

RFID Changing Buying Behavior

MasterCard says RFID-enabled payment cards are leading to significant changes at the cash register, while a Visa survey finds cell phones are a promising payment form factor.

By Mary Catherine O'Connor

July 21, 2006—In its efforts to promote an increasingly cashless society, MasterCard is finding RFID a helpful tool. The credit card organization says that adding RFID tags to credit and debit MasterCard cards has led to increased usage of its cards over cash. It has also resulted in an increase in the amount of MasterCard transactions at some of the 32,000 retail locations now equipped to read the cards' RFID tags. Sheetz, a convenience-store chain that accepts RFID-enabled card payments, says customers using RFID cards transact their purchases an average of 8 seconds more quickly than those who do not use the cards. Other merchants accepting MasterCard's PayPass include McDonalds, CVS, Ace Hardware and 7-Eleven.

MasterCard compiled transaction data dating back to September 2005 and reviewed information provided by an unnamed PayPass card issuer. MasterCard's internal data indicated its accountholders paid with their MasterCard credit or debit card 18 percent more often once those cards were enabled with PayPass. However, the card issuer's data showed an increase of 45 percent increase in the number of transactions when comparing a three-month period in 2005—prior to the PayPass card distribution—with a three-month period after the cards were sent to cardholders. It also showed that PayPass cardholders became loyal to merchants accepting PayPass. Such cardholders used their MasterCard cards at merchants that accept PayPass 230 percent more often than they did at those same merchants prior to being issued new PayPass-enabled cards. The data also shows that 45 percent of purchases made with PayPass were for transactions valued at less than \$10.

"The findings met—and, in fact, exceeded—our expectations," says Cathleen Conforti, senior vice president and global PayPass product manager for MasterCard. Conforti adds that with so many PayPass transactions being made for small dollar amounts, the report "shows that [accountholders] are using this card where they used to use cash."

According to Conforti, PayPass cardholders are also starting to use their cards to pay for items at RFID-enabled vending machines. MasterCard participated in a pilot program last year with VisaUSA Technologies, a provider of cashless payment terminals for vending machines (see Vending Machines Accept RFID Cards). USA Technologies is now RFID-enabling 1,000 machines that dispense Coca-Cola products in the Philadelphia metro area (see Philly to Get RFID-enabled Vending Machines).

Consumers in some parts of the world can link their credit or debit accounts to RFID tags embedded inside cell phones. This allows them to make purchases by presenting their phones to RFID payment terminals installed at merchant sites. Consumers in Asia have been making payments via RFID-based mobile phone applications for some time, using Sony's proprietary high-frequency (13.56 MHz) FeliCa tag. Now, Philips Semiconductor, Sony and cell phone maker Nokia are partnering to standardize the FeliCa system, which is being used to make payments through cell phones or other mobile devices. They are also adding the capability to use the devices for data collection—essentially, enabling them to act as RFID interrogators. This technology, called near field communications (NFC), is still emerging, and NFC-enabled phones are not

widely available in many parts of the world. Still, a number of technology trials in Europe are showing that consumers are interested in using phones for payments.

At present, Nokia sells an NFC-enabled phone, but it uses GSM technology, which is not widely supported in North America. Once phone makers begin adding NFC capability to phones sold and supported widely in the United States, U.S. consumers will begin using them for payments as well, according to the results of a survey conducted in June by Visa USA. The company asked a group of 800 consumers at least 18 years of age—all mobile phone users, and all credit and/or debit cardholders—questions to gauge their interest in using their phones for more than just person-to-person communication. The survey showed that respondents have a strong interest in using their mobile phones to conduct transactions such as payments, which would be enabled by RFID tags embedded in or attached to the phones.

Sixty-one percent of respondents between 25 and 34 years of age said they are interested in making purchases with their mobile phones. On average, respondents reported being twice as likely to carry their mobile phone than to carry cash, but respondents ages 18 to 34 said they were four times more likely. More than half of the respondents between 18 and 44 said they worry about not having enough cash on hand to make small purchases, while more than half of all those surveyed would like more electronic payment options so they wouldn't need to carry cash. In addition, half said they'd like to send money to a friend via their mobile phone.

Copyright ©2005 RFID Journal, Inc. All Rights Reserved