



## Learn the ABCs of the EMVs with This Q&A and FAQ

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Beginning October 1, 2015, the major card networks began a shift of financial responsibility for losses from certain types of card fraud to the party using the least secure technology. This shift in responsibility provides an incentive for merchants to modify their point-of-sale (POS) devices to read EMV, or chip, cards. But what does the shift mean to consumers? Doug King, payment risk expert with the Atlanta Fed's Retail Payments Risk Forum, talked with *Economy Matters* editor Nancy Condon about consumers and the new EMV cards.

**NC:** Does the industry expect to see a drop in fraud with the chip cards, at least as far as counterfeiting?

**DK:** I think the counterfeit fraud rates will come down, especially at brick-and-mortar stores.



Doug King (photographed by Odie Swanegan)

**NC:** So the cards are harder to counterfeit, but what about online shopping?

**DK:** There are still areas where the chip card will be vulnerable, but by moving to the EMV card, the chance of someone stealing your card data and using that data to buy a big-screen TV is greatly reduced.

But the industry is aware and is working on additional security measures for card-not-present fraud. For example, I've recently

seen some really interesting technology that could be deployed to mitigate this fraud. Say you're shopping online. When you type in your card number and expiration date, there are programs being developed out there that will be able to recognize your pattern of how you type your card. If someone else types in that information, the program will notice it didn't match the pattern, and the merchant or issuer could choose to reject the transaction. There are also a lot of additional variables that are already available to monitor behavior, as well as other heuristic data that can be used to minimize fraud. For example, if your card were used to buy gas in Georgia, then three minutes later it's used to buy a computer in California, the issuer would more than likely reject the second transaction and notify you of possible fraud.

**NC:** *The new cards have the chip coexisting with the magnetic strip. Wasn't it the magnetic strip that made cards relatively easy to counterfeit? Does the chip bring any advantage at all when it comes to reducing card fraud when it's there with the magnetic strip?*

**DK:** They [cards with both chips and magnetic strips] are issued because consumers and merchants can always fall back to the mag strip, but it's coded so that it's harder to counterfeit. And if you try to swipe your chip card, and the reader accepts a chip, it'll tell the consumer to dip the card. There's an item coded on the mag strip that says, "This card is a chip card," which is read when it's swiped. But say the chip transaction doesn't go through. Then the merchant might say, "Swipe your card," and the machine would read the mag strip. But the chip is still there and still works to prevent counterfeiting.

And a lot of merchants don't have the capability to accept chips. If your dry cleaner doesn't have a chip terminal, and your issuer sent you a chip-only card—which doesn't exist, by the way—you couldn't use that card at the dry cleaner. But over time, the goal is to phase out the mag strip and eventually have chip-only cards.

**NC:** *Many of the merchants I've been to don't have the new card machines yet. Are they farther behind than the issuers?*

**DK:** I would say that the merchants are farther behind. So there's going to be more EMV cards in place than merchants with terminals that are able to accept them.

**NC:** *For smaller companies, is the shift a big financial burden?*

**DK:** For a small mom and pop that has one or two terminals, they're generally renting those terminals. They don't own them. It might be a couple of dollars added cost a month. The big expense was to the very large companies, and the medium-size businesses that have specialized POSs, reporting net worth requirements, etc. What we're seeing and hearing, it's those medium-size businesses that are actually the ones who are farther behind in transitioning to EMV than your large retailers.

**NC:** *How are consumers learning the whys and hows of their chip cards? Who is doing the educating?*

**DK:** I think the education efforts could have been a little better, but the industry has kind of agreed that the education is going to occur at the time the consumer receives the card and when the consumer uses the card at the POS. For someone using the card at the POS, that education falls to the merchant, which could be a 17-year-old high school student who's working evenings at a cash register.

**NC:** *Or at a self-checkout.*

**DK:** So there's nobody there. When you receive your card, that's the opportunity for the issuer to educate. All the EMV cards I received—and all of my cards are now EMV—have come with material in the envelope saying this is a chip card, and how the chip card is used. But how many people actually read that? So education really is going to come at the time you're using your card, through trial and error.

The thing is that a lot of the terminals we use today are interactive. We might not think that because we just swipe our cards, and it's second nature. But when you swipe your card, it'll ask you to enter a PIN. It will ask you, is it credit or debit? Do you want cash back? And so a lot of those terminals are set up to walk the individual through the process of using the EMV card. For instance, if you swipe your card and the terminal is capable of an EMV transaction, it'll say, "Dip your card (or insert your card) into the reader." Then when you insert your card, it'll say, "Leave your card in the reader." Then it'll beep or tell you when you can remove your card. So it'll walk you through the process.

I'd liken the early part of using the EMV card to riding a bike. Riding a bike doesn't come with a manual. You maybe watch someone, or your parents will tell you what to do, but until you actually get on and do it, it's a little tough still. By the third or fourth time, it's second nature. So I think that's going to be the same with the EMV.



**Nancy Condon**  
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