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Will That Be Cash, Credit, or E-money?

Since the founding of our country, Americans have been experimenting with payment systems. Colonists moved from cumbersome barter systems, the most elementary forms of payment, to notes and paper currency. Banks have played a major role in the development of American payment systems. The next step in the evolution of payment vehicles appears to be "e-money:" value transferred via computer either by using the Internet or stored value cards. Already, many consumers are buying software, flowers, and cosmetics over the Internet.¹ University campuses currently offer stored value cards to students to pay for food and photocopies, as well as to provide identification for checking out library books or entering athletic events.² Such multiple application stored value cards could carry not only value and bank account data, but also health records and frequent flier accounts.³ A recent stored value card experiment at the 1996 Summer Olympics in Atlanta proved that at least some consumers are interested in utilizing the new technology.⁴ The acceptance of electronic forms of payment may open the door to a new way of life, or it may simply offer another payment option for a limited number of consumers who have access to these new technologies.⁵

1. See, e.g., Scott A. Anenberg & Thomas J. Pax, *Congressional Budget Office Examines Electronic Payment Mechanisms*, ELECTRONIC BANKING L. & COM. REP., Sept. 1996, at 18, 19.

2. See, e.g., Robert J. Eagan, *Smart Cards May Test Significant Questions in Cyberbanking Law*, BANKING POL'Y REP., Mar. 4-18, 1996, at 18, 18; Niles S. Campbell, *Ready to Regulate Or Not, Regulators Begin Exploring Implications of Electronic Banking*, 67 Banking Rep. (BNA) No. 12, at 483, 485 (Sept. 30, 1996) [hereinafter Campbell, *Regulators Begin Exploring*].

3. See *Treat Smart Cards As More Than Just Tools*, FIN. SERVICES REP., Feb. 14, 1996. Idaho, Nevada, North Dakota, and Wyoming will launch a pilot program at the end of 1997 with 50,000 cardholders testing the use of cards for storing health information. See Valerie Block, *Four States Planning 1997 Test of Card To Store Health Data*, AM. BANKER, Dec. 23, 1996, at 12.

4. See, e.g., *Olympic Cash Card Pilot Results Are In: Merchants the Key to Program's Success*, BANK SYS. & TECH., Sept. 1996, at 8 [hereinafter *Olympic Cash Card Pilot*]. For a discussion of the cash card experiment at the Atlanta Olympic Games, see *infra* notes 98-107 and accompanying text.

5. See *Electronic Banking: Acceptance of E-Money Will Be Gradual, Greenspan Says, Urging Minimal Gov't Role*, 67 Banking Rep. (BNA) No. 12, at 437 (Sept. 23, 1996) [hereinafter *Acceptance of E-Money Will Be Gradual*] ("Electronic money will come into widespread use only gradually, Federal Reserve Board Chairman Alan Greenspan told a

As banks and other companies look at the potential of e-money, they consider a number of legal factors. First, should state and federal laws treat this technology as a form of currency or as another form of bank note?⁶ Second, the industry must be concerned with existing laws and regulations that may impact the development and structure of e-money schemes.⁷ The government also has an interest in monitoring the development of this new payment system and will certainly take consumer concerns into consideration when developing regulations for electronic payments.

To date, the federal government has taken a "wait and see" approach toward the regulation of e-money. In hearings and statements, leaders of various federal agencies have stressed their hesitancy to set up a framework for technology which is just now burgeoning.⁸ Because of this open framework, banks and other financial institutions have been given artistic license in engineering the details of this exciting new technology.⁹ Whether the consumer accepts this form of payment may depend on the structure vendors provide. Whether the government will step in to regulate may depend on the consideration financial institutions give to public policy and legal concerns surrounding this system of payment.¹⁰

This Comment will address the evolution of money.¹¹ Anecdotally, this Comment will explain how new payment technologies work

conference of bankers Sept. 19, saying bankers and regulators may have under-estimated the advantages of paper currency for consumers."). Comparing the new technology to Automated Clearing House (ACH), Greenspan noted that, "[i]n our enthusiasm over new electronic payment systems, we significantly underestimated the convenience of paper for consumers and especially the cost and difficulty of building a broad-based infrastructure to support new electronic payment systems." *Id.* at 437-38. For a discussion of consumer concerns about availability of and access to electronic banking services, see *infra* notes 228-30 and accompanying text.

6. The characterization of e-money could have legal repercussions. See *infra* notes 38-43 and accompanying text.

7. For a discussion of existing regulations, see *infra* notes 120-83 and accompanying text.

8. See Niles S. Campbell, *New Federal Task Force To Explore Electronic Banking, Commerce Implications*, 67 Banking Rep. (BNA) No. 12, at 436, 436 (Sept. 23, 1996) [hereinafter Campbell, *New Federal Task Force*]. Alan Greenspan suggested that "the private sector will need to experiment, without broad interference by the government" in order to create new forms of payment. *Acceptance of E-Money Will Be Gradual, supra* note 5, at 437 (statement of Alan Greenspan) (internal quotation marks omitted).

9. At a Treasury Conference on September 19, 1996, Federal Trade Commission Chairman Robert Pitofsky stated that "[i]f and when private solutions fail to kick in, the government should step in." Campbell, *New Federal Task Force, supra* note 8, at 436.

10. See *infra* notes 228-39 and accompanying text.

11. See *infra* notes 19-37 and accompanying text.

and how they fit in with traditional notions of currency.¹² This Comment also discusses how banks can deal with some of the legal issues and consumer concerns raised by this new system of payment: how Federal Reserve Board Regulation E affects e-money;¹³ whether Federal Deposit Insurance will cover this type of value;¹⁴ what happens to "lost" e-money (lost either by consumers or by technical problems);¹⁵ what happens to unused or abandoned value;¹⁶ and what types of institutions may offer e-money services.¹⁷ Finally, this Comment will suggest ways in which banks can "cash in" on the new technology by finding a niche that non-banks cannot fill.¹⁸ Because encryption, law enforcement, and privacy issues have been addressed at length in other fora, this Comment will not discuss those topics.

I. A BRIEF HISTORY OF MONEY

Unlike modern American currency, the first forms of paper currency were not issued by the United States government.¹⁹ In fact, in the seventy years following the American Revolution, the government held a very limited role in the circulation of paper currency.²⁰ Instead, most currency was in the form of notes issued by private entities, usually banks chartered under state laws.²¹ Because the notes were issued by various institutions, their value was dependent on the

12. See *infra* notes 38-119 and accompanying text.

13. See *infra* notes 130-52 and accompanying text.

14. See *infra* notes 153-83 and accompanying text.

15. See *infra* notes 60, 82, 184-86 and accompanying text.

16. See *infra* notes 187-91 and accompanying text.

17. See *infra* notes 192-204 and accompanying text.

18. See *infra* notes 205-13 and accompanying text.

19. See *A Commercial Lawyer's Take On The Electronic Purse: An Analysis of Commercial Law Issues Associated With Stored Value Cards and E-Cash*, Task Force on Stored Value Card, Second Discussion Draft, May 20, 1996, at 17 [hereinafter *Analysis of Commercial Law Issues*] ("This Discussion Draft has been prepared by the Task Force on Stored Value Cards based upon reporters' perception of views expressed by Task Force members . . . [it] has not been approved . . . and does not represent a Task Force viewpoint. Accordingly, the Discussion Draft should *not* be cited as reflecting the views of the Task Force in its current format.") (based on a publication of the Federal Reserve Bank of New York, "From Rocks to Riches: an Illustrated History of Coins and Currency" (1992)) (The Task Force consists of members of the Uniform Commercial Code Committee Subcommittee on Payments, Banking Law Committee Subcommittee on Domestic and International Payments and EFT Transactions, Committee in Law of Commerce in Cyberspace, and the Business Law Section of the American Bar Association) (on file with the University of North Carolina School of Law Banking Institute).

20. See *id.*

21. See *id.* at 18.

perceived stability of the issuer.²² Inefficient means of communicating financial information, bank failures, and counterfeiters made this form of payment problematic.²³

The federal government became involved with money as recently as 1861.²⁴ The government began issuing “greenbacks”²⁵ in \$5, \$10, and \$20 denominations to try to finance the Civil War.²⁶ The first “legal tender”²⁷ was issued in 1862 in the form of United States notes.²⁸ United States notes were issued by national banks chartered under the National Currency Act of 1863.²⁹ These government papers were used alongside privately issued money until about twenty years after the enactment of the Federal Reserve Act in 1913 (which provided for issuance of Federal Reserve Notes).³⁰ Eventually, privately issued money disappeared and, “[t]oday, the Federal Reserve Note remains the only circulating form of legal tender.”³¹

While many believe the use of telecommunications technology in the transfer of money is relatively new, it actually started with the completion of the first transatlantic cable in 1866.³² In the late 1800s, “the Reserve Banks were linked to one another by telegraph or tele-

22. *See id.*

23. *See id.* at 18-19. Federal Reserve Board Chairman Alan Greenspan compared the new electronic technology to “the ‘wildcat’ banking era” of the 1850s where most of the currency was issued by state banks and beyond federal control. *Electronic Banking’s Future Will Be Largely Unregulated*, 1670 Fed. Banking L. Rep. (CCH) ¶ 1, at 12 (Sept. 27, 1996) (“‘[T]hen as now,’ Greenspan remarked, ‘a significant part of safety regulation is an add-on that tries to identify presumed market failures and, accordingly, substitute official rules to fill in the gaps.’”)

24. *See Analysis of Commercial Law Issues*, *supra* note 19, at 19.

25. “Greenbacks,” named for their colored paper, were currency issued by the government and redeemable for coin. *See id.*

26. *See id.*

27. In the event a sovereign state legislates that “only certain types of paper or objects, if tendered to an obligor, will discharge indebtedness, that concept is known as legal tender.” *Id.* at 24. For further discussion, see *infra* note 38 and accompanying text.

28. *See Analysis of Commercial Law Issues*, *supra* note 19, at 20.

29. Act of Feb. 25, 1863, ch. 58, 12 Stat. 665 (1863). In 1863, there were 66 national banks established as compared to the 1,466 state banks. *See* Michael Franchioni, *Leveraging the Land: The Changing Loan to Value Ratio For Real Estate Lending By National Banks*, 112 BANKING L.J. 41, 45 (1995) (citing figures from EUGENE N. WHITE, *THE REGULATION AND REFORM OF THE AMERICAN BANKING SYSTEM, 1900-1929* 12 (1983)). By 1865, those numbers changed dramatically as there were 1,294 national banks and only 349 state banks. *See id.*

30. *See Analysis of Commercial Law Issues*, *supra* note 19, at 20 (citing Pub. L. No. 63-43, 38 Stat. 251 (1913) (codified at 12 U.S.C. §§ 221-228 (1996))). By 1920, the Federal Reserve Note comprised approximately half of the circulated currency. *See id.* at 21.

31. *Id.*

32. *See id.* at 21-22.

phone, and Reserve balances were transmitted from one bank to another by cable."³³ Transfers over this cable were known as "wire transfers," and the transmission system was called "FedWire." The FedWire transmission became more efficient with the integration of computer technology.³⁴ This communication partnership has continued to grow and has made the use of currency more convenient for the consumer. While e-money backers posture this technology as "revolutionary or unprecedented,"³⁵ e-money is really the natural product of the development of payment systems.³⁶ The history of monetary systems should be understood to avoid repeating mistakes of the past.³⁷

While e-money is the next logical step in the evolution of payment systems, this natural progression may not be money at all. E-money is not considered "legal tender" as defined by the United States federal government.³⁸ Additionally, according to the Uniform Commercial Code, "these products are not money because they do not represent 'a medium of exchange authorized or adopted by a domestic or foreign government. . . .'"³⁹ The fact that e-money does not fall within the legal definitions of "legal tender" or "money" may impact its treatment under existing laws and contracts.⁴⁰

Proponents of e-money technology should bear in mind that the federal government only became involved in the currency business when significant problems arose with the payment methods offered by banks.⁴¹ While the differences between bank obligations and claims on the government have been reduced by federal deposit insurance, technologies, like e-money, which are exempt from federal insurance could fall prey to special problems.⁴² One such problem

33. *Id.* at 22.

34. *See Analysis of Commercial Law Issues, supra* note 19, at 22-23. Before computers, clerks had to manually process the cumbersome accounting of bank assets and liabilities. *See id.*

35. *Id.* at 23.

36. *See id.*

37. *See id.*

38. *See Analysis of Commercial Law Issues, supra* note 19, at 26. *See also* 31 U.S.C. § 5103 (1994) ("United States coins and currency (including Federal reserve notes and circulating notes of Federal reserve banks and national banks) are legal tender for all debts, public charges, taxes, and dues. Foreign gold or silver coins are not legal tender for debts."); 31 C.F.R. § 100.2 (1996).

39. *Analysis of Commercial Law Issues, supra* note 19, at 27 (emphasis added) (quoting U.C.C. § 1-201(24) (1995)).

40. *See id.*

41. *See id.* at 23.

42. *See id.* at 24. For a discussion of the emergence of non-banks in the smart card

may be that "all of the commercial law issues that have been resolved in the context of transferring bank credit present themselves with the use of new payment products."⁴³

II. HOW E-MONEY WORKS

To understand the possible problems with electronic value systems, one must understand how these systems work. There are currently two forms of e-money in development. The most widely recognized form is the stored value card, also known as a smart card. The other form is e-money which is accessed from a personal computer. Once value is accessed or downloaded on a personal computer, the electronic money may be used to pay bills by computer, to make purchases on the Internet or eventually to transfer value to the microchip of a stored value card.⁴⁴

Although there was early scuttlebutt to the contrary,⁴⁵ the Federal Reserve does not plan to issue electronic money as it does currency or to operate an on-line payment system.⁴⁶ The Federal Reserve will become involved with the developing system only if full cost recovery could be insured, the public would clearly benefit by the Federal Reserve's involvement, and private sector suppliers clearly could not provide the service "with the same effectiveness, scope and equity as the Federal Reserve."⁴⁷

Because there is no standard format for electronic money,⁴⁸ the mechanics of the payment systems can only be described in reference to systems currently in use or in development. The common pattern can be explained in very general terms. First, there is a dichotomy

market, see *infra* notes 192-204 and accompanying text.

43. *Analysis of Commercial Law Issues*, *supra* note 19, at 33.

44. See generally *Smart Cards Plus PCs: Does This Compute?*, BANK NETWORK NEWS, Nov. 25, 1996, available in 1996 WL 11829652 (noting that computer manufacturers hope to offer computer hardware capable of utilizing stored value cards as early as 1997); *An ATM In Every Home Is VeriFone's Platform*, BANK NETWORK NEWS, Oct. 11, 1996, available in 1996 WL 11829570 (suggesting that smart card readers may eventually come as standard features in new television sets).

45. See, e.g., *U.S. Mint Eyes Government's Own Stored Value Card*, BANKING POL'Y REP., Mar. 4-18, 1996, at 14, 14; *U.S. Mint Explores Legal Tender Cards*, BANK NETWORK NEWS, Oct. 1, 1995, available in 1995 WL 8219257.

46. See *Federal Reserve Will Let Private Firms Push Cyberspace Frontier*, *McDonough Says*, 67 Banking Rep. (BNA) No. 12, at 623, 624 (Oct. 14, 1996) [hereinafter *Private Firms Push*] (statement of New York Federal Reserve Bank President and Chief Executive Officer William J. McDonough).

47. *Id.* (statement of William J. McDonough).

48. Eventually, the market may force e-money systems to accept a standardized system like the one being established for encryption of credit card transactions. See generally Larry Loeb, *The Stage Is Set*, INTERNET WORLD, Aug. 1996, at 54.

between "open" and "closed" systems. "Open" systems are those in which the issuer of the e-money is not the primary provider of goods or services that the e-money is being used to purchase.⁴⁹ In contrast, "closed" systems are those in which the issuer of the e-money anticipates that the value will only be used for her own goods or services. For example, a transit system might create a closed system by placing value on a card that can only be used at transit system turnstiles.⁵⁰

A. On-line E-money Systems

Currently, systems are in use and in development for electronic value transfers over the Internet. The operation of each system is dependent on the structure provided by the vendors. The three most prominent on-line payment systems are: CyberCash, DigiCash, and First Virtual Holdings.⁵¹ Each of these systems is primarily open. However, each system may require that the ultimate payee be a participant in the system.

1. CyberCash⁵²

CyberCash's digital payment system allows individuals to purchase goods and services on the Internet.⁵³ CyberCash "acts as a middle man between consumers, merchants and banks."⁵⁴ Banks utilizing the service can accept credit card payments over the Internet for only five cents a transaction.⁵⁵ CyberCash provides a degree of anonymity in purchasing and keeps credit and debit card information secure.⁵⁶ CyberCash's CyberCoin allows expenditures of small amounts (twenty-five cents to ten dollars) that are not possible with

49. See Anenberg & Pax, *supra* note 1, at 20.

50. See *id.* While pre-paid phone cards operate in a closed system in the United States, they would not be characterized as stored value cards. See Richard Mitchell, *Lots of Calls For Phone Cards*, CREDIT CARD MGMT., Dec. 1, 1996, at 14. Instead of carrying the information on the card, they are remote-memory cards with the value actually stored on a host computer. See *id.*

51. See *Internet Payment Competition Heats Up*, FIN. SERVICES REP., July 17, 1996, available in 1996 WL 7003687.

52. CyberCash's web page can be accessed at: <<http://www.cybercash.com>>. See David Angell, *Web Watch: Laying the Track*, INTERNET WORLD, Aug. 1996, at 34, 36.

53. See Kathleen A. Hagen, *Banking in Cyberspace—A New Frontier For Treasury Professionals*, TMA J., Mar./Apr. 1996, at 45, 46 (publication of the Treasury Management Association).

54. *Id.*

55. See *Cybercash Luring More Credit Card Transactions*, CARD NEWS, October 14, 1996, available in 1996 WL 8437992 (statement of Bill Wilson, Chief Operating Officer of CyberCash).

56. See Hagen, *supra* note 53, at 46.

minimum charge requirements of credit cards.⁵⁷ CyberCoin will allow consumers to buy lower-priced or impulse items, like software, articles, games, and music on the Internet.⁵⁸ To use CyberCoin, consumers can download CyberCash's "Internet Wallet," a software program that allows the transmission of encrypted messages.⁵⁹ Funds are not stored on the consumer's personal computer, so they would not be lost in a computer "crash," and CyberCash funds are insured by the Federal Deposit Insurance Corporation (FDIC).⁶⁰ Within a year, the company plans to offer the capability to download value from personal computers to smart cards.⁶¹ Currently, consumers can use CyberCash's two services either to purchase goods and services or to transfer funds over the Internet.⁶²

a. Merchant Services

Authorized Merchant Services is one service that CyberCash offers. Using CyberCash merchant services, consumers can make purchases from Internet merchants by entering credit or debit card information.⁶³ To initiate a CyberCash transaction,

[t]he consumer information is encrypted and passed back to the merchant. The merchant then adds an identification number to the transaction and forwards it to the CyberCash server. The CyberCash server then processes a credit or debit card authorization to the merchant's bank. The bank processes the authorization request and sends a reply to the CyberCash server, which in turn forwards the response to the merchant. The CyberCash system also supports charge, void and return transactions.⁶⁴

57. See *New Cybercash Service Clears Way For Low-Priced Purchases Over Internet*, 67 Banking Rep. (BNA) No. 12, at 545 (Oct. 7, 1996).

58. See *id.* (statement of Bill Melton, CyberCash Chief Executive Officer).

59. See *id.* The "Internet Wallet" may be downloaded from CyberCash's World Wide Web site: <<http://www.cybercash.com>>. See *id.*

60. See *New Cybercash Service Clears Way For Low—Priced Purchases Over Internet*, *supra* note 57, at 545. "CyberCash itself does not issue [e-money], but rather works with financial institutions to move money that is in the banking system," allowing coverage by Federal Deposit Insurance, which is not extended to accounts with non-banks. Niles S. Campbell, *Limit Electronic Banking Products Issuance To Depository Institutions*, ABA Report Says, 67 Banking Rep. (BNA) No. 12, at 624, 625 (Oct. 14, 1996) [hereinafter Campbell, *Limit Electronic Banking*].

61. See *Cybercash Luring More Credit Card Transactions*, *supra* note 55.

62. See Hagen, *supra* note 53, at 47-48.

63. See *id.* at 47.

64. *Id.*

CyberCash merchant services could allow consumers to make credit and debit card payments for services and products that previously did not offer that flexibility, like small ticket items.⁶⁵

b. Peer-to-Peer Services

In addition to merchant services, CyberCash also offers Peer-to-Peer services. This service allows individual users to send money to other individuals or to execute payments in small amounts that would be slower or more expensive using traditional means.⁶⁶ Another benefit of this service is that the receiver of the payment does not need to utilize CyberCash.⁶⁷ Both Peer-to-Peer and merchant transactions use existing bank networks much like a Personal Computer Automated Clearing House (PC-ACH). However, CyberCash's services use their networks on a retail consumer level.⁶⁸

2. DigiCash⁶⁹

DigiCash is another company experimenting in the e-money field. DigiCash offers E-cash, a product which is a form of digital currency rather than a payment system.⁷⁰ E-cash is a hybrid of currency and traveler's checks and is entirely electronic.⁷¹ The system requires that the user have E-cash software installed on a PC and an E-cash bank account in the user's name with a participating E-cash financial institution.⁷² Users can use E-cash to make purchases from or payments to participating merchants or another E-cash participant.⁷³ Much like CyberCash's Peer-to-Peer service, E-cash participants could send money to friends or relatives, as long as the receiver had an E-cash account.⁷⁴ In order to use E-cash, one must withdraw money from a regular bank account at a participating institution using E-cash software and then transfer the E-cash into a personal account on a PC's hard drive.⁷⁵ The participating bank is

65. *See id.* at 48.

66. *See Hagen, supra* note 53, at 48.

67. *See id.*

68. *See id.*

69. DigiCash's web page can be accessed at: <<http://www.digicash.com>>. *See Angell, supra* note 52, at 36.

70. *See id.* at 34.

71. *See Hagen, supra* note 53, at 48.

72. *See id.*

73. *See id.*

74. *See id.* For further discussion, see *supra* notes 66-68 and accompanying text.

75. *See Hagen, supra* note 53, at 48.

then no longer involved in any payments using E-cash.⁷⁶ The bank merely “adjusts its books to reflect a reduction in deposit liability”⁷⁷ for the removed E-cash, but “the bank retains the liability, called an [E-]cash liability.”⁷⁸ It is a kind of balancing act: as E-cash liability increases, deposit liability decreases and vice versa.⁷⁹ This process differs from “traditional Fedwire or ACH transactions, in which the bank transfers the deposit liability to another financial institution.”⁸⁰ The E-cash on the hard drive has a serial number to allow the bank to verify the issuance of the E-cash⁸¹ and to allow replacement of “lost” E-cash.⁸²

3. First Virtual Holdings⁸³

The third major on-line system is operated by First Virtual Holdings (First Virtual), a leader in Internet payment with credit card transactions.⁸⁴ The on-line software package offered by First Virtual differs from CyberCash and DigiCash in that it utilizes e-mail-based transfers.⁸⁵ Customers register their accounts off-line via a toll free 800 number and then receive a personal identification number, called a “Virtual PIN,” by e-mail.⁸⁶ Using the system, customers never have to disclose account information on the Internet; information is only disclosed by customer initiated phone calls.⁸⁷

The next step in the process involves the merchant receiving the Virtual PIN as payment for goods or services.⁸⁸ First Virtual is contacted by the merchant with the Virtual PIN. Then First Virtual contacts the customer by e-mail to ask if he or she will accept the charge.⁸⁹ Once the customer accepts the charge for a payment, the merchant will receive payment from the institution which is providing

76. *See id.*

77. *Id.* at 51.

78. *Id.*

79. *See id.*

80. Hagen, *supra* note 53, at 51.

81. *See Internet Payment Competition Heats Up, supra* note 51.

82. *See* Hagen, *supra* note 53, at 48.

83. First Virtual's web page can be accessed at: <<http://www.fv.com>>. *See* Angell, *supra* note 52, at 36.

84. *See* Penny Lunt, *Payments on the 'Net? How Many? How Safe?*, AM. BANKER'S ASS'N BANKING J., Nov. 1995, at 46-54.

85. *See Internet Payment Competition Heats Up, supra* note 51.

86. *See id.*

87. *See id.*

88. *See id.*

89. *See id.*

First Virtual's service.⁹⁰ They may accept, reject, or send back a message that the charge is fraudulent. There may, however, be a considerable delay in payments, from three to ninety days, depending on the merchant's status with First Virtual.⁹¹ Everyday, about 700 consumers pay the initial two dollar fee to sign up with First Virtual, and the system processes an estimated 10,000 transactions each week.⁹² The system appeals to users who are wary of sharing their financial information on what some consumers feel is an unstable Internet system.⁹³

B. Off-Line E-money: Stored Value Cards

Smart cards are another new form of electronic money. Smart cards,⁹⁴ first introduced in the 1970s, differ from traditional debit cards in that the "value" is not taken from a consumer's account but is "stored" on the card itself.⁹⁵ The value of the card can be accessed independently from any deposit or credit account. This valuation is possible because the smart card contains a computer chip instead of the confining magnetic stripe.⁹⁶ Stored value cards are more familiar than on-line payment systems because consumers are accustomed to using credit and debit cards.⁹⁷ Also, many people have been exposed to stored value cards through recent experiments across the country and around the world.

90. *See id.*

91. *Internet Payment Competition Heats Up*, *supra* note 51. Very small businesses are not able to get reimbursed from First Virtual until all of the necessary transfers have cleared. *See id.*

92. *See id.*

93. *See Lunt, supra* note 84.

94. "According to its inventor [Roland Moreno], the smart card [or stored value card] is a 'card with self-protected integrated memory.'" Randy V. Sabett, *Cryptography, Smart Cards, and Future Banking Technology*, ELECTRONIC BANKING L. & COM. REP., Sept. 1996, at 8, 10.

95. *See id.* at 10-11.

96. *See id.* at 10. A computer chip can store more information and has a memory, whereas the magnetic stripe only provides enough information to access account data on another piece of equipment. *See Marga G. Moreno, Special Feature: Cashless Spending: Cashless Shopping Goes Beyond Credit Cards*, BUSINESS WORLD (MANILA), Sept. 30, 1996, at 27. With the value residing on the chip's memory, chip cards provide faster transactions by eliminating the need for verification procedures. *See id.* A computer chip can also be scanned by signals (transmitted from a contactless reader) without making physical contact with the reader. *See infra* note 118 and accompanying text. Nevertheless, university systems have found that the magnetic stripe is better suited to their needs. *See Colleges Talk Smart Cards, But Mag-Stripes Earn Top Grades*, DEBIT CARD NEWS, Dec. 18, 1996, available in 1996 WL 11851304. Universities have pointed to the low cost and durability as reasons for using magnetic stripe cards. *See id.*

97. *See Sabett, supra* note 94, at 10.

1. Experiments in Stored Value Cards

One highly publicized experiment with smart cards was conducted at the 1996 Summer Olympics in Atlanta. This pilot program involved the use of disposable stored value cards which were accepted at more than 1,500 merchant locations.⁹⁸ About halfway through the Olympic games, Visa reported approximately 100,000 transactions.⁹⁹ The majority of the merchants who participated in the Olympic pilot, "such as fast-food restaurants, convenience markets and gas stations," were not previously equipped to handle debit or credit card payments or did not previously accept card payments for very small purchases.¹⁰⁰

The results of this experiment were encouraging in terms of consumer acceptance of the new technology.¹⁰¹ This acceptance came at a cost. It is estimated that the Atlanta smart card partners spent three million dollars to four million dollars on advertising.¹⁰² However, not only did consumers accept this new technology, research revealed that they were pleased with it.¹⁰³ Partners in the pilot program were especially pleased with the performance of the physical components such as retrofitted Automatic Teller Machines (ATMs), pay phones, transit turnstiles, and point of sale terminals.¹⁰⁴ The primary complaints came from merchants who had not previously accepted debit or credit cards.¹⁰⁵ These merchants were bothered by the amount of counter-space that was sacrificed for the terminals and for the time spent training employees.¹⁰⁶ Leading smart card vendors say the next step in this market is to test acceptance of reloadable

98. *See Olympic Cash Card Pilot, supra* note 4, at 8.

99. *See id.*

100. *Id.*

101. *See id.* After a few months, the pilot program partners' conducted a survey that found that they had raised consumer awareness in seventy percent of Atlanta consumers. *See id.* While consumer acceptance was encouraging, there are still many bugs to work out, including security, availability of distribution points, and elimination of consumer confusion about the differences between stored value and bank debit cards. *See Atlanta Stored-Value Card Issuers Learn From The Olympic Lessons, DEBIT CARD NEWS, Jan. 16, 1997, available in 1997 WL 8934215.*

102. *See Good News And Bad News From Visa Cash Pilot, BANK NETWORK NEWS, Nov. 25, 1996, available in 1996 WL 11829656.*

103. *See id.* At the end of the Olympics, forty-two percent of cardholders said that they would continue to use the card, and the results were even higher for those who bought the card (thirty percent of the users received the card free through promotions). *See id.*

104. *See Olympic Cash Card Pilot, supra* note 4, at 8.

105. *See Good News And Bad News From Visa Cash Pilot, supra* note 102.

106. *See id.*

cards.¹⁰⁷

2. On-going Improvements

New tests and experiments with stored value cards are going on all the time.¹⁰⁸ Mondex International, a company that recently made a deal with MasterCard International,¹⁰⁹ is in the middle of its first North American smart card experiment in Canada.¹¹⁰ This exhibit is actually Mondex's second experiment with smart cards. Their first experiment began in 1995 in Swindon, England.¹¹¹ Mondex is encouraged by the range of interested merchants which include: coffee and sandwich shops, street vendors, and farmers' markets.¹¹² Taking a cue from lessons learned in their Swindon experiment, where benefits were not immediately available upon inception, Mondex planned to have all its program features available for the November, 1996 starting date.¹¹³ For example, The card holders in Canada will be provided free of charge with a "sleeve" for their stored value cards.¹¹⁴ The sleeve has a screen and calculator with the ability to check balances and adjust personal codes.¹¹⁵ This new sleeve is an improvement over the key chain device used in the Swindon experiment that could only read the card's balance.¹¹⁶ The success of the Mondex Canadian pilot will hopefully provide valuable insights for U.S. smart card vendors.

Another smart card experiment is in the works for Seattle, Washington where transit agencies are planning a smart card project that will test the technological limits of present systems.¹¹⁷ Six transit

107. See *Olympic Cash Card Pilot*, *supra* note 4, at 8.

108. Bank of Hawaii is planning a unique experiment, focusing marketing of pre-paid magnetic stripe cards to Japanese tourists. See Richard Mitchell, *Surf's Up for Stored Value Has Launched its CashCard Store-Value Card Service*, CREDIT CARD MGMT., Dec. 1, 1996, at 18. The card will require the user to have a personal identification number. See *id.* Therefore, it will be a secure way to retrieve cash, and you can even carry it while scuba diving. See *id.*

109. See *Two Smart Card Deals Down, One To Go*, BANK NETWORK NEWS, Nov. 25, 1996, available in 1996 WL 11829650.

110. See *Smart Cards—Slow But Steady Is The Canadian Mondex Motto*, BANK NETWORK NEWS, Sept. 26, 1996, available in 1996 WL 11829560 [hereinafter *Slow But Steady*].

111. See *id.*

112. See *id.*

113. See *id.*

114. See *id.*

115. See *Slow But Steady*, *supra* note 110.

116. See *id.*

117. See *Seattle Embarks On A Multi-Function Card Trip*, BANK NETWORK NEWS, Aug. 12, 1996, available in 1996 WL 11829535 [hereinafter *Seattle Embarks*].

agencies hope to develop a smart card that can be scanned without making contact with a reader by passing near a reader that sends out powerful signals which scan chip information. These transit agencies also hope the smart card will support reading by a contact card reader (like those currently used by most financial institutions).¹¹⁸ This project will investigate whether current smart card designers can support the needs of different systems, such as those of ferries, buses, or trains.¹¹⁹

III. EXISTING REGULATIONS

Regulations are another key issue which must be examined when developing e-money systems. While the federal government is reluctant to propose new regulations and legislation for electronic payment systems, the new technology cannot be exempted from existing laws and regulations. As institutions consider providing e-money and as vendors refine the mechanics of e-money systems, attention should be paid to existing federal and state laws which may have an impact on the use of e-money. The impact may be intentional, or it may simply result from an unanticipated application of legislation geared to address problems of a simpler time.

A. *The Stamps Payment Act of 1862*

Some commentators suggest that The Stamps Payment Act of 1862¹²⁰ may be one example of legislation implicated by this new technology.¹²¹ The law provides:

Whoever makes, issues, circulates, or pays out any note, check or memorandum, token or other obligation, for a less sum than \$1, intended to circulate as money or to be received or used in lieu of lawful money of the United States, shall be fined under this title or imprisoned not more than six months, or both.¹²²

118. *See id.* Contactless systems work well for transit applications because they allow quick reading while passengers pass through gates or turnstiles. *See* Valerie Block, *Card Frontiers: Motorola, French Firm Planning More-Secure "Contactless" Smart Card*, AM. BANKER, Nov. 6, 1996, at 14. Currently, cards that can support both contact and contactless reading cost about two dollars more than regular contact cards. *See id.*

119. *See Seattle Embarks*, *supra* note 117.

120. 18 U.S.C.A. § 336 (West Supp. 1996).

121. *See* Thomas P. Vartanian et al., *Echoes Of The Past With Implications For The Future: The Stamp Payments Act of 1862 And Electronic Commerce*, 67 Banking Rep. (BNA) No. 12, at 465 (Sept. 23, 1996).

122. 18 U.S.C.A. § 336.

Shortly before and during the Civil War, the metal in U.S. coins was often worth more than the face value of the coin, so many held their coins and used only bank notes for small payments.¹²³ Merchants did not want to part with coins either, so they would make change with tokens or notes redeemable only for their goods or services.¹²⁴ The Stamps Payment Act was created to stop this practice.

It is easy to imagine how this act may be implicated by using electronic value in small denominations. This law presents an especially difficult problem because it was written over one hundred years before e-money technology was developed.¹²⁵ Therefore, legislative intent and statutory construction can offer little guidance.¹²⁶ While it seems unlikely that the federal government would use this dated law to restrict electronic payment systems, it should definitely be considered by those hoping to shape the development of e-money technology.¹²⁷ Issuers should bear in mind that the federal government may use the law, or it may enact more focused legislation in order to limit attempts to create a "parallel currency."¹²⁸ Stored value card issuers should also be aware that the act may be representative of other existing state and federal laws that may be implicated by this new technology.

B. Regulation E

While these new systems may relate to some existing laws, they will also remain beyond the scope of certain legislation and regulations "that apply to current 'banking' transactions, including those that promote safety and soundness and deposit protection."¹²⁹ Regulation E¹³⁰ (which implements the Electronic Funds Transfer Act¹³¹) was designed to provide consumer protections which previously did not apply to electronic transfers.¹³² Regulation E mandates disclo-

123. See Vartanian et al., *supra* note 121, at 465-67.

124. See *id.*

125. See *id.*

126. See *id.* at 469; see, e.g., *Gustafson v. Alloyd Co. Inc.*, 115 S. Ct. 1061, 1066, 1073 (1995) (utilizing the construction of the statute itself and the legislative history to interpret meaning).

127. See *supra* notes 38-40 and accompanying text.

128. See Vartanian et al., *supra* note 121, at 470.

129. Sarah Jane Hughes, *A Call for International Legal Standards for Emerging Retail Electronic Payment Systems*, 15 ANN. REV. BANKING L. 197, 199 (1996).

130. 12 C.F.R. § 205 (1996).

131. 15 U.S.C. § 1693 (1994).

132. See *id.*

tures and notices to consumers using electronic funds transfers.¹³³ In addition, it provides protection for consumers against unwanted issuance of electronic transfer devices and bank errors.¹³⁴ In order to be subject to these requirements, an electronic transfer must be a transfer of funds by electronic means that debits or credits an account of a consumer.¹³⁵ If electronic money is subject to Regulation E's requirements, institutions may be required to issue notices, statements, and receipts, and also to provide tracking of e-money for error resolution. This could be very costly, especially if e-money is used frequently and in relatively small amounts.¹³⁶ Due to uncertainty over whether stored value is subject to Regulation E, the Federal Reserve has issued a proposed amendment dealing with this issue.¹³⁷

The Federal Reserve's proposed amendment to Regulation E would exempt most types of stored value cards from disclosure related rules unless the cards perform traditional ATM functions.¹³⁸ The Federal Reserve proposal would also categorize each stored value system into one of four groups.¹³⁹ The first category, which would be exempt from Regulation E requirements, consists of stored value cards with a value of less than one hundred dollars.¹⁴⁰ The second group distinguishes "on-line" from "off-line" accounts.¹⁴¹ "On-line" accounts would include systems such as CyberCash and First Virtual, and "off-line" accounts would include stored value cards in

133. See Barbara E. Mathews, *Reg E and Stored Value Cards: Fed Is On the Right Track*, BANKING POL'Y REP., July 1, 1996, at 4, 4.

134. *Id.*

135. *See id.*

136. *See generally id.*

137. *See* 61 Fed. Reg. 19,696 (1996) (proposed May 2, 1996).

138. *See* Niles S. Campbell, *Fed Consumer Council Recommends Move To Fewer Mortgage Disclosure Documents*, 67 Banking Rep. (BNA) No. 12, at 687, 688 (Oct. 28, 1996) [hereinafter Campbell, *Fed Consumer Council*]. While the comment period on the proposal ended in the fall of 1996, a final draft will not be released until 1997 because of a congressional moratorium on smart cards rulemaking signed into law on September 30, 1996. *See id.*

139. *See* Mathews, *supra* note 133, at 4.

140. *See id.*

141. *See id.* The Federal Deposit Insurance Corporation (FDIC) does not find this distinction meaningful in deciding which types of stored value are covered by FDIC insurance. *See* 61 Fed. Reg. 40,490 (1996) (notice of FDIC General Counsel's Opinion on whether funds underlying stored value cards may be considered deposits under FDIA). Instead, they look at where the funds are held before being used as determinative of whether the funds are FDIC insured. *See id.* The FDIC makes it clear that this is not intended to be critical of the Federal Reserve's distinction, but finds that the distinction is not as relevant to the issue of FDIC coverage as it may be to Regulation E. *See id.* For further discussion, see *infra* notes 153-83 and accompanying text.

which the funds are recorded on the card itself.¹⁴² The on-line accounts would be subject to Regulation E's provisions on unsolicited issuance, disclosure, and limited consumer liability.¹⁴³

The third and fourth categories are comprised only of off-line systems.¹⁴⁴ The third category is made up of off-line accountable systems, and the fourth category deals with off-line unaccountable systems.¹⁴⁵ Off-line accountable systems are those systems in which the balance of the smart card is maintained on a database apart from the card or storage device.¹⁴⁶ Under the proposal, only the off-line accountable systems would be subjected to the disclosure requirements of Regulation E.¹⁴⁷ However, the off-line unaccountable systems (where the balance is maintained on the card) would not be subject to Regulation E.¹⁴⁸ The proposed approach seems to recognize the limits on the feasibility and the cost of compliance. It also realizes that liability is limited to the amount stored.¹⁴⁹

By Congressional mandate, the Federal Reserve is to conduct a study to determine whether the Electronic Funds Transfer Act (EFTA) can be applied to stored value cards without impinging on the development and use of the technology.¹⁵⁰ While the banking industry and consumer groups can agree that some disclosure requirements should be imposed, the EFTA may not be the answer.¹⁵¹ Of course, issuers of smart cards do not "want the information on the back of a card to look like a mortgage loan closing."¹⁵²

C. Federal Deposit Insurance

Another government regulator which may be triggered by e-money is the Federal Deposit Insurance Corporation (the FDIC). There are many government regulators involved, but only the FDIC

142. See Mathews, *supra* note 133, at 4. Although some assume that DigiCash's E-Cash falls within the on-line category, because the value is stored on a PC hard drive, in reality, the digital currency seems to be stored off-line. See Hagen, *supra* note 53, at 48.

143. See Mathews, *supra* note 133, at 4.

144. See *id.*

145. See *id.*

146. See *id.*

147. See *id.*

148. See *id.*

149. See *id.*

150. See Campbell, *Fed Consumer Council*, *supra* note 138, at 688. The report is due on March 30, 1997. See *id.*

151. See *id.* For further discussion, see *infra* notes 237-39 and accompanying text.

152. Campbell, *Fed Consumer Council*, *supra* note 138, at 688 (statement of Terry Jorde, President and Chief Executive Officer of Towner County State Bank).

could incur significant financial losses should an uninsured depository institution fail with a substantial amount of 'new' money under its control. The difficulty facing the FDIC, as well as other regulators, is how to define the newly developing electronic products and services that will be offered by depository institutions and non-banks.¹⁵³

Many consumer groups would like to see e-money covered by FDIC insurance.¹⁵⁴ It may be easy to discern when on-line accounts are covered by FDIC insurance; however, the issues are more complicated with stored value cards because the value is stored on the card itself, making it "unnecessary to contact a depository institution or database for transaction authorization."¹⁵⁵ In response to numerous inquiries, the FDIC issued an opinion on the coverage of stored value cards¹⁵⁶ under the Federal Deposit Insurance Act (the FDIA).¹⁵⁷

1. FDIC Categorizations

The FDIC General Counsel's Opinion did not find the on-line and off-line distinctions made in reference to Regulation E helpful in determining FDIC coverage.¹⁵⁸ Instead, the FDIC made demarcations based upon how the funds underlying the stored value are held.¹⁵⁹ The FDIC recognized that consumers may view the smart card transactions as being as final as cash. In reality, they are not.¹⁶⁰ Because of this potential misperception, the FDIC wants to protect consumers by providing insurance for funds or obligations are composed of "deposits."¹⁶¹ The categories outlined by the FDIC are based on where the card's underlying funds are held. "Bank Primary-Customer Account Systems" are those in which the underlying funds remain in the customer's account before a transfer. "Bank Primary-Reserve Systems" download the value to a card, and hold actual funds at an institution which makes payments to payees as transfers

153. Thomas A. Brooks, *Stored Value Cards Raise Many Issues About FDIC Coverage*, BANKING POL'Y REP., Mar. 4-18, 1996, at 16, 16.

154. *See Electronic Banking's Future Will Be Largely Unregulated*, *supra* note 23, at 10.

155. 61 Fed. Reg. at 40,490.

156. *See id.*

157. 12 U.S.C. §§ 1811-1835 (1994).

158. *See* 61 Fed. Reg. at 40,490. For further discussion, see *supra* note 141 and accompanying text.

159. *See* 61 Fed. Reg. at 40,490.

160. *See id.*

161. *See* 61 Fed. Reg. at 40,491. While the classification system was developed in the context of stored value, the FDIC believes that the principles outlined can apply to "stored value computer network payment products." 61 Fed. Reg. at 40,490.

are made. "Bank Secondary Systems" are those in which the e-money is not only created by a third party, but also held by that third party. Depository institutions act only as intermediaries.¹⁶² Two sub-categories exist under the "Bank Secondary Systems" category.¹⁶³ "Bank Secondary-Advance Systems" are those in which the customer trades funds for electronic money. The funds are then held for a short time before being forwarded to the merchant or payee.¹⁶⁴ "Bank Secondary-Pre-Acquisition Systems," by contrast, have the depository institution exchange funds for electronic money from the third party. Then the institution trades e-money for customer funds.¹⁶⁵

2. Defining a Deposit

In determining whether stored value is equivalent to a deposit, the FDIC first analyzed the definition of deposit under the FDIA.¹⁶⁶ The FDIC concluded that in order for stored value to constitute a deposit under 12 U.S.C. §§ 1813(l)(1) and (3), the funds must signify that

(1) [a]n unpaid balance of money or its equivalent received or held by an institution; (2) in the usual course of business; and (3) either (a) the institution must have given or be obligated to give credit to a commercial, checking, savings, time, or thrift account; or (b) the funds must be held for a special or specific purpose.¹⁶⁷

a. Unpaid Balance of Money or Equivalent Received or Held By an Institution

In determining whether the stored value represents "an unpaid balance of money or its equivalent received or held by an institution,"¹⁶⁸ the FDIC noted differences between "Bank Primary Systems" and "Bank Secondary Systems."¹⁶⁹ The opinion states that either of the Bank Primary Systems would meet this component of the definition of a deposit because the institution holds the funds to

162. See 61 Fed. Reg. at 40,490

163. See *id.*

164. See *id.*

165. See *id.*

166. See *id.* at 40,491 (analyzing 12 U.S.C. § 1813(l) (1994)).

167. 61 Fed. Reg. at 40,491.

168. *Id.*

169. See *id.*

pay merchants and other payees in both of these systems.¹⁷⁰

The opinion went on to compare the “Bank Secondary-Advance Systems” to travelers’ checks where funds are held for even a short time before disbursement.¹⁷¹ Under this analysis, the FDIC interpreted “Bank Secondary-Advance Systems” as fitting within this element of the deposit definition.¹⁷² In “Bank Secondary-Pre-Acquisition Systems,” however, the underlying funds are held by a third party, not by the depository institution, so these systems do not fall within the definition of a deposit.¹⁷³

b. In the Usual Course of Business

The opinion also stated that the FDIC would probably view any funds received or held by an institution to be “in the usual course of business” because of the increasing participation of financial institutions in stored value schemes.¹⁷⁴

c. The Institution Must Have Given or Be Obligated to Credit an Account

Once it is determined that stored value is money or its equivalent held in the usual course of business, the opinion requires that either: the institution has given or is obligated to credit an account; or the funds are to be held for a special or specific purpose. The FDIC opinion explicitly states that only “Bank Primary-Customer Account Systems” clearly fall within the first alternative of the definition.¹⁷⁵ The FDIC did issue the caveat that, “at some point the institution may become obligated to credit a payee’s deposit account maintained at that institution and thus create a deposit liability to the payee.”¹⁷⁶

170. *See id.*

171. *See* 61 Fed. Reg. at 40,491.

172. *See id.*

173. *See id.* The opinion also addressed situations in which the Bank Secondary System might retain a contingent liability to redeem the unpaid amounts. *See id.* at 40,491-92. The FDIC looked to *FDIC v. Philadelphia Gear Corp.*, 476 U.S. 426, 435 (1986), in order to ascertain whether a contingent liability constitutes “hard earnings.” *See* 61 Fed. Reg. at 40,491-92. The opinion concluded that a contingent liability did not constitute hard earnings and, therefore, would not push the system into the definition of a deposit. *See id.* at 40,492.

174. *See id.*

175. *See id.*

176. *See id.* The opinion gives the example of a merchant who receives the value from a consumer and requests that the payment for value be credited to his or her account. 61 Fed. Reg. at 40,492.

d. Or, the Funds Must Be Held for a Special or Specified Purpose

Having already determined that "Bank Primary-Customer Account Systems" fit into the definition of a deposit and that "Bank Secondary-Pre-Acquisition Systems" do not fit, the FDIC analyzed whether the remaining two categories could be defined as a deposit.¹⁷⁷ After studying the relevant case law,¹⁷⁸ the FDIC concluded that "Bank Primary-Reserve Systems" were too general or unrelated to be considered "held for a special or specified purpose."¹⁷⁹ However, the opinion did determine that "Bank Secondary-Advance Systems" could be considered specific or special enough to qualify as a deposit because they are linked to a specific transaction.¹⁸⁰

e. Summary of Covered Deposits

The FDIC explained that although some stored value systems fall within the definition of deposits under the FDIA, the stored funds would still not automatically be covered by FDIC insurance.¹⁸¹ To be certain of coverage, deposits need to satisfy other requirements such as the requirement of additional record keeping or the requirement that an institution initially qualify for insurance.¹⁸² Under the FDIC's analysis, only "Bank Primary-Customer Account Systems" and "Bank Secondary-Advance Systems" meet the threshold deposit determination for FDIC insurance coverage.¹⁸³

IV. "LOST" OR ESCHEATED E-MONEY

Lost or escheated e-money is an additional issue facing electronic money proponents. The ability to retrieve "lost" value varies depending on the system used. Many of the on-line e-money providers have developed safeguards to ensure that e-money is not lost due to technical failures.¹⁸⁴ The risk of lost value is not so easily remedied with stored value cards. Absent FDIC protection, current smart card

177. *See id.*

178. *See id.* (citing *FDIC v. European American Bank & Trust Co.*, 576 F. Supp. 950, 957 (S.D.N.Y. 1983); *Seattle-First Bank v. FDIC*, 619 F. Supp. 1351, 1360 (W.D. Okla. 1985)).

179. 61 Fed. Reg. at 40,493.

180. *See id.*

181. *See id.* at 40,494.

182. *See id.*

183. *See id.*

184. *See supra* notes 60, 82 and accompanying text.

systems do not provide for retrieval of "lost" or stolen card value.¹⁸⁵ To avoid the imposition of restrictions, issuers should be certain that consumers are adequately informed of this risk of loss.¹⁸⁶

A more troublesome issue for banks is that of escheatment.¹⁸⁷ For instance, depending on state law, banks may be required to forfeit funds in an account that has remained dormant for five to seven years.¹⁸⁸ If a consumer does not use stored value for a significant period, as often happens with other funds left in banks, the bank eventually would need to turn the money over to the state as escheated funds. The consumer is then assumed to no longer lay a claim to the funds; however, banks may want to find a way to keep the funds, which could add up to very significant sums. While state laws have not yet been amended to specifically cover escheatment of stored value, participants in the Atlanta Olympic pilot program may have found a way around escheatment.¹⁸⁹ In this program, issuing banks "put expiration dates on their disposable cards and First Union Corp[oration] is imposing maintenance fees after the expiration date to drain any remaining funds" ¹⁹⁰ To assist card users, First Union explains the maintenance fees on the back of each card.¹⁹¹

185. Telephone Interview with Annette Barrett, Smart Card Sales Products Division of First Union National Bank of Georgia (Jan. 10, 1997). It is assumed that since dollar amounts are usually as small as one would carry in cash, the owner runs the risk of losing the value as he would cash. *See id.*

186. *See infra* notes 231-36 and accompanying text.

187. "The word escheat, in this country, . . . indicates the preferable right of the state to an estate left vacant, and without there being any one in existence able to claim thereto." BLACK'S LAW DICTIONARY 545 (6th ed. 1990) (internal quotation marks omitted).

188. *See Smart Cards And Escheatment: Who Gets The Unspent Funds?*, BANK NETWORK NEWS, August 12, 1996, available in 1996 WL 11829532.

189. *See id.*

190. *Id.* One of the Atlanta participants, NationsBank, plans to donate unspent funds to the Atlanta Olympic Organizing Committee and the United States Olympic Committee. *See id.*

191. *See Smart Cards And Escheatment: Who Gets The Unspent Funds?*, *supra* note 188 (" 'Using maintenance fees is a creative solution to the escheatment dilemma,' says David W. Lott, senior analyst at Dove Associates. 'This issue is a huge concern considering the early business models for smart cards assumed banks could keep unspent funds.' ").

A NationsBank spokesman says the bank has not yet decided on whether to impose a card maintenance fee. Cardholders can, however, retrieve unspent funds by mail, although they are charged a \$3 processing fee. Meanwhile, Wachovia Corp., the third Visa Cash-issuing bank in Atlanta, also has not yet decided on imposing a maintenance fee because its cards do not expire until 1997, says Nancy B. Poe, vice president. . . . The bank is keeping records of unspent funds.

Id.

The problem with lost cards results from the fact that smart cards are anonymous. The institutions which issue smart cards do not track the funds on the cards (as some on-line systems do). Thus, it may be hard to determine if the specific funds have been left for significant periods of time. However, if the cards were assigned serial numbers (like on-line e-money), banks could conceivably trace fund expenditures and determine how long funds have been with the bank. Obviously, this new idea would require a costly and tedious tracking system which may be better avoided due to the small amounts of money involved.

V. NON-BANKS

The emergence of non-banks in the smart card market is another important area of concern. One commentator noted that

[s]mart cards . . . illustrate the difficulties confronting the regulators. Among the concerns of the Office of the Comptroller of the Currency is whether or not they [the cards] can be issued by non-banks and the problems resulting if the issuer defaults. Should a non-bank's issuance of stored value cards be regulated, and if so, by what entity? Should a non-bank be subject to the same regulatory burden (security, privacy, consumer protections, etc.) to which banks are subject, or should the regulatory burden on banks be reduced to better enable them to compete with non-banks?¹⁹²

Issuance of e-money by non-banks was a major policy concern voiced by the Congressional Budget Office (the CBO). However, the CBO only expressed concern with respect to "open" systems, where the issuer is not the provider of the service.¹⁹³ The CBO is concerned about the kinds of safeguards that will be in place to protect consumers; however, this concern "appears to be at odds with the views of others that the marketplace will impose the necessary discipline on non-depository institution issuers."¹⁹⁴

Presently, no plans exist to extend Federal Deposit Insurance safeguards to non-banks.¹⁹⁵ If non-banks wish to be covered by deposit insurance, they can team up with insured banks which provide

192. Brooks, *supra* note 153, at 16.

193. See Anenberg & Pax, *supra* note 1, at 20.

194. *Id.*

195. See *Federal Reserve Will Let Private Firms Push Cyberspace Frontier*, McDonough Says, *supra* note 46, at 624. For further discussion, see *supra* notes 179-80 and accompanying text.

“fundamental safeguards to consumers.”¹⁹⁶ This idea is consistent with the way electronic payment systems are currently used in Europe.¹⁹⁷ A recent American Banker’s Association report states that twelve European central banks are considering proposals to restrict the issuance of stored-value cards to depository institutions.¹⁹⁸

An additional problem arises by allowing non-banks to provide e-money services because this allowance limits the Federal Reserve’s ability to monitor and control the money supply. One commentator explained that

[t]he CBO concludes, however, that the expected size of the market is small enough that it would not have a significant impact. This is consistent with Federal Reserve Vice Chairman Alan Binder’s testimony to Congress that it would be “most unlikely” that . . . control of the money supply would be damaged by the . . . new payment systems.¹⁹⁹

Non-banks could also face challenges on the state level if they choose to join the e-money market. While few states have enacted legislation to specifically address the use of electronic money, there is an indication that certain services at the state level may be limited to traditional banks. For instance, in 1990, the Comptroller for the State of Florida ruled that Florida State University’s pre-paid cards, which could be used at certain ATMs, were equivalent to checks.²⁰⁰ Florida State then turned the program money over to be held in a bank.²⁰¹ The Texas Attorney General, on the other hand, reached the opposite conclusion in evaluating the Texas University program.²⁰² However, unlike the Florida program, the cards provided by universities in Texas did not allow students to make withdrawals from their accounts or from ATMs.²⁰³ A similar approach was taken in 1995 by the Idaho legislature which stipulated that universities would not be acting as banks if they offered debit card programs as long as the uni-

196. Campbell, *Limit Electronic Banking*, *supra* note 60, at 624.

197. *See id.*

198. *See id.*

199. *See Anenberg & Pax*, *supra* note 1, at 20.

200. *See* Thomas P. Vartanian & Robert H. Ledig, *The Business of Banking In the Age of the Internet: Fortress or Prison*, BANKING POL’Y REP., Mar. 4-18, 1996, 6, 7 (citing Inter-Office Communication from J. Ashley Peacock, Assistant General Counsel, to Terry Straub, Director, Division of Banking, (Nov. 16, 1990)).

201. *See Stored-Value Participants Brace For An On-Coming Regulatory Wind*, DEBIT CARD NEWS, August 16, 1996, at 6.

202. *See* Vartanian & Ledig, *supra* note 200, at 7-8.

203. *See id.* at 8.

versities did not allow the card to be used to redeem cash.²⁰⁴

Even if allowed in the market, non-banks will probably be limited to some degree in the variety of services that they can offer directly to consumers. As the existing systems show, however, non-banks may act as middlemen between banks and consumers—providing support or technology that is too expensive for banks to provide for themselves. In summary, non-banks wanting to take advantage of smart card technology will probably avoid legal troubles if they take care to keep the funds of consumers in accounts held by banks.

VI. BANKS: FINDING A NICHE

The banking industry may be at risk of letting the potential profits from an e-money service slip away.²⁰⁵ The Banker's Roundtable, a group of the largest U.S. banks, are working to promote the issuance of e-money by banks. In September, 1996, the Banker's Roundtable established a new office to "work toward 'acceleration and enhancement of consumer adoption of electronic banking' through new standards and specifications designed to attract a public that so far has shown only sluggish acceptance of electronic commerce."²⁰⁶ The group hopes that the office will find ways to ensure efficient payments and protect consumer privacy and security.²⁰⁷

Banks may be able to carve out their own niche in offering electronic value. There are several reasons why this may work. First, banks have access to unique marketing opportunities. Most banks have a ready-made target audience in their customers. Because electronic commerce is a viable option for banks and some consumers, "banks now have the opportunity to claim their stake in the cybermarket...."²⁰⁸ Furthermore, banks already have established relationships with merchants who could use the electronic payment systems. Banks enjoy a distinct advantage in this area because merchants will be assured that their banks will accept e-money before they choose to participate, and banks usually "only accept for deposit claims on other banks that are members of their clearing and settle-

204. *See id.*

205. *See* Lunt, *supra* note 84, at 46-54 (statement of Michael Karlin, President and Chief Operating Officer of Security First Network Bank).

206. *Bankers Roundtable Forms New Group To Woo Consumers To Electronic Banking*, 67 *Banking Rep.* (BNA) No. 12, at 487, 487 (Sept. 30, 1996).

207. *See id.*

208. *Internet Payment Competition Heats Up*, *supra* note 51 (statement of Richard Crone, Vice President and General Manager of CyberCash's electronic check division).

ment systems.”²⁰⁹ Banks also could benefit from community name recognition. Additionally, banks could market packages of services. By grouping common services with electronic payment services, banks have a powerful marketing tool that is not an option for most non-banks.

Furthermore, banks have the benefit of consumer confidence. Banks offer a “place,” a physical building where people know that they can get assistance in utilizing services. Banks also provide consumers with stability through their status as a bank.²¹⁰ The Federal Reserve currently does not plan to afford “federal safety net” protections to non-banks, which gives banks a further competitive edge in the e-money market.²¹¹ Moreover, consumers already trust banks with their personal financial information. Potential consumers may not be as likely to disclose account information to third party vendors. Consumers appreciate the fact that banks seem to understand and respect their privacy concerns.²¹²

A final advantage for banks can be found in the “breathing-room” regulators are currently providing. If banks are to succeed in circumventing future regulation, the industry must bear in mind governmental and consumer interests. At a Treasury Department conference in September 1996, five key characteristics of a successful electronic market were identified. These factors include: (1) enforceable and reliable transactions, (2) a market that prevents fraud without infringing on consumer privacy, (3) a system that shields consumers from fraud and loss, (4) well-informed consumers who are able to participate with adequate understanding of the risks, and (5) growth that does not hinder access to more traditional financial transactions.²¹³ If industry leaders respect the government’s interests in the development of new payment technologies, both banks and consumers will benefit. Without restrictive regulation, it may be possible for electronic payment systems to meet consumer needs and to promote growth in the banking industry.

209. *Private Firms Push*, *supra* note 46, at 623, 623-24.

210. *See Campbell, Limit Electronic Banking*, *supra* note 60, at 624-25.

211. *See Private Firms Push*, *supra* note 46, at 624.

212. *See id.* Banks and certain other financial institutions offer consumers additional safeguards as prescribed by federal Right to Financial Privacy laws. *See* 12 U.S.C. §§ 3401-3422 (1994).

213. *See Electronic Banking’s Future Will Be Largely Unregulated*, *supra* note 23, at 5-10.

VII. CONSUMER ACCEPTANCE

Many people see e-money technology as a way to tap the sector of the marketplace currently dominated by cash. It is estimated that anywhere from fifty to seventy-five percent of all transactions are cash.²¹⁴ While the number of cash transactions is incredibly high, the amount of money involved in each transaction is relatively small. An estimated twenty-two percent of cash transactions are less than ten dollars.²¹⁵ The market for these small transactions is exactly the kind of market many e-money providers hope to reach because of its huge potential. It is estimated that "issuers of stored-value cards could sell \$10 billion of cards by replacing only one percent of cash transactions. Fast food and vending machines alone account for over \$200 billion in annual consumer spending."²¹⁶ Financial institutions hope to "capture some of the seven billion Internet financial transactions expected by the year 2000."²¹⁷

Commentators emphasize that "[t]he CBO estimates that the potential market for stored-value cards in the United States is approximately \$20 billion per year . . . [and reports] that worldwide sales over the Internet are already estimated to be over \$300 million annually, even though the on-line payment systems to facilitate such sales are barely more than experimental."²¹⁸ Of course, cultivating this market will require extensive marketing to prove to the public that these systems can be more beneficial than existing systems.²¹⁹ Research by the Congressional Budget Office "indicates that the success or failure of a new payment mechanism will be determined more by marketing than by the technological details of the proposed system."²²⁰

In developing a new market, stored value cards have a decided advantage over on-line payment systems.²²¹ Consumers are already familiar with the card format and have used similar type cards for other transactions for some time.²²² Growth may be slow at first. "It

214. See Anenberg & Pax, *supra* note 1, at 18; Annette Barrett, *Stored Value "Cash" Cards—the Future has Arrived*, Lecture at Carolinas Cash Adventure XII (May 14, 1996).

215. See Barrett, *supra* note 214.

216. Anenberg & Pax, *supra* note 1, at 18-19.

217. *Cybercash Luring More Credit Card Transactions*, *supra* note 55, at 4.

218. Anenberg & Pax, *supra* note 1, at 18-19.

219. See *id.* at 18.

220. *Id.*

221. See *id.*

222. See Anenberg & Pax, *supra* note 1, at 19. For further discussion, see *supra* note 84 and accompanying text.

took approximately ten years for consumers to begin to use ATMs on a regular basis, but once they became popular and networks made them more convenient, ATM use grew rapidly, and a Federal Reserve study indicates that consumers now use ATMs much more often than bank tellers were ever used.²²³ On-line e-money systems, by contrast, are not as uniform²²⁴ and do not have a definable target market.²²⁵

Predictions as to consumer acceptance of e-money vary widely. Some believe that electronic money and stored value systems will rise to "significant use in two to five years."²²⁶ On the other hand, others opine that electronic banking will replace the U.S. paper-based system in fifty to seventy years.²²⁷

VIII. CONSUMER CONCERNS

While security and privacy are of concern to consumers, consumer activists have additional concerns. One concern is the availability of and the access to electronic banking services.²²⁸ Both consumer advocacy groups and regulators want to insure access to the new payment systems by low-income and currently "unbanked" people.²²⁹ This concern is growing because the federal government is currently trying to achieve "full electronic disbursement of federal benefits by 1999."²³⁰ Consumer groups also are concerned about the protections "for consumers who have lost their stored-value cards, had them stolen, or had them used fraudulently."²³¹ Moreover, pro-

223. Anenberg & Pax, *supra* note 1, at 19 (citing David B. Humphrey, *Declining Deposit Services: ATMs Versus Branches*, ECON. Q., Spring 1994, at 63-64).

224. For a discussion of on-line E-Money systems, see *supra* notes 51-93 and accompanying text.

225. See Anenberg & Pax, *supra* note 1, at 19.

226. Campbell, *Regulators Begin Exploring*, *supra* note 2, at 483.

227. See *id.*

228. See Campbell, *New Federal Task Force*, *supra* note 8, at 436.

229. See *id.* at 427

In order to truly succeed, the industry must determine how to make the technology readily available and usable to the mass market. Until it becomes a commonplace substitute for actual cash, e-cash will continue to be a "gee whiz" kind of topic, useful only to those relatively privileged few who have the knowledge and ability to navigate the constantly shifting technology . . . the banking industry must begin to adapt to, and incorporate, this new technology.

Sabett, *supra* note 94, at 11.

230. Campbell, *New Federal Task Force*, *supra* note 8, at 437. Colorado and Connecticut are leading the way by implementing the national standards for their state electronic benefit transfer programs. See *The State Quest To Bring About EBT Consistency*, DEBIT CARD NEWS, Jan. 16, 1997, available in 1997 WL 8934216.

231. Campbell, *New Federal Task Force*, *supra* note 8, at 436.

spective customers will want to know what will be done in the event that their hard drive crashes with stored e-money or their smart card microchip gets damaged.²³² Some experts suggest that consumer confidence will be the biggest obstacle in the way of e-money expansion.²³³ In many instances, consumers believe "confidence is the critical element of any form of money."²³⁴ Traditional banks "instill a sense of stability and strength"²³⁵ which is currently lacking in cyber-banking.²³⁶

Consumers are not concerned about traditional bank disclosure requirements.²³⁷ In fact, consumers have been confused by too much information.²³⁸ Consumers only want to know "how much value remains on the stored-value card, the cost of the electronic transaction, a telephone number to call in case something goes wrong, and who bears the liability for lost or stolen cards"²³⁹

IX. CONCLUSIONS

It appears that the major obstacles to e-money technology and acceptance will not be legal problems. The government's hands-off approach to e-money so far implies that it will be willing to help make e-money work if consumers show significant interest and approval. It also seems likely that developers who are sensitive to consumer concerns and receptive to suggested modifications will fare well in this new market. However, if developers and issuers of e-money take advantage of the regulatory leeway, they may find their efforts curtailed by the imposition of stricter regulations. By offering so much latitude, the federal government is placing great trust in e-money pioneers, and it will likely react negatively if its generosity is abused.

E-money proponents should also work with state officials. States may have existing legislation (like escheatment) which should be of some concern when designing electronic payment systems. Issuers should develop compelling arguments for the benefits of e-

232. It is highly unlikely that a smart card microchip can be damaged. Telephone Interview with Annette Barrett, *supra* note 185. In tests, stored value cards have even been run through washing machines, and come out functioning. *See id.*

233. *See* Campbell, *New Federal Task Force*, *supra* note 8, at 436.

234. *Id.* (statement of James L. Brown).

235. *Id.*

236. *See id.*

237. *See id.* For further discussion, see *supra* notes 150-52 and accompanying text.

238. *See* Campbell, *New Federal Task Force*, *supra* note 8, at 437.

239. *Id.* (statement of Lynne B. Barr).

money. If states understand how advantageous this technology can be, they may be as willing as the federal government to allow sufficient space for e-money growth.

Finally, proponents of electronic payment systems should heed the lessons of the stored value card experiments. These lessons teach that education makes a difference. The industry should make complete disclosures in a meaningful way. Consumers may not take the time to read pages of fine print, but issuers can inform consumers of risks simply without frightening them away. Balance will be the key. If marketers can begin by targeting technology-minded persons, who are better able to understand the systems and appreciate the possible hazards, it is likely that these persons may help build a solid market base for future growth.

As more consumers try the new e-money systems, the industry will learn if consumers will ultimately embrace this new technology. Certainly, as more consumers experiment with electronic payment systems, new innovations will be made and new legal questions will arise. The key to the success of e-money will be anticipating consumer concerns and avoiding legal uncertainties.

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