Evolution of Payments in the U.S.

By William H. Stone, Jr.

The 2004 Federal Reserve Payments Study asserted that electronic payments, for the first time ever, had trumped paper checks in number of total transactions. First Vice President William Stone discusses the major changes faced by our nation's payments system and shares how the Federal Reserve is managing the risks inherent in this evolution.

The Federal Reserve is highly vested in the evolution of payments. Our role encompasses both the responsibility to maintain the integrity of the payments system and participation in new innovation as a financial services provider.

According to the Fed's most recent study, only about 45 percent of all U.S. noncash retail payments are made by paper check, with payment cards and ACH accounting for much of the remainder. At current growth rates, credit cards and debit cards will *both individually* surpass the paper check in terms of total annual transactions by 2007.

William H. Stone, Jr., First Vice President

From the early days of banking until quite recently, checks had maintained dominance as our nation's noncash payment of choice. Then, in the early 1970s, the Fed introduced its automated clearinghouse (ACH) and began an evolution of electronic payments that would replace transactions traditionally made via checks. ACH grew quickly by distributing various U.S. Treasury credit payments, such as armed services payrolls and Social Security payments, to name just a few. Commercial bank credit payments, such as direct deposit of employers' payrolls, quickly followed, as did other forms of debit and credit payments.

Financial institutions continue to find innovative uses for ACH, spanning a broad range of retail transactions and shifting substantial volumes to this system, primarily at the expense of check volume. A relatively recent variation even allows merchants to convert paper checks to electronic payments through the ACH at the point of purchase. Another variation, known as ARC, for accounts receivable conversion, allows billers such as utilities and credit card issuers to convert checks that are sent to pay monthly bills. These new uses have increased substantially as of late.

But despite innovations in ACH, the greatest driver of change in our nation's payments system has been payment cards. The credit card was the first ubiquitous consumer-based electronic payments instrument to emerge, and it was the credit card that proved most instrumental in moving payments from paper to electronics at the point of sale. Credit cards began as offline travel and dining cards in the 1960s, grew to become more general-purpose purchasing cards in the 1970s, and then increased vastly in usage in the 1980s.

Technology Boom

In the 1990s, when the technology boom made information processing and telecommunications more powerful and less expensive, credit card companies were poised to gain. Low-cost telecom has made real-time, point-of-service verification of cardholders and their credit availability widespread, speeding transactions and curtailing fraud. Of significance for the future, this technology has made the credit card a viable means of payment for e-commerce as well. We have also seen a rise in Internet person-to-person payments supported by credit cards. In addition, some banks and other card issuers even offer online consolidated bill payment on their websites.

The second most popular electronic instrument for making retail payments today is the debit card. It arrived on the scene relatively recently—during the 1980s—but its growth in usage has already been dramatic.

Payment Card Growth

At first, the debit card emerged as a result of automated teller machine (ATM) systems, but it then moved beyond being solely a mechanism to access currency. Now, bank customers have the option to simply present the card to the merchants and have their bank account directly debited.

The Fed's payment study found that debit payments had the largest compound annual growth rate, at 24 percent. Indeed, the growing popularity of debit cards seems to be part of a broader phenomenon. Last year, Visa announced that for the first time ever, its global debit transaction volume surpassed its credit transaction volume.

The last decade has marked a clear turning point in our payments system. From that time on, Federal Reserve research has indicated a steady decline in check usage. While the number of checks written remains large, the majority of noncash payments in the U.S. are now initiated electronically. In fact, since their peak a decade ago, checks are not only losing market share,

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they are actually declining in absolute volume.

The last few years, in particular, have marked dramatic change for the industry. While the 37 billion checks written in the U.S. in 2003 were down more than 12 percent from their 2001 levels, electronic transactions over that period totaled over 44 billion, representing an increase of roughly 45 percent.

Looking forward, the share of retail transactions handled by cards, both debit and credit, will continue to grow, particularly at the point of sale. In addition, organizations other than banks, especially retailers, will expand their role in the payments system.

But the question remains: How quickly will the move from paper to electronics occur? The transition depends on both the evolution of our payments system's capabilities and consumer acceptance. Consumer habits tend to change gradually. People will only accept a payment structure in which they have the utmost confidence. As a result, the paper check is likely to be with us for some time.

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Future of Check Clearing

In the meantime, the Fed has been trying to maximize the efficiencies afforded by electronic processing of payments, whether that transaction is initiated electronically or by paper check. For the latter, the Fed is doing what it can to foster check truncation and electronification as early as possible in the payment process. Under the Check Clearing for the 21st Century Act, or Check 21, it became even easier to move toward a more electronic check process because banks have additional options for handling image-based payments.

As a provider of financial services, the Fed has been actively engaged in bringing a whole array of new products to market to enable banks to more fully take advantage of Check 21 benefits. Our business has been enhanced in a number of ways to encourage the new image technology the act allows. To cite just a few: We have established an image archive for electronic items; we have modified deposit deadlines and enhanced clearing times; and we have enhanced our ability to produce substitute checks, the intermediate step toward a full image-exchange environment. In fact, the Philadelphia Fed has earned the distinction of being the largest producer of substitute checks in the Federal Reserve System.

Evolution in Efficiency

With the evolution of the payments system accelerating, the Federal Reserve System has made major adjustments to both its physical infrastructure and its payments services. Our program of aggressive electronification of retail payments will facilitate Check 21 and allow us to identify new processing efficiencies. The ongoing shift to electronic payments has also profoundly affected our check processing operations. The Fed currently clears about one-third of all checks written in the U.S. Still, the number of checks collected annually through the Reserve Banks has fallen nearly 20 percent since 1999, and the decline continues to accelerate.

Consequently, the Fed has had to consolidate its operations, closing down processing sites where appropriate. Yet, we still maintain national service levels by re-routing checks to nearby sites. To illustrate the scale of this effort, consider that two years ago the Fed had 45 check processing sites. By mid-2006 we will be down to 22. This downsizing helps us fill our traditional role of payments processor while at the same time maintaining efficiency in this new environment.

The Philadelphia Fed has been selected to become a System consolidation site for check processing, absorbing New York's East Rutherford Operations Center — known as EROC. The Federal Reserve System chose us based on our overall productivity and efficiency, ability to handle total check volume for both Districts, and our proximity to New York financial institutions. The Philadelphia Fed has long been a leader in the System with a premier check operation, but new responsibility will mean additional employees, equipment, and space renovations to accommodate the increased workload. In the second half of 2006, we expect to create approximately 60 new positions to help process the additional volume. These changes should have positive implications for our Bank in the future, as this Systemwide leadership role solidifies our position of strength in check processing efficiency.

Future of Electronic Payments

As the check continues to be replaced by more efficient payment types, new technologies continue to help curtail check fraud. The Federal Reserve and, in particular, the Philadelphia Fed have been industry leaders in identifying technology to help reduce fraud in the check payment system. These efforts have constrained the $5 billion annual fraud losses that burden financial services institutions and their customers.

To address the evolution taking place in the payments system, in 2000, the Philadelphia Fed established its Payment Cards Center. The Center's work has been instrumental in enhancing our understanding of electronic payment vehicles, their use by consumers, and their broader impact on the financial system.

The Federal Reserve System encourages the market to drive checks toward electronics. The Philadelphia Fed will play a key leadership role in managing check payments as they morph into new payment forms. We will also continue to develop our unique expertise in understanding and tracking the payment card industry as new payment vehicles evolve in both market share and complexity.

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