

FUTURE OF MONEY

This month's feature concludes a two-part series on currency. This month focuses on the future of plastic as well as micro payments.

Read about the evolving form of paper currency in the January, 2006 issue.



Zip Zap Blink

Bank cards, contactless gadgets aiming for tiny everyday cash-and-coin payments

Mark Friedman has a payments dream. He pictures the day when he can hop on the Massachusetts Pike on his way to a meeting in Boston and not stop to pay the \$2 toll. The same device would save him from digging for quarters in the backseat of his car by electronically paying the parking meter, shorten the time to pay for a cup of coffee and a scone at a café, and let him buy a candy bar from a vending machine.

That day may not be far off, according to Friedman, president and CEO of Peppercoin, a Waltham, Mass., company that develops technology to facilitate small payments. Advances in technology, including contactless technologies and micropayments, and shifting consumer preferences are changing the look and use of credit, debit and stored-value cards.

From the days of metal tags and embossers to today's plastic cards with magnetic stripes, payment cards have offered convenience, flexibility and consumer rewards capabilities that have dramatically changed the way Americans make payments—and will continue to do so in the future.



Wallet cards are clearly outstripping cash and checks when it comes to making purchases. Americans charged an estimated \$2.7 trillion in 2005, about 13 percent more than the year before. Of that total, \$1.9 trillion was credit card charges and approximately \$800 billion was debit card charges, according to CardData. Just 45 percent of consumers' monthly payments were made with cash or checks, down from 57 percent in 2001, according to a Dove Consulting study.

Much of that growth is in debit and prepaid cards. One-third of in-store purchases are made via debit card, compared with 21 percent six years ago. Meanwhile, 32 percent of consumers report using gift or prepaid cards to make at least one purchase per month. In 2003, just 12 percent did so.

"We see enormous growth in consumer interest in accessing ready funds" (funds consumers have on hand), explains Niki Manby, vice president of market and technology innovation for Visa USA. "Consumers want [direct] access to those funds ... whether it's putting it into a prepaid account or using a check card."

Speed is Sacred

Consumer desire for immediacy and convenience is the driving force behind the evolution in card payments. With less free time and even less patience, consumers want to get in and out of checkout lines as quickly as possible.

How concerned are they with the speed? While credit transactions take about 30 seconds to complete and debit transactions, 26 seconds, check payments take about 75 seconds. In a Visa USA/National Markets Measures poll, 49 percent of consumers surveyed reported feelings of frustration when stuck behind someone paying by check. Another 40 percent moved to another line and 11 percent said they left the store without purchasing anything.

This in and out focus held by consumers is a big reason for the push by major card issuers to develop contactless cards—cards that need only be waved at a device, rather than swiped to initiate a transaction. As expected, these transactions are even faster.

A contactless transaction can shave 12 to 18 seconds from transaction times. They averaged about

12.5 seconds in a recent pilot at drugstore chain CVS in Phoenix. The company was so pleased it implemented 40,000 contactless payment terminals throughout its chain of 5,400 stores in 2005.

Contactless payments have been available in some arenas for years—most notably transportation. Drivers along the East coast have E-Z Pass, a transponder that automatically deducts tolls from a driver's prepaid account when passing through a toll both. And mass transit riders in Washington, D.C., can wave a prepaid SmartTrip pass over a touch pad to ride the subway or buses. Recently, Citigroup has taken the SmartTrip card to the next level, testing a combined stored-value card for transit fares with a regular magnetic stripe card that can be used for other purchases.

Most cards available today, however, are focused strictly on payments, unlike unsuccessful smart cards of the past, and combine radio frequency identification tags (RFID) with magnetic stripes. J.P. Morgan Chase & Co. in conjunction with Visa and MasterCard International and American Express have all developed cards and have agreed upon one contactless standard, making it easier for merchants to accept the cards. Merchants simply add a contactless reader, in addition to their magnetic stripe reader, and use the existing card processing network.

Security is said to be tighter than traditional cards since data from the chip cannot be skimmed, or copied, as can happen with a magnetic stripe. Such cards needn't even technically be cards. Keychain fobs and electronic devices have already been implemented in the United States and abroad.

"Contactless cards deliver even further than magnetic payments because the consumer and cashier needn't exchange cards," says Manby. "The cashier can multi-task and the line moves faster."

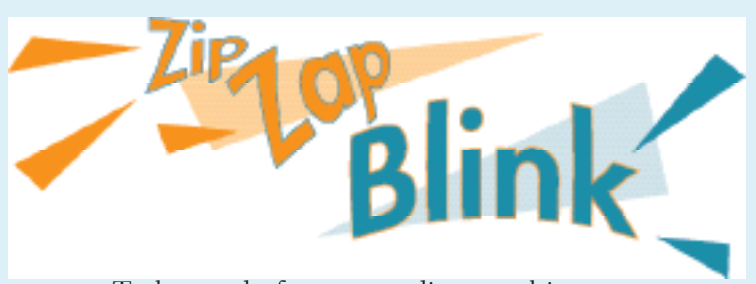
Micropayment Possibilities

Advances in contactless technology and demand for greater speed and convenience are creating opportunities for cards to be used for untraditional, smaller payments previously cornered by cash and coin currency.

Once the domain of large-ticket purchases, credit and debit cards are now commonly used to pay for

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—Niki Manby, Visa USA



the smallest purchases from a hamburger at a fast food restaurant to a pack of gum at the pharmacy. These small payments, or micropayments, were originally imagined within the online world as payments for music and gaming. In 2005, nearly 20 million Americans reported purchasing something online for less than \$2, up nearly 350 percent from 2003. Yet micropayments haven't been limited to digital content.

"We're seeing a very high propensity for the consumer, instead of using cash, to use an electronic form of payment for even the smallest payments in the real world," says Freedman.

It has also become a lucrative field. The cell phone ring-tone market brings in nearly \$1 billion annually, yet that sum pales in comparison to \$1.3 trillion in physical point-of-sale transactions at convenience stores, quick serve restaurants and other places that have begun accepting payment cards for all transactions. Not only does it offer the customer the convenience of not having to carry cash, but vendors benefit, too. In quick-service restaurants, customers who pay by card spend 30 to 80 percent more than the average cash sale, according to MasterCard.

It's a phenomenon that isn't likely to disappear. An estimated 45 million Americans are willing to use credit or debit cards for purchases of \$5 or less, according to recent survey by Peppercoin and Ipsos Insight. The most common categories in which they'd be willing to use their cards: convenience stores, fast-food restaurants or cafeterias, transportation, coffee/beverages and parking. Other possibilities include movie theaters and gas stations.

With so many people willing to use their cards on the smallest of purchases, the field is ripe for products that enable consumers to make payments quickly and easily, especially as the increased number of transactions increases card revenue.

E-payments Go Global

In Japan and several other countries, the wallet phone is catching on as a way to make small payments since its introduction in early 2004. Each phone is embedded with a computer chip that can be loaded with up to 50,000 yen (about \$450). Payments are made by waving the chip-enabled cell phone near a special payments pad. The money is automatically debited and the account balance is displayed on the phone's exterior

screen. To buy soda from a vending machine, users need only push the electronic payment button, choose a drink and then hold up their phones. Clerks at a store can do the same when ringing up a bill. The devices are accepted at 25,000 retailers.

It's a technology that makes sense in Japan where two-thirds of the population owns a cell phone and one large company has a near-monopoly on the cell phone market. While U.S. companies such as Motorola and MasterCard International have pilot tested payment-enabled phones and others explore the possibility, development of the technology has been hindered by disagreements over how to divide the costs and revenue among banks, phone companies and credit card issuers, according to an investigation by *American Banker*. Complicating matters is the fact that one cell phone could theoretically hold several credit cards, just like a wallet.

Many believe payment-enabled cell phones are inevitable as the number of consumer electronic devices such as cell phones and iPods continue to rise. But first, acceptance of contactless payments needs to reach a critical mass. Widespread acceptance will also be a critical point for community banks, which may need to offer contactless cards in the future to remain competitive in the payment card market.

Battle for Wallet Share

Despite consolidation in the banking industry, evidence suggests competition for wallet share will only increase in the future as companies outside the financial services arena look to woo customers or save money with their own payment offerings. For instance, since 2003 grocery chain Safeway has allowed customers in some markets to link checking accounts to Safeway Club loyalty cards. The customer's account is debited through an automated clearing house transaction, saving the store money on processing fees and saving time for the customer who doesn't need to pull out another card, cash or a checkbook.

Meanwhile, Wal-Mart Stores Inc. is also looking to ACH transactions to save money (see related story on page, 116). The company recently signed on to accept cards issued by Debitman, a debit network that initially uses the retailer's processor, but then uses ACH transactions to debit customer's accounts and remit payment to the retailer. While Debitman cards number in the tens of thousands instead of tens of millions,

acceptance by popular retailers can only benefit the fledgling network.

“The distinction between traditional card payment networks and ACH transactions is going to be blurry to the consumer going forward,” predicts Viveca Ware, ICBA’s director of payments policy. “There will be more initiatives looking at the ACH network for settling transactions.

As competition expands, so will card reward programs, predicts Manby of Visa. “The rewards programs that we’ve seen will continue to evolve to things like real-time rewards at the point of sale,” she says. “Imagine being at a coffee shop and because you’re using a co-branded card with Visa at that coffee shop you get upgraded from a medium to a large.”

And what of Friedman’s dream of the all-in-one device? It’s a possibility for some consumers, but unlikely to become the norm, according to experts. While a variety of payment cards—many that won’t even look like traditional cards—will become available over the next few years, consumers with different needs are expected to adopt products that best fit their lifestyles or business needs. Solutions will have to appeal to a wide range of people. One size won’t fit all, Manby says.

“People get this idea that one form of payment type will overcome the rest, but there are reasons different forms exist,” explains Linda Elliott, a partner with financial services consulting firm, Glenbrook Partners. “They do well in different environments. How I use my debit card is different from a large corporation with a credit card.”

Looking forward, the

world of plastic payments will be filled with innovation. With more ideas, more opportunities and more competition, some consumers will continue to expand the panoply of cards they hold while others will abandon leather wallets for digital ones: Just so long as it’s convenient. **ib**

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