Statement of

Stephanie Ericksen

Vice President, Risk Products

Visa Inc.

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Transition to EMV Chip

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Chairman Chabot, Ranking Member Velazquez and Members of the Committee, my name is Stephanie Ericksen and I am Vice President of Risk Products at Visa Inc. Thank you for the invitation to appear before the House Committee on Small Business to discuss Visa's ongoing efforts to help transition the US to EMV chip technology and what this means for small businesses.

For more than 50 years, Visa has enabled people, businesses and governments to make and receive payments across the globe. As a global payments technology company, we connect financial institutions, merchants and governments around the world with credit, debit and prepaid products. Visa works behind the scenes to enable tens of millions of daily transactions, powered by our core processing network – VisaNet. We make digital commerce more convenient, reliable and secure. It's important to note that Visa does not issue credit or debit cards or set the rates and fees on those products – our financial partners do.

Data breaches in recent years have highlighted that no business or industry is exempt from cyber threats, and, everyone – from consumers and small businesses to corporations and governments – are the targets. In today's connected world, it is critical that all those in the payments system – payment networks, merchants, and financial institutions – work together to protect sensitive information and continue to drive advancements in security. At Visa, nothing is more important than maintaining trust in the payment system and we continue to place security at the forefront of everything we do.

Given the current cyber threats, especially those that merchants face, we need to move the payments industry away from static account information that can be stolen and used for fraud, to smarter technologies that make stolen account information useless to criminals. Chip is an important part of this fundamental change in the payments system, and we're committed to helping consumers and businesses make the shift.

EMV Chip Technology

This morning, I look forward to sharing with the Committee Visa's efforts to encourage the adoption of EMV chip technology in the U.S., as well as our work to educate and empower small businesses during this important transition period. For those who are unfamiliar with chip cards, or smart cards as they are often called, let me provide an overview of what they are, how they work and how we got to where we are today.

An EMV chip is a microprocessor that is embedded in a payment card or in other form factors such as a mobile phone. When a consumer uses a chip card at a chip terminal, a unique, one-time-use code, or 'cryptogram' is generated for each transaction. This type of authentication, which introduces dynamic values for each transaction, adds a substantial layer of safety. Chip cards effectively prevent counterfeit fraud, virtually eliminating one of the common ways criminals use stolen payment data. Since chip technology makes it essentially impossible to counterfeit cards, which is approximately two-thirds of the fraud that occurs in stores today, merchants will be less attractive targets for criminals.

Chip technology is also the basis for future payments innovation because it enables technologies like near field communications (NFC) technology and tokenization. When small business owners upgrade to chip-enabled terminals, they aren't just investing in payment and data security. They are also positioning themselves to accept the next generation of secure payment technologies, such as mobile and digital payments.

The payments system in the US is larger and more complex than any other in the world, with thousands of financial institutions and millions of businesses accepting electronic payments. In August 2011, Visa announced a roadmap to transition the US to chip technology through a set of milestones intended to encourage both issuers and merchants to adopt the chip technology. Visa's EMV chip roadmap is not a mandate. Instead, it provides marketplace incentives to encourage adoption by financial institutions and merchants – elements that have proven to be effective in moving other markets to deploy chip technology and thereby drastically reduce counterfeit fraud.

As part of the incentive program, Visa rules specify that, as of October 1, 2015, liability protection from counterfeit fraud on in-store payments is extended to the party that makes the investment in chip technology. The party that has not implemented chip technology, be it a bank that chooses not to issue a chip card or merchant that cannot accept a chip card, may bear the loss from any resulting counterfeit fraud. This shift applies to in-store, point-of-sale environments. Due to the complexities and life cycles of Automated Fuel Dispensers (AFDs) and ATMs, their liability shift will take effect October 1, 2017.

Education of Small Businesses a Top Priority

Throughout the ongoing transition to chip, Visa has dedicated significant resources to raising awareness and providing small businesses with the tools and information they need to adopt chip technology. In March, Visa launched our 20-City Small Business Chip Education Road Show to help business owners understand the value of chip card technology and to increase chip card acceptance. To date, we've traveled to 16 cities including Cincinnati, Charlotte, San Francisco, Boston, Houston, Miami, New York, Albuquerque, and Denver – to name a few. More than 1,000 small businesses owners have turned out to learn about chip technology from experts in payment security. To amplify our efforts, we are working closely with other partners, organizations and clients that provide critical resources to small businesses, including the Small Business Administration, America's Small Business Development centers, Facebook, the National Federation of Independent Business, and local chambers of commerce across the country.

Our efforts to educate small business owners does not stop there. On top of our dedicated chip education website – www.visachip.com – which contains specific information for all of our stakeholders, we also created an online toolkit specifically for the small business community (www.visachip.com/businesstoolkit). With easy-to-use navigation, small business owners can quickly access actionable information about chip technology including a step-by-step guide to adopting chip, videos, and infographics at their convenience.

A key success factor in the transition to chip technology is ensuring a seamless checkout experience. To address this, our toolkit provides employers with a training module to ensure their employees know and understand how to use chip technology; it includes decals to place at the point-of-sale alerting customers that they accept chip cards, as well as instructions on how to complete a transaction with a chip card. Visa is making all of these materials available free of charge to merchants.

We have also focused on addressing the most significant barrier to adoption small business owners face: cost. Visa has worked with the terminal providers to make transitioning to chip technology more easily accessible, especially to smaller merchants. Low-cost chip terminal options are available for less than $100 and, in many cases, the terminal is included in the cost of the service. For example, Square, a leading merchant processing services provider, recently announced a new $49 card reader that accepts EMV chip cards and Apple Pay. Square is giving away 250,000 of them for free to small business customers and will also take on the risk of counterfeit fraud after October 1 if the merchant pre-ordered a device.

And, this is just one example. Other terminal providers like Chase, Bank of America Merchant Services, and VeriFone, to name a few have several low-cost options available to small business owners that bring that help prepare them for the future of accepting all payment forms including chip cards and mobile payments.

We know that our efforts to educate and facilitate the small business community are gaining traction. In fact, in August 2015, nearly 50 percent of the nearly 4 billion dollars in Visa chip transaction volume occurred at small businesses.

Chip Adoption Gaining Momentum

While we want to encourage a speedy migration to chip technology to improve the security of payments everywhere, we know that some businesses may take more time to upgrade. Owners of small businesses that do not experience significant loss from counterfeit fraud, such as dry cleaners, restaurants, or hair salons, may decide to upgrade to chip as part of their normal terminal replacement cycle. The roadmap was designed with this type of flexibility in mind, allowing businesses to make the transition on a timetable that meets their needs. Some merchants, for example, were ready this summer ahead of the liability shift, while others in the coming months.

In other words, October 1 marked the beginning of a process that will ultimately lead to near-universal adoption of chip technology in the US. With the milestones achieved to date, the US is well-positioned to adopt the next level of payment security for consumers, businesses, and financial institutions.

Where are we today?

Over the past twelve months we have seen significant progress. Today, there are more than150 million Visa chip cards in circulation in the US, an increase of over 655 percent in the last year alone. That number eclipses the roughly 129 million Visa chip cards in Brazil and 124 million Visa chip cards in the United Kingdom, making the US the largest chip market in the world.

Retailers, and particularly small businesses, are making great strides in implementing chip technology. As of September 15, chip-enabled devices are in use at more than 314,000 merchant locations, representing a 470 percent year-over-year

increase. We are strongly encouraged by the number of small businesses that are already using this technology and look forward to continuing to encourage their adoption of chip.

Tokenization

While EMV technology eliminates in-store counterfeit card fraud, it does not prevent all types of fraud – particularly fraud that occurs online in the e-commerce environment. To mitigate the growing risk of e-commerce fraud, Visa developed tokenization.

Tokenization, which removes the account number from the payment process completely, is one of the most promising technologies for fighting fraud. Tokenization replaces the accountholder's 16-digit account number in a payment transaction with a unique digital "token" or proxy number that is tied to the underlying account. Tokenization can enhance transaction efficiency, improve cardholder privacy and data security, and may enable new types or methods of payment. When fully deployed, tokenization in combination with chip, could virtually eliminate the need for merchants, digital wallet operators or others to use cardholder account numbers.

Cardholder Verification Technologies

Mobile payment applications such as Apple Pay, Android Pay, and Samsung Pay each offer enhanced security to consumers and merchants by using tokenization solutions to prevent the underlying card number from being comprised. And, as some of you may know from personal experience, many of the new mobile payment devices and applications use biometrics to verify your identity – like a thumbprint – before you can

complete a transaction. At Visa, we believe this type of dynamic authentication is the future.

Today, with expertise gained from years working with merchants and issuing banks, Visa supports a variety of cardholder verification methods, including signature, PIN, and no cardholder verification for low value, low risk transactions. However, we see dynamic, or one-time use, verification technologies as the way forward. Just as the information technology industry is looking to replace the static password with more dynamic technologies, the payments industry must also replace static technologies in the payments ecosystem with more effective protections. I want to share a few of these future technologies with you, some of which are exist today.

In February, Visa launched a new opt-in service that uses mobile geo-location information to more reliably predict whether it is the account holder or an unauthorized user making a payment with a Visa account. By matching the location of the cardholder through a cell phone or other mobile device to the location of the purchase, this service helps improve fraud detection and identify unauthorized transactions.

In addition, Visa introduced a new specification just last month to use biometrics with chip card transactions. The specification can enable fingerprint, palm, voice, iris, or facial biometrics in the authorization of payments. This first-of-its-kind technology framework is designed to work with the EMV chip industry standard to help ensure open, globally interoperable solutions for payment security. This product addresses increasing demand for biometrics as a more convenient and secure alternative to signatures or PINs, especially as biometrics technologies become more reliable and

available. The architecture Visa has designed enables fingerprints to be securely accepted by a biometric reader, encrypted, and then validated. The specification supports “match-on-card” authentication where the biometric is validated by the EMV chip card and never exposed or stored in any central databases. Issuers can optionally validate the biometric data within their secure systems for transactions occurring in their own environments, such as their own ATMs. This innovative technology is just rolling out, but has great promise for protecting consumers in years to come.

Conclusion

We have come a long way in the past year as the US transitions to EMV chip technology, but, we must continue to work together to achieve the necessary progress to protect all stakeholders in the payments space, including small businesses. Visa is committed to continuing our work to drive innovation and ensure that EMV chip technology, tokenization, geo-location, biometric authentication, and other technologies evolve to address the needs and threats of tomorrow. This is critical for the success of our merchant and financial institution clients, and we look forward to working with all stakeholders on this important goal.

Thank you again for the opportunity to testify today. I would be happy to answer any questions you may have.