March 27, 2014, 9:18 a.m. EDT

Stories You Might Like

Don’t bank on high-tech credit cards

- Why you should care about the yield curve
- The bill for home-equity lines is coming due
- Tesla strikes deal with Ohio auto dealers

Shutterstock.com

The credit card of the future for many Americans will look a lot like the credit card of 2006 for most Europeans.

The major players in the payments industry are moving to implement chip-and-pin cards that store data on a microchip, which much of the world has been using for nearly a decade. The U.S. — home to half the world’s card fraud though it only accounts for about a quarter of its transactions — will likely be the last developed country to take on the technology called EMV, which stands for Europay, MasterCard MA -0.44% and Visa V -0.16% , the companies that began developing it in 1994 – and that’s if the country meets its October 2015 goal. Analysts say this means high-tech innovations other companies are proposing, like cards with built-in keypads or disappearing digits, may have to wait.

"Since EMV chip cards are nearly impossible to counterfeit, they eliminate one of the most important incentives for criminals to steal payment data today — their ability to use the data to create counterfeit cards," Visa Chief Enterprise Risk Officer Ellen Richey told a Senate committee Wednesday at a hearing on the recent data breaches at Target and Neiman Marcus. "As such, EMV chip makes payment data a less attractive target for criminals."

In the United Kingdom, credit card fraud diminished by 47% from 2004 to 2010, after the system was adopted in 2002, according to a Federal Reserve Bank of Atlanta report.

Chip-and-pin cards are more expensive to produce than magnetic stripes, said Nick Holland, senior payments analyst at Javelin Strategy & Research. They hover close to $1 compared with 20 to 30 cents for traditional cards, not counting additional costs for processes like authorization.

Given the slow pace of adoption in the U.S., the more ambitious card-tech ideas may not go mainstream anytime soon. The "Hidden" card, by Pennsylvania-based Dynamics, Inc., for instance, hides six digits of the card number on a blank screen until users enter a password. For every transaction, it generates a new three-digit security code, as well as the key encrypted into the magnetic stripe. Altering the permutations for every transaction means a thief can't use the last permutation to make a purchase, Dynamics CEO Jeff Mullen said.

"This is a global fix to credit-card fraud," Mullen said. "Consumers will sign up for these types of products and will actually switch banks to get the security and the value."

Another innovative idea is Coin, a black, digital screen that stores all your existing cards' information into one device. These cards are also attempting to "ring even more efficiencies out of the status quo," given that the U.S. should've started using EMV decades ago, says David Robertson, publisher of the payments industry newsletter The Nilson Report.

But will banks and merchants embrace these cards? "Ten years from now, we're all going to still have plastic cards, let's be clear about that," Robertson said.

Here's why: Such higher-tech cards cost much more than chip-and-pin and magnetic stripe cards, a factor that deters banks and payment giants from producing them for the masses, experts say. "If the entire payments industry is moving to chip cards next year, which it is, these will be obsolete in a year," Holland said. "They're technologically very interesting, but that doesn't really make them mass-market adoptable."

As companies invest more in each EMV card, they're also extending the card's life span from the average two or three years until expiration to about five years to save the cost of issuing new cards, Holland said. Plus, he said, cards that ask consumers to alter their behavior — by adding an additional passcode, for example — have difficulty gaining traction.

He said geolocation features that sync credit cards with smartphones to make sure they're in the same place during a transaction have more hope of taking off, because while they add an extra layer of protection they don't ask consumers to change their behavior. People already carry their smartphones.

More by Priya Anand:

IRS: Conmen posed as taxmen in $1 million scam

How some workers abuse overtime

Who still uses paper checks? Crooks

ADD TO WATCHLIST MA

MasterCard Inc. Cl A

US : U.S.: NYSE

$ **73.39**

-0.33 -0.44%

Volume: 3.99M

March 27, 2014 12:33p

P/E Ratio

28.37

Dividend Yield

0.60%

Market Cap

$87.46 billion

Rev. per Employee

$1.02M

ADD TO WATCHLIST V

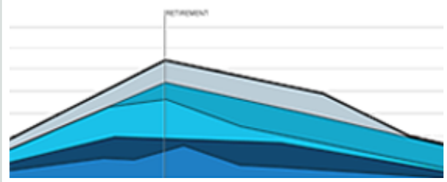
VISA Inc. Cl A

US : U.S.: NYSE

$ **215.33**

Retirement Planner

Are you on track?



Current Age 40

Current Salary $ 100000

Annual Savings 10%

Total Assets $ 0

Calculate

What's This?

Rates »

MORTGAGE EQUITY SAVINGS AUTO CREDIT CARDS

5 yr CD	1.4%
2 yr CD	0.8%
1 yr CD	0.6%
MMA $10K+	0.4%
MMA $50K+	0.6%
MMA Savings	0.4%
MMA Savings Jumbo	0.5%

National averages from Bankrate.com

Breaking Insight

DARRELL DELAMAIDE'S POLITICAL CAPITAL

Is Hillary Clinton liberal enough?

THE TECHNICAL INDICATOR

Charting a garden-variety market pullback

Time to invest in the death of Net neutrality

CHUCK JAFFE

The only thing investors should care about