which accompanies the funds transfer.

The Federal Reserve Board has begun an intensive effort to curb the practice of remote disbursement and to speed up the clearance of large value checks.[17] These efforts will discourage the artificial extension of float, and will make cash control more important. The Board's posture has been interpreted by some as a move to enhance the attractiveness of corporate EFT.

High interest rates have caused corporations to place increased emphasis on cash management techniques and practices. Many banks now offer services which allow companies to more closely monitor their bank balances—often by using a terminal between the bank and the corporate treasurer's office.[18] These balance reporting services are becoming more sophisticated, allowing the treasurer to more accurately forecast his cash needs and to mobilize funds at the same terminal session.

Further, a major pilot program has commenced under the auspices of the American Bankers Association to truncate checks at the bank of first deposit.[19] While the aim of this project is to reduce the exchange of paper among banks by replacing checks with electronic impulses, the success of this program will greatly simplify the next

17. For a description of the Federal Reserve's experimental test of speedier clearance of large value checks, which is being conducted during the last half of 1979, *see* BANKING L. REP. (CCH) ¶ 97,825, at 83,617 (1979).

18. The C & L Report states that cash management is the "heart of EFT." *C & L Report, supra* note 2, at 5. *See also Chase Cash Management Net Offers Firms Immediate Access to Money Transfer*, Am. Banker, Feb. 24, 1978, at 1, col. 2. For a general overview of the capabilities of balance reporting systems, *see* Geyer, *Balance Reporting: An Important New Cash Management Tool*, FINANCIAL EXEC., Nov. 1978, at 38.

19. *EFT Based on Paper*, 25 DATAMATION, July 1979, at 75; *see also* White, *Legal Guidelines to Check Transactions*, 2 COMPUTER/L.J. 115 (1980).

step of entirely replacing the check.[20]

While these are each separate events, their cumulative effect will be to develop an atmosphere conducive to the development of corporate EFT. Networks are maturing and major issues are being addressed by banks and corporations.

IV. THE UNCERTAIN REGULATORY FRAMEWORK

To date, regulation has focused on consumer-related EFT, particularly the use of account cards. Consumer liabilities and disclosure requirements have been imposed by the federal Electronic Funds Transfer Act[21] and Regulation E.[22] The regulatory framework for corporate EFT, however, is uncertain and little work has been done in this area. The Uniform Commercial Code was written for a paper-based system, and is clearly inadequate to cover EFT transactions.[23]

Issues yet to be resolved include what constitutes proof of payment, and the allocation of liabilities for mis-transmission, error or "failure to deliver." The rights of stop payment and return are not yet clearly defined. The immediacy of the transfer of funds in EFT systems makes these issues quite complex.

While major concerns have been expressed on each of these issues as they relate to consumers, the same difficulties also hold true among businesses. If an EFT interchange is viewed simply as the replacement of a check by electronic impulses, the issues are more easily understood; it is the timing of the transactions that becomes most important. One school of thought suggests that the entire Uniform Commercial Code should be rewritten to take EFT into consideration.[24] Others suggest that a chapter be added to the Uniform Commercial Code specifically directed to EFT.[25] Still others argue

---

20. The ABA study will involve corporate dividend checks written for amounts of $2500 or less. A similar effort within the Federal Reserve System plans for items of $10,000 or more to be presented electronically. The paper would then follow through normal check clearing channels. Six banks were initially invited to participate in the Fed pilot; however, all but two banks have withdrawn. An overview of the two pilot programs can be found in 3 EFT REPORT, Jan. 2, 1980, at 1.

21. 15 U.S.C. §§ 1693 *et seq.* (1978), *reprinted infra* in the Appendix.

22. 12 C.F.R., pt. 205 (Regulation E), *reprinted infra* in the Appendix.

23. *See* R. ZIMMER & T. EINHORN, THE LAW OF ELECRONIC FUNDS TRANSFER 45-50 (1978); *but see* Vergari, *Electronic GIRO for the United States*, 2 COMPUTER/L.J. 101 (1980).

24. *See* H. Scott, New Payment Systems: A Report to the 3-4-8 Committee of the Permanent Editorial Board for the Uniform Commercial Code (1978).

25. *See* Vergari, UCC Article 3 and 4 in an EFT Environment. The New Way to Pay (paper prepared for the electronic funds transfer seminar at the University of San Francisco School of Law, 1979). *See also* Vergari, note 23 *supra*.

that federal regulation is premature, and private contracts are adequate to meet today's needs.[26]

The Permanent Editorial Board for the U.C.C. approved recommendations of the Board's 3-4-8 Committee to begin drafting a model Comprehensive Payments Code which would include all payment methods other than cash.[27] The model will focus on modifications to state, rather than federal, law. Transactions which do not involve consumers directly would be subject to modification by agreement. Since the model is not expected to be completed for three years, and because issues specifically related to corporate EFT are not being addressed, corporate EFT will remain, for all practical purposes, relatively unregulated.

SWIFT recently became the first interbank funds transfer network to delineate in a comprehensively written policy the rights and responsibilities involved in the use of the system.[28] The SWIFT operating guidelines, contractual in nature, apply to many banks in different countries and specify whether the sending or receiving institution or SWIFT itself is liable for interest losses resulting from a late payment under a given set of circumstances. Although some definitions need further clarification, the following policies have been adopted:

> the sending bank is responsible for interest losses arising out of late payments if the payment message has not been acknowledged by SWIFT, if the message receives an acknowledgement but then appears on the report of undelivered messages; if an urgent message is entered but does not get a delivery notification from SWIFT; if a transaction is entered in an inappropriate format, or if the sender does not react promptly to a SWIFT notification that a bank, regional processor or operating center is not functioning.
>
> the receiver is responsible for such losses if the receiver does not carry out the payment date instructions in a message; if the receiving bank does not react promptly to notification of system outages; if incoming messages are not adequately reconciled according to sequence numbers, or if the receiving bank does not adhere to SWIFT's terminal connection policies.
>
> SWIFT is responsible in three situations: if messages are acknowledged to the sender, do not appear on an undelivered message report and go undelivered because of system failure; if it can be shown that the SWIFT system or its personnel did not perform as expected, or if SWIFT does not notify its members

26. *See, e.g.,* Clarke, *The Bank-Customer Relationship in an Electronic Credit Transfer System*, 2 RUTGERS J. COMPUTERS & L. 1 (1971); Odom, *Alternatives to the Present Check Collection System*, 20 STAN. L. REV. 571 (1968).

27. *See* Scott, note 24 *supra*.

28. *See* Kutler, *SWIFT Codifies Liabilities*, Am. Banker, June 18, 1979, at 1, col. 2.

promptly of failures of banks, operating centers or regional processors.[29]

The allocation of risks is much better defined in this policy statement than in the previous guidelines, which specified that SWIFT was responsible for a loss of interest only "if it was related to a non-recoverable loss of funds representing the principal amount of a customer of bank transfer."[30] SWIFT has established a contingency fund of $660,000 for the fiscal year beginning July 1, 1979, to meet any claims against it.[31] SWIFT, however, will reimburse interest losses when it is at fault on any transaction only to the extent that the amount exceeds $3,000.[32] Any member making a formal claim against SWIFT that is disallowed will be subject to a charge of $900.[33]

V. CONCLUSION

Since corporate EFT is in an embryonic stage, the reluctance of regulators to act may be an indication of one of two prevailing attitudes. First, it may indicate a basic ignorance and lack of understanding of the implications of corporate EFT by legislators. Because of the magnitude and velocity of corporate funds, a system failure could cause catastrophic results. The CHIPS network alone currently handles interbank transfers of about $100 billion a day, with an average of 45,000 transactions daily. If adequate back-up were not provided, a minor incident, such as a power failure, could be disastrous. Fortunately, back-up provisions are in force. The system, however, due to its next-day settlement capability, is still vulnerable to collapse in the event of an overnight bank failure by a major participant.

More likely than ignorance of the implications of wide-spread corporate EFT, is a wisdom on the part of regulators that they shall allow corporate EFT to evolve naturally. Over-regulation, particularly in the early stages, would serve only to thwart system growth and stifle creative efforts to explore and exploit EFT opportunities. This attitude requires that great care be taken to properly frame agreements among financial institutions, operating networks and EFT users.

---

29. *Id.* at 22, col. 2.
30. *Id.*
31. *Id.*
32. *Id.* at 22, col. 3.
33. *Id.*

Corporate EFT is coming of age. Though there are obstacles and unanswered questions, responsible progress is evident.[34]

34. The Coopers & Lybrand Report recommends the following actions to those corporations seek a clearer perception of EFT's role in their operations.

> Reassess present system and procedures including banking services, in terms of both effectiveness and efficiency. Events in the last year suggest that an evaluation program for such services as lockbox and decentralized disbursement locations may be necessary. Actions that have been taken by customers and vendors to improve their cash control could have adversely affected a company's present mobilization techniques.
>
> Reassess the present banking network that provides action and information related to bank services, with the objective of simplifying bank contacts and reducing the work involved in network control.
>
> Analyze the costs and benefits of present bank "electronic" transaction services (e.g., wire transfers, direct deposit of payroll, consumer bill-paying, etc.). This analysis might well reveal that some of the currently available services are worth looking into for their potential benefits to the company, possibly including vendor agreements for wire transfers between major vendors and customers (usually resulting in discounts); a drawing down of compensating balances carried to help employees cash checks by initiating direct deposit of payroll; and simplifying consumer receipts processing requirements by using consumer bill-paying services such as a GIRO and preauthorization.

C & L Report, supra note 2, at 11.