



Michigan
Retailers
Association



buy nearby

Credit Card Security

Chip & Sign vs. Chip & PIN

House Financial Services Committee
January 20, 2016

What's in your wallet?



Retailers exist to accept payments

- Our members want to accept everything you have in your wallet (or digitally on your phone)
 - Retailers update technology frequently
- It should be easy for consumers to provide secure forms of payment
- Retailers want to protect that data
- Which is why we're advocates for consumers and support adoption of the most secure technology available



"Mag" stripe cards

- "Mag" stripe cards were invented in the 1960s and have not been updated since.
- The card uses a magnetic stripe that contains the electronic card information when swiped.
- The "mag stripe" cards replaced old "knucklebusters" (card imprinters) that required retailers to submit paper copies of consumer receipts for payment.

STATUS QUO
MAGNETIC STRIPE CARD



• 1960'S TECHNOLOGY
• CURRENTLY USED IN THE UNITED STATES



What is a chip card?



The chip is an embedded microchip that cannot be replicated, making it more difficult for hackers to steal card data and produce counterfeit cards.

- Generates a unique one-time code (a cryptogram) for each consumer transaction
- This cryptogram is virtually impossible to replicate in counterfeit cards
- It renders the previous card swipe data worthless each time a consumer uses their card

Changes at the point of sale

- The most visible change is consumers will no longer “swipe” a card. With a chip card the consumer will now have to “dip” or insert it into the reader (similar to an ATM) and wait for the card to be read.
- Customers will need to leave the card in the reader until the transaction is complete.
- New chip card readers will beep to remind the customer to remove the card once the transaction is complete.

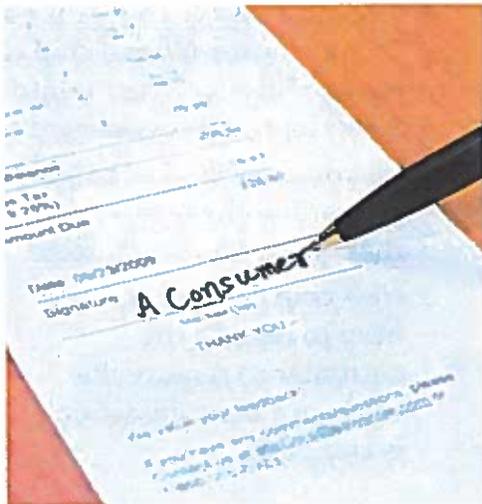


Two kinds of chip cards

<h3>Chip & Sign (Signature)</h3> <p>VISA/MASTERCARD STANDARD CHIP AND SIGNATURE CARD</p>  <ul style="list-style-type: none">• NO PIN HALF WAY IMPROVEMENT• MEDIOCRE TECHNOLOGY BANKS WANT FOR CONSUMERS	<h3>Chip & PIN (Personal Identification Number)</h3> <p>INTERNATIONAL STANDARD (EMV) CHIP AND PIN CARD</p>  <ul style="list-style-type: none">• DOUBLE AUTHENTICATION WITH CHIP AND PIN. STANDARD IN REDUCING FRAUD AROUND THE WORLD FOR DECADES• UP-TO-DATE TECHNOLOGY RETAILERS WANT FOR CONSUMERS
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Chip & Sign

- A Chip & Sign transaction is culminated with a signature
- It occurs like a traditional transaction today



Chip & PIN

- A Chip & PIN transaction is completed with a Personal Identification Number (PIN) number.
- The PIN number is always transmitted in an encrypted format, thereby protecting the PIN in the case of a data breach.



Chip & PIN vs. Chip & Sign

- Chip & Sign is not enough.
- While the Chip & Sign model is a good start to protecting consumers from the people trying to steal their identities, the ultimate protection is Chip & PIN.
- Chip & PIN cards are already in wide use around the world and have significantly reduced fraud.



Chip & PIN vs. Chip & Sign

- The PIN adds an extra layer of security and makes it even more difficult – if not impossible- for cybercriminals to replicate counterfeit cards.
- Research by the Federal Reserve has found that PINs on debit cards make them 700% more secure than transactions authorized by signature



Chip & PIN vs. Chip & Sign

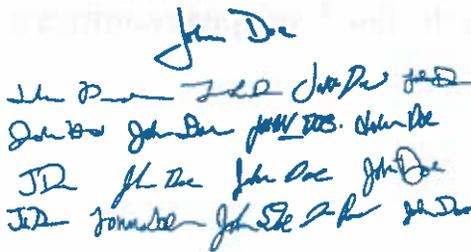
- The best authentication is when the consumer has a card with a Chip and a PIN.
- This is why banks require a PIN at an ATM to withdraw money.



Chip & PIN vs. Chip & Sign

PIN IS MORE SECURE THAN SIGNATURE

THERE ARE A MILLION WAYS TO SIGN A NAME... BUT ONLY ONE PIN FOR EACH PERSON



John Doe

John Doe

John Doe

John Doe

John Doe



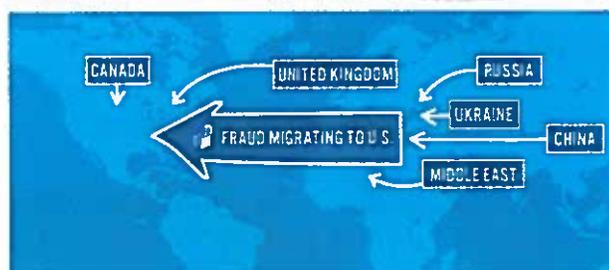
ANYONE CAN FORGE YOUR SIGNATURE, ONLY YOU KNOW YOUR PIN





Around the world

- Chip & PIN technology is the standard in Europe, Australia and Canada
- The U.S. is one of the few developed countries not to embrace it



Results

- Fraud is more prevalent in the U.S. than in countries with Chip & PIN cards.
- Since the UK started using Chip & PIN:
 - Fraud losses at retailers have fallen by 67%
 - Lost or stolen card fraud has fallen 58%

In the U.S.

- The U.S. has the most card fraud in the world
 - A 2015 research note from Barclays stated that the U.S. is responsible for 47% of the world's card fraud despite only accounting for 24% of total worldwide card volume
- U.S. credit card fraud is on the rise
 - About 31.8 million U.S. consumers had their credit cards breached in 2014, more than three times the number affected in 2013

In the U.S.

- Nearly 90% of card breach victims in 2014 received replacement credit cards
- In 2011, 85% of all fraudulent debit card transactions involved signature "verification"
 - \$1.15 billion of the total \$1.35 billion in debit card fraud losses (85%) stemmed from signature debit card transactions
 - 59% of the more than 37 billion debit card transactions that were made were verified by signature

Do Chip & PIN cards prevent data breaches?

- No, but by rendering the data worthless, we can make it much less enticing to criminals
 - Could reduce fraud and data breaches in the U.S.
- Chip & PIN cards are much more secure and will better protect an individual's financial information and personal identity than a Chip & Sign card
 - Remember, it's much easier to forge a signature than to correctly guess an individual's PIN



Are any steps necessary to move to Chip & PIN?

- Technically, no
 - Banks, credit unions and other issuing lending institutions are free to choose whether or not to issue chip cards
 - Issuing lending institutions also choose whether or not to issue a PIN with a chip card
- Only the federal government has the authority to regulate interstate commerce
- Financial institutions claim Chip & Signature is "good enough"

***But is “good enough”
good enough for your financial
information and identity?***



Why the reluctance to issue Chip & PIN cards?

- Issuers argue that it will be difficult for consumers to remember PIN numbers.
 - Customers already use PIN numbers with debit cards and some passwords. It should not be a great leap to use a PIN for every transaction.
- Issuing Chip cards is more expensive than “mag” stripe cards and issuing a PIN requires an extra step
 - 85% of all fraudulent debit card transactions involved signature “verification”
 - Less fraud = fewer replacement cards financial institutions need to reissue, thereby reducing their costs

Fact vs. Fiction

Will Chip & PIN cards still have a "Mag" stripe in case there isn't a Chip reader available?	Yes.
Will customers be able to remember a PIN?	Yes. They already remember PIN numbers for debit cards and to withdraw money from ATMs.
What if I can't remember my PIN?	It can be reset, just like a debit card.
"Chip & Choice" gives customers the choice to select a Chip & PIN card or a Chip & Signature Card.	False. "Chip & Choice" gives issuing banks the choice to issue cards with or without a PIN.

Do customers want Chip & PIN?

Yes!

WHAT DO CONSUMERS THINK?



82%

CARDHOLDERS SUPPORTIVE OF CHIP AND PIN



52%

CARDHOLDERS SAID THEY WOULD SWITCH BANKS FOR CHIP AND PIN CARDS

SOURCE: CHIP AND PIN SECURITY HOWY RESEARCH, TARGETPOINT CONSULTING, NOVEMBER 2014

Why do retailers want Chip & PIN?

- Advocate on behalf of our customers
 - We want customers to feel secure shopping at retail locations
- By devaluing the data we can:
 - Reduce the cost of accepting and processing credit cards
 - Reduce criminals' attempts at hacking into systems to steal customers' data
 - Reduce the potential impact of a data breach if one occurs

What's happening in the U.S.?

- Executive Order – President's BuySecure Initiative (October 2014)
 - Required newly issued and existing government credit and debit cards to be enabled with Chip & PIN technology
- FBI Director James Comey testified before the U.S. House Judiciary Committee that Chip & PIN is the most secure payment technology available (October 2015)
 - "The experts at the FBI would say that PIN and chip is more secure than [chip] and signature."

What's happening in the U.S.?

- Attorneys general in 8 states and D.C. sent a letter to credit card companies urging the use of Chip & PIN (November 2015)
 - Connecticut, Illinois, Maine, Massachusetts, New York, Rhode Island, Vermont, Washington and the District of Columbia
 - From the letter: "There can be no doubt that this [chip and sign] is a less secure standard, since signatures can easily be forged or copied or even ignored at the point-of-sale."
- NY Legislation to require lending institutions to issue a PIN when issuing Chip cards (Introduced in December 2015)

Should Michigan act?

- Michigan could follow the president's lead and require all newly issued and existing government credit and debit cards to be enabled with Chip & PIN technology
- Passing legislation to require card issuers to only issue chip cards with a PIN to all customers would be futile
 - There are no issuing banks domiciled in Michigan
 - Congress has the sole authority to regulate interstate commerce
- Technology is always advancing
 - Legislators should be careful not to specifically mandate technology today that may no longer be the most secure option tomorrow





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Thank You!



