

# Chicago Fed Letter

## Can existing payment networks meet future needs? A conference summary

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The proportion of retail, non-cash payments made electronically in the U.S. grew from 15% in 1979 to 40% in 2000. A recent Chicago Fed conference addressed the important question of whether today's payment networks can adequately support emerging payment technologies.

Credit card, debit card, and automated clearinghouse payments have grown fivefold since 1979.

The last few years have seen a steady decline in check volumes and explosive growth in electronic payments. However, not all payment innovations have gained market acceptance and not all market segments have enthusiastically abandoned paper-based instruments. Changes in the U.S. payment industry landscape are most dramatically evidenced by a fivefold increase in the combined number of credit card, debit card, and automated clearing house (ACH) payments annually since 1979, with debit cards growing significantly toward the end of that period. The proportion of retail, non-cash payments made electronically grew from 15 percent in 1979 to 40 percent in 2000. Near term, businesses and financial institutions will need to maintain both paper and electronic payment processing systems, while the migration toward electronic instruments will likely drive future investments in technology and the payment infrastructure, raising the question: Can today's payment networks support emerging payment technologies or will new networks emerge?

On May 29–30, 2003, the Federal Reserve Bank of Chicago hosted an industry conference titled “Can Existing Payment Networks Meet Future Needs?”

The conference brought together approximately 150 participants, including representatives from financial institutions, payment networks, corporations, retailers, and government, with the objective of fostering dialogue on the development and adoption of more efficient payment methods. This *Chicago Fed Letter* summarizes the presentations and views expressed by conference participants, who focused on opportunities to improve the payment system while addressing the challenge of balancing end-users' needs and the profitability goals of payment service providers. Speaker biographies and presentations are available at [www.chicagofed.org/paymentsystems/conferences.cfm](http://www.chicagofed.org/paymentsystems/conferences.cfm). The conference centered on the following questions:

- Why invest in payment technology?
- What are the costs and benefits to end-users of using and accepting various payment instruments?
- How can networks leverage their existing infrastructure to meet the evolving demands of payment system participants?
- How will the payment landscape evolve?

- What is the role for the Federal Reserve in promoting a more efficient payment system?

In his introductory remarks, Gordon Werkema, first vice president and chief operating officer, Federal Reserve Bank of Chicago, emphasized the Federal Reserve's mission to foster efficiency in the payment system through facilitating discussion among payment industry participants. He went on to introduce the keynote speaker, Carl Rutstein, vice president and head of Americas Payment Practice, Boston Consulting Group. Rutstein argued that technology alone is not sufficient for successful market adoption of payment innovations. He stressed the importance of execution and the need for financial institutions to direct their efforts toward areas where they have sustainable competitive advantages and where their customers will benefit. For example, a bank's online bill-pay service has the potential to attract and retain more profitable and loyal customers if it is integrated with the bank's other products, such as loans, deposit account services, and investment services. Banks can leverage this broader access to customers' financial information to find cross-selling opportunities, tailor more products to customers' needs and, consequently, increase their share of customers' "wallets."

### Investing in payments

The first conference panel featured Collin Roche, principal, GTCR Golder Rauner, LLC; John Perry, chief executive officer (CEO), InterCept Payment Solutions; Nick Alex, senior vice president, Bank of America Corporation; and David Roberts, senior vice president, First Data Corporation. The discussion focused on when, why, and how firms invest in payments. The panelists emphasized that profitable opportunities do exist. Payment services generally produce stable revenue streams and account for about one-third of profits at the largest banks. Despite the importance of payments to their businesses, the panelists' firms were reluctant to invest in innovative but unproven payment products. Importantly, they choose to wait to invest until the product has established sufficient market demand.

This panel also addressed the role of joint ventures in the evolution of the payment system. While the panelists recognized that joint ventures could aid in the development of industry standards, distribute development and implementation costs among partners, and potentially achieve the critical mass necessary for adoption, several panelists also cited some challenges. Perry, formerly the CEO of Spectrum, suggested that joint ventures can provide immediate scale and speed to market, but may have high indirect management costs and potential risk to the reputations of the participants. While emphasizing the value of information and risk sharing, Alex argued that large institutions might have greater influence than smaller members in such partnerships, which may diminish the venture's value to smaller participants.

### End users' perspective

In the second panel, a diverse group of end users shared their insights on the potential uses of existing and emerging payment mechanisms. Jay DeWitt, senior manager, Amazon.com, Inc., said

consumers have their fingerprints scanned by a biometric reader at the cash register. Then the reader matches customers to their desired payment instruments, which are kept on file, and the consumer authorizes payment. West Seattle Thriftway has used its system to steer customers to PIN-based debit cards, a less costly alternative to credit cards and signature-based debit cards. In addition to greater convenience for consumers and lower fraud rates, Kapioski argued that the novelty of the payment experience has increased the customer base and customer loyalty.

While electronic payments may reduce costs for businesses, Gail Hillebrand, senior attorney, Consumers' Union, questioned whether these changes are always in consumers' best interests and whether legal protections are keeping up with changes in the marketplace. For example, while in practice, payment providers often offer similar consumer protections on credit and debit cards, consumer legal protections typically vary based on the payment instrument used. Hillebrand recommended the

**Barriers to electronic payments are much higher for business-to-business payments.**

that rather than push customers toward the least costly payment mechanisms, Amazon tries to accommodate their preferences. A major concern for Amazon, like many merchants, are the fees charged by the banks that process their credit card transactions, often referred to as "acquirers." Credit cards are currently the most popular method of payment for Internet transactions. To reduce payment processing costs, Amazon is developing an ACH payment option that will allow consumers to make payments to Amazon via their demand deposit accounts at significantly lower processing costs than for credit card transactions.

Paul Kapioski, owner, West Seattle Thriftway, described a new system introduced at his store last year whereby

development of uniform statutory protections for all payment products to reduce confusion among consumers.

The barriers to electronic payments are much higher for business-to-business payments than for consumer-to-business payments, according to Cathy Gregg, partner, Treasury Strategies, Inc. Gregg said that 95% of business transactions still use checks. In this market segment, the cost of a payment itself is inconsequential, compared with the costs associated with receiving and processing payments, known as the accounts receivable workflow. For many businesses, electronic payments have not lowered costs, but rather have forced businesses to create separate, manual procedures to accommodate those customers who prefer to pay

electronically. Gregg suggested that electronic payments should be bundled with value-added services, such as integration with supply-chain management systems or back-end processes, that are currently not provided with checks.

### **Leveraging the payment infrastructure**

The third panel of the conference featured Bond Isaacson, co-chief executive officer, Concord EFS, Inc.; George Thomas, president and chief executive

that the recent decision to allow consumers to initiate ACH payments over the Internet should be reconsidered. They argued that the chargeback system is too cumbersome for consumers and the risk of fraud too high.

Each of the panelists discussed profit opportunities in electronic payments. Isaacson mentioned small-value payments as one such opportunity, but said that industry collaboration would be required to create a successful instrument.

## **Cost-based pricing could encourage greater use of more efficient payment instruments.**

officer, the Electronic Payments Network; Steve Abrams, senior vice president, MasterCard International, Inc.; and Andy D'Amato, senior vice president, Certegy, Inc. The panelists stressed that existing payment networks will be able to meet the future demands of payment system participants. Some panelists noted that most payment innovations leverage the existing payment infrastructure. For example, Isaacson suggested that while new payment solutions might emerge for micropayments, which range from a few cents to a few dollars, eventually these systems will piggyback on existing networks. A payment might be authorized with a mobile phone, billed on a phone bill, and eventually paid with a credit card.

Some panelists also discussed the growth of fraudulent payments. D'Amato suggested that fraudulent checks, as a percentage of total checks, will continue to grow because a greater proportion of non-fraudulent check payments will migrate to electronic alternatives. Similarly, Thomas predicted that as ACH transactions grow, especially those initiated over the Internet and telephone, fraud will increase dramatically unless new controls are put in place. He suggested that the use of a database allowing operators to match name and address information against demand deposit account information would reduce fraud. Several panelists agreed

Abrams identified business-to-business payment cards as a promising area. He emphasized how important the opportunity to analyze purchase data is to firms. MasterCard will soon have the ability to provide customers with more detailed information on each item purchased, including the individual bar codes for purchases made with a business-to-business payment card.

### **Future of payment networks**

On the final panel, Leo Van Hove, assistant professor, Free University of Brussels, presented a survey of electronic retail payments used in several European countries. Van Hove discussed possible reasons behind the large divergence in payment preferences across countries, especially in the adoption of new payment instruments. General-purpose stored value has had particularly strong growth since the introduction of the euro, primarily in smaller countries and in countries where debit cards are popular.

Van Hove also suggested that consumers might not be facing the right incentives to use the most efficient payment instrument. He suggested that cost-based pricing could encourage greater use of more efficient payment instruments. He emphasized that, in general, the cost of making a payment is too low; the marginal cost is typically zero, and if fees are charged at all they are

usually fixed. For example, the cost of ATM (automated teller machine) withdrawals is often zero, but the cost of providing these cash withdrawals is not zero. As a result, consumers tend to use cash instead of other more efficient payment forms.

Austin Adams, chief information officer and executive vice president, Bank One Corporation, outlined some of the opportunities in the delivery of payment services that Bank One has implemented or is considering. Adams stressed that payments make up about half of the bank's total revenue and that managing payment products using an enterprise-wide, coordinated approach is a priority. Recently, the bank has been conducting accounts receivable conversion (ARC) trials, in which consumers' checks are imaged and converted into paperless ACH transactions. These trials have been very successful in lowering processing costs and have had the unexpected benefit of reducing the number of return items by 40 percent.

In his presentation, Norman Litell, vice president, Visa U.S.A., Inc., stressed that innovations in payment systems do not always come from technological change—they can also be the result of changes in the soft infrastructure, such as rules. For example, Visa Commerce addresses businesses' payment needs by allowing payments to be scheduled and negotiated between

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the parties, rather than processed immediately. Litell identified some of the challenges and opportunities associated with being a global organization like Visa. Products often need to be customized between and within countries to adapt to consumer preferences and various regulations, while maintaining compatibility across market segments and jurisdictions. However, this diversity does allow Visa to accumulate and transfer expertise with different products to new environments.

### **Federal Reserve role in payments**

Gary Stern, president and chief executive officer, Federal Reserve Bank of Minneapolis, and chair of the Federal Reserve System's Financial Services Policy Committee, emphasized that the Fed "should not provide new payment services unless markets are failing and the Fed has a unique competitive advantage." He also stressed the difficulty the Fed faces in responding to changes in the demand for existing and future services. He suggested a new principle to guide these decisions, that the Fed "should ensure that the size, reliability, and capabilities of its basic retail infrastructure supporting established services

correspond to market demand." However, he acknowledged that forecasting market demand is a difficult task.

Jeff Marquardt, associate director, Board of Governors of the Federal Reserve System, shared the results of the Payments System Development Committee's study on the future of clearing and settlement. The study was based on interviews with 49 organizations regarding the barriers to innovation in the payment mechanism. While no single, consistent recommendation emerged from the survey, the interviewees emphasized that technical innovation alone is not enough—new services must provide significant benefits for key participants. Interview participants also voiced their concern over the lack of a mechanism for Internet payments that combines reasonable cost, security, and reliability.

### **Conclusion**

In his concluding remarks, Sujit Chakravorti, senior economist, Federal Reserve Bank of Chicago, noted that most participants thought that networks *can* meet future needs, but that significant opportunities exist for financial

institutions, merchants, payment processors, and networks to improve upon today's payment mechanisms. Many networks are expanding from their core market segments. For example, online and point-of-sale merchants are considering ACH payments that were primarily developed for recurring payments. Payment innovations may take longer to adopt than innovations in other industries because of the need to balance the interests of multiple agents—consumers, merchants, financial institutions, and networks. In addition, payment providers must often operate both legacy and new systems side by side, increasing costs in the short run.

Several speakers identified a well-designed implementation plan as a necessary precondition for the adoption of technological payment innovations. Conference participants agreed that while many challenges remain in the evolving payment landscape, opportunities exist for the industry to innovate by improving the security and reliability of the payment mechanism, and by increasing the value of payment-related activities to participants in the payment marketplace.