

A Study on Innovation in Payments and Approaches in Banking Industry

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Abstract: *Innovation in Payments and Banking Technology: Abstract and Figures: Industry Trends and Implications for Banks Technology has become increasingly important to the development of new electronic retail products and bank retail delivery systems in recent years. A growing number of banks' marketing strategies center on their ability to consistently deliver cutting-edge technology products. The majority of financial institutions view the introduction of new products and services like PC (personal computer) banking as a necessary step for retaining highly valued clients and strategically positioning themselves for the future. Technology-related risks will continue to evolve, posing significant challenges for banks and supervisors of the banking industry, as this trend continues. Having a clear understanding of the shifting banking and payments landscape is essential for responding to these challenges. The changes in "retail" payments (i.e., business-to-consumer and consumer-to-business payments) are the primary focus of this article's description of that landscape. We start with a concise depiction of the huge change in the US toward electronic method for installment in retail exchanges. The article then, at that point, addresses significant improvements occurring in the nature and example of electronic installments processes. A portion of these improvements include the reception of new cycles, while others mirror a new flood in the utilization of innovations that have existed for various years. These procedures combine the actual payment instructions with the electronic transfer of payment-related information in both instances. While the shift away from paper-based payment media has received a lot of attention, electronic commerce and banking will likely be more affected in the long run by the development and adoption of processes that expand the scope of information transferred electronically during a payment transaction. In the fourth section of the article, we talk about how banks responded to these technological advancements and the problems that arose for bank management. Banks are considerably expanding their interests in innovation, and we present data on the synthesis and size of those speculations. Our examination shows that banks are areas of strength for feeling tensions to try not to be abandoned in the innovation region. This need to get a move on could prompt elevated innovation related risk openings for banks on the off chance that they neglect to carry out fitting innovation risk the board rehearses. After that, we have a brief discussion of the actions taken by bank regulators to assist institutions in developing effective risk management strategies.*

Keywords: payment, banking, technology , consumer, banks

I. INTRODUCTION

The banking and financial services industry's advancements are increasingly influenced by the information and communication technology revolution. Most banking industry experts remember innovative change for the short rundown of significant elements basic the elements in banking industry design and execution. For ex-more than adequate, enhancements in data the board are playing a vital job in empowering banks to take advantage of expanded powers and decreases in geographic restrictions. More complete and speedier admittance to customer information is permitting banks to all the more really manage complex client connections and to "strategically pitch" additional monetary administrations. Furthermore, innovation has been a rousing variable for a significant number of the new large bank consolidations, as foundations with less productive technology the board search out consolidation accomplices with better technology the executives. Technology has become increasingly important to the development of new electronic retail products and bank retail delivery systems over the past few years. A growing number of banks' marketing strategies center on the reliability with which they can deliver cutting-edge technology products.

Some of these changes involve using new processes, while others show a recent uptick in the use of technologies that have been around for a while. These procedures combine the actual payment instructions with the electronic transfer of payment-related information in both instances. While much consideration has fixated on the shifts away from paper-based installment media, the creation and reception of cycles that widen the scope of data moved electronically over payment exchange will probably have a more prominent long-term impact on electronic business and banking.

Improvements in Electronic Installment Media

Analysts partition installments into "discount" and "retail" payments. Wholesale payments, especially interbank payments related to banks' clearing and settlement roles, have very high values.² Retail payments You can get an electronic copy at: Quarterly Journal, Vol. <http://ssrn.com/abstract=1988490> 24 17, No. 3, September 1998 include customer to-business and business-to-business payments. Despite ongoing technological advancements, electronic wholesale payments have been in use for a long time. Although there is a wide variation in the relative proportion of paper-based versus electronic payments in the Group of Ten (G-10) countries, each of those countries has experienced a significant shift toward greater reliance on electronic payments over the past five years. Although debit card use soared four-fold in terms of volume and five-fold in terms of value from 1992 to 1996, technological advancements in retail payments have also been ongoing. However, recent rapid increases in the pace and scope of such changes have drawn much attention in the financial community. Many check card exchanges happen at point of sale (POS) terminals, the correspondingly steep development in number of POS terminals over the 1992-to-1996 period.

Since check card exchanges substitute for paper checks, and, to a far lesser degree, for cash, the potential for development of charge card use is huge. At the point of sale, American customers currently write an estimated 12 billion checks annually. Merchants could save an estimated \$1.73 billion if only half of those payments were made with debit cards rather than checks.⁵ In general, more people using electronic payments not only improves customer experience but can also cut costs for businesses, consumers, and banks. While the use of credit cards, debit cards, and ACH has increased significantly, the use of electronic stored value has not.

Developments in Electronic Payment Processes

The development of electronic payment media can be seen as the spearhead for broader developments in electronic payment processes and electronic banking. One study estimates that the cost of using electronic payments is approximately one-third the cost of using paper-based transactions. Payment transactions are information transfers that credit and debit accounts in their most basic sense. However, in addition to the credit and debit instructions, the majority of payment transactions involve additional information exchanges. For instance, receipts or invoices are typically delivered as part of paper payment transactions. Numerous experts and industry members accept that the next extraordinary wellspring of significant worth and development in electronic retail installments will come from extending the extension of the data traded in start to finish electronic business-to-business and buyer to-deals.

At present, electronic installment guidelines are typically accompanied by extra exchanges of data, which are finished in the customary paper-based way. For instance, even if a customer pays electronically, the majority of businesses still need to send paper bills to their customers. Instructions for electronic bill payment are frequently sent to a third party, who sends a biller a paper list of the "electronic check information" that must be manually entered into the biller's system. In many instances, a system that combines electronic and paper components may only provide a marginal efficiency boost in comparison to an all-paper environment. Through the elimination of the relatively expensive paper components of transactions, however, incorporating all transaction information into a smooth and effective end-to-end electronic transaction has the potential to generate great efficiencies for both businesses and customers.

Electronic data interchange (EDI) has seen significant growth and investment over the past few years in business-to-business payment systems. At the moment, companies primarily use EDI to electronically transmit purchase orders as well as pertinent shipping and billing information to one another. This makes it possible for information to be automatically fed into the accounting and inventory management systems of each company. Such data exchange allows organizations to diminish working expenses significantly. Financial EDI (FEDI) is the process of integrating payments

with commercial transmission of sales, inventory, and production data. Although financial EDI has been around for two decades, its use has only increased in recent years, doubling between 1995 and 1997, as shown in Figure 5. Due to the high cost of EDI software, only the largest businesses and banks were able to handle EDI transactions up until recently. This present circumstance has been changing as the expenses of EDI-related programming has declined essentially over the most recent quite a while. When the Federal Reserve distributes free software that enables banks to translate EDI payment information later this year, this cost reduction will receive an additional boost at banking institutions.

A company's incentives to become EDI-capable are increasing as a result of the rise in EDI use. One-time set-up costs account for many of the costs associated with becoming EDI-capable. The increased efficiency of information flows makes up for these fixed costs. The more transactions that can be completed using EDI, the greater the efficiency gains and the greater the likelihood that these gains will offset the costs of setting up. This is a model of what financial experts allude to as "network externalities," where the worth of a firm taking on EDI is decidedly connected with the number of different firms that have embraced this innovation

Buyer to-business installment systems

Consumer-to-business installments innovation is another area of fast change in which banks and nonbanks are making significant speculations. Similarly as with EDI, there is a significant plausibility that this market could proceed to grow at a fast speed. Electronic bill payment and electronic bill presentation are the two main components of the "electronic-ification" of consumer-to-business transactions. With electronic bill payment, a customer sends instructions for payment to his bank or a nonbank company that offers bill payment services via phone or computer. At present, the bank or bill installment firm finishes the bill-paying cycle by starting an ACH exchange or by writing a check

Joining electronic charging with electronic installment can substantially increment the accommodation and productivity of consumer-to-deals. Several competing options are vying for acceptance as electronic bill delivery becomes a practical reality. Present-ers"—i.e., companies that provide electronic bill presentation services are creating an electronic version of the bills paid by their clients' businesses. Shoppers could then receive these bills in more than one way. Customers could access electronic bills from each business bank by visiting their billers' websites.

Significant Increases in Technology Spending

Technological innovation has the potential to boost profitability through either an increase in revenues or a decrease in costs. The significantly higher costs that banks incur when conducting customer transactions using paper checks as opposed to electronic means are depicted in Figure 7. For instance, a transaction processed online may cost a bank approximately one cent, whereas a deposit processed over the counter at a branch office may cost nearly one dollar. Advantages may also come from forestalling disintegrations in benefit and market position as banks and nonbanks contend in these emerging markets.

Expanded utilization of innovation in banking and installments is likely to raise shopper security issues too. Concerns about appropriate privacy safeguards arise as a result of technological advancements greatly enhancing the capacity of banks and other financial institutions to collect and use vast amounts of information. Consumers will also want to know how financial institutions intend to resolve disputes in the event of errors or malfunctions, as well as their rights and responsibilities when using new systems and products. Customers' trust in banks is likely to be eroded or destroyed if they fail to effectively address these concerns in the midst of their efforts to adopt new payment and banking technologies.

The Response of Bank Regulators

Bank supervisory authorities have increased their focus on technology-related issues as they have recognized the significant challenges posed by the rapid advancement of technology. The Basel Committee on Banking Supervision, whose members include bank regulators from the G-10 countries, has also recently published a report on risk management for electronic banking activities. In the United States, the OCC and other federal guidance helps banks identify and prioritize risks and suggests possible risk management measures.

II. CONCLUSION

The following are the main findings of our investigation:

Both businesses and consumers have made significant shifts toward electronic payment methods. In some areas of buyer and business electronic compensation methods there are signs that the market may be poised for a fast and significant development of transactions volume in the close to term.

Critical advancement and speculation is under way that could prompt exceptionally quick extension in fully electronic business-to-business and shopper to-business installments in the close to term. Although it is difficult to predict how quickly these markets will change, these innovations will eventually result in significant savings for retail payment systems.

In response to developments in remote banking and electronic payments, banks have significantly increased their investment in technology, particularly in retail banking. Banks hope to see a short-term impact on profitability for some activities. Survey evidence reveals a sense of urgency regarding the adoption of new technology and reflects substantial competitive pressures to act quickly.

Other investments are motivated more by a desire to establish a competitive position or avoid falling behind the competition. Bank regulators are paying a lot of attention to appropriate risk management of new technology. These pressures may increase the likelihood that some banks will rush into technology spending without fully preparing to assess and manage risks.

Banks and banking regulators will need to devote more resources to this growing area of importance. The additions from mechanical progressions in banking and installments are probably going to be significant, both from the point of perspective on individual monetary organizations broad. In this setting, banks must examine and, if necessary, modify their risk management procedures in conjunction with technological advancements.

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