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## Systems

By STACY COWLEY SEPT. 23, 2015

LEE PADGETT, the owner of **Busted**, a lingerie shop in Detroit, has spent the last two weeks wrestling with three different payment software systems and a pile of new hardware. She is determined that by Oct. 1, her store will be one of the first in the area to begin moving from the familiar swiping technology for processing credit and debit cards to the chip-card system that card networks are pressing retailers to adopt.

The process of getting there, though, has been time-consuming, expensive and messy — and like many small-business owners, she is not entirely sure what she stands to gain from it.

Ms. Padgett's target date for adding the new payment system isn't arbitrary. It's the deadline set by Visa, MasterCard, American Express and other major card networks for a years-in-the-making liability shift aimed at prodding American merchants into finally adopting a more secure payment technology that is ubiquitous in Europe and Canada but still rare in the United States. Starting next month, retailers that haven't upgraded their payment systems to read E.M.V. microchips — the small, metallic rectangles that are increasingly prevalent on the front of American charge cards — will bear the financial liability for some fraudulent charges. (Gas stations have an extra two years to make the switch for charges from their fuel pumps.) E.M.V. stands for Europay, MasterCard and Visa, the companies that created the standard in the mid-1990s.

The new technology is a significant change from the current system, under which card issuers absorb most of the losses for in-person transactions made with counterfeit or stolen cards. Banks and merchants lost an estimated **\$16.3 billion** last year globally on fraudulent transactions, and America has been their biggest problem spot. The country accounts for nearly half of the global losses, despite generating only 21 percent of the worldwide transaction volume, according to the Nilson Report, an industry researcher.

Visa drew a line in the sand four years ago: American merchants would have until October 2015 to update their systems or absorb the losses themselves. Other major card networks quickly adopted the same deadline.

Just days before the deadline, few merchants are ready.

A handful of national retailers — most prominently, Walmart and Target — have invested in E.M.V.-ready terminals and spoken publicly about the switch, but many others have stayed silent. Around 27 percent of American merchants will be ready to process E.M.V. cards next month, according to a survey conducted this month by the Strawhecker Group, a consulting firm for the payments industry.

For small sellers, the readiness rate is even lower. Banks and industry groups estimate that one in five will have their new systems running by Oct. 1. Both systems will continue to be available during a lengthy transition period.

The upgrade is not inexpensive. The hardware that merchants need to accept E.M.V. cards generally costs \$100 to \$600 a terminal, and software upgrades and other necessary add-ons can easily raise the price for even a small

shop to four or five figures.

In addition, employees and customers have to be trained to use the unfamiliar, and slower, technology. Tom England, the co-owner of **Dancing Bear**, a toy store in Frederick, Md., that added the new technology a few months ago, estimates that reading a chip card takes five to 10 seconds longer than reading the familiar magnetic strip.

“It adds up quickly when you have customers waiting in line,” he said.

For merchants, the October deadline presents a choice: Which is more cost-effective, spending money to upgrade or covering the losses if a customer goes shopping with a stolen or counterfeit card?

The choice isn't clear-cut. While some retail categories are prone to fraud — jewelry and electronics are two of them — others rarely encounter it. Ms. Padgett can't remember having a single bad charge in the two years her shop has been open.

Still, she would rather avoid any preventable business risk. When she heard about the E.M.V. deadline, she set out to comply.

Faced with having to buy new hardware, Ms. Padgett decided to use the opportunity to replace her store's sales system with one that can better handle her complex inventory. This week, she is running transactions through her old software while installing and setting up the new one, Intuit's iPad-based **QuickBooks Point of Sale**.

She also bought a new E.M.V.-compatible reader for her backup system, **Square**, which she uses as a second checkout terminal when her shop is busy. Factoring in discounts from Intuit and Square — like many small vendors that focus on businesses, they have offered incentives to spur E.M.V. adoption — the upgrades cost her around \$1,400.

E.M.V. cards are considered more secure than magnetic strip cards because the chip creates a unique code, validated by the issuing bank, for each transaction, making the cards much harder to copy. While the design of the new equipment varies, it requires a device with a chip reader, rather than the slot used to swipe a card with a magnetic strip.

Adding the new equipment has taken longer than Ms. Padgett expected. “This is just such a more complicated system,” she said of her new Intuit software. “I didn't realize how much more complicated it would be when I got started.”

Ms. Padgett is working late nights to configure her new system and scheduling morning training sessions with her staff to learn how to process chip checkout transactions. She is excited about the efficiencies her new software will bring but uncertain about whether the chip technology will really make her business, and her customers, any more secure.

Some of those who chose to upgrade are less than thrilled about it. “I think it's ridiculous that the merchants should be liable,” said Bianca Piccillo, the co-owner of **Mermaid's Garden**, a seafood shop in Brooklyn. Still, she went ahead and ordered a new card reader from Square.

Others would like to update their systems, but their vendors aren't ready yet. Tran Wills, who owns a **nail salon** in Denver, is waiting for her payment processors to become E.M.V.-compliant. That is a common problem: In the Strawhecker Group's recent industry survey, 68 percent of respondents cited processor readiness as a significant barrier to adoption of the new system.

Isaac Levy, the manager of **G&I Wine and Spirits** in Brooklyn, uses a specialized point-of-sale system customized for liquor retailers. Fraud is an issue for everyone in his industry, he acknowledged, but until his

provider adds E.M.V. capabilities, he is stuck.

But he said he was not overly worried about it. After 30 years of running jewelry stores and other businesses in the neighborhood, he is familiar with what counterfeit cards tend to look like — and with what transactions raise red flags. “They go for big bottles of the Hennessy, the Patrón,” he said.

Many neighborhood shops will be relying on that kind of old-fashioned fraud prevention technology for months — or years — to come. A Wells Fargo survey of small-business owners conducted in July found that nearly 70 percent still were not aware of the E.M.V. deadline. Among those who were, 21 percent said they did not plan to make the switch. The cost of upgrading was one of the main reasons cited, and many said they were not concerned about being liable for fraudulent charges.

For retailers that deal in low-risk goods and services, holding off can be a perfectly sound business choice.

“It’s not the end of the world if you’re a merchant and you’re not upgraded by Oct. 1. It’s an economic choice,” said Jared Drieling, an executive with the Strawhecker Group. “It’s going to take years for total E.M.V. migration to take place.”

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