Contactless Payments: The Dawn of a New Payment Era

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INTRODUCTION

Until recently, paying with a contactless device teetered on the horizon. ExxonMobil’s Speedpass program, one of the earliest initiatives in the U.S. (beginning in 1995), caught the attention of many as a fast and convenient way to pay for gas and convenience store purchases. Many financial institutions tested the waters for a contactless transaction system in 2002 through several pilots, and in the last two years, several banks have taken the plunge by offering contactless devices to customers nationwide. Today contactless devices are being issued by banks such as American Express, Bank of America, Chase, Citibank, KeyBank, and Wells Fargo. Worldwide, there are more than 35 million contactless devices bearing the American Express, MasterCard, or Visa brand for use at an estimated 100,000 merchant locations. Without question, interest continues to grow in contactless payments.

BENEFITS OF CONTACTLESS TECHNOLOGY

Contactless solutions open the door to new markets and new interchange opportunities for issuers. The convenience offered by these devices helps increase wallet share, by simplifying credit and debit transactions for consumers. In addition, the technology’s flexibility enables issuers to offer customers value-added features to encourage account use. The benefits of this technology include

- Lack of physical contact between the transponder and reader
- User-friendly transactions
- Reader and transponder durability
- Greater security
- Form factor flexibility
- Convenience

Lack of Physical Contact Between the Transponder and the Reader

Unlike in a magnetic stripe transaction or even a contact-based smart card transaction, the transponder doesn’t need to come in contact with the reader. This minimizes the chance that the reader will be unable to read the card and reduces
terminal maintenance and card reissuance, creating significant savings for both the merchant and the issuing bank.

**User-Friendly Transactions**

With contactless devices, consumers do not need to worry about which way they should swipe their card through a reader—a common point of confusion at the point of sale (POS). Once they have gone through the initial contactless reader learning curve, consumers won’t be confused anymore. To put this in the perspective of today’s environment, magnetic stripe credit cards have been in use for well over 20 years, yet people still ask which way the card should be swiped at the POS.

**Durable Reader and Transponder**

The lack of contact, coupled with the robustness of radio-frequency transmission, affords greater flexibility to the reader’s operating environment. A contactless reader can be placed in environments in which a magnetic stripe reader would have great difficulty operating. A good example is a POS reader at a drive-through business. A contactless reader is far more likely to handle a transaction in wind, rain, snow, or sleet than a magnetic stripe reader would or could in those environments.

**Greater Security**

A contactless device is capable of generating a dynamic cryptogram that can be transmitted to the issuer for authorization. This capability adds a layer of security to the transaction, because it doesn’t need to rely on a static value such as the magnetic stripe. This point is often overlooked when people think of a contactless transaction, but in today’s digital environment, the distinction is worthwhile.

**Form Factor Flexibility**

Suppliers continue to advance this technology and make it more flexible, durable, and compact. Today antenna/chip combinations can accommodate four-line embossing on a standard plastic card. The antenna may also be coiled into a very small package that can fit into noncard form factors such as wristwatches, pens, cell phones, personal digital assistants, and key chains.

**Convenience**

As for the technology, convenience stems from the flexible form factor. It may be more convenient for people to pay with a key chain than with a card in their wallet, which may be in their purse. Convenience may also result from contactless transactions’ user-friendliness and the elimination of the frustration of not knowing how to properly swipe a card.

Aside from the benefits of the technology itself, payment associations and banks are also offering other transaction-related benefits. One such benefit in the U.S. is
“No Signature Required.” For low-cost purchases (often less than US$25), the cardholder’s signature is not required. Eliminating the signature greatly reduces the burden of an electronic transaction and thus shortens the transaction time.

TARGET MARKET
For merchants many of the benefits outlined above translate directly into cost savings. Although a second may seem trivial to many of us, it has great value to fast food restaurants. Former McDonald’s CEO Jack Greenberg has been quoted as saying that for every six seconds saved in a drive-through restaurant, unit sales will jump 1 percent.

Consistent with this example, contactless transactions are ideal today for high-volume, low-ticket markets that have traditionally accepted only cash. Merchant types that operate in this kind of environment include limited-service restaurants, movie theaters, gas stations, convenience stores, and drugstores. In the U.S., the revenue from these target industries exceeded US$1.4 trillion in 2005, with a significant portion paid by cash or check. This alone presents a significant opportunity for contactless systems to compete against traditional forms of payment.

OVERCOMING THE CHALLENGES
This journey has only just begun. Some significant hurdles must still be overcome before mass deployment is successful. Average consumers, not just the tech-savvy ones, must be made comfortable and have their security fears addressed. Merchants must also be convinced of the benefits of accepting contactless payments, particularly if they have recently made the investment to accept magnetic stripe cards. In addition, the proliferation of radio-frequency identification (RFID) technology in other industries is a double-edged sword. The familiarity that accompanies such widespread use will assist some in understanding the basics of contactless transactions but worry others when they improperly compare the two.

Given these hurdles and the recent scars of smart card initiatives, many banks are taking a conservative approach to contactless technology. Many are issuing the devices to select cardholders, whereas others are targeting certain regions in hopes of spurring merchant adoption. This approach has resulted in contactless pockets throughout the U.S. Although the coupling of the magnetic stripe enables these devices to be used anywhere, the contactless feature is largely restricted to fewer than 10 major U.S. cities.

THE OUTLOOK
Today merchants accepting contactless payments account for a small fraction of the money being spent in the prime contactless industries. Widespread deployment and adoption of contactless systems by merchants, banks, and consumers will certainly not happen overnight. We are years away from having this technology become a de facto standard for credit or debit payments. However, we must keep in mind that it
took general-purpose cards more than 15 years to account for more than 5 percent of consumer expenditures. Although contactless technology will inherit a significant boost from the general-purpose card market, because it operates on the same infrastructure, it also faces stiff competition, given market alternatives and hurdles. Ultimately, optimism concerning the future of contactless technology is high, for numerous reasons:

- Contactless devices stand to unlock key markets for issuers seeking new and additional interchange.
- Contactless transactions are truly user-friendly and convenient.
- The cost of RFID technology continues to fall as adoption increases in the world of payments and beyond.
- Alternative form factors will eventually take hold in the payments industry, and contactless systems can bridge the gap between current and future standards, whether it be a smart card or a cell phone.
- The robustness of the technology will be appealing to new markets that are most concerned about convenience and durability in difficult POS environments such as self-service kiosks and drive-thrus.

CONCLUSION

Contactless payments are a growing phenomenon. The supporting technology and form factor flexibility deliver substantial benefits to consumers, merchants, and issuers. Although some challenges remain, there are many compelling advantages propelling the widespread adoption of contactless systems in the near future.